



EuSEM 2012

7th European Congress on Emergency Medicine

In association with 8th EPAT National Emergency Medicine Congress



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18 CME
credits

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BOOK OF ABSTRACTS

Dear Friends and Colleagues,

On behalf of the European Society for Emergency Medicine (EuSEM) and the Emergency Physicians Association of Turkey (EPAT) we are delighted to welcome you to EuSEM 2012.

Emergency Medicine has been growing significantly in Europe and is now established as a primary specialty in 15 countries. The specialty has a strong foundation in Turkey where it has been established for more than 10 years. During recent years EuSEM has played an active role in the creation of a Section of Emergency Medicine within the Union of European Medical Specialists (UEMS). This will enable the specialty to have more autonomy in the development of Emergency Medicine as a primary specialty in all European countries.

The EuSEM 2012 Scientific Committee is very pleased to offer a high quality scientific programme which covers all the major topics in Emergency Medicine. The scientific content of the congress is comprehensive and up-to-date and provides a forum for discussion with leaders in the specialty. It offers a wonderful opportunity for academic, professional and scientific exchange and networking. A faculty world-class speakers, researchers and teachers from Europe and beyond have prepared first-class lectures and will facilitate interactive discussions between speakers and audiences. Their contributions and your presence will make this congress a great success.

We wish you an enjoyable, stimulating and beneficial stay in one of the most beautiful regions of Turkey.

With best wishes,



Abdelouahab Bellou
(EuSEM President)



Başar Cander
(EPAT President)



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Executive Officer

Ruth Klassen GREEN

Head Office

7-9 Brems Buildings
London EC4A 1DT
United Kingdom

T: +44 (0)20 7400 6101

F: +44 (0)20 7067 1267

E: ruth.klassengreen@eusem.org

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ABOUT EUSEM

The European Society for Emergency Medicine (EuSEM) is a non-profit making scientific organisation whose aim is to promote and foster the concept, philosophy and the art of emergency medicine throughout Europe. The ultimate objective of the Society is to help and support European nations to achieve the specialty of emergency medicine.

Born as a society of individuals in 1994 from a multidisciplinary group of experts in emergency medicine, since 2005 EuSEM also incorporates a Federation which currently includes 28 European national societies of emergency medicine.

Our mission is to: Advance research, education, practice and standards of the specialty of emergency medicine throughout Europe.

Our goals are:

- > to foster and encourage education, training and research in Emergency Medicine in Europe
- > to promote and facilitate the dissemination of information on Emergency Medicine, through meetings, courses, research and publications
- > to encourage the development of uniform information systems and data banks in Emergency Medicine in Europe
- > to encourage the formation and the cooperation between national associations for Emergency Medicine
- > to promote international collaboration in the field of Emergency Medicine

HISTORY AND STATUTES

The European Society for Emergency Medicine was inaugurated in May 1994 during an international emergency medicine conference in London by a multidisciplinary group of experts in emergency medicine which became known as the Club of Leuven.

WHAT IS EM?

Emergency Medicine is a specialty based on the knowledge and skills required for the prevention, diagnosis and management of urgent and emergency aspects of illness and injury affecting patients of all age groups with a full spectrum of undifferentiated physical and behavioural disorders. It is a specialty in which time is critical.

The practice of Emergency Medicine encompasses the pre-hospital and in-hospital triage, resuscitation, initial assessment and management of undifferentiated urgent and emergency cases until discharge or transfer to the care of another physician or health care professional. It also includes involvement in the development of pre-hospital and in-hospital emergency medical systems.

CONTACT EUSEM

The EuSEM office is located at:
7-9 Bream's Buildings
London EC4A 1DT
United Kingdom

Contact details:

T: +44 (0)20 7400 6101
F: +44 (0)20 7067 1267
E: enquiries@eusem.org

EuSEM Executive Officer:

Ruth Klassen Green
ruth.klassengreen@eusem.org



ABOUT EPAT

The Emergency Medicine Physicians Association of Turkey (EPAT) was founded in 1999 as part of a dynamic process in the field of emergency medicine. Our association is an association of a specialty. It was established with the objective of contributing to the development of emergency medicine, of helping to increase and improve qualified emergency departments, of protecting employee rights of emergency physicians and improving working conditions both physically and morally. Since its creation twelve years ago, EPAT has overcome many difficulties and

obstacles; today it has reached a position of expertise and authority. Voices who said "Why does emergency medicine exist?" in the past, now say "Emergency medicine is necessary" - this transformation is the result EPAT's vision and efforts. To date, our society has organised seven national congresses, 13 symposia and numerous courses and scientific activities, all of which have helped to add knowledge to this energetic community. Our society is proud to be co-organising EuSEM 2012 together with European Society for Emergency Medicine (EuSEM).

ORAL PRESENTATIONS

F11:1

Other 1

METABOLIC CHANGES IN EPILEPTIC PATIENTS EXPERIENCING SEIZURE DURING FASTING

E. Akıncı (1), E. Atayık (2), YY. Aydın (3), H. Çiftçi (3), H. Ramadan (3), F. Coşkun (3)

1. Emergency department, Konya Training and Research Hospital, Konya, Turkey
2. Department of Allergy and Immunology, Cumhuriyet University School of Medicine, Sivas, Turkey
3. Emergency department, Ankara Training and Research Hospital, Ankara, Turkey

Corresponding author: emineakinci@yahoo.com

Key-words: Epileptic Patients ; Metabolic Changes ; Ramadan

Introduction

More than one billion Muslims fast for one month (Ramadan) each year, for periods of between 12 hours per day to 18 hours when Ramadan falls during the summer months. Muslims observing the fast must not only abstain from eating and drinking, but also from taking oral medications, smoking, as well as receiving intravenous fluids and nutrients. The quantity of the fluids and foods taken also change during Ramadan. Volume deficit and dehydration can occur, especially in the long summer days. Patients with any illness and those on medication adjust their drugs according to these timeframes. Thus, patients' medication programs also change.

Previous studies have revealed the effects of Ramadan fasting on complications of gastrointestinal system, coronary heart disease, diabetes mellitus and circadian rhythms. Accordingly, some publications reported adverse affects of fasting during Ramadan on the electrolyte and hematocrit balance of the body. In our study, we compared the metabolic situations of known epilepsy patients who suffered seizures; one group experienced a seizure while fasting during Ramadan, while the control group experienced a seizure during normal times.

Method: The study included 20 consecutive patients experiencing an epileptic seizure while fasting during the month of Ramadan in 2010, and other 20 patients who experienced a seizure while not fasting. All patients presented to the emergency service of Ankara Training and Research Hospital. Venous blood gas, full blood count, kidney function tests, sodium, potassium, chlorine, blood glucose and full urine analysis were required for the patients. The patients were followed for approximately 12 hours.

Results

A clear change of drug regime was determined in the fasting group. The patients stated that they had drugs in the pre-dawn meal of sahur or fast breaking dinner, iftar. All patients in the fasting group expressed that their regular sleep routines had changed with respect to other months because of the sahur and also that their sleeping time was reduced by approximately 2 hours. No significant differences were found between study groups in terms of the average age of patients or gender distributions ($p=0.915$ and $p=0.525$). No significant inter-group differences were found in terms of blood glucose, urine, creatine, sodium, potassium and chlorine levels ($p>0.05$). No significant inter-group differences were observed in terms of blood pH, HCO_3 , anion gap, osmolality and increasing the base deficit ($p>0.05$). It was found that ketone level was significantly higher in the urine of the fasting group. The mean ketone level of the fasting group was 50 mg/dl (+) and was slightly higher compared to the control group ($p<0.047$). When comparing clinical and biochemical indicators between the groups, there were significant inter-group differences in terms of the anion gap and ketone in the urine present. The rate of being out of the normal limits in the control group in terms of the anion gap and the rate of being out of the normal limits in the fasting group in terms of the ketone in the urine were significantly higher ($p=0.003$ and $p<0.047$ respectively).

Conclusion

There was no significant difference found in metabolic changes between fasting epilepsy patients and the control group. The only significant difference was the higher levels of ketone in fasting epilepsy patients compared ketone on-fasting group.

F11:2

Other 1

CEREBRAL BLOOD FLOW (CBF) IN SEVERE HEMORRHAGE DURING PREGNANCY.

R. Schiffner (1), S. Bischoff (2), F. Rakers (3), S. Rupprecht (3), H. Schubert (2), M. Schwab (3)

1. Accident and Emergency Dept., Univ. Hospital of Friedrich Schiller Univ., Jena, Germany
2. Institute for Animal Sciences and Welfare, Univ. Hospital of Friedrich Schiller Univ., Jena, Germany
3. Neurology, Univ. Hospital of Friedrich Schiller Univ., Jena, Germany

Corresponding author: rene.schiffner@med.uni-jena.de

Key-words: Cerebral Blood Flow, ; Severe Hemorrhage, ; Pregnancy,

Introduction:

The leading cause of death for people under 45 years is the trauma (Kauvar, 2006). Hemorrhage is a major complication at birth, e.g. due to placental abruption. During pregnancy the leading cause of death is the acute hemorrhage (Khan, 2006). Functional outcome of severe hemorrhage in adults is mainly restricted to cerebral damage due to an insufficient cerebral blood supply (Kudo, Crit Care Med 2006).

Aim:

To examine whether pregnancy affects regulation of CBF during severe hemorrhage.

Methods:

Five non-pregnant and pregnant sheep were instrumented with femoral arterial and venous catheters under general isoflurane anaesthesia. Single fiber Laser Doppler flow probes (400µm diameter, Moor Instr.) were introduced into the cerebral cortex and subcortex (thalamus) following trepanation to monitor capillary CBF changes continuously. Controlled severe hemorrhage was induced by withdrawing 40% of the estimated total blood volume (7% of total body weight).

Results:

In non-pregnant sheep, hemorrhage induced a delayed decrease of CBF that was especially pronounced in the subcortex reflecting cerebral autoregulation (Fig. 1, $p<0.05$). In pregnant sheep, the CBF decreased faster in the cortex and subcortex (Fig. 1, $p<0.05$). The maximum cortical and subcortical CBF decrease was more pronounced in pregnant compared to non-pregnant sheep (Fig. 1, $p<0.05$).

Conclusions:

In pregnancy, autoregulatory function and maintenance of CBF is diminished in the cerebral cortex and subcortex most likely due to the decreased cerebral vascular tone that diminishes the cerebral autoregulatory reserve. In spite of increased baseline CBF (Cipolla, J Appl Physiol 2011), specific vigilance to maintain maternal cerebral blood supply during severe hemorrhage in pregnancy is necessary to prevent cerebral damage.

F11:3

Other 1

USE OF BISPECTRAL INDEX TO MONITOR THE DEPTH OF SEDATION IN MECHANICALLY VENTILATED PATIENTS IN THE PREHOSPITAL SETTING

J. Josseume (1), M. Saunier (2), E. Wojciechowski (2), S. Chantoiseau (2), C. Rouanet (2), A. Ricard-Hibon (1), J. Mantz (2), F. Duchateau (2)

1. Emergency Department, Hopital Beaujon, Paris, France
2. Intensive Care Unit, Hopital Beaujon, Paris, France

Corresponding author: jjosseume@gmail.com

Key-words: Bispectral index ; Sedation in mechanically ventilated patient ; prehospital medicine

Introduction: Different clinical scales have been developed and validated for monitoring sedation of mechanically ventilated patients but to date, the Ramsay score remains the reference in the prehospital critical care. However, the content of this scale is limited and lacks subtlety. The bispectral index of the EEG (BIS) has proved reliability for measuring the depth of sedation or analgesia yet. The objective of the present study was to evaluate the effectiveness of the BIS in the prehospital setting.

Methods: After IRB approval, this prospective study included mechanically ventilated patients managed by one of our EMS teams (French physician-staffed EMS system). BIS values were blindly recorded continuously using the BIS – XP 2000 monitor (Aspect Medical System). The Ramsay Score was performed every 5 minutes (from T0 to T+20min) then every 10 min. Main criterion was the correlation between BIS values and the Ramsay score. The estimated number of patients needed was 30 for each class of Ramsay 4, 5 and 6. Results have been expressed as medians [Interquartile Range]. Statistical analysis was performed using a Kruskal-Wallis test and a Spearman test. We used statistical package Stat-View 5 (Abacus Concept, Berkeley, CA, USA).

Results: Seventy-two patients were included into the study (the number of patients to treat was reached). Patients were mostly presenting with toxic coma (29%) or neurologic coma (24%). Median BIS value was 85 [84-86] when the Ramsay score was 3, 80 [76-84] when the Ramsay score was 4, 61 [55-80] when the Ramsay score was 5, 45 [38-60] when the Ramsay score was 6. There was an acceptable correlation between BIS values and Ramsay score ($H = 127$; $p < 0,001$; Fig.1). Rho coefficient was $-0,63$.

Conclusion: This blinded comparison between the BIS and the Ramsey score suggests that its use in prehospital critical care encounters the same issues as those observed in the ICU.

F11:4

Other 1

ANALYSIS OF THE ANALGESICS USE IN ED

T. Arsinte (1), DC Cimpoesu (2), A Pomohaci (1), V. Popa (1), D Teodorovici (1)

1. Emergency Department, Hospital St.Spiridon, Iasi, Romania
2. Emergency Department, University of Medicine and Pharmacy Gr.T.Popa, Iasi, Romania

Corresponding author: dcimpoesu@yahoo.com

Key-words: Analgesics ; opioids ; emergency department

Background: In Romania there aren't specific local guidelines for analgesia in patients who present in the ED's. The experiences are different for each ED in terms of indications, type of analgesics, doses and monitoring the patients who need analgesia. The clinical

studies for this field are in a very early phase and the methods used in analgesia are basically physical (position, ice, warmth etc.).

Aim: to analyse, in a retrospective study, the indications, the type and the doses of the analgesics used in emergency situations; to establish any correlations between the analgesics administration and the profile of the patients.

Material and method: The study was conducted in the Emergency Department for adults with an Intensive Mobile Unit for pre-hospital intervention in the county of Iasi, during 16 months between the 1st of January 2011-and the 30th of April 2012. Inclusion criteria: any patient receiving intra venous analgesic medication during pre-hospital and ED intervention. The decision for analgesics administration was a clinical decision, using the visual pain scale (1-10) for the conscious patients.

Results: 2675 patients were included: only 67 from the pre-hospital interventions in 2012 and 2608 ED patients represent 5% of the total number of ED presentations. More than a half were males 1411 (52,8 %) and 1264 (47,2 %) females. Age distribution: 489 (18%) between 18 -30 years old, 803 (30%) 31 -50 years old, 885 (33%) 51-70 years old and 498 (19%) over 70 years old. The majority of the patients 56% were stable- SBP between 100-140 mmHg, 3% with hypotension and 41% with hypertension SBP over 141 mmHg. Pain aetiology in patients receiving analgesics : 25 (0.9%) patients with urethritis, prostatitis or cystitis, 160 (6%) cancer and tumour pain, 123 (4.6%) peripheral vascular pain, 85 (3.2%) chronic low back pain, 47 (1.7%) arthritis and periarticular inflammation, 172 (6.4%) cardiac chest pain, 47 (1.8%) biliary tract pain, 42 (1.6%) cases – headache, 43 (1.6%) gastritis, pancreatitis, peptic ulcer disease and gastroesophageal reflux disease, 102 (3.8%) neck and back pain, 116 (4.3%) neuropathy and post herpetic neuralgia, 350 (13.1%) renal colic, 165 (6.2%) undifferentiated abdominal pain, 618 (23.1%) extremity trauma, 84 (3.1%) politrauma, 484 (18.1 %) multiple contusion, 7 (0.3%) chest trauma, 5 (0.2%) isolated head and C-spine trauma. The top analgesic was tramadol (51.4% of the patients) follow by ketoprofen 29.9 %, fentanyl (16.4%) and only 2,2 % in our group received morphine. A small number of cases received sedation with midazolam 4.8% and ketamine (0.9%). 22.1 % of the patients received 2 kind of analgesics and 1 out of 10 patients needed repeated administration of analgesics in ER. Statistically significant correlations were found between patient age and the need for opioid analgesia ($p < 0.01$), and the need for repeated administration of analgesics ($p < 0.01$). In patients with lower Glasgow score, intubated and mechanically ventilated, the most frequently used scheme was the analgo-sedation one ($p < 0.01$). The correlation between age and non steroidal anti inflammatory drugs administration (NSAIDs) was a negative one, as they are preferred especially for young patients ($p < 0.01$).

Conclusions: The use of analgesics in ED was reduced in group analysis, opioids and NSAIDs being especially used. The most frequent indication was in trauma, followed by the pain of renal-urinary cause. The physician's experience and clinical evaluation were essential to the medical management decision, but the elaboration of national protocols for analgesia and sedation are strongly required in the future.

F11:5

Other 1

RANDOMIZED DOUBLE BLIND COMPARISON OF HIGH DOSE NEBULIZED MORPHINE VERSUS INTRAVENOUS TITRATED MORPHINE IN THE EMERGENCY MANAGEMENT OF THE POST TRAUMATIC PAIN

MA. Msolli, W. Bouida, H. Boubaker, MH. Grissa, K. Laouiti, R. Boukef, S. Nouira

Emergency Department, University Hospital of Monastir, Monastir, Tunisia

Corresponding author: grissa.medhabib@gmail.com

Key-words: Pain ; Nebulized morphine ; Trauma

INTRODUCTION:

Pain is a common reason for emergency department (ED) visit for up to 60% of consultants. In most cases the pain is the main reason for consultation.

PURPOSE:

Compare and evaluate the efficacy and safety of high dose nebulized morphine compared to intravenous morphine in the treatment of post traumatic pain in ED.

PATIENTS AND METHODS:

This is a prospective randomized, controlled, double-blind study carried out in the ED of Monastir University Hospital over a period of 30 months. We included patients older than 8 years consulting for post traumatic pain with a visual analog scale (VAS) \geq 50%. Patients were randomized in two groups: group receiving high dose nebulized morphine (Neb group) 20mg renewable when needed (maximum 3 times) and intravenous titrated morphine group (IV group) receiving 5mg bolus and 2mg every 5 minutes when needed (maximum 15mg). Both groups received placebo: nebulized serum saline for IV group and intravenous serum saline for Neb group. Success of treatment, defined by a decrease in the VAS \geq 50% from baseline, and resolution time defined as the time between the start of the protocol and treatment success. All adverse events were collected. Standard statistical methods were used to compare both groups.

RESULTS:

200 patients were enrolled in this study: 100 patients in each group, their characteristics were not different at baseline. The VAS decreased for both groups compared to baseline. There was a significant difference between groups in favor of high dose nebulisation (fig 1). Side effects were more frequent in IV group compared with Neb group ($p=0.01$).

CONCLUSION:

The analgesic effect is significantly higher with nebulized morphine compared to intravenous titrated morphine. In addition, the use of nebulized morphine is associated to a significant decrease of side effects.

Introduction: acute pain is the most common presenting symptom in the Emergency Department (ED); nevertheless, in this setting, oligoanalgesia is known to be a very frequent problem.

Objective: to recognize the presence of oligoanalgesia in our ED.

Design: retrospective study.

Setting: ED of a community-based, 700-bed hospital.

Patients and methods: retrospective analysis of the first 3000 ED visits in 2011 (software AIRO, Area Informativa Ricoveri Ospedalieri), with regard to the following indicators: A) assessment of pain intensity at triage using pain scales; B) number of patients with moderate/severe pain who received analgesics; C) analgesic drugs used in the ED; D) average door-to-drug time in patients with moderate/severe pain; E) number of patients with severe pain with door-to-drug time > 20 min.; F) number of patients with moderate pain with door-to-drug time > 60 min.; G) number of patients who received a reassessment of pain; H) number of patients who received a home prescription of analgesic drugs at discharge.

Patients with age < 12 years, chest or abdominal pain, severe headache (yellow code) and major trauma were excluded. We identified 606/3000 patients (20.2%) with potentially treatable pain (68/606 yellow code 11.3%, 538/606 green code 88.7%). In patients with severe pain, diagnoses were the following: minor trauma 56 (82.5%); renal colic 9 (13.3%); biliary colic 1 (1.4%); low back pain 1 (1.4%); other kind of pain 1 (1.4%). In patients with moderate pain, diagnoses were the following: minor trauma 410 (76.3%); renal colic 16 (2.9%); biliary colic 11 (2.1%); low back pain 23 (4.2%); headache 26 (4.9%); other kind of pain 52 (9.6%).

Results: A) all the patients received an assessment of pain intensity with verbal rating scale (mild, moderate, severe pain); B) 23/68 (33.8%) patients with yellow code and 97/538 (18.9%) patients with green code received analgesics; C) the drugs used were the following (single doses): acetaminophen IV (45), ketoprofen IV (35), tramadol IV (3), diclofenac IM (35), miorelaxants IM (20), antispasmodics IV (20), lorazepam OS (6), betamethasone IV (3), acetylsalicylic acid IV (1), methylprednisolone IV (2), Oxygen (2); D) average door-to-drug time was 90.2 min. for yellow code (range: 7-679 min) and 93.7 min. for green code (range: 9-908 min.); E) 39% of the patients with yellow code who received analgesics (9/23) had a door-to-drug time > 20 min.; F) 50.5% of the patients with green code who received analgesics (49/97) had a door-to-drug time > 60 min.; G) none of patients received a reassessment of pain intensity; H) 22/37 (59.4%) patients with yellow code discharged home received a clear prescription of analgesics. 314/490 (64%) patients with green code discharged home received a clear prescription of analgesics.

Conclusions: as reported in previous studies, acute pain is undertreated also in our ED. Recognizing this problem could be the first step to develop clinical pathways for pain management in this setting.

F11:7

Other 1

F11:6

Other 1

OLIGOANALGESIA IN THE EMERGENCY DEPARTMENT: FACING A REAL CHALLENGE

E. Pennacchio, M. Autilio

Emergency department, Azienda Ospedaliera Regionale San Carlo, Potenza, Italy

Corresponding author: vzivil@tiscali.it

Key-words: Oligoanalgesia ; Pain treatment ; Emergency department

EVALUATION OF THE OUTCOMES, CAUSES, TYPES AND INCIDENCE OF THE ACID-BASE DISORDERS IN PATIENTS PRESENTING TO EMERGENCY DEPARTMENT: A PROSPECTIVE OBSERVATIONAL DESCRIPTIVE STUDY

A. Kose, E. Armagan, N. Oner, F. Ozdemir, G. Taskin, O. Koksall, S. Akkose

Department of Emergency Medicine, Uludag University, Faculty of Medicine, Bursa, Turkey

2. Department of Emergency Medicine, Uludag University, Faculty of Medicine, Bursa, Turkey

3. Department of Emergency Medicine, Uludag University, Faculty of Medicine, Bursa, Turkey

Corresponding author: otaberk76@yahoo.com.tr

Key-words: Acid-base disorders ; emergency medicine ; causes

Objectives. Acid-base disorders are common in outpatients and especially hospitalized patients and, usually correlated with high rates of morbidity and mortality. Objective of this study was to analyze outcomes, causes, types and incidence of the acid-base disorders in patients presenting to emergency department.

Methods: In the patients presented between January 2011 and May 2011; age, gender, complaints for referring to ED, diagnosis by ED and the outcomes (discharge, hospitalization, referral, death) were prospectively analyzed in the cases having ABD.

Results: ABG was normal in 301(29%) of 1037 patients, while ABD was defined in 736 (71%). Of 736 cases with acid-base disorder, 173 (23.5%) were simple ABD and 563 (76.5%) mixed ABD. The most common ABD was mixed metabolic acidosis and respiratory alkalosis (MACRAL) (n=408, 55.4%). All ABD types were most commonly seen in the patients aged over 65. ABD patients presented to emergency department (ED) most commonly with the complaints of dyspnea (44.4 %) and general poor health (12.9%). In the cases with ABD, pneumonia was the most common diagnosis (n=120, 16.3%). Of ABD cases, 379 (51.6%) were discharged, while 318 (43.2%) were hospitalized. Twenty two (2.9%) of the remaining patients were lost. Death was more commonly seen in the cases with mixed metabolic and respiratory acidosis (MRAC) (n=6) and MACRAL (n=11).

Conclusions. ABDs are quite common in the patients presented to ED, especially in the critical patients (71%). Mixed MACRAL is the most commonly defined ABD. Dyspnea and pneumonia are the most common diagnoses in ABD patients. Mortality develops more commonly in the mixed MRAC and MACRAL cases. This knowledge may provide some important clues for diagnosis, treatment and early prognosis of the patients

F11:8 Other 1

THE VALIDITY OF THE MANCHESTER TRIAGE SYSTEM IN ADULTS

N. Seiger (1), PP. Rood (2), P. Patka (2), HA. Moll (1)

1. General pediatrics, Erasmus MC - Sophia Children's Hospital, Rotterdam, Netherlands
2. Emergency department, Erasmus MC, Rotterdam, Netherlands

Corresponding author: n.seiger@erasmusmc.nl

Key-words: Triage ; Validity ; Emergency department

Background: In adults, several studies have evaluated the interrater agreement of the MTS, while the validity of the Manchester Triage System (MTS) was only assessed in specific subgroups or by trends in resource use and hospitalisation. Therefore the aim of this study was to assess the validity of the MTS in emergency care using an independent reference standard as proxy for true urgency for the adult population.

Methods: The validity of the MTS was assessed in a pilot study which included patients who had presented at the emergency department (ED) of Erasmus MC in Rotterdam in August 2009. The validity of the MTS was assessed by using an independent reference standard based on abnormal vital signs, resource utilization, and follow-up. Sensitivity, specificity, diagnostic odds ratios (DORs), and percentages of undertriage, overtriage and correct triage of the MTS were calculated.

Results: In total, 1622 patients were triaged using the MTS. The reference standard was available in 98%. In 927 of 1582 (59%) patients, the MTS urgency level agreed with the reference standard; in 504 (32%) patients the MTS urgency level was higher than the reference standard (overtriage); and in 151 (9%) the MTS

urgency level was lower than the reference standard (undertriage). The sensitivity was 59% (95% CI 48-68%), the specificity 93% (95% CI 91-94%) and the DOR 18.4 (95% CI 11.6-29.1).

Conclusion: The validity of the MTS in adults was moderate to good with moderate sensitivity and high specificity. These conclusions were based on a pilot study, which included 1622 patients. During the conference we will present our results based on a prospective observational study conducted in 2010 including approximately 20,000 patients.

F11:9 Other 1

EVALUATION OF TRIAGE INDEXES IN EMERGENCY DEPARTMENT: THE EXPERIENCE OF OSPEDALI RIUNITI DI PINEROLO

MC Sfasciamuro (1), E. Mana (1), C. Odetto (1), M. Civita (1), **E. Laurita** (1), M Crestani (2), A. Prone (1), GA Cibinel (1)

1. emergency department, ospedali riuniti di pinerolo, pinerolo (TO), Italy
2. Emergency Department, Ospedale di Rivoli, torino, Italy

Corresponding author: emanuela.laurita@alice.it

Key-words: Triage indexes ; Emergency Department ; Nursing training

The triage process used in our professional reality consists of 4 stages: first valuation, second valuation, priority code allotment and revaluation. In every single stage are used specific indexes :in first valuation viable indexes, distress indexes and in second valuation specific primary and secondary indexes. The viable indexes include valuation of viable functions concerning A,B,C,D; distress indexes are pain, unplugging bleeding, hypo/hyperthermy and incoercible vomit.

Primary specific indexes are signs and symptoms directly linked with principal reported symptom. Former pathology and risk factors are part of specific secondary indexes.

AIM: evaluate the utility of indexes in triage process of the ED.

Materials and methods: the study has been performed on a number of 639 forms.; 9 forms were randomly selected every day of the week (3 for every single shift) from January to July 2010, then subsequently tested by tutor-nurses of ASL TO 3 triage group of Pinerolo.

Results: from data analysis emerged that, in 98% forms triage nurses use viable indexes during first valuation. Distress indexes are used in 56,3% of cases, primary specific indexes are used in 79,6% of cases while the secondary ones only in 37,6% of cases . Revaluation takes place in 4,6% of cases.

Conclusions- discussion: the use of viable indexes is so important because the deficit of one of the viable function defines not only priority but also patient's gravity. This valuation accures immediately, when entering the ED, without particular tools but simply "eye balloning". The distress indexes are used during valuation to award an elevated priority code, dued not only to the primary-symptom or to the developing risk, but also to the pain grade or presence of signs and symptoms that compromise patient's dignity. Patient's valuation is defined by the analysis of guide symptom/sign that assigns a high suspect and lead the valuation towards one or more clinical conditions. This is the reason why, with specific primary indexes, we look for linked signs/symptoms, viable altered parameters or other fundamental elements for the attribution of the priority code.

Is not always possible to link the description of guide sign/symptom back to a specific clinical condition. In a minor percentage of cases the nurse needs to search for other elements, to elevate or reduce the importance of first suppositions, using secondary specific indexes.

Even if revaluation is a basic element of triage, data shows it is not so used during the process; the reason could be related to the lack of staff, and lack of time that does not allow to record supporting documents of revaluation.

F21:1 Life Support 1

TREATING POTENTIALLY LIFE-THREATENING LARYNGEAL HEREDITARY ANGIOEDEMA ATTACKS WITH ICATIBANT

M. Bas (1), C. Olivier (2), W. Lumry (3)

1. Hals-Nasen-Ohrenklinik, Technische Universität München, Munich, Germany

2. Global Medical Affairs Angioedema, Shire Human Genetic Therapies, Eysins, Switzerland

3. Allergy and Asthma, Allergy and Asthma Research Associates Research Center, Dallas, United States

Corresponding author: m.bas.hno@googlemail.com

Key-words: hereditary angioedema ; icatibant ; laryngeal

Introduction: Although laryngeal (upper airway) hereditary angioedema (HAE) attacks are relatively rare, patients who present to the emergency room (ER) are often misdiagnosed or experience delays in treatment that result in unnecessary hospital admissions, intubation, tracheotomy and, in some cases, death. As such, treatment of laryngeal HAE attacks requires prompt and effective diagnosis and treatment. Icatibant (an investigational drug in Turkey), a bradykinin B2 receptor antagonist, is a subcutaneous, physician- or patient self-administered treatment option for type I and II HAE attacks in adults.

The efficacy of icatibant has been evaluated in three separate Phase III trials: For Angioedema Subcutaneous Treatment (FAST) -1, -2 and -3. We present data from a pooled analysis of the three FAST studies in the treatment of potentially life-threatening laryngeal HAE attacks in adult patients.

Methods: Adult patients presenting to the ER with laryngeal attacks were treated with subcutaneous icatibant (30 mg). At pre-treatment, a global assessment of all laryngeal symptoms was carried out by the investigator using a five-point scale (0-absent, 1-mild, 2-moderate, 3-severe, and 4-very severe) to determine the attack severity. Laryngeal symptom severity following treatment was evaluated using two patient-assessed individual symptom scores: difficulty swallowing and voice change. Both assessments were also made using a five-point scale (0-absent, 1-mild, 2-moderate, 3-severe, and 4-very severe). Safety was assessed throughout FAST-1, -2 and -3; adverse events (AEs) and local tolerability are reported here.

Results: Sixty adult patients presented with laryngeal attacks and were treated with icatibant. Attacks were determined as mild (n = 19 [31.7%]), moderate (n = 26 [43.3%]) or severe (including very severe attacks) (n = 15 [25.0%]) based upon the investigator's Global Assessment of all laryngeal symptoms at pre-treatment.

No patients required intubation or tracheotomy. The majority of patients (55/60 [91.7%]) were successfully treated with a single dose of icatibant (five [8.3%] patients required a second dose of icatibant).

Difficulty swallowing was experienced by 92.9% patients (28.6% patients assessed difficulty swallowing as severe-to-very severe). At 2 h post-treatment, this percentage had reduced to 64.9% (10.6% severe-to-very severe), by 4 h, this had reduced to 45.3% (1.9% severe-to-very severe). Difficulty swallowing was absent by 12 h post-treatment in all patients. At pre-treatment, voice change was experienced by 81.8% patients (29.1% patients assessed voice change as severe-to-very severe). At 2 h post-treatment, this percentage had reduced to 57.1% (7.1% severe-to-very severe), by 4 h, this had reduced to 45.3% (0.0% severe-to-very severe) and at

12 h post-treatment, voice change was absent in all patients. For all 60 patients, the pooled patient-assessed median time to initial symptom improvement was 0.6 h (95% CI: 0.5 h–0.9 h) and was consistent across FAST-1, -2 and -3 (0.6 h, 0.8 h and 0.8 h, respectively).

Adverse events were reported by 33 (55%) patients. The most frequently reported AE was HAE (n = 13) and two drug-related AEs were reported (headache). Serious AEs (SAEs) were reported by four (6.7%) patients (HAE [n = 2], pregnancy [n = 1] and laryngeal oedema [n = 1]); none were considered to be drug-related. Injection site reactions were reported in 58 (96.7%) patients, of which the majority (85.0%) were mild-to-moderate in severity; all were transient and resolved without further intervention.

Conclusion: Icatibant alleviated individual symptoms of difficulty swallowing and voice change in laryngeal HAE attacks in all patients within 12 h post-treatment. Importantly, no patient required intubation or tracheotomy. Moreover, a single injection of icatibant successfully treated the majority (92%) of laryngeal HAE attacks. Icatibant was generally well tolerated in this population of patients and no drug-related SAEs were reported.

F21:2 Life Support 1

VIDEO SELF-INSTRUCTION IMPROVES KNOWLEDGE ABOUT CARDIOPULMONARY RESUSCITATION AND AUTOMATED EXTERNAL DEFIBRILLATORS AMONG POLICE OFFICERS

A. Aldeen (1), G. Chiampas (1), DM. Courtney (1), N.

Hartman (1), A. Phull (1), A. Segura (1), D. Shaw (2)

1. Emergency Department, Northwestern University Feinberg School of Medicine, Chicago, United States

2. Chicago Police Department, Chicago Police Department, Chicago, United States

Corresponding author: ameraldeen@gmail.com

Key-words: Video self-instruction ; CPR ; AED

Objectives:

Prompt cardiopulmonary resuscitation (CPR) and defibrillation greatly improve survival for victims of sudden cardiac arrest (SCA). Police officers often serve as first responders in cases of out-of-hospital SCA before Emergency Medical Services (EMS) personnel arrive. The goals of this study were to quantify knowledge about CPR and automated external defibrillators (AEDs) among members of a large urban police force and to evaluate the effect of a brief CPR/AED training video on this knowledge.

Methods:

We administered a three-part online survey using SurveyMonkey™ to members of the second-largest police force in the United States, the Chicago Police Department (CPD). Data collection lasted from March 1 to April 1, 2011. Participants were asked to enter their own unique identifier code based on their initials and date of birth for the pretest and posttest. Part 1 queried demographic variables. Part 2 assessed prior experience in CPR and AEDs. Part 3 represented the knowledge portion, which consisted of two, slightly different tests of CPR and AED knowledge, A and B. Each test was composed of 12 multiple-choice or rank order questions. Participants were randomized into two groups. Group 1 received A as the pretest and B as the posttest, and Group 2 vice versa. Participants then viewed a 10-minute CPR/AED training video discussing the use of CPR and AEDs. The video placed emphasis on the performance of chest compressions (CC) over mouth-to-mouth (MTM) ventilations as part of a city-wide effort to promote CC-only CPR. Participants then took the posttest by group designation. The primary outcome measures were knowledge of proper depth and rate of CC and selection of the best action in a sample scenario.

Means and proportions were reported with 95% confidence intervals.

Results:

Over a 1-month period, 2615 pretest and 2542 posttest survey entries were collected. A total of 1616 participants (63.6%, 95%CI 61.7 to 65.4) responded with complete data. Mean age was 44.7 years (95%CI 44.3 to 45.1), mean CPD experience was 16.9 years (95%CI 16.5 to 17.2), and the sample was 74.6% male (95%CI 72.4 to 76.6). Most (58.4%, 95%CI 55.9 to 60.7) had a Bachelors degree or higher. Seven percent (95%CI 5.9 to 8.3) had up-to-date formal BLS certification, 4.8% (95%CI 3.8 to 5.9) had recent BLS certification (2y after expiration) or no BLS certification. The vast majority of participants had never performed MTM (92.8%, 95%CI 91.4 to 93.9) or CC (88.2%, 95%CI 86.5 to 89.7) or used an AED (98.8%, 95%CI 98.2 to 99.3). 819 were randomized to Group 1, and 797 were randomized to Group 2. Groups 1 and 2 did not differ significantly in any background variable.

Before the training video, 21.1% (95%CI 18.5 to 24.1) of Group 1 and 16.9% (95%CI 14.5 to 19.7) of Group 2 knew the proper rate of CC (out of 6 answer choices). After the training video, knowledge of proper CC rate improved to 80.2% and 79.5%, respectively, an absolute difference of +59.1% (95%CI 55.0 to 62.8) and +63.0% (95%CI 59.0 to 66.6). Similar improvements were seen in knowledge of CC depth after watching the video: +44.8% for Group 1 (95%CI 40.5 to 48.8) and +54.5% for Group 2 (95%CI 50.3 to 58.3). Though most participants (60.6%, 95%CI 57.2 to 63.9 in Group 1; 63.5%, 95%CI 60.1 to 66.8 in Group 2) correctly identified the best action in a sample scenario even before watching the video, significant improvement was still noted after the video (+27.5%, 95%CI 23.4 to 31.4 in Group 1; +27.2%, 95%CI 23.3 to 31.1 in Group 2).

Conclusion:

A brief training video significantly improves knowledge of cardiopulmonary resuscitation and automated external defibrillators among members of a large, urban police force. Further research is suggested to evaluate clinical outcomes of this educational study.

whether LVs were covered using the resuscitation techniques. These distances were compared with distances between the fingers and thumbs of 20 adults performing the two-finger and the two-thumb techniques on templates of infant's chests.

Results: The mean distances of the INL and the LT of the sternum from the xiphoid process were 32 ± 8 mm (range, 14-52mm) and 12 ± 2 mm (range, 10-16mm), respectively. The LVMD was 15 ± 6 mm (range, 1-27mm) from the xiphoid process, which on average was 16 mm below the INL and 3 mm above from the LT of sternum, respectively. When apply the mean distances between the digits of adults performing the two-finger and two-thumb techniques of 28 ± 3 mm and 23 ± 5 mm, respectively, the LVMD was covered in 57 patients (90.5%) using the two-finger technique and in 59 patients (93.7%) using the two-thumb technique. The upper abdomen was compressed in 22 patients (34.9%) by the two-finger technique with a mean distance of 4.3 mm (range 1.7 - 10.8 mm) and in 16 patients (25.3%) by the two-thumb technique with a mean distance of 0.7 mm (range, 0.3 -1.8mm).

Conclusion: When applying 2010 AHA CPR guidelines for infants, the chest compression landmarks for two-finger and two-thumb techniques adequately cover the LV in more than 90% of patients. However, in 25-35% of infants, the upper abdomen is compressed from few millimeters to 11 millimeters.

F21:4

Life Support 1

THE ULTRASOUND POINT OF CARE IN EMERGENCY DEPARTMENT: A REVIEW OF PROTOCOLS.

J. Armas (1), B. Giménez (1), E. Valero (1), S. Diéguez (1), J.C. Real (1), S. Angell (2)

1. Emergency Department, Hospital del Vinalopó, Alicante, Spain.
2. Primary Health Care Departament Vinalopó, Alicante, Spain.

Corresponding author: jarmas@vinaloposalud.com

Key-words: ultrasound ; point of care ; critical care.

Background: Advances in ultrasound (US) technology continue to enhance its diagnostic applications in daily medical practice. Emergency ultrasound is a bedside, point of care, focused diagnostic procedure which is aimed completing the physical examination. The ultrasound "point of care" can permit rapid, accurate, and noninvasive diagnosis of a broad range of acute critical situations in emergencies.

Objectives: The primary goal is to determine sensitivity, specificity and other operating characteristics of bedside ultrasound in two protocols: EFAST and FEEL. Its secondary goal is to identify the physician's ability to use this technology.

Patients and Methods: The cross-sectional study at Emergency Department of Hospital del Vinalopó prospectively evaluated 92 patients between March 2011 and May 2012. The attending physician of emergency medicine evaluated the patients through protocols of FEEL and EFAST. Finally, data were compared and quantitative and categorical variables were worked out along with other statistical analysis through estimated indicators.

Results: The EFAST examination performed during trauma assessment detected free abdominal fluid in 70% (P=0.005) of those examined. Compared with the CT findings, the diagnostic performance of the FAST examination had a sensitivity of 70.1% (95% CI, 65.3-72.4), specificity of 97.6% and negative predictive value of 82.1% (95% CI). In the case of the FEEL examination during cardiac arrest in pulseless electrical activity (PEA) identified the causes of no reversal situation in 45% of studied patients. The sensitivity was approximately 78.5% (95% CI) and positive predictive value of 85.2%. In relation to the ability to use US, lees

F21:3

Life Support 1

EVALUATION OF THE CHEST COMPRESSION LANDMARKS ACCORDING TO THE 2010 AMERICAN HEART ASSOCIATION(AHA) GUIDELINE FOR CARDIOPULMONARY RESUSCITATION (CPR) USING COMPUTED TOMOGRAPHY (CT) EXAMINATIONS FOR INFANTS

J. Cho (1), HJ. Yang (1), EY. Kim (2)

1. Department of Emergency Medicine, Gachon University Gil Hospital, Incheon, Korea, (South) Republic of
2. Department of Radiology, Gil Hospital, Incheon, Korea, (South) Republic of

Corresponding author: oneshot0229@gmail.com

Key-words: Pediatric resuscitation ; Cardiac arrest, Infant ; MDCT

Purpose: To verify by computed tomography (CT) that the left ventricle (LV) is compressed and the abdomen avoided using the two-finger and the two-thumb techniques in infants as described in the 2010 American Heart Association (AHA) for cardiopulmonary resuscitation (CPR) guidelines.

Methods: Using chest CT examinations in 63 infant patients from March 2002 to July 2011, we retrospectively measured distances of inter-nipple line (INL) and lower third (LT) of the sternum from xiphoid process. Below the xiphoid process was regarded as abdomen. In addition, distances between LV maximal diameter (LVMD) and xiphoid processes were also measured to determine

than half (45.6%) knew how to perform US, with 78.9% citing a lack of training.

Conclusions: This study demonstrates that focused emergency ultrasound may be useful for the diagnosis of several acute complications or situations with a high rate of mortality in critical care. The correct use of bedside ultrasound by emergency physicians could effectively help to identify reversible causes in cardiac arrest and abdominal or major trauma, even improving patients outcome.

F21:5

Life Support 1

A SURVEY INVESTIGATION OF KNOWLEDGE AND CONFIDENCE IN THE PERFORMANCE OF PEDIATRIC CARDIOPULMONARY RESUSCITATION AMONG PARENTS OF CLINIC PATIENTS IN A MIDDLE EASTERN HOSPITAL

J. Abu Asbeh (1), Cl. Leach (2), Bl. Lee (3), L. Moreno-Walton (4)

1. Paediatrics, Al Rahba Hospital, Abu Dhabi, United Arab Emirates
2. medical student, Louisiana State University Health Sciences Center, New Orleans, United States
3. Emergency Medicine, Louisiana State University Health Sciences Center, New Orleans, United States
4. Emergency Medicine & Research Genetics, Louisiana State University Health Sciences Center, New Orleans, United States

Corresponding author: DoctorMoreno@gmail.com

Key-words: pediatric cardiac arrest ; pediatric resuscitation ; public health

Background: The literature documents that infants and children in cardiac arrest are more than twice as likely to survive if bystander pediatric CPR (p-CPR) is promptly initiated. Bystander p-CPR can be easily taught to individuals with no medical training in a few hours in a small group setting.

Objective: This study seeks to evaluate the level of knowledge and confidence in the performance of this simple, lifesaving skill among parents bringing their children to a pediatric clinic in a Middle Eastern hospital.

Methods: An anonymous, previously validated 10 item survey on p-CPR was administered to a convenience sample of 300 parents of paediatric patients at a clinic with an annual census of 8,500 located in a suburban community hospital serving a population of 80,000. Responses were entered onto an Excel spread sheet and later analyzed on SAS Institute software using Pearson's Chi Square Test and simple proportions.

Results: 74.0% of respondents had a child < 1 year old, 47.7% had a child 2-12 years, and 8.0% 13-18 years. 18.3% had a premature infant. 16.3% were able to define CPR. 9.7% had trained in p-CPR and 4.0% in adult. 1.0% had performed CPR on an infant, 1.0% on a child 2-12, and 1.0% on a child 13-18. 94.7% had no CPR training experience. 1.33% had training < 1 year ago, 2.33% had training 1-2 yrs ago, 1.33% had training 3-4 years ago, 0.33% had training more than 5 years ago. The majority of those who did not train in p-CPR were not comfortable with performing CPR on children. (p=0.0239). If trained in CPR, 41.7% would be willing to perform it on their own child (p=0.0172) and 38.7% would be willing to perform p-CPR on someone else's child (p=0.0112). 18.33% of surveyed parents had no access to training/ re-training. 57.33% of surveyed parents did not know where to go train or re-train. 53.3% did not know that parents could receive training.

Conclusions: Our study demonstrates some important knowledge gaps. Despite conclusive evidence that p-CPR saves lives; almost none of the parents in this study know how to perform it and less than 20% know what CPR is. If trained in CPR, almost half of parents would be comfortable performing it on their own children,

and a third on the children of others. Not knowing where to go for training or even that parents can receive training are the greatest barriers. Our study is limited by being a single site survey study.

F21:7

Life Support 1

OUT-OF-HOSPITAL CARDIAC ARREST RESUSCITATION – SLOVAK REGIONAL DATABASE

J. Karas (1), A. Kilianova (1), M. Paulikova (1,2), S. Trenkler (1,3)

1. Education and Training Centre, Falck Zachranna a.s., Kosice, Slovakia
2. Department of Anaesthesiology and Intensive Medicine, Oncological Institute, Kosice, Slovakia
3. Department of Anaesthesiology and Intensive Medicine, L Pasteur University Hospital, Kosice, Slovakia

Corresponding author: trenkler@falck-zachranna.sk

Key-words: Cardiac arrest ; Out-of-hospital ; EuReCa

Purpose. Survival from out-of-hospital cardiac arrest (OHCA) is a widely accepted benchmark of emergency medical services (EMS) but the outcome for these patients as reported by various studies remains poor. One reason is the difficulty in performing CPR research. Prospective interventional studies and randomised controlled studies are not feasible in the context of cardiac arrest. For evaluation of health outcome the prospective collection of data in registries is the most appropriate tool. The European Resuscitation Council decided in 2008 to establish a common Cardiac Arrest Registry (EuReCa) of out-of-hospital cardiac arrest. Falck Zachranna (FZ) is a major provider of emergency medical services (EMS) in Slovakia with about 135 000 interventions a year and serving a population of about 1.4 million (26% of the Slovak population). We decided to develop a regional cardiac arrest register with the goal of testing this approach and of benchmarking our service. The final goal is to invite all EMS providers in Slovakia to join and develop the national Slovak registry to contribute to the common EuReCa registry and to be able to compare our national outcomes with those of other European countries.

Materials and methods. We have translated all documents, adopted the software and repeatedly trained around 600 paramedics and doctors through the Educational and Training Centre (ETC) of FZ. All 91 ambulances (32 physician-based) are advanced life support (ALS) equipped and all staff are regularly trained in 2010 ALS. All cases of pre-hospital cardiac arrest, with or without CPR performed by FZ ambulance staff, are prospectively recorded using an electronic Utstein-style protocol, an obligatory part of the company computerized information system. In spite of logistical and some legal problems we strived to get information about patients' outcomes in hospitals.

Results. From January to December 2011 altogether 2906 cardiac arrest protocols have been completed (2.17% of all interventions). The mean ambulance response time was 8.6 minutes. In 70.0% the aetiology of the cardiac arrest was primary cardiac, in 5.5% primary respiratory, in 4.1% trauma, in 5.2% other and in 14.2% unknown. Altogether 87.7% of the patients collapsed at home, 17.7% in a public place and 4.5% in the ambulance. The initial rhythm was asystole in 58.2%, ventricular fibrillation in 27.7% and pulseless electrical activity in 10.5% patients; in 2.1% the rhythm was not identified. Cardiopulmonary resuscitation was attempted in 1350 (46.45%) patients. Return of spontaneous circulation was obtained in 439 (32.5%) of these patients. One month survival in 411 patients was 6.7% (in 28 patients the outcome was not known). In comparing results from the first six months with the second six months of 2011, the proportion of patients with return of spontaneous circulation who were admitted to hospital increased

from 18.0% to 46.6% and the 1 month survival improved from 4.65% to 8.76%.

Conclusions. In preparation to join the EuReCa, in this pilot study we have defined the Slovak terminology, trained the personnel to complete the formulary in unified fashion and improved the software. We have recorded an improved outcome of resuscitated patients during 2011, the year in which the new 2010 Guidelines were implemented. Comparison with other countries is difficult because of the wide range of outcome numbers and uncertainty about the exact population served by FZ. The main challenge lies in determining the hospital mortality and neurological outcome of the patients. We have invited all 27 EMS providers in Slovakia to join the collection of data and we are looking for an organisation that could cover financially and personally the whole Slovak EuReCa project.

F21:8

Life Support 1

ACCOMPANYING THE END OF LIFE IN THE EMERGENCY DEPARTMENT

C Grange (1), A Heron (2), E Revue (3), A Saadar (3)

1. Palliative Care Unit, Victor Jousselin's Hospital, Dreux, France

2. Clinic Research, University René Descartes, Paris, France

3. Emergency Department, Louis Pasteur's Hospital, Le Coudray Chartres, France

Corresponding author: ericrevue@yahoo.fr

Key-words: Palliative Care ; End of Life decisions ; Palliative Mobile Care Unit

Introduction: Emergency departments (EDs) are increasingly used for patients, at the end-of-life (EOL) situations. Resuscitation and active treatment for these patients may not be the best, especially if they cannot always be discharged from ED to an appropriate facility or service. The Palliative Care Mobile Unit (PCMU) and the EPs established a pilot project to identify adults in need of palliative care, and to create a shortcut for EOL situations in the ED. **Materials and Methods:** we conduct a prospective study of all death in palliative emergency situations in our ED (40,000 visits/year) over 12 months. Epidemiologic data, length of stay (LOS), date of death and/or discharge, therapeutic practices were analyzed. All cases that involved palliative care patients with no curative therapeutic approach could be applied were included in a protocol named "LATA URG" for "Limitation And Treatment for palliative URGent situations". Participating in hospital emergency physicians (EPs), nurses and physicians from PCMU. We used 4 anonymous, standardized, self-administered survey questionnaires for ED Team, PCMU, patients and families. Measures included responses regarding experiences related to advance directives and EOL decisions in palliative care patients.

Results: Over a 12-month period, 21 patients were included. Mean age 68+/- 12 years, (67 % M, 33 % F). EOL situations accounted for 78 % of the deaths, 66% of patients had advance directives. 94% resulted in hospitalization in a dedicated palliative bed in the hospital (52%), in the ED Short Stay Unit (43 %), none were unable to leave following ambulant treatment at home. LOS 7 hours (3-24). Most of the patients died in less than 24h on working day (62%) or a week end (38%). 30% of patients were initially treated as a urgent situation before EOL decisions. A majority of EPs (69%) evaluated pain or anxiety (50%) but poor attention (5%) to spiritual and social concerns. Referral to the PCMU was crucial (57%) in these situations during the first hours of arrival in the ED. Patient's families were satisfied of EP's and PCMU in 80% of the EOL decisions.

Discussion: Palliative care patients represent about 0,1 % of all visits in our ED. During out-of hospital care of palliative care patients in advanced stages of their disease, acute situations are

more likely to occur as the patient nears death. In the final stages of life, palliative care patients in homecare settings may have to deal with sub-acute and acute conditions. Many patients present to ED because symptoms, such as pain or nausea and vomiting, cannot be controlled at home. Even for patients in whom goals of care are clear, families often need support for their mental distress. The ED is often the only place that can provide needed interventions (e.g., intravenous fluids or pain medications). Therefore, any EP may be confronted with palliative care patients, legal questions about advance directives, ethical decisions, and EOL decisions. In-hospital emergency medical treatment of palliative care patients depends on the expertise in palliative medical care of the emergency physicians. To assist palliative care patients who are in an advanced stage of their disease certainly requires a different therapeutic approach and must respect the patients's wishes. Our study presents EPs experiences, therapy decisions, and wishes concerning advance directives and showed the importance of palliative medical care expertise. In our protocol, EPs gave better in-hospital palliative medical care with a strong collaboration with the PCMU. A combination of both medical disciplines to address the most important issues that involve therapy at a patient's EOL wishes.

Conclusions : The reason of admittance patients in an advanced stage of palliative care has been identified by our study with the better experiences of the EMT with the Palliative Care Unit for their care-giving relatives in situations of clinical emergencies. It would be advantageous to integrate palliative medical content into emergency medical training. This would ensure the provision of appropriate emergency medical care to patients who are at the end of their lives, in accordance with palliative medical principles and consistent with their wishes. Having a palliative care team that is responsive to the needs of the ED will further enhance collaboration with the EP. Future research should focus on understanding the range of benefits to having palliative care in the ED.

F22:1

Life Support 2

ISCHEMIC POSTCONDITIONING AT THE INITIATION OF CARDIOPULMONARY RESUSCITATION FACILITATES FUNCTIONAL CARDIAC AND CEREBRAL RECOVERY AFTER PROLONGED UNTREATED VENTRICULAR FIBRILLATION

N Segal (1), T Matsuura (2), E Caldwell (2), S McKnite (2), M Zviman (3), TP Aufderheide (4), HR Halperin (3), KG Lurie (5), P Plaisance (1), D Yannopoulos (2)

1. Services des Urgences, Univ Paris Diderot, Sorbonne Paris Cité, UMR5 942, AP-HP, Hôpital Lariboisière, Paris, France

2. Cardiovascular Division, University of Minnesota, Minneapolis, United States

3. Division of Cardiology, the Johns Hopkins University School of Medicine, Baltimore, United States

4. Emergency Medicine, Medical College of Wisconsin, Milwaukee, United States

5. Cardiovascular Division and the Department of Emergency Medicine, University of Minnesota, Minneapolis, United States

Corresponding author: dr.nicolas.segal@gmail.com

Key-words: Cardiopulmonary resuscitation ; survival ; Postconditioning

Objectives: Ischemic postconditioning (PC) with "stuttering" reintroduction of blood flow after prolonged ischemia has been shown to offer protection from ischemia reperfusion injury to the myocardium and brain. We hypothesized that four 20-second pauses during the first 3 minutes of standard CPR would improve post resuscitation cardiac and neurological function, in a porcine model of prolonged untreated cardiac arrest.

Methods: 18 female farm pigs, intubated and isoflurane anesthetized had 15 minutes of untreated ventricular fibrillation

followed by standard CPR (SCPR). Nine animals were randomized to receive PC with four, controlled, 20-second pauses, during the first 3 minutes of CPR (SCPR+PC). Resuscitated animals had echocardiographic evaluation of their ejection fraction after 1 and 4 hours and a blinded neurological assessment with a cerebral performance category (CPC) score assigned at 24 and 48 hours. All animals received 12 hour of post resuscitation mild therapeutic hypothermia.

Results: SCPR+PC animals had significant improvement in left ventricular ejection fraction at 1 and 4 hours compared to SCPR (59±11% vs 35±7% and 55±8% vs 31±13% respectively, $p<0.01$). Neurological function at 24 hours significantly improved with SCPR+PC compared to SCPR alone (CPC: 2.7 respectively, $p=0.003$). Neurological function significantly improved in the SCPR+PC group at 48 hours and the mean CPC score of that group decreased from 2.7

Conclusions: Ischemic postconditioning with four 20-second pauses during the first 3 minutes of SCPR improved post resuscitation cardiac function and facilitated neurological recovery after 15 minutes of untreated cardiac arrest in pigs.

research on the effects of SGD use in humans and the effects on carotid artery blood flow is warranted.

F22:3

Life Support 2

SODIUM NITROPRUSSIDE ENHANCED CARDIOPULMONARY RESUSCITATION PREVENTS POST-RESUSCITATION LEFT VENTRICULAR DYSFUNCTION AND IMPROVES RESUSCITATION RATES AND 24 HOUR SURVIVAL AND NEUROLOGICAL FUNCTION AFTER PROLONGED UNTREATED CARDIAC ARREST IN PORCINE MODELS

N Segal (1), J Kolbeck (2), E Caldwell (2), S McKnite (2), P Plaisance (1), TP Aufderheide (3), D Yannopoulos (2)

1. Services des Urgences, Univ Paris Diderot, Sorbonne Paris Cité, UMR5 942, AP-HP, Hôpital Lariboisière, Paris, France

2. Cardiovascular Division, University of Minnesota, Minneapolis, United States

3. Emergency Medicine, Medical College of Wisconsin, Milwaukee, United States

Corresponding author: dr.nicolas.segal@gmail.com

Key-words: Cardiopulmonary resuscitation ; Survival ; Vasodilation

Aim of study: Sodium nitroprusside-enhanced cardiopulmonary resuscitation, or SNPeCPR, consists of active compression decompression CPR with an impedance threshold device, abdominal compression, and intravenous sodium nitroprusside (SNP). We hypothesize that SNPeCPR will improve carotid blood flow, return of spontaneous circulation, post resuscitation left ventricular function and neurological function compared to standard (S) CPR after prolonged ventricular fibrillation and pulseless electrical activity cardiac arrest (PEA) in a porcine model of cardiac arrest.

Methods: In Protocol A, pigs ($n = 22$) anesthetized with isoflurane underwent 15 min of untreated ventricular fibrillation, were then randomized to 6 min of S-CPR ($n = 11$) or SNPeCPR ($n = 11$) followed by defibrillation. In protocol B, 24 isoflurane-anesthetized pigs underwent 15 mins of untreated ventricular fibrillation and were subsequently randomized to receive standard cardiopulmonary resuscitation ($n = 6$), active compression-decompression cardiopulmonary resuscitation plus impedance threshold device ($n = 6$), or sodium nitroprusside-enhanced cardiopulmonary resuscitation ($n = 12$) for up to 15 mins. First defibrillation was attempted at minute 6 of cardiopulmonary resuscitation. In protocol C, a separate group of 16 pigs underwent 10 mins of untreated ventricular fibrillation followed by 3 mins of chest compression only cardiopulmonary resuscitation followed by countershock-induced pulseless electrical activity, after which animals were randomized to standard cardiopulmonary resuscitation ($n = 8$) or sodium nitroprusside-enhanced cardiopulmonary resuscitation ($n = 8$). The primary endpoints were neurologic function as measured by cerebral performance category (CPC) score and left ventricular ejection fraction in protocol A. In protocol B and C, the primary end point was carotid blood flow during cardiopulmonary resuscitation and return of spontaneous circulation.

Results: In protocol A, SNPeCPR increased 24-hour survival rates compared to S-CPR (10/11 versus 5/11, $p = 0.03$) and improved neurological function (CPC score 2.5 ± 1 , versus 3.8 ± 0.4 , respectively, $p = 0.004$). Left ventricular ejection fractions at 1, 4 and 24 hours after defibrillation were 72 ± 11 , 57 ± 11.4 and 64 ± 11 with SNPeCPR versus 29 ± 10 , 30 ± 17 and 39 ± 6 with S-CPR, respectively ($p < 0.01$ for all).

In protocol B, after prolonged untreated ventricular fibrillation, sodium nitroprusside-enhanced cardiopulmonary resuscitation

F22:2

Life Support 2

IMPAIRMENT OF CAROTID ARTERY BLOOD FLOW BY SUPRAGLOTTIC AIRWAY USE IN A SWINE MODEL OF CARDIAC ARREST

N Segal (1), D Yannopoulos (2), BD Mahoney (3), RJ Frascione (4), S McKnite (2), P Plaisance (1), DG Chase (5)

1. Services des Urgences, Univ Paris Diderot, Sorbonne Paris Cité, UMR5 942, AP-HP, Hôpital Lariboisière, Paris, France

2. Cardiovascular Division, University of Minnesota, Minneapolis, United States

3. Emergency Medicine, Hennepin County Medical Center, Minneapolis, United States

4. Emergency Medicine, Regions Hospital, St Paul, United States

5. Emergency Medicine, Ventura County Medical Center, Ventura, United States

Corresponding author: dr.nicolas.segal@gmail.com

Key-words: Intubation ; Cardiopulmonary Resuscitation ; supraglottic airway

Objective: Supraglottic airway devices (SGDs) are often used as an alternative to endotracheal tube (ETT) during cardiopulmonary resuscitation (CPR). SGDs can be inserted 'blindly' and rapidly, without stopping compressions. These devices utilize pressurized balloons to direct air to the trachea and prevent esophagus insufflation. We hypothesize that the use of a SGD will compress the carotid artery and decrease carotid blood flow (CBF) during CPR in pigs.

Methods: Ventricular fibrillation (VF) was induced in 9 female pigs (32 ± 1 Kg) followed by 4 minutes without compressions. CPR was then performed continuously for 3 six-minute intervals. During each interval, an ETT was used for the first 3 minutes, followed by 3 minutes of each SGD (King LTS-D™, LMA Flexible™, Combitube™) in a random order. The primary endpoint was mean CBF (ml/min). Statistical comparisons among the 4 airway devices were performed by Wilcoxon Rank test. Post mortem carotid arteriographies were performed with SGDs in place.

Results: CBF (median ml/minute; 25/75 percentile) was significantly lower with each SGD [King (10; 6/41), LMA (10; 4/39), and Combitube (5; -0.4/15)] versus ETT (21; 14/46) ($p < 0.05$ for each SGD compared with ETT). Arteriograms showed that with each SGD there was compression of the internal and external carotid vessels.

Conclusion: The use of 3 different SGDs during CPR significantly decreased CBF in a porcine model of cardiac arrest. While the current study is limited to pigs, the findings suggest that further

demonstrated superior rates of return of spontaneous circulation when compared to standard cardiopulmonary resuscitation and active compression-decompression cardiopulmonary resuscitation plus impedance threshold device (12 of 12, 0 of 6, and 0 of 6 respectively, $p < .01$).

In protocol C animals with pulseless electrical activity, sodium nitroprusside-enhanced cardiopulmonary resuscitation increased return of spontaneous circulation rates when compared to standard cardiopulmonary resuscitation. In protocol B and C, carotid blood flow, coronary perfusion pressure, cerebral perfusion pressure, and end-tidal CO₂ were increased with sodium nitroprusside-enhanced cardiopulmonary resuscitation.

Conclusions: In pig, SNPeCPR significantly improved return of spontaneous circulation rates, as well as carotid blood flow, end-tidal CO₂, 24-hour survival rates, neurologic function and prevented post-resuscitation left ventricular dysfunction.

F22:4 Life Support 2

TEMPERATURE STABILITY DURING THERAPEUTIC HYPOTHERMIA INDUCED WITH A NOVEL ESOPHAGEAL DEVICE

P Shanley (1), E Kulstad (2), D Courtney (3), K Lurie (4), T Matsuura (5), S McKnite (6), A Metzger (7), J Rees (8)

1. McCormick School of Engineering, Northwestern University, Evanston, United States

2. Department of Emergency Medicine, Advocate Christ Medical Center, Oak Lawn, United States

3. Department of Emergency Medicine, Feinberg School of Medicine, Northwestern University, Chicago, United States

4. Department of Emergency Medicine, Hennepin County Medical Center, Minneapolis Medical Research Foundation, Minneapolis, United States

5. Cardiovascular Division, University of Minnesota, Minneapolis, United States

6. Cardiac Arrhythmia Center, Minneapolis Medical Research Foundation, Minneapolis, United States

7. Department of Emergency Medicine, University of Minnesota Medical Center, Minneapolis, United States

8. Research Associate, Advanced Circulatory Systems, Inc., Roseville, United States

Corresponding author: shanley@advancedcoolingtherapy.com

Key-words: Hypothermia ; Animal model ; Medical device

Introduction: The maintenance of goal temperature within a narrow range is important during treatment with therapeutic hypothermia, since breaches below goal temperature may impart harmful effects to patients, and excursions above goal temperature risk loss of the benefits of treatment. Because existing methods to induce therapeutic hypothermia do not always maintain goal temperature within a ± 1 C range, we evaluated the ability of a novel esophageal cooling device to maintain goal temperature, hypothesizing a variance around goal temperature of less than ± 1 C.

Methods: Hypothermia was induced using a new esophageal cooling device in 5 female Yorkshire swine (65 kg \pm 3.9 kg) after anesthesia with inhalational isoflurane. The device cools through the esophagus by connecting to an external chiller set to automatic cooling mode, which provides a closed circuit of chilled water to the device, while a central channel allows withdrawal of gastric contents. A 24 hour cooling protocol was completed before rewarming and recovering the animals. Temperature was measured via intravascular, rectal, and bladder and/or vaginal temperature probe.

Results: Swine were cooled 4 C below baseline from an average baseline temperature of 38.6 C. Once steady-state was reached (with an average rate of temperature decrease of 1.3 C/hr) intravascular temperatures remained at goal temperature for over 20 hours, with standard deviations for each subject of 0.10, 0.03,

0.15, 0.28, and 0.48 C, and with an overall standard deviation amongst all 5 swine of 0.21 C.

Conclusions: This novel esophageal cooling device successfully cooled a large-animal model, maintaining a very precise temperature range around the goal temperature (standard deviation 0.21 C). Core cooling through this manner may offer improved temperature regulation when compared to existing surface or intravascular approaches, and avoid dangerous temperature overshoot.

F22:5 Life Support 2

CAPNOGRAPHY AND THORACIC ULTRASOUND IN THE MANAGEMENT OF ACUTE DYSPNEA IN THE EMERGENCY DEPARTMENT.

C Sandonà, G Serianni, G Vettore, F Tosato

Pronto Soccorso, Azienda Ospedaliera di Padova, Padova, Italy

Corresponding author: chiara.sandonà@gmail.com

Key-words: Dyspnea ; Capnography ; Thoracic Ultrasound

Background

Acute dyspnea is one of the most chief complaints in the Emergency Department where the most common causes are acute pulmonary edema, COPD exacerbation, asthma and pneumonia. Physical examination, biomarkers and chest radiography have insufficient specificity or sensibility. Lung US is based on analysis of artifacts like B-lines artifacts, that indicates alveolar-interstitial syndrome, which is a common sign of acute pulmonary oedema. Capnography is the measurement of carbon dioxide (CO₂) partial pressure in the exhaled breath; it provides a graphic representation of CO₂ concentration over time: the capnogram. In subjects without respiratory difficulty or underlying lung pathology, the capnogram has a rectangular shape, when in obstructive lung disease the capnogram has a more rounded appearance in the initial phase of exhalation and an upward slope during the alveolar plateau; this pathological shape is called shark fin morphology. **Objectives.**

Our objectives were: test the usefulness of capnography in non-intubated patients in the ED; study the capnogram shape in pulmonary and cardiogenic dyspnea; investigate the diagnostic performance of capnography, pulmonary ultrasound and standard physical-instrumental examinations; find the role of capnography in the initial treatment approach in the ED.

Methods

We enrolled 38 consecutive non-intubated adult patients with positive triage for dyspnea or respiratory distress, with SaO₂ $<$ 96%, respiratory rate $>$ 20 acts/min and PaO₂ $<$ 80mmHg. We excluded all patients with massive pleural effusion, pneumothorax, pulmonary cancer, pneumonectomy, STEMI and previous drug administration in the prehospital setting (O₂ therapy excluded). Each patient had a capnogram trace of 15sec with almost 8 spontaneous breaths, End-tidal CO₂ was measured by a nasal cannula connected to a microstream capnometer. US examination of the lung had been carried out with 8 anterior and lateral scans of the chest wall. We considered a scan as positive if it revealed more than 3 B-lines with a gap smaller than 7mm. We also considered: clinical signs of obstructive lung disease or heart failure, chest x-ray, arterial-blood analysis and blood-concentration of CRP and white-blood-cells.

Results

We enrolled 38 patients, but we finally analyzed 28 patients: 14 had been diagnosed heart failure (HF), 8 COPD/asthma, 6 HF plus COPD. Lung US was positive for alveolar-interstitial syndrome in 13

HF cases and negative in 7 COPD/asthma patients; sensitivity 80% (IC 62,5-97,5) and specificity 87,5% (IC 64,6-99,68) ($p=0,0009$). Capnogram shape was normal in 11 patients with HF while it showed a "shark fin" morphology in 7 patients with COPD/asthma and in 3 patients with HF+COPD. Sensitivity 78,5% (IC 48,8-94,3) and specificity 78,5% (IC 48,8-94,3) ($p=0,0024$). Using simple linear regression, the correlation between $etCO_2$ and $PaCO_2$ in all patients was poor ($R = 0,61$); correlation was poorer in patients with HF ($R=0,63$), with a mean difference between $EtCO_2$ e $PaCO_2$ of 12,18 mmHg, while in patients with COPD/asthma correlation was 0,65 and mean difference $EtCO_2$ - $PaCO_2$ was 4,2 mmHg.

Conclusions

This preliminary study shows a significant correlation between pulmonary US and capnogram shape in the differential diagnosis of pulmonary and cardiogenic acute dyspnea. Both techniques may be used in an Emergency Department to make a rapid diagnosis and to guide the initial treatment ensuring a rapid diagnosis.

F22:6

Life Support 2

ACCURACY OF MULTI-ORGAN ULTRASOUND (VENOUS, CARDIAC AND THORACIC) FOR THE DIAGNOSIS OF PULMONARY EMBOLISM: SUSPECTED PULMONARY EMBOLISM SONOGRAPHIC ASSESSMENT (SPES) MULTICENTER PROSPECTIVE STUDY

C Gigli (1), P Nazerian (2), S Vanni (3), M Zanobetti (2), M Bartolucci (4), A Ciavattone (5), G Volpicelli (6), A Lamorte (6), S Grifoni (2)

1. Emergency Department, Azienda Ospedaliero-Universitaria Careggi, Florence, Italy
2. Emergency department, Azienda Ospedaliero-Universitaria Careggi, Florence, Italy
3. Emergency Department, Azienda Ospedaliero-Universitaria Careggi, Florence, Italy
4. Radiology department, Azienda Ospedaliero-Universitaria Careggi, Florence, Italy
5. Emergency department, Ospedale Pierantoni Morgagni, Forlì, Italy
6. Emergency department, Ospedale Universitario San Luigi Gonzaga, Torino, Italy

Corresponding author: io_gigliola@hotmail.it

Key-words: Pulmonary embolism ; Ultrasound ; Diagnosis

Purpose. Patients with suspected Pulmonary Embolism (PE) and a high clinical probability or a high D-dimer level should undergo a second level diagnostic test such as Multidetector Computed Tomography Angiography (MCTPA). Unfortunately MCTPA involves radiation exposure, is expensive, is not feasible in unstable patients and has contraindications. UltraSound (US) is safe and rapidly available even in unstable patients. Many authors evaluated the diagnostic role of Compression Ultrasound Scan (CUS) for detecting limbs Deep Vein Thrombosis (DVT), TransThoracic Ecocardiography (TTE) for detecting Right Ventricular Disfunction (RVD) or Thoracic UltraSound (TUS) for detecting subpleural infarcts in patients with suspected PE. No previous studies have investigated the diagnostic accuracy of CUS, TTE and TUS combined (multi-organ US) for the diagnosis of PE. This study evaluates the diagnostic accuracy of multi-organ US.

Methods. Consecutive patients that underwent MCTPA in three Emergency Department for clinical suspicion of PE and with a simplified Well's score >4 (PE likely) or with a D-dimer value ≥ 500 ng/ml were enrolled in the study. MCTPA was considered the gold standard for PE diagnosis. A multi-organ US was performed by an emergency physician sonographer before MCTPA. PE was considered echographically present if CUS was positive for DVT or TTE was positive for RVD or at least one pulmonary subpleural infarct was detected with TUS. The accuracy of the single and multi-organ US was calculated. Multi-organ US accuracy was calculated in patients with a complete US exam (CUS of femoral

and popliteal veins bilaterally, good acoustic window for TTE and TUS of both anterior and posterior chest).

Results. Among 237 patients, (59% female, median age=72), MCTPA was positive for PE in 84 (35%). A complete US was feasible in 218 (92%) patients. The sensitivity, specificity, Positive (PPV) and Negative Predictive Value (NPV), positive and negative Likelihood Ratio (LR) of the single and the complete multi-organ US are reported.

Conclusions. A complete multi-organ US scan is possible in more than 90% of patients with suspected PE. Multi-organ US has a good sensitivity, NPV and negative LR and its sensitivity is superior to all single organ US scan. Multi-organ US is a good tool to rule-out PE.

F22:7

Life Support 2

ENDOGENOUS CARBOXYHEMOGLOBIN (COHB) CONCENTRATIONS IN THE ASSESSMENT OF SEVERITY IN PATIENTS WITH COMMUNITY-ACQUIRED PNEUMONIA

K. Corbacioglu, I. Kilicaslan, F. Bildik, A. Guleryuz, B. Bekgoz, A. Ozel, A. Keles, A. Demircan

Emergency Department, Gazi University Faculty of Medicine, Ankara, Turkey

Corresponding author: isakilicaslan@hotmail.com

Key-words: Community-acquired pneumonia ; Endogenous carbon monoxide ; Emergency department

Introduction

Studies have shown that carbon monoxide (CO), which is produced endogenously by heme oxygenase enzyme system, is increased in community-acquired pneumonia (CAP). However, it has not been studied enough whether severity of pneumonia is correlated with increased COHb concentrations in CAP. The aim of this study was to determine whether COHb concentrations could predict severity in CAP.

Material and Method

Eighty-two patients with community-acquired pneumonia (CAP) and eighty-three control subjects were evaluated in this cross-sectional study during a 10-month period. The carboxyhemoglobin (COHb) concentration was measured in arterial blood sample.

Results

The values of COHb in patients with pneumonia were 1.70% (min-max: 0.8-3.2), whereas those in control subjects 1.40% (min-max: 0.8-2.9). The COHb concentrations were significantly higher in patients with CAP compared with those control subjects ($p<0.05$). Concentration of COHb correlated with PSI ($p: 0.04$ $r: 0.187$); however, it did not correlate with CURB-65 ($p: 0.218$ $r: 0.112$).

Conclusion

Even though COHb concentrations show an increase in patients with pneumonia, we cannot yet conclude that this increase acts as an indicator in diagnosis process or prediction of clinical severity for the physician.

F22:8

Life Support 2

ACUTE RESPIRATORY DISTRESS IN MANIITSOQ, GREENLAND

P. Duch (1), NE. Ebbenhøj (2), F. Lynggaard (1)

1. Dept. of internal medicine Dronning Ingrid's Hospital, Nuuk, Greenland

2. Dept. of Occupational Medicine, Bispebjerg University Hospital.

Corresponding author: pduch@hotmail.com

Key-words: ; ;

Background: Inhalation of aerosols of surface active substances is a known risk factor for development of acute respiratory distress syndrome (ARDS). A number of small case series are reported with exposure for aerosols from spray-cans with textile or leather protecting agents. We report a series of cases with respiratory symptoms in a group of 39 persons exposed to a floorsealing product, Anti Fleck Super® (AFS). Case: In 2010, a supermarket in the Greenlandic town Maniitsoq, was under renovation. A 300 m² floor was sprayed with AFS. The spraying created a fog of aerosols of polyfluorinated silicones. Craftsmen, employees, and customers inhaled the aerosols during a period of minutes to 3 hours. Within hours 39 persons developed cough, dyspnoea, and fever in varying degrees. It was necessary to evacuate the 39 patients, with progressive symptoms, by airplane from the small hospital in Maniitsoq, to the well equipped Dronning Ingrid's Hospital (DIH), Nuuk. Triage was used. Methods: Symptoms were recorded in Maniitsoq and DIH. All patients had arterial blood analyses and chest x-rays taken on arrival to DIH. Two months after the incident, the patients were offered a thoroughly clinical follow-up with lung function test, oxygen-saturation working test and chest x-ray. The patients: male and female, mean age 33 years, mainly without earlier medical record. Almost all were smokers. Results: Within few hours 39 persons developed symptoms of respiratory distress. Mainly difficulty breathing, coughing, flu-like symptoms, tachycardia, fever and reduced SpO₂. Seven patients had acute lesions on chest X-ray. All symptoms peaked and virtually subsided within 24 hours. Except in 3 patients, hospitalized in intensive care, who had severe respiratory symptoms for 48 hours, SpO₂ average 80%. At clinical follow-up, 15 patients still experienced difficulty breathing during hard physical work. But all had normal medical examinations including normal SpO₂ during exercise. Conclusion: The Greenlandic healthcare system has a set-up that makes it capable of managing acute situations even up to a larger scale. Evacuation and the management in the hospitals functioned optimally throughout the acute situation. Poly-fluorinated silicones are potent chemicals able to produce pulmonary toxicity even at low-intensive exposure levels.

F22:9

Life Support 2

PERFORMANCES OF VENTILATOR AT ALTITUDE

E Forsans (1), L Franck (1), C Bourrilhon (2), F Leclerc (2), F Briche (3), CE Astaud (3), H Lefort (3), S Lemoine (3), JP Tourtier (3)

1. emergency department, Military hospital Val-de-Grâce, Paris, France

2. Air Force, Laboratory of aviation and space medicine, Brétigny, France

3. emergency department, Fire brigade of Paris, Paris, France

Corresponding author: jeanpierre.tourtier@free.fr

Key-words: ventilation ; altitude ; aeromedical evacuation

Introduction :

We have assessed the ability of 3 ventilators to deliver to a normal lung model a set tidal volume (Vt) at different simulated cabin altitudes, by changing the air pressure using a decompression chamber. Changes in barometric pressure with increasing altitude are associated with alterations in gas density, temperature and humidity. Ventilation during air medical transport is a challenge and there is definitely a need for lack of variations between delivered and set tidal volume (Vt). Unfortunately mechanical ventilators can suffer from variations in the environmental pressure. We studied the performance of the LTV-1200 (Care Fusion, USA), the Elisée 350 (Resmed, Australia) and the Medumat transport (Weinmann, Germany).

Materials and methods :

The experiment was performed in the French laboratory of aviation and space medicine of Air Force. We used a decompression chamber to mimic the hypobaric environment at a range of simulated cabin altitudes of 2438 and 3657 meters (8000 and 12000 feet). Measurements were also committed at ground level (90 m). One ventilator of each type was randomly chosen from the warehouse. The ventilators had current manufacturer certification, and were checked by the maintenance service of medical materials of the French Air Force. Ventilators were tested with a set fraction of inspired oxygen of 50% and Vt set of 700 ml (with a normal lung model). Respiratory rate was 12 breaths/minute. The positive end expiratory pressures were set at 0 cm H₂O. We measured the actual volume delivered with a dedicated instrument of the physiological laboratory of the Air Force: Fleisch pneumotachograph. It was connected between the ventilator circuit and the normal lung model. Pressure drop across the pneumotachograph was measured by a differential pressure transducer. The spirometer was checked at each altitude using a calibration syringe. Signals for flow, volumes and pressure were collected and recorded for analysis (Hewlett Packard TM computer). Comparisons of preset to actual measured values were accomplished using a t test for each altitude. The protocol included 36 measurements for each Vt set at each simulated altitude. A significant difference was defined by p < 0.05.

Results:

With a Vt set of 700 mL, Vt delivered was respectively at 90, 2438 and 3657 m:

- Firstly, for the LTV-1200: 635.72 (95% confidence interval: 634.51-636.94 ; Vt delivered vs Vt set : p<0.05), 763.80 (95% confidence interval: 761.92-765.67; Vt delivered vs Vt set : p<0.05) and 843.14 (95% confidence interval: 842.02- 844.26; Vt delivered vs Vt set : p<0.05) .

- Secondly, for the Elisée 350: 656.10 (95% confidence interval: 654.61- 657.59; Vt delivered vs Vt set : p<0.05), 672.41 (95% confidence interval: 670.18- 674.64; Vt delivered vs Vt set : p<0.05) and 665.24 (95% confidence interval: 663.98- 666.49; Vt delivered vs Vt set : p<0.05) .

- Thirdly, for the Medumat transport: 665.23 (95% confidence interval: 659.56- 670.89; Vt delivered vs Vt set : p<0.05), 628.90 (95% confidence interval: 620.72-637.09; Vt delivered vs Vt set : p<0.05) and 657.54 (95% confidence interval: 650.66-664.41; Vt delivered vs Vt set : p<0.05).

Discussion:

The major finding of this investigation is that the ventilators performed differently when exposed to ventilation in a hypobaric environment.

With altitude, the LTV1200 showed an important increase (more than 10%) in Vt delivered. Performances of the Elisée 350 and Medumat transport ventilator remained almost the same despite the decrease of the barometric pressure.

F23:1

Disaster Medicine 1

CHILD IN HAND - A PROSPECTIVE ANALYSIS OF A DISASTER MITIGATION AND HAND HYGIENE PROGRAM FOR CHILDREN IN HAITI.

MA Aljohani (1), SC Cattanmanchi (2), AQ Alqahtani (3), MB Bouton (4), TS Stalls (5), GC Ciottonne (6)

1. Emergency Medicine, King Abdulaziz Medical Center, National Guard Hospital. BIDMC, Harvard Medical School, Waltham, United States

2. Emergency Department, Disaster Medicine Section, Harvard Medical School, Boston, United States

3. Emergency Department, Disaster Medicine Section, King Fahad Medical CENTER. BIDMC, Harvard Medical School, Boston, United States

4. Emergency Medicine, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, United States

5. Project Manager, Child in Hand (CIH), Virginia, United States

6. Harvard-Affiliated Disaster Medicine/Emergency Management Fellowship. Harvard Medical School Disaster Section / Division of Disaster Medicine. Beth Israel Deaconess Medical Center., Beth Israel Deaconess Medical Center, Boston, United States

Corresponding author: mjoahani@hotmail.com

Key-words: To create awareness about disaster mitigation procedures and hand hygiene among the children in orphanages participating in the "Child In Hand" program in Haiti. ; children were then taught mitigation techniques including hand hygiene, and for fire, earthquake and hurricanes, using playful techniques, songs, and puppets. Kids were then encouraged to demonstrate what they have learned in front of the class. Rewards were given to children who demonstrated what they have learned in front of the class. We are planning to continue teaching the lessons during future visits and evaluate how many of the kids have retained knowledge about Disaster Mitigation Awareness and Hand Hygiene techniques.

BACKGROUND

Very few places in the world have experienced disasters such as Haiti did over the past decade. Haiti has experienced numerous deadly hurricanes, including the most devastating group of storms in 2008 which combined resulted in 793 deaths, 22,702 homes destroyed, and 84,625 damaged, affecting 800,000 people. The devastating Earthquake in 2010 then killed more than 200,000 people, injured more than 300,000 people, and left more than 1,000,000 homeless. The subsequent Cholera outbreak, (October 2010-March 2011), left 4,672 people dead and a total of 252,640 people struck ill. A little more than 1,000,000 orphans are now estimated to be living in Haiti and are most at risk.

OBJECTIVE

To create awareness about disaster mitigation procedures and hand hygiene among the children in orphanages participating in the "Child In Hand" program in Haiti.

METHODS

This is a prospective analytical study of the effectiveness of disaster mitigation and hand hygiene awareness programs for Haitian children, conducted at the six orphanages in and around Port-au-Prince Haiti, from 2nd to 6th April 2012. The disaster awareness and hand hygiene education team consisted of Disaster Medicine Fellows, an Emergency Medicine Resident, Emergency Management personnel and an Attending-level Emergency Physician..

Using pediatric disaster mitigation awareness materials provided by FEMA and the CDC, coloring activity books by UNICEF and UNDP, and hand hygiene educational material from the CDC and WHO, we created a Disaster mitigation awareness and hand hygiene program for the Haitian children. First, the children were quizzed on their knowledge of hand hygiene, fire, earthquakes, and hurricanes before starting the awareness program. The children were then taught mitigation techniques including hand hygiene, and for fire, earthquake and hurricane, using playful techniques, songs, and puppets. Kids were then encouraged to demonstrate what they have learned in front of the class. Rewards were given to all who participated. Animated Drawings of the lessons were passed to kids who were asked to color them, creating their own posters for each disaster which was then displayed in their

orphanage. At the end of the program the children were again quizzed on their knowledge.

RESULTS

A total of 395 children from 6 orphanages in and around Port-au-Prince Haiti, were included in the study, among whom 200 children belonged to the Mission of hope-Grand Gove, 40 to orphanage DAMAS-19, 35 to Williams, 30 to Foyer Evangelique, 30 to House of David, and 60 to ORAEDH.

A total of twenty children aged 8-15 participated in the quiz from all of the orphanages. The average score of the children before starting the course was 25%. Of interest, concerning disaster mitigation awareness, none of the children answered the question correctly. At the conclusion of the program, 85% of the children in all orphanages tested knew the correct answers for all questions on disaster mitigation awareness and hand hygiene.

After the awareness program, each orphanage was provided with multiple sets of posters in Haitian Creole about Hand Hygiene, which were posted in bathrooms and Kitchen areas. Care-takers and older kids were encouraged to supervise the younger children as they wash their hands.

CONCLUSION

This educational program demonstrated dramatic improvement in the children's knowledge of disaster mitigation awareness and hand hygiene. As the aim of this program is sustainability, we are planning to continue teaching the lessons during future visits and evaluate how many of the kids have retained knowledge about Disaster Mitigation Awareness and Hand Hygiene techniques.

F23:2

Disaster Medicine 1

MOBILE HEALTH SERVICES IN VAN EARTHQUAKES

S Karadas (1), R Dursun (2), H Gönüllü (1), S Sevimli (3), S Güner (4), O Cetinkaya (5)

1. emergency department, Yüzüncü Yıl University, van, Turkey

2. emergency department, Van Region Training and Research Hospital, van, Turkey

3. Medical History and Ethics, Yuzuncu Yil University School of Medicine, van, Turkey

4. ortopedy department, Yüzüncü Yil University, van, Turkey

5. Advisor to the undersecretary, Republic of Turkey Ministry of Health, ankara, Turkey

Corresponding author: drrecepdersun@hotmail.com

Key-words: Earthquake ; mobile health services ; triage card

INTRODUCTION

The routine services of public and private health service providers were unable to continue because of Van earthquakes (7.2, 5.6, 5.0) because 90% of the buildings have had damage thereby they had risk. This situation, the treatment of earthquake victims and other patients were prevented from reaching health care. In this process, earthquake victims and other patients needed health services, authorities of health have established mobile health services for patients to access easily to health services. Aim of this paper is to explain the activities of mobile health services and highlight the importance of mobile health services in the process of disasters.

METHODOLOGY

Data of patients of the earthquake which was obtained from Van city health department, and crisis coordination center were received and three months data of same centers has been examined. Data were evaluated retrospectively. Views of the mobile health care providers and coordination of the employees were evaluated beside of these data. In Van, four hospitals in addition these buildings five field hospitals and a mobile operating theater were established in order to health service effectively survivors of earthquake and other patients.

RESULTS

In addition, five field hospital were also kept ready for use in case of need. Total of 212 ambulances were sent to the region. In this process Van has totally 52 ambulances, health authorities sent 212 ambulances and therefore total 264 ambulances served. Six of these were intensive care ambulance. Furthermore, four generator (30 KWA), three mechanical ventilators, 70.6 tons of medical supplies and medicines were sent to the region. Two mobile pharmacy vehicle traveling 56 National Medical Rescue Team were commissioned in the region. Health material were supported 70 other cities. Two teaching assistants and 22 professional staff were charged for environmental health, water sanitation, and epidemic disease prevention program. Vaccination services, psychological supports and treatment services were presented by health professionals to Van besides of its districts and villages.

DISCUSSION AND CONCLUSION

Within the framework of existing, studies of health services were realized in Van city, but there was some troubles. First, air ambulances are not appropriate for night flights. For this reason, transportation of the injured was very slow. Second, efficient allocation and use of ambulances from outside the city in the early days were achieved. Therefore, over time, health care professionals and patients did not want to enter to the hospitals. Other important thing became the absence of a triage card. Identification card of unconscious patients has failed due to lack of triage card. Therefore, accurate data flow is not achieved.

F23:3

Disaster Medicine 1

APPLICATION OF TWO PREDICTIVE MODELS FOR MASS-GATHERING MANAGEMENT: AN ITALIAN EXPERIENCE.

E Albergoni (1), D Colombo (2), F Della Corte (2), F Foti (1), P Ingrassia (2)

1. Servizio Sanitario Urgenza Emergenza, AREU - Lombardia, Milano, Italy
2. Medicina Traslationale - CRIMEDIM, Università del Piemonte Orientale, Novara, Italy

Corresponding author: davide.colombo@med.unipmn.it

Key-words: Mass Gathering ; Medical ambition ; Predictive model

Background: Several models were described to try to establish the medical need during mass-gathering events. The AREU 118 (Lombardia Emergency Medical System) had recently to support the "VII World Meeting of Families" in Bresso, near Milan. Two different models were adopted to ascertain the level of medical preparedness. The aim of this study is to describe the medical response system, the working-load of healthcare provider and type and severity of interventions performed during the Sunday meeting in the Bresso area and compare this data with those expected by the models applied.

Method: Both Arbon1 and Maurer2 models were adopted to establish the level of medical ambition to face the event. Data were based on 500,000 visitor expected. Data were collected by means of EMMA (Beta 80, Milano Italy), the software for dispatch center management with custom revisions for the meeting.

Results: the Arbon's algorithm resulted in 439 expected patients' presentation to the healthcare system. The Maurer's system scored 204 points. A dedicated team with experience in mass gathering event management reviewed the data and decided to implement the following organization:

- a)1 dedicated dispatch center (dDC) [1 Medical doctor (MD) and 5 radio technicians (RT)].
- b)1 dedicated safe-car for the Pope: [2 MD, 1 nurse (N) and 1 driver (D)]
- c)3 medic-cars [1MD, 1N, 1D each]
- d)2 rescue volunteers (RV) with medical-motorcycles

- e)8 ambulances for transportation [2 RV, 1 D each]
- f)4 advanced medical post (AMP) [2MD, 3N, 2RV each]
- g)2 ambulances for each AMP [2 RV, 1 D each]
- h)70 walking rescue team [3RV, each]
- i)23 Ambulances [3RV, each] in Bresso area

The number of people attended the meeting were close to 800,000. The dDC received 317 call during the meeting. The majority were patients with direct access to AMP (153), followed by patients coming from field area (142), from gates (11), from VIP-area (6), from stage (5) and 2 from disable zone. For patients directly admitted to AMP resulted as 2 red codes, 12 yellow, 91 green and 39 white. The most common pathology coming from dDC was digestive problems (17%), followed by heart failure (13,9%) and accidental falls (11,9%). Walking rescue team did not know the main pathology when called in 43.9%; in 23.3% they were called for a cardio-circulatory problem. A total number of 74 patients (23.4%) were transferred to hospital, equally distributed in the 10 nearby hospital. AMP-A received more patients (35.9%) than B (26.5%) and D (24.2%), while AMP-C received less patients as compared to the other three (13.4%).

Conclusions: No problems arose during the "Family day": the organization guaranteed the accessibility to healthcare-system for those who need. Arbon model accurately predicted the number of patients, but underestimated the number of those who needed hospital transportation (7 vs. 74, respectively). Maurer models suggested almost the double of the resources deployed. The review of the results of the 2 models allowed the implementation of an effective response system with an acceptable over-estimation of the resources, considering the worst case scenario philosophy.

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F23:4

Disaster Medicine 1

NURSES AND MASS CASUALTY INCIDENT TRIAGE: EFFICACY AND APPRECIATION OF NATIONWIDE SIMULATION PROGRAM.

L Ragazzoni (1), PL Ingrassia (1), E Sabatini (2), S Sabbatini (3), L Di Matteo (3), F Polcini (2), H Troiano (3), C Picone (2), F Petrini (3), F Della Corte (1)

1. Research Center in Emergency and Disaster Medicine, CRIMEDIM, Novara, Italy
2. PhD in e-Learning, Delivery and Development., Università G. D'Annunzio, Chieti - Pescara, Italy
3. Department of Anesthesia, Critical Care and Pain Medicine, Università G. D'Annunzio, Chieti - Pescara, Italy

Corresponding author: luca.ragazzoni@med.unipmn.it

Key-words: Mass Casualty Incident Triage ; Disaster Simulations ; Nurse Education

Background

The format of live exercise is currently the best known type of simulation and it was demonstrated to be very effective in improving technical and non-technical skills and represents the gold standard for confrontation. Other options such as table-top and computerized simulations are useful tools for training and teaching Disaster Medicine. Basing on this evidence, we explored if a 1-day exercise session about Mass Casualty Incident (MCI) Triage, based on innovative simulation tools, could be effective to improve basic knowledge and if it could be appreciated by nurses.

Methods

51 nurses, enrolled in an Italian first-level Master focused on principles of Disaster Preparedness and Management, were exposed to three different types of simulations (table-top exercise, virtual reality simulation and live scenarios). After a 20-min lecture on MCI Triage, every nurse was subsequently exposed to the three simulations aiming at triaging 10 victims in a limited period of time (5 min). The simulation environment and the victims' clinical conditions were identical in the three scenarios. For learning evaluation purposes, all participants were assessed with a standard multiple-choice questionnaire and a triage exercise before and after the whole session. Participants' level of satisfaction through a 6-items questionnaire rated on a 10-point Likert scale was also evaluated.

Results

The average of right answers was 58% in the pretest and 82% in the post-test. The triage accuracy was 64% and 94% in the pre-test and post-test exercise respectively. 41/51 nurses reached in the post-test 100% of triage accuracy. The overall mean score of nurses satisfaction with the entire learning session was 9/10.

Conclusion

The whole session based on new teaching methodologies were able to increase the basic knowledge of nurses in MCI triage topics. The study demonstrates that the overall training session generates improvement in triage accuracy. The nurses really appreciated the use of simulation tools and exercises. The data represents only an initial report of a future nationwide study that will include all the 180 nurses enrolled into the Master.

F23:5

Disaster Medicine 1

NATIONWIDE PROGRAM FOR TRAINING NURSES IN MCI TRIAGE: THE IMPACT OF THREE DIFFERENT TYPE OF SIMULATION.

L Ragazzoni (1), PL Ingrassia (1), E Sabatini (2), S Sabbatini (3), L Di Matteo (3), F Polcini (2), H Troiano (3), C Picone (2), L Carenzo (1), F Petrini (3), F Della Corte (1)

1. Research Center in Emergency and Disaster Medicine, CRIMEDIM, Novara, Italy

2. PhD in e-Learning, Delivery and Development, Università G. D'Annunzio, Chieti - Pescara, Italy

3. Department of Anesthesia, Critical Care and Pain Medicine, Università G. D'Annunzio, Chieti - Pescara, Italy

Corresponding author: luca.ragazzoni@med.unipmn.it

Key-words: Disaster Simulation ; Stress response ; Triage performance

Background

Several studies assessed the effects of training and teaching in Disaster Medicine using simulation systems on medical skills. Anyhow stress responses in a simulated scenario and the relationship between stress reactivity and medical performance have been rarely studied. Table-top exercises and Virtual Reality simulation are supposed to be equally effective if compared to the Live Simulation but the high degree of realism achieved by drills usually produces a more stressful situation to the participants compared to the others. Aim of this study was to compare the impact on physiologic stress response of three different simulation-based methods for training nurses in mass casualty triage and the relationship between stress reactivity and triage performance.

Methods

A prospective randomized controlled longitudinal study was designed. 51 nurses enrolled in an Italian first-level Master on principles of Disaster Preparedness and Management were randomized in three groups. After a 20-min lecture about MCI Triage, Group 1 (G1), Group 2 (G2) and Group 3 (G3) were exposed to Table-Top exercise (TT), Virtual Reality simulation (VR) and Live

Scenario (LS) respectively aiming at triaging 10 victims in a limited period of time (5 min) using the Simple Triage and Rapid Treatment (START) algorithm. The simulation environment and the victims' clinical conditions were identical in the three different simulations. Heart rate and blood pressure were recorded just before and after the simulations. The groups' ability to manage the simulated triage scenario was then compared (times and triage accuracy). One-way analysis of variance (ANOVA) for each student was used.

Results

The three groups were composed by 17 nurses each. There was no difference in triage accuracy during the three exercises (average 7.56±1.23). There was a notable difference in time to complete triage. Both G1 and G2 in the TT and VR used all the time available to complete triage (5 minutes) while G3 participating in the LS completed the triage operation in an average of 3.3±0.5 minutes. Regarding physiological stress parameters there was no difference in heart rate before and after the three simulations. Average heart rate was 85 bpm before and 82 bpm after TT, 80 bpm before and 76 bpm after LS and 85 bpm before and 80 bpm after VR with a p=0.54. Interestingly systolic blood pressure, which was not significantly different before the exercises (TT 127 mmHg, LS 121 mmHg and VR 123 mmHg, p=0.23) showed a marked increase in G2 (post exercise systolic 130 mmHg, p<0.05) and in G3 (post exercise systolic 139 mmHg, p<0.01) participating in VR and LS respectively. As opposed there was a slight reduction in G1 taking part in the TT (post exercise systolic 125mmHg, p=0.73).

Conclusion

The study demonstrated that the VR and LS had an increased physiologic stress levels, as measured by systolic blood pressure, compared with TT. This results could be explained by the high degree of realism achieved by VR and LS compared to TT. Instead such a stress reactivity reported would seem to have no impact in improving or decreasing triage performance. Although nurses were exposed to a training session, the lack of familiarity with the new simulation tools could be the reason of the higher time to complete TT and VR. The data represents only an initial report of a future nationwide study that will include all the 180 nurses enrolled in the Master.

F23:6

Disaster Medicine 1

A PILOT STUDY USING A MINI DISASTER EXERCISE TRAINING MODULE FOR TRAINING OF HEALTHCARE WORKERS IN SABAH, NORTH BORNEO

PK Cheah, MY Arifin, W Madsah

Emergency and Trauma Department, Queen Elizabeth Hospital, Kota Kinabalu, Sabah, Malaysia

Corresponding author: pkheng1@yahoo.com

Key-words: Training ; Health Care Providers ; Mini Disaster Exercise

Introduction and Objectives

Sabah has a very scattered population layout over its vast mountainous regions and tropical rainforests. Its healthcare facilities are widespread with 7 tertiary and 16 district hospitals. Land distances between districts are far with treacherous road conditions. When a disaster strikes, whether it is due to natural causes, man made or hybrid, it usually overwhelms the local resources available for its management. This is evident especially in rural areas where expert help and disaster teams are often far away with long response times. The most important resource at the time of disaster is the human expertise and the preparation done before the event. Every disaster is unique and few can claim that they are completely prepared for it. The human creativity and

experience to cope during each disaster using whatever assets available locally will be the deciding factor on how well a disaster situation will be overcome. Personnel training and evaluation is usually done during a full-scale disaster exercise. It usually involves multiple agencies, long preparation and is costly to organise. Only a handful of healthcare personnel working in rural areas have the opportunity to attend disaster training and a full-scale disaster drill. A mini disaster exercise training module (MDETM) was introduced to improve the knowledge and confidence of healthcare providers in dealing with disasters.

Methodology

We used a MDETM to train and expose healthcare staff in disaster management. The MDETM is designed as a 6-hour training module conducted in the working locality of the participants such as a small district hospital. The 6-hour module consists of a lecture, communications briefing, pre-event table top, team set up and an actual off-site drill followed by a debriefing. Participants are given a lot of leeway in organizing their own disaster team and executing their local disaster plan. The MDETM emphasizes on recognition of locally available resources and indirectly builds disaster teams amongst participants. Problems and obstacles identified during the drill will be discussed during the debriefing. Therefore, participants will get input from experts in disaster management based on local conditions offering local solutions. A pre and post course questionnaire study was done to gauge confidence and knowledge of participants.

Results

Two courses were organized for this pilot study with a total of 47 participants. They comprised of 32 (68%) paramedics, 9 (19%) doctors and 6 (13%) administrators and support staff. Paired-sample t-test was conducted to compare pre and post course confidence and knowledge. Significant improvement of confidence in handling disasters ($p < 0.005$) was seen in the participants. Knowledge of disaster management also improved in our group of participants ($p < 0.005$).

Conclusion

We believe the MDETM will be more beneficial as compared to large-scale disaster drills in Sabah due to the vast area of coverage and the differing local environment in each district. With the low monetary cost and short time needed to run the MDETM, it can be organized often and in many different localities.

F23:7 Disaster Medicine 1

DESIGN FOR SIX SIGMA IN DISASTER MEDICINE CURRICULUM DEVELOPMENT FOR EMERGENCY MEDICINE RESIDENTS

JM Franc (1), C Kjelland (1), A Naismith (1), M Verde (2)

1. Emergency Medicine, University of Alberta, Edmonton, Canada
2. Anesthesia and Critical Care, L'Universita' degli Studi del Piemonte Orientale, Novara, Italy

Corresponding author: jeffrey.franc@gmail.com

Key-words: disaster medicine ; curriculum development ; six sigma

INTRODUCTION: Although disaster medicine may be an important part of residency training in emergency medicine, many residency programs do not have a structured disaster medicine curriculum. Rather than simply designing a curriculum by consensus, use of the design for six sigma business process management technology – which emphasizes creation of product solution based on customer needs – may allow a more structured approach to curriculum design. The present study describes the use of design for six sigma to create a disaster medicine curriculum for emergency medicine residency training.

METHODS: The project team included two physicians with training and expertise in disaster medicine, and the assistant program directors from the two emergency medicine residency programs at the University of Alberta. The project followed the design for six sigma phases of Define, Measure, Analyze, Design, and Verify. During the Define phase, seven residents of the two residency programs attended a focus group to reveal their initial impressions of their needs for a disaster medicine curriculum. Ideas from the focus group were used to create a survey instrument. During the Measure phase, twenty residents completed the survey instrument. In addition, twenty-one residents completed a pre-test in disaster medicine to determine which areas were common gaps in knowledge. During the Analyze phase, data from the focus group was analyzed using a tree diagram, while pretest and survey data was analyzed using Pareto analysis. During the Design phase, results of the tree and Pareto analysis were used to design a curriculum. The Verify phase, which is now ongoing, will apply this curriculum to the next cohort of residents. Further study the efficacy of the new curriculum by a questionnaire on resident satisfaction and changes on the pre and post test scores.

RESULTS: The focus group revealed that residents feel disaster medicine training is important and should receive more emphasis during the residency program. They also voiced a strong preference for independent study and a focus on exam preparation. In the needs survey, residents voiced a strong preference for four types of learning activities: computer simulation, seminars with a disaster medicine instructor, lectures, and sample exam questions. Pretest scores were highest for the topics of disaster management, definition of terms, and risk analysis, while scores were lowest for the topics of historical perspectives of disasters, psychosocial aspects of disasters, and philosophy of disaster medicine. The final curriculum includes: 1) yearly computer simulation emphasizing emergency department disaster management, 2) once yearly didactic presentation on disaster medicine at emergency medicine grand rounds, 3) a set of sample exam question modules that residents will complete independently during their Emergency Medical Services rotation, and 4) a seminar with a disaster medicine instructor to review problems with the written exam questions and perform a short practice oral exam. Content of the curriculum will be focused on addressing those areas most concerning on the pre-test instrument.

CONCLUSIONS: The design for six sigma technique was easily implementable for the creation of a new curriculum in disaster medicine. By providing a structured approach to definition, measurement, and analysis prior to design, the curriculum may be better suited to the needs of the residency training program. Further study is ongoing to verify its efficacy.

F23:8 Disaster Medicine 1

ICED: INCIDENT COMMAND FOR EMERGENCY DEPARTMENTS. RESULTS OF A CUSTOMER SATISFACTION SURVEY FOR A NOVEL COMMAND AND CONTROL TOOL

JM Franc (1), M Verde (2)

1. Emergency Medicine, University of Alberta, Edmonton, Canada
2. Anesthesia and Critical Care, L'Universita' degli Studi del Piemonte Orientale, Novara, Italy

Corresponding author: jeffrey.franc@gmail.com

Key-words: incident command system ; disaster medicine ; computer simulation

INTRODUCTION: Disaster management for emergency departments is often problematic. Although an organized system of command and control is often needed to manage the additional

chaos brought on by the disaster, emergency physicians are often ill prepared for the situation. Although several current systems exist for command and control structure, including Incident Command System (ICS) and Hospital Incident Command System (HEICS), these systems are extremely comprehensive, and simulation physicians often comment that the systems are too complex. The Incident Command for Emergency Departments (ICED) system represents a novel instrument for emergency department management during disasters. This simplified incident command system consists of an introductory text, a simplified organizational chart with only thirteen color coded positions, job actions sheet for each position, and a set of only five forms.

METHODS: A customer satisfaction survey was administered to four groups of participants of a computerized simulation program (SurgeSim, Edmonton, AB, Canada) to assess their satisfaction with ICED. Participants were given a short lecture (approximately 30 minutes) about the ICED system and then partook in a group simulation lasting approximately one hour where the ICED system was used for command and control. During the simulation, participants had access to the ICED documents including organizational chart, job action sheets, and forms. Following the simulation, participants completed a short questionnaire regarding the use of ICED during the simulation. The survey instrument consisted of five statements rated on a five-point Likert scale to assess perceived needs, nine questions rated on a seven point scale to assess satisfaction with the ICED product, and as series of open and closed ended questions regarding potential future product features.

RESULTS: Seventy-nine surveys were collected. This included 19 staff physicians, 50 residents, and 10 who did not specify occupation. Most participants agreed strongly with the statement: "An organized command-and-control structure is needed during a disaster": 67/79 (85%) scored strongly agree while, while 5/79 (6%) scored agree. 71/79 (90%) respondents agreed that ICED had helped the group to manage the simulated disaster. 58/79 (73%) agreed that they would be comfortable using ICED in a true disaster, and 69/79 (87%) participants agreed that they would encourage their department to adopt the ICED system. Overall Satisfaction with the ICED program was high, with 67/79 (85%) of participants scoring 5 or higher on the 7 point scale. Among the various components of the ICED system, the satisfaction score was highest for the job action sheet component (mean=5.7/7) and lowest for the introductory text (mean=5.2/7). The most frequently requested additional features were an electronic (tablet) based version of ICED program (29/79 participants)(37%), inclusion of positions outside the emergency department in the organizational structure (26/79)(33%), online training in ICED (25/79)(32%), and a longer training session in ICED (24/79)(30%).

CONCLUSIONS: The ICED system, a simplified version of incident command system, was well received by staff physicians and emergency medicine residents for use during a computerized disaster simulation. Potential development of an electronic tablet based version of the system, and inclusions of additional positions within the organizational structure may help improve the product.

F23:9

Disaster Medicine 1

TESTING THE FIRST NATIONAL BURN DISASTER MANAGEMENT PLAN IN SWEDEN

H Nilsson (1), CO Jonson (2), T Vikström (3), E Bengtsson (2), J Thorfinn (4), F Huss (5), M Kildahl (5), F Sjöberg (4)

1. Center for teaching and research in Disaster Medicine and traumatology, Clinical and Experimental medicine, Linköping University Hospital, Linköping, Sweden
2. Center for teaching and research in Disaster Medicine and traumatology, Linköping University Hospital, Linköping, Sweden

3. Center for teaching and research in Disaster Medicine and, Linköping University Hospital, Linköping, Sweden
4. Depts. of Hand, Plastic Surgery and Burns, Clinical and Experimental medicine, Linköping University Hospital, Linköping, Sweden
5. Dept. of Plastic and Maxillofacial Surgery,, Akademiska Sjukhuset and Dept. of Surgical Science, Uppsala University, Uppsala, Sweden

Corresponding author: helene.nilsson@lio.se

Key-words: burns ; emergency response ; preparedness

Background: When advanced burn care in Sweden was centralized to two National Burn Centers (Linköping and Uppsala) in 2010, one of the issues was to establish an official national burn disaster management plan. A draft of a plan was launched which was based on the guidelines presented by the International Society for Burn Injuries (ISBI) and a specific national co-ordination of medical resources and distribution of burns was designated.

Aim: The aim of the study was to test this plan and to examine other important issues related to burn disaster management in Sweden

Material/method: A simulation of a mass casualty incident including burns using the Emergo Train System (ETS) ® was undertaken in November 2011. The simulated scenario was a discothèque fire with 400 injured at a large ski resort hotel in the Northern part of Sweden (Sälen).

Before the simulation a large inventory of available rescue and health care resources in Sweden was made (eg. ambulance, helicopters, staff, ICU- beds and OR capacity) including all national burn care resources and additional resources that could be possible to allocate from other countries. Local as well as regional organizations participated in the simulation, such as involved county councils, emergency call centers (regional/national level) and the National Board of Health and Welfare.

Results: The results of the simulation showed that 13 ETS ® casualties out of 70 critically injured did not reach definitive care (ED, OR, ICU or Spec burn centre) within the stipulated timeframe. In Sweden a total of 15 burn beds and medical resources in 10 different county councils were used. The nearest two hospitals received 38 injured. 14 injured were sent to ICU beds abroad. 7 burn injured were transported by helicopters to burn centers in Norway and Finland together with 6 neuro trauma and one patient with thoracic trauma.

Conclusions: The overall conclusions were that a national co-ordination of medical resources and distribution of burns can be supportive. Apart from the finding presented above, a significant number of unresolved practical and administrative issues need to be further addressed in the future work to establish a well-functioning national disaster management plan for Sweden.

F24:1

Disaster Medicine 2

HOSPITAL AND PRE-HOSPITAL PREPAREDNESS FOR DISASTER RESPONSE: NORTHERN ITALY, 2010.

M Zannoni (1), L Ragazzoni (2), PL Ingrassia (2), F Della Corte (2)

1. Emergency Department, Azienda Ospedaliera Universitaria Integrata, Verona, Italy
2. Research Center in Emergency and Disaster Medicine, CRIMEDIM, Novara, Italy

Corresponding author: luca.ragazzoni@med.unipmn.it

Key-words: EMS Disaster Preparedness ; Hospital Disaster Preparedness ; Disaster Response

Background

The importance of the integration between the hospital and the pre-hospital medical response is widely demonstrated during a Disaster or a Mass Casualty Incident (MCI). The emergency system

needs a close cooperation, sharing of operational plans and reliable communications and simulation drills and table-top exercises are usually used for testing and possibly modifying them. The aim of this study was to assess the current state of pre-hospital and hospital disaster preparedness and response in the EMS of Northern Italy.

Methods

From July until December 2010 a cross-sectional observation study was conducted through the use of a structured survey. The questionnaire was sent by mail or e-mail to the directors of EMS and Emergency Departments of Northern Italy previously identified through the information from Ministry of Health website and Regional, Sub-Regional and Local Health Agencies. The survey was composed of 6 sections: Available resources; Communication Systems; Risk Analysis; Mass Casualty Incident and Disaster Plan; CBNR Equipment; Education and Training in Disaster Medicine. On December 31, 2010 the raw data were collected and answers were reported in aggregate.

Results

49 EMS Dispatch Centers and 197 Hospitals with Emergency Departments were identified. The response rate of DCs and EDs were 100% and 82,23% respectively. Emergency vehicles and HEMS are distributed throughout the territory as well as EDs with specific medical specialties. Communication between DC and ED occurs through a direct dial phone (98.8%), radio (50.3%) or computer (31.9%). Risk analysis has been performed by 41 (83.7%) DCs and 100 (61.3%) EDs. MCI and Disaster plan is available in almost all DCs (47, 95.9%) and Hospitals (142, 87.1%); in 30 cases (61.2%) a shared Disaster Plan is available. 38 (77.6%) DCs and 49 (30.1%) EDs have CBNR equipment at hand. Table-top exercises or live simulations are used as a training method in 28,6% of DCs and 31,7% of EDs.

Conclusions

The study revealed the poorness of integration between pre-hospital and hospital medical system for disaster preparedness and mitigation. Only in few cases a shared disaster preparedness plans are available. Also a great lack of proper education and training in disaster medicine at the same levels seems to be proved.

F24:2 Disaster Medicine 2

MODELING VICTIMS FOR SIMULATION OF DISASTER MEDICAL MANAGEMENT

M Debacker (1), E Dhondt (2), C Ullrich (3), F Van Utterbeeck (3)

1. Research Group on Emergency and Disaster Medicine, Vrije Universiteit Brussel, Brussels, Belgium

2. Operational Command, BEL Defense Medical Component, Brussels, Belgium

3. Department of Mathematics, Royal Military Academy, Brussels, Belgium

Corresponding author: michel.debacker@vub.ac.be

Key-words: modeling ; simulation ; disaster medical management

The "Simulation for the Assessment and Optimization of Medical Disaster Management in Disaster Scenarios" (SiMEDiS) project aims to develop a stochastic discrete event simulation model in order to identify evidence-based principles and/or interventions for optimizing the medical disaster management in different disaster scenarios.

The simulation model is constructed using Arena@PE, a commercially available, SIMAN programming language-based discrete event simulation software (version 13.0 Rockwell Automation, Wexford, PA, USA).

The simulation model used within SiMEDiS consists of 3 main components: the medical response model simulating time-

dependent processes in which entities (the victims) interact with human and material resources, the scenario victim creation model and the victim pathway model monitoring the clinical conditions of the victims within the scenarios.

The scenario victim creation model aims to create all the disaster victims needed in the simulation and to map these victims to a profile corresponding to the scenario. This model consists of a number of modules through which the victim entities will flow. The victim creation module creates the number of victims which have been defined in the scenario settings database. The victim profile mapping module will assign to each victim entity a specific profile stored in the victims database. The victim attributes assignment module will assign to the victim all the attributes according to his/her profile. Finally, the victim duplication module will create two identical victim entities which will be transferred to both the medical response model and to the victim pathway model.

The victim pathway model aims to represent the clinical evolution of the victims in a disaster scenario. Victim profiles are exported from a library or are created for a particular scenario. Each victim profile, defined by medical experts, consists of general victim data, a set of clinical conditions including primary survey, triage and diagnostic test data, injury severity scores, and a set of transitions triggered by time and/or medical treatment interventions. The transition of one clinical condition to another clinical condition depends on time intervals (time interval of clinical deterioration if no treatment is provided, time interval to deliver the treatment and time interval of treatment procedures to be effective), treatment procedures and resources including the healthcare providers with their respective skill levels, medical equipment and supplies. The "no treatment" time interval and effect time interval of treatment are determined by medical experts. The treatment delivery time interval is based on experimental studies.

The victim clinical condition module in the victim pathway model checks if the victim evolves by a time or a medical intervention trigger. If a medical intervention is initiated in the medical response model, the victim entity is sent to the medical intervention trigger module where it will wait until the treatment delivery and effect time of the intervention has elapsed. If no medical treatment is or can be performed, the victim entity is sent to the time trigger module where it will wait until the allotted time interval has elapsed. Subsequently, the victim entity is sent to clinical condition adaptation module where the clinical condition of the victim will be updated and then checked in the new clinical condition module if it is an end clinical condition or not. If it is not an end clinical condition the victim entity will be sent back to the victim clinical condition module for the next trigger. If it is an end clinical condition the victim identity is sent to end clinical condition module to generate a log file.

We will present the victim creation and victim pathway model in a multiple vehicle mass casualty incident.

F24:3 Disaster Medicine 2

MODELING ACUTE MEDICAL RESPONSE FOR SIMULATION OF DISASTER MEDICAL MANAGEMENT.

M Debacker (1), E Dhondt (2), C Ullrich (3), F Van Utterbeeck (3)

1. Research Group on Emergency and Disaster Medicine, Vrije Universiteit Brussel, Brussels, Belgium

2. Operational Command, BEL Defense Medical Component, Brussels, Belgium

3. Department of Mathematics, Royal Military Academy, Brussels, Belgium

Corresponding author: michel.debacker@vub.ac.be

Key-words: modeling ; simulation ; disaster medical management

The operational research in medical disaster management attempts to identify methods and principles of best practice and to assess performance and outcome of disaster medical management. However, this research is limited by the fact that the conduct of prospective and randomized studies under real world conditions is impossible or ethically inappropriate. Computer simulation has been used to overcome these methodological problems. Moreover, there are currently no validated performance measures as to what constitutes a “good” or “optimal” disaster medical response. In contrast to real world disaster exercises, computer simulations of disaster response are able to repeat a particular scenario, changing the occurrences and timing of particular interventions or adding restrictions to the use of human and material resources. The simulation makes it possible to test (medical) operational interventions in multiple plausible situations and to develop a resource-efficient medical response in every simulated disaster situation without the costs and time investments of full scale exercises.

The “Simulation for the Assessment and Optimization of Medical Disaster Management in Disaster Scenarios” (SiMEDiS) project aims to develop a stochastic discrete event simulation model in order to identify evidence-based principles and/or interventions for optimizing the medical disaster management in different disaster scenarios. The simulation model is constructed using Arena®PE, a commercially available, SIMAN programming language-based discrete event simulation software (version 13.0 Rockwell Automation, Wexford, PA, USA).

The medical response model represents the environment (victims, locations, time-related factors, ..), the human and material resources as well as operational decisions and medical treatment interventions stored in a “rules” and “scenario settings” database. A typical medical response model consists of three zones [the disaster site, the forward medical post (FMP) and healthcare facilities (HCF)] together with the evacuation from one zone to another representing the victim flow. We created four submodels corresponding to these main zones: the “on-site” submodel, the “FMP” submodel, the “HCF Emergency Department” submodel and finally the “non-urgent care facilities” submodel. The location of each zone is specified in the “scenario settings” database. The “on-site” submodel represents the flow of the victim entities subsequent to interventions performed by first responders (e.g. triage in urgent and non-urgent casualties) and the disposition of the victims (e.g. to FMP, hospital ED or non-urgent care facilities). The decision to evacuate victims to a HCF or to the FMP depends on the severity of the injuries, the associated survival probability of the victim and its deterioration rate over time, the availability of transport vehicles, the transport time from the scene to the HCF and the treatment capacity of the HCFs.

In the “FMP” submodel the victim entities enter the “victim disposition” module which determines whether the victim can be evacuated to a HCF or to a non-urgent care facility either will be distributed to the “victim treatment”, “palliative care” or “emergency mortuary” module within the FMP. The decision making rules are specified in the “scenario settings” database. A study of the impact of 5 different emergency resources configurations and medical response operations in a simulated multiple vehicle mass casualty incident will be presented.

F24:4

Disaster Medicine 2

HOSPITAL DISASTER DRILLS; THE STRUCTURED APPROACH

GE Khalifa

Emergency, Al Rahba Hospital, Abu Dhabi, United Arab Emirates

Corresponding author: gabbas@emirates.net.ae

Key-words: Hospital ; Disaster ; Preparedness

Hospital Disaster Drills: The Structured Approach

Introduction

Disaster Drill is a training exercise that tests part or all of the elements and components of disaster response in a simulated environment with or without simulated causalities

One of the major activities in preparation is planning. Different agencies including hospitals develop their own disaster or mass causality plans. These plans give a false sense of security.

Disaster drills identify strengths and weaknesses of hospital disaster drill response, provide a learning opportunity for disaster drill participants, and promote integration of lessons learned into future responses.

A very important objective of hospital disaster drills is to comply with international standards and governing body mandates.

Several types of hospital drills have been used, including computer simulation, tabletop exercises, and operationalized drills involving specific victim scenarios. The latter have been carried out with either mock (volunteer) victims or paper-based clinical descriptions of victim status.

Drills can be costly and complex to organize; to maximize the value of such endeavors, evaluation plans must be included. Disaster drill evaluations then can help hospitals to further their level of disaster preparedness.

Material and Methods

The Author describes the method to conducted a model hospital Disaster drill in Al Rahba Hospital, Abu Dhabi UAE.

The drill was conducted on December 21st, 2011.

The steps started two months earlier by forming a task force that followed logical steps. After Hazard Vulnerability Assessment that revealed that motor vehicle crashes are the top priority, the task force opted to run a full scale exercise with simulated causalities. The local ambulance provider participated in the exercise. The selected scenario was a road traffic incident with 37 simulated causalities. The task force used smart causalities (all were registered nurses) with dynamic causality cards.

The task force chaired by the author held regular meetings that identified the tasks, assigned them to the members with target dates and scheduled progress reports.

Evaluation of the response to mass causalities used Johns Hopkins evaluation forms that were customized to Al Rahba Hospital. A corporate (SEHA) evaluation was done by auditors using specific SEHA disaster Drill evaluation forms.

The Drill technique followed the annual EMDM live-in course full scale exercise.

Evaluation of the drill technique was done.

Results:

The results of evaluation forms plus observational notes of the evaluators showed a response that exceeded 80 % of the measureable elements.

The corporate body (SEHA) auditors gave the drill a score of 29/30.

Conclusion

Hospital must conduct drills of different scale but at least one annual full scale exercise that strains all the response elements.

Careful planning and following a systematic approach is vital. Using a customized evaluation forms is very important to identify areas that need improvement with subsequent actions to close the gaps.

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F24:5

Disaster Medicine 2

IN FLIGHT AUSCULTATION DURING AIR MEDICAL EVACUATION: COMPARISON OF ELECTRONIC AND CONVENTIONAL STETHOSCOPES

E Fontaine (1), S Coste (2), C Klein (3), M Franchin (1), C Poyat (3), S Lemoine (1), L Domanski (1), JP Tourtier (1)

1. emergency department, Fire brigade of Paris, Paris, France
2. emergency department, Military hospital Percy, Clamart, France
3. emergency department, Military hospital Val-de-Grâce, Paris, France

Corresponding author: jeanpierre.tourtier@free.fr

Key-words: stethoscope ; auscultation ; air medical transport

Introduction: Aero-medical evacuations occur in high ambient noise environments, and that can preclude the use of the conventional stethoscope and inhibit the monitoring of patients. Many technological improvements are currently under development in order to increase the signal-to-noise ratio. Electronic auscultation appears to be a promising practice which is based on several technologies for minimizing background interferences and at the same time improving the signal-to-noise ratio. The aim of this study was to evaluate the capabilities of a traditional and an electronic amplified stethoscope during aero-medical evacuations.

Materials and methods: This double-blinded and prospective study, which was achieved over 12 months (June 2010-May 2011), compared a widely used conventional stethoscope, the Littmann® Cardiology III, with a recently available electronic stethoscope, the Littmann® Electronic Stethoscope Model 3200. We included consenting physicians, all experimented in air medical transport and emergency medicine. Participants were asked to evaluate the two types of stethoscopes in real conditions of aero-medical evacuations of patients aboard Falcon 50, medically configured, at standard altitude (10,000m). Measurements of ambient noise levels were taken during the flight. All patients were transported for medical reasons and were either unconscious or blinded with a mask during the auscultation (after individual agreement to participate in this study). Each auscultation included successively the auscultation of the aortic and mitral areas and then, of the right and left lungs. Different filtering modes of the two stethoscopes were tested. Clinicians, who have participated into the study, were blinded with a mask for each stethoscope: during the auscultation they did not touch the stethoscope. The right placement for each auscultation areas (placed the chest piece of each stethoscope in the proper position) and the lyre adjustment on ears of the clinician were determined by an independent

practitioner. At the end of each examination, the quality of auscultation was described using a numeric rating scale ranging from 0 to 10, 0 corresponding to "I hear nothing" and 10 to "I hear perfectly". The comparisons between using the electronic and conventional stethoscopes were performed as paired t tests (two-tailed), either for cardiac or breath sounds. A significant difference was defined by $p < 0.05$.

Results: Twenty patients were included in our study. The age of the patients was 29 ± 5.8 years. Among them 90% were males. Their body Mass Index was 23.2 ± 1.5 kg/m². We included 14 physicians. The noise level at the patient placement was 65 ± 2 dB. For cardiac auscultation, mitral and aortic areas were considered (ie 40 auscultations). A significant difference appears between the acoustic stethoscope and the three filtering modes of the amplified stethoscope (paired t test: $p < 0.0001$). The value of the rating scale was 4.53 ± 1.91 for the acoustic stethoscope and respectively 7.03 ± 1.79 , 7.18 ± 1.88 , 6.53 ± 2.17 for different modes of the electronic stethoscope (bell, extended and diaphragm). In comparison, the three filtering modes of the Littmann® 3200, the only significant difference was proven between the extended mode and diaphragm mode (paired t test: $p = 0.0045$). For pulmonary auscultation, right and left lungs areas were considered (ie 40 auscultations). A significant difference appears between the acoustic stethoscope and the three filtering modes of the amplified stethoscope. The value of the rating scale was 3.10 ± 1.95 for the traditional stethoscope and respectively 4.65 ± 2.19 for the diaphragm filtering mode of the electronic stethoscope (paired t test : $p = 0.0001$), 4.80 ± 2.23 for the bell filtering mode (paired t test : $p < 0.0001$) and 5.10 ± 2.13 for the extended filtering mode (paired t test : $p < 0.0001$). In comparison the three filtering modes of the Littmann® 3200, no significant difference was proven between them.

Discussion: We found a significant difference between the conventional and the amplified electronic stethoscope for both of cardiac and pulmonary auscultation. This study suggests that the perception of pulmonary and cardiac auscultation is significantly improved by using amplified electronic stethoscope during Falcon air medical transport.

F24:6

Disaster Medicine 2

EFFECT OF THE RISK SCORE FOR TRANSPORT PATIENTS (RSTP) ON CRITICALLY ILL PATIENTS TRANSPORT SAFETY AND LOCAL TRANSPORTATION PROTOCOL ABILITY TO ALLOCATE HUMAN AND TECHNICAL RESOURCES

P Cubeddu (1), S Ferraris (1), S Dalle Nogare (1), T Ferraris (2), MG Barbieri (1), G Alberto (1)

1. Emergency Department, ASL VC, Borgosesia, Italy
2. Health Department, ASL VC, Borgosesia, Italy

Corresponding author: fgw@fastwebnet.it

Key-words: Risk Score for Transport Patients ; transport safety ; critically ill patients

Interhospital transfer of critically ill patients is a common procedure, subject to significant risks both for health personnel and patients. Critically ill and injured patients transferred from Emergency Departments (EDs) represent a significant proportion of the total number of inter-hospital transfers. Looking specifically at an in depth analysis of transfers from EDs pinpoints widespread deficiencies in equipment provision, patient monitoring facilities, staff training and transfer documentation. Hence, a risk to benefit ratio assessment is mandatory for justifying the procedure and the best selection of the facilities and human resources to be used.

A literature review on this topic shows that most of the articles provide a weak level of evidence therefore their validity and applicability should be taken with caution.

In 1998, a Spanish group (Etzebarria et al Eur J Emer Med) proposed a simple score denominated RSTP for assigning technical and human resources for a safe interhospital transfer of critically ill patients afterwards validated to some extent by an independent group (Markakis C et al Emer Med J 2006).

OBJECTIVE

Assess the validity of RSTP in providing a safe transport to critically ill patients from a 100-bed community hospital to larger ICU equipped hospitals as primary outcome and assign the right human and technical resources according to both local availability and transport protocol as the secondary outcome.

MATERIALS AND METHODS

From January 1st to June 30th 2012, according to the modified community hospital transportation protocol, the RSTP had to be used by the consultant in charge to supply both human and technical resources during transport of critically ill patients. The number of adverse events was recorded and an analysis of the resources used compared with the same period of in 2011 was performed. We considered as adverse events any death during the transport or any event occurring to the patient exceeding human or technical resources available during transport and requiring emergency procedures (i.e. diversion to the closest hospital) to provide adequate treatment.

RESULTS

138 patients were prospectively enrolled and transported in the study period; 65 (47,1%) needed a health professional in the transport staff according to the consultant in charge using RSTP and 27 (19,6%) required further assistance by a qualified intensive care physician. No adverse events were recorded in the study period.

In the same period of 2011 we transported approximately the same number of patients (136): 81 (59,6%, $p < .001$ vs 2012) needed a health professional in the transport staff according to the local protocol and 23 (16,9%, p NS) required a qualified intensive care physician. A larger number of patients in 2012 were transported with technical staff trained in basic life support compared to 2011 (73 vs 55, $p < .001$), thus reducing both human and technical resources used and saving money without any clinical adverse events.

CONCLUSION

The addition of RSTP to our local transport protocol appears to be safe and effective in reaching both the primary and secondary outcome with a significant saving in human and technical resources needed and money spent without any loss in appropriateness. A larger cohort to confirm and validate these data is warranted.

requests, reporting an emergency case involving what was reported by the caller to be an unconscious patient. In such situations, the local emergency medical dispatcher sends the best unit available(having a doctor and a team of paramedics on board fully equipped) to deal with the case but too often it finds out that this is not the unconscious case they expected. This kind of advanced medical unit is a limited resource easy to be exhausted and an unfortunate result of dispatching it when not needed is that the dispatcher is forced to send a less capable unit to deal with the case where the advanced resources are needed with the inevitable undesirable result.

The study aims to show the importance of basic life support medical education in general population to reduce erroneous "assessment" by callers that the patient in need of care is unconscious, when in fact they are not, so that the proper unit can be dispatched the case. We are additionally interested about what type of unconscious case is found as well as the actions being taken by the callers until first responders arrive.

Methods

Data about more than one thousand patients was obtained retrospectively from Sibiu SMURD(Mobile Emergency Service for Resuscitation and Extrication) database between 01.01.2010 and 30.06.2012, mainly focusing on Sibiu city unconscious cases reported by the local dispatcher. We have collected the medical details of the case (patient medical status when team arrived, GCS, presumptive diagnosis, medical procedures taken) and the reason for the emergency call. We have done a series of statistical analyses in order to highlight what type of medical cases were found.

Results

We found out that more than one third of these cases are not "real" unconscious cases but different other medical disorders. Another one fifth of total cases are alcoholic coma and only half of the cases are proper unconscious cases such as cardiopulmonary arrest, cerebrovascular accident, drug poisoning and other types of coma. We found out that there is an unfortunate lack of correlation between the reported case and the situation that was found on site.

Conclusion

Emergency calls erroneously reporting a patient's state as "unconscious" are more likely to occur when the callers are not properly educated about knowing the difference between a conscious and an unconscious patient. For the situation when the information collected is not accurate we may face the following :

- a. no proper life saving measures are taken for the patient
- b. wrong life saving measures are taken for the patient
- c. the dispatcher guidance and decisions may be incorrect
- d. the wrong type of response unit is dispatched

We conclude that providing basic life support medical education in general population and raising the level of awareness about the responsibility of requesting an advanced unit ambulance will decrease substantially the percent of false unconscious cases. As a result of these measures, we expect SMURD will be able to provide more efficient and appropriate emergency service to the community.

F24:7

Disaster Medicine 2

EMERGENCY CALLS: IS THE PATIENT CONSCIOUS OR UNCONSCIOUS? A STUDY OF 1000 CASES.

A Canciu, D Falamas, M Smarandoiu, D Taran

Emergency, SMURD, Sibiu, Romania

Corresponding author: mariussibiu@yahoo.com

Key-words: emergency calls ; unconscious ; smurd

Background

SMURD(Mobile Emergency Service for Resuscitation and Extrication) is the top emergency rescue service based in Romania. During the last two and one half years, SMURD Sibiu Mobile Intensive Care ambulance was sent to more than one thousand

F24:8

Disaster Medicine 2

DOES THE MTS NEED A NEONATAL FLOWCHART

N Seiger (1), M van Veen (1), H Almeida (2), M Ruige (3), R Carneiro (2), CF Alves (2), I Maconochie (4), HA Moll (1)

1. General pediatrics, Erasmus MC - Sophia Children's Hospital, Rotterdam, Netherlands
2. General pediatrics, Fernando Fonseca Hospital, Lisbon, Portugal
3. General pediatrics, Haga Hospital - Juliana Children's Hospital, The Hague, Netherlands
4. Pediatric accident and emergency department, St Mary's Hospital, London, United Kingdom

Corresponding author: n.seiger@erasmusmc.nl

Key-words: Triage ; Neonates ; Validity

Background: In the Manchester Triage System (MTS) are no specific triage items for neonates, while these children differ from older children when it comes to presenting problems at the emergency department (ED) and prognosis. Therefore the aim was to explore the need of a neonatal flowchart in the MTS.

Methods: All triaged children (< 16 years) who had presented at EDs in the Netherlands (2006-2010), Portugal (2010), and UK (2010) were included. We calculated the prevalence of neonates (< 1 month) and descriptive statistics of allocated flowcharts and discriminators. Secondly, the validity of the MTS in the neonatal population was assessed by using an independent reference standard and hospitalisation as proxy for urgency. The reference standard was based a combination of vital signs (urgency 1), potentially life-threatening conditions (urgency 2) urgency, diagnostic resources, therapeutic interventions and follow-up (urgency 3, 4 and 5) were used to determine patient's true urgency. 1 Positive and negative likelihood ratios (LRs) and diagnostic odds ratios (DORs) were calculated as measure for performance.

Results: The prevalence of neonates was 2.7%. Neonates were more often assigned to general MTS flowcharts or discriminators. (RRflowchart 2.6, 95%CI 2.5-2.7 and RRdiscriminator 1.5, 95% CI 1.5-1.7) The DOR of MTS and the LR-were not statistically significant different between neonates and older children, while the LR+ in neonates was better than the LR+ in older children. (Hospitalisation: LH+neonates 3.6 (95%CI 3.0-4.4) versus LH+older children 2.7 (95%CI 2.7-2.8); Reference standard: LH+neonates 4.9, 95% CI 4.1-5.8 versus LH+older children 3.7, 95% CI 3.6-3.9)

Conclusion: The validity of the MTS was better in neonates than in older children, therefore no specific neonatal flowchart was needed.

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F24:9

Disaster Medicine 2

HOW TO INCREASE THE PREDICTIVE VALUE OF MODIFIED EARLY WARNING SCORES IN INHOSPITAL MORTALITY PREDICTION OF EMERGENCY ADMISSIONS?

E. Yaka (1), S. Yılmaz (1), M. Pekdemir (1), N. Etiler (2), AG. Kartal (1)

1. Emergency Department, Kocaeli University, Faculty of Medicine, Kocaeli, Turkey
2. Public Health Department, Kocaeli University, Faculty of Medicine, Kocaeli, Turkey

Corresponding author: epostac77@yahoo.com

Key-words: early warning scores ; functional and comorbidity status ; in-hospital mortality

INTRODUCTION

It is important for emergency department (ED) admission decisions to be accurate with respect to the level of care. Because patients admitted to hospital through emergency departments tend to be older, have more severe conditions and stay in hospital longer than patients admitted via other means. Admission decisions through ED are also complicated due to time restraint and Intensive care unit (ICU) beds occupancy. So early and accurate identification of patients at risk of deterioration is paramount importance for emergency admissions. Early Warning Scores (EWS) have been shown to predict in-hospital mortality in ED patients. Despite their

widespread usage, there is still doubt about their sensitivity. The objective of this study is to identify factors evaluated during ED stay that can improve the predictive value of EWS for in-hospital mortality of medical patients admitted through ED.

METHODS

This was a prospective, single center, observational study of consecutive adult medical patients admitted through emergency department. Patients older than 18 years of age who required hospital admission through ED at April-July 2010 were considered for inclusion. Patients who died in the ED, had trauma or more than 30 days of hospital stay and those who were receiving mechanical ventilation at the time of presentation were excluded from the study. Patients with incomplete documentation and referred to another hospital for ICU were also excluded.

This was a prospective, single center, observational study of consecutive adult medical patients admitted through emergency department. Patients older than 18 years of age who required hospital admission through ED at April-July 2010 were considered for inclusion. Patients who died in the ED, had trauma or more than 30 days of hospital stay and those who were receiving mechanical ventilation at the time of presentation were excluded from the study. Patients with incomplete documentation and referred to another hospital for ICU were also excluded.

Patients' clinical, physiological, laboratory parameters and functional status were recorded to a data collection form created by authors. No additional test or intervention was carried out for the study. Patient demographics, functional and comorbidity status, ED presentation time, laboratory results and emergency consultations were evaluated as potential predictors. Barthel Index (BI) and Charlson Comorbidity Index (CCI) were used for assessment of functional and comorbidity status respectively. Modified Early Warning Scores (MEWS), BI and CCI of patients were calculated by investigators after data collection. SPSS 13 (SPSS, Inc., Chicago, USA) software was used for analysis.

For the multivariate analysis, the significant variables identified with univariate analysis were further entered into the logistic regression to determine independent predictors of in-hospital mortality. $P < 0.05$ was considered as significant.

RESULTS

From 851 total ED admissions, 593 were eligible for the study. In all, 509 patients were discharged, 84 (14.2%) deceased.

In-hospital mortality was 3.6% in patients with MEW score of 1 while 29.5 % of patients with MEWS ≥ 5 died. The percentage of patients died in hospital increased gradually for each rise in MEWS. BI ≤ 80 (OR:9.6, 95% CI=3.7-24.3), CCI ≥ 3 (OR:5.7, 95%CI=3.0-10.9), hypoalbuminemia (OR:3.3, 95% CI=1.5-7.3) and number of pathological biochemical parameters (OR:1.4, 95%CI=1.1-1.7) were independent risk factors for in-hospital mortality in emergency medical admissions.

Adding BI of ≤ 80 and CCI of ≥ 3 increased the sensitivity of MEWS ≥ 5 from 45.2 % to 96.4 % for in-hospital mortality prediction among emergency medical admissions.

CONCLUSION

Use of functional and comorbidity status which are readily available at presentation with MEWS may help emergency physicians to identify the subset of patients at increased risk for in-hospital mortality in emergency admissions. Further research is warranted to examine whether addressing these issues improves patient care for acutely ill medical patients.

F31:1 Administration & management

COMPARATIVE STUDY ON OVERCROWDING BETWEEN BARCELONA (SPAIN) AND PARIS (FRANCE) HOSPITALS

S Ferrandiz (1), C Guijarro (1), E Revue (2)

1. Health, Catalan Health Service, Barcelona, Spain
2. Emergency Department, Louis Pasteur's Hospital, Le Coudray Chartres, France

Corresponding author: ericrevue@yahoo.fr

Key-words: Overcrowding ; ED organization ; Hospital beds

Introduction

Overcrowding is an everyday and seasonally heightened problem in most hospitals. Contributing factors are population density, needs, pre-hospital care systems and ED and hospital specific logistic reasons.

Objective:

Identify and compare the different measures implemented and lessons learned.

Material and methods: comparative analysis of ED visits between the cities of Barcelona and Paris and their surrounding areas.

Discussion:

Barcelona 1.8 Million (Greater Barcelona area 3.2 M). MD: 33/1000 inhab. ; 30 ED's; 9700 beds. ED visits : 2,2 M visits/year (35-50% no urgent); 10-12% inpatient admit rate.

Paris (France) : 2,2 Million (Ile de France region: 11,5 M). ratio 33 GP /1000 inhab. 14 Million ED visits per year (increasing by 4% per year) with a 64% total increase in number of ED visits in the last 10 years. 17% inpatient admit rate. Overall Emergency calls to the Emergency Medical System ("SAMU") have increased but in 30 % of cases advice is provided preempting the dispatch of ambulances. The rising rate of ED admissions to hospital is partly the result of an increasing elderly population with an increasing number of ED visits.

The main issues considered and the measures undertaken are:

Barcelona

Patients choose hospital ED's as the first contact with the Health network regardless of the acuity of their complaint (in some way due to effectiveness of ED). Intervention: a. Comprehensive information campaigns through media and pre-hospital health facilities; b. Special primary care for elderly, fragile patients especially in extreme weather seasons; c. Better coordination of pre-hospital services with Hospital ED. (with these measures patient ED frequentation has dropped by 20%)

ED organization and effectiveness. Intervention: a. Effective Triage system (Canadian modified system).

Organizational procedures of care, diagnostic and specialized consultants.

Restricted access to hospital beds (Access block). Measures: a. Enhanced collaboration between

ED and other services/departments -especially with Admissions- at the highest level; b. Discharge plans as "Pre-discharge" and home health care; c. Short stay Units until a hospital bed is free.

Paris

ED crowding will not be alleviated until hospitals adopt a multidisciplinary system wide approach focused on solutions to inpatient capacity constraints. Reduction in admissions is an important aim of ED in France. Many experiments have been conducted on the input factors (Triage, Emergency Physician in Triage, GP's houses...) Throughput (Fast Track, organization of ED, Geriatric Team) and output (bed manager, hospitalization at home).

Conclusions:

Increased utilization of ED by the public appears to be a common problem in both cities and regions. Measures to minimize this problem should be hospitalization alternatives, special procedures

for elderly and fragile patients, search of excellence in ED performance and surge bed capacity to avoid or diminish access block from ED to hospital beds seem to be the best measures to fight overcrowding.

F31:2 Administration & management

MONITORING EMERGENCY CARE: INSIGHT INTO PATIENT DEMAND FOR EMERGENCY CARE AND PATIENT FLOW IN THE CHAIN OF (PRE) HOSPITAL BASED EMERGENCY CARE IN THE NETHERLANDS

J.A. Haagsma (1), A.C. Scholten (1), T.H. van de Belt (3), K. van den Berg (1), S.A.A. Berben (1), L. Schoonhoven (2)

1. Regional Emergency Healthcare Network, Radboud University Nijmegen Medical Centre, Nijmegen, Netherlands
2. Scientific Institute Quality of healthcare, Radboud University Nijmegen Medical Centre, Nijmegen, Netherlands
3. Radboud R&Eshape and Innovation Centre, Radboud University Nijmegen Medical Centre, Nijmegen, Netherlands

Corresponding author: a.scholten@azo.umcn.nl

Key-words: Emergency care ; Patient flow ; Self-referrals

Introduction

The aim of healthcare providers involved in (pre)hospital based emergency care is to deliver adequate emergency care. In the Netherlands, (pre)hospital based emergency care is provided by several healthcare organizations, such as general practitioners (GPs), after-hours care of General Practitioner Cooperatives (GPCs), ambulance emergency medical services (EMS), helicopter emergency medical services (HEMS), association for mental health and addiction care (MHA), emergency departments (EDs), and acute coronary care units (CCUs). Up till now, regional emergency care organizations have insight in their own patient flow, however it is not known to what extent emergency care in a region is delivered and completed by one emergency care organization and in how many cases the patient is treated by multiple links in the chain of emergency care. Furthermore, insight into patient demand for emergency care, the level of urgency, and transfers of patients in the chain of emergency care is a prerequisite to improve the quality and efficiency of this care.

Aim

The aim of this study was to gain insight into patient demand for emergency care, provided emergency care and patient flow in the chain of (pre)hospital based emergency care in the Netherlands.

Method

The prospective study included ten emergency care organizations (GP n=1, GPC n=2, EMS n=2, HEMS n=1, MHA n=1, ED n=2, CCU n=1) in a rural part of the Regional Emergency Healthcare Network (AZO) in the Netherlands. The measurements were performed in one week in the spring of 2010 and one week in the spring of 2011. Data on the patient characteristics, patient demand for emergency care and the delivered emergency care were extracted from the patient files and registration systems of the participating health care organizations. To allow comparison between health care organizations, the primary patient problems/diagnosis were classified using the International Classification of Primary Care – second edition (ICPC-2). Datasets of different health care organizations were merged in order to identify whether patients were treated by more emergency care organizations and to further analyze patient flows.

Results

During the two measurement periods approximately 8.200 emergency care cases were registered. Two thirds of these emergency care cases were seen by the two after hours GPCs.

Approximately one in twenty emergency care cases treated by the after hours GPCs were classified as high priority (2010: 7%; 2011: 5%). For the two EMSs and the EDs the proportions of high priority cases were 43% (2010) and 62% (2011) and 9% (2010) and 8% (2011) respectively. Some patients were seen several times by the same health care organization during the two measurement periods. This was particularly the case for the Dutch association for mental health and addiction care, the GPCs and the EDs. During both measurement periods 7% of the emergency care cases were seen by more than one healthcare organization in the chain of emergency care. Most of these cases were referred.

Discussion and conclusions

In the Dutch Regional Emergency Healthcare Network (AZO), one in nine emergency care patients was treated by multiple links of the chain of emergency care. A small proportion of these patients were self-referrals (e.g., 6% of those visiting the after hours GPCs). Annually this may add up to hundreds of cases. In urban regions, the proportion of patient self-referral to emergency medical services might be even higher. Previous research in a medium sized city in the Netherlands showed that patient self-referrals put needless demands on costly care. Insight in patient flow between the links of the emergency health care chain is an important basis for policymaking, strategic choices and improvements of quality of care.

F31:3 Administration & management

MODELIZATION OF THE CARE FOR RENAL COLIC IN THE EMERGENCY DEPARTMENT WITH THE BAYESIAN NET

A Bellou (1), G Boess (2), N Flacke (3), SM Lieu (4), J Prost (5)

1. ED, Pontchaillou University Hospital, Rennes, France
2. Department of Medicine, Guebwiller Hospital, Guebwiller, France
3. ED, Guebwiller & Colmar Hospital, Guebwiller, France
4. ED, Altkirch Hospital, Altkirch, France
5. ED, Guebwiller Hospital, Guebwiller, France

Corresponding author: Nflacke@gmail.com

Key-words: Knowledge Management ; Bayesian Net ; Renal colic

Introduction :

The Care of Renal Colic is structured by Professional Guidelines. During a work for a medical thesis, it appeared that some guidelines such as treating pain were applied at various rates. We searched to observe the impact of guideline application on the event of discharge.

Methodology :

We modelize the impact of painkillers on the event discharge by automatic exploitation of a database with the Bayesian Net tool BayesiaLab (c). The Bayesian net, developed following Thomas Bayes' theorem of 1763, is a graphical model created by Judeah Pearl in 1988. The model describes the probability that one event leads to another. The Bayesian Net accepts information in any order, tolerates lack of information, will run anyway, and propagates probabilities throughout its structure. These characteristics make the Bayesian Net quite suitable for our practice.

We automatically exploit the database created during a Medical thesis that was exploited by the Cartography Management Tools Freemind (c) and Mindjet (j).

Variables were defined as discrete from the start, whenever possible, and allowed for swift customization of the database. Colors were attributed to events (yellow=elements leading to the diagnosis, grey=therapy, red=prognosis).

Results :

It has been possible to create a Bayesian Net of 11 nodes, and to represent graphically the relationships with Pearson Khi2-tests.

Analysis :

We observe that

- There are 6 positive correlations, of whom 3 are strong
- There are 4 negative correlations, of which non are strong.

Discussion :

The BN shows us what we are aware of in our professional culture. It will represent graphically what we usually describe in a table, a table that is awkward to read at all times during our shifts.

We discover new knowledge as there is no significant correlation with painkillers such as paracetamol and ketoprofene and discharge. Discharge is only significantly correlated with a morphine prescription, and the correlation is negative. It indicates what we are aware of in our culture, that patients in great pain are likely to receive morphine, and these patients are less likely to be discharged home.

Conclusion :

It is possible to create more knowledge with less resources with the Bayesian Net, and observe the impact of analgesics in renal colic patients on the discharge rate as a dashboard, and at the patients bedside.

The occasion of a medical thesis allows to create a database, to practice Knowledge Management and to uncover new worksites of knowledge.

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F31:4 Administration & management

MODELIZATION OF A CONTINUOUS VARIABLE WITH THE BAYESIAN NET APPLIED TO ACS CARE IN THE ED

A Bellou (1), F Braun (2), F Claussner (3), M De Talance (4), N Flacke (5), M Gündesli (6), M Kosayyer (7), C Rothmann (8), P Satttonet (9), M Zerguine (3)

1. ED, Pontchaillou University Hospital, Rennes, France
2. ED, Centre Hospitalier Verdun, Verdun, France
3. ED, Centre Hospitalier Marie-Madeleine, Forbach, France
4. ED, Centre Hospitalier General Jean Monnet, Epinal, France
5. ED, Guebwiller & Colmar Hospital, Guebwiller, France
6. ED, Nancy University Hospital, Nancy, France
7. ED, Centre Hospitalier Général, Sarreguemines, France
8. ED, Emergency Call Center, Centre Hospitalier Regional Metz, Metz, France
9. ED, Centre Hospitalier Thionville, Thionville, France

Corresponding author: Nflacke@gmail.com

Key-words: Knowledge Management ; Bayesian Net ; Acute coronary syndrome

Introduction :

The Bayesian Net is a graphical probabilistic model created by Judeah Pearl in 1988. It is based on Bayes' Theorem published posthumely in 1763, which describes the probability that one event leads to another. The Bayesian Net will receive information in any order, tolerate lack thereof and still run. In this it emulates our

decision making process while receiving a new patient in the ED. A challenge is that the Bayesian net will accept only discrete variables. Thus in modelization of continuous variables, such as time or troponin levels, transformation is required.

Methodology :

A regional database of 2000 chest pain patients enrolled in 19 EDs was analyzed retrospectively with the BayesiaLab tool. Intervals were observed closely along the process of care before and after arrival of the ED.

The continuous variables were discretized.

It was possible to analyze the impact of time on prognosis for five diagnostic subcohorts : Study population, ACS patients, Stable angina patients, cardiovascular patients (w/o ACS), non cardiovascular patients.

Results :

Our results show that is possible to tackle the challenge and modelize continuous variables according to our needs.

In this model the Patient is Actor on time, and we observe the impact of the delay before Arrival to the ED in hours in the STE-ACS Cohort on the Heart Failure Rate at 12 months.

Discussion: It is possible to transform continuous variables through discretization and to represent them in a binary or multimodal form. The Bayesian Net Tool BayesiaLab allows to leave the discretization process to the platform.

Conclusion :

The BayesiaLab interface hands the power to modelize decision making processes in the ED, to integrate continuous variables through discretization and to choose intervals that create significant cohorts. It is possible to place the Patient as Actor on time in the model and to observe the impact on prognosis for the subcohorts such as patients with a definitive STE-ACS diagnosis and the heart failure rate at 1 year.

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F31:5

Administration & management

A SYNCOPES TRIAGE PROTOCOL: AN EFFECTIVE WAY TO STRATIFY THE RISK IN THE EMERGENCY DEPARTMENT

F Stella (1), R Volpin (2), A Scudeller (2), E Pistollato (1), G Vettore (2), F Tosato (2)

1. Dipartimento di Medicina, Università degli Studi di Padova, Padova, Italy
2. Pronto Soccorso ed Osservazione, Azienda Ospedaliera di Padova, Padova, Italy

Corresponding author: fede.stella@gmail.com

Key-words: syncope ; biphasic triage ; risk management

Introduction: Syncope is a clinical syndrome characterized by transient loss of consciousness and postural tone due to temporary global cerebral hypoperfusion, followed by spontaneous recovery and return to baseline neurologic status.

Syncope is a common presenting complaint to the Emergency Department (ED) and its management is difficult, because it may be caused by either benign or life threatening conditions, the latter associated with an increased mortality.

Our ED uses a biphasic triage to assess the risk of patients presenting with syncope, in order to not overcrowd the Intensive Care Room (ICR) of the ED. All patients presenting with syncope undergo a protocol to stratify the risk.

Our Syncope Protocol (SP) is formed by ten dichotomous questions regarding medical history, associated symptoms, vital parameters and EKG. Only patients at medium-high risk for syncope caused by potentially life threatening conditions are visited in the ICR of the ED.

Objectives: we aimed to study safety and effectiveness of our syncope protocol to assess risk stratification in patients presenting with syncope in the years 2006-2011.

Methods: we retrospectively analyzed all the patients who visited the ED because of syncope between January 2006 and December 2011, dividing them into two groups according to the result of the syncope protocol.

We looked for early death during ED stay in both groups.

We looked for differences in the two groups with regard to percentage of hospitalization and discharge.

Lastly we looked for the number of returns to the ED for recurrent problems concerning syncope in the group of discharged patients from the not intensive unit.

Results: We analyzed 22,006 patients who visited our ED due to syncope in the period between January 2006 and December 2011. 14,390 patients had a positive protocol, 7,616 patients had a negative protocol.

7 patients visited in the ED due to syncope died during the stay in the ED, all of them had resulted positive to the protocol and were being evaluated in the ICR of the ED.

There was a significant difference in the two groups with regard to percentage of hospitalization and discharge: in the positive-to-protocol group half of the patient were hospitalized to undergo further medical evaluation, in the negative-to-protocol group only 23% of the patients were hospitalized.

No one of the discharged negative-to-protocol patients returned to the ED for life threatening recurrent problems concerning syncope.

Conclusions: our protocol is safe to stratify the risk of patients presenting with syncope.

F31:6 Administration & management

TRANSPARENCY OF PHYSICIAN METRIC DATA DECREASES TIME TO PHYSICIAN AND EMERGENCY DEPARTMENT LENGTH OF STAY

M Kauffman (1), J Kelleher (1), J Martinez (1), K Murrell (2), S Offerman (1), R Yee (1)

1. Emergency Department, Kaiser South Sacramento, Sacramento, USA
2. Emergency Medicine, Kaiser South Sacramento, Sacramento, USA

Corresponding author: karen.l.murrell@gmail.com

Key-words: Open Data ; Decreased length of stay ; Improved flow without added cost

Study Objectives:

Open, unblinded data is a well-known strategy to drive the performance of a group. We hypothesized that having clear goals for emergency department length of stay while capitalizing on physicians' natural competitive tendencies would drive performance. Our objective was to use open data in a non-punitive way to create a standardized approach to efficient patient care. Emergency Department (ED) overcrowding has been recognized as a national crisis in the United States. Systematic approaches to improve patient flow through the ED and therefore create bed capacity are necessary. We compared physician flow metrics before and after implementation of this system.

Methods

This was a retrospective review of the 12 months before and after implementation of an open data system for physicians in a single ED. Prior to the start of this new system, physicians were given their flow metrics in a blinded manner and at irregular time intervals. After the system, physicians were given unblinded data in a monthly staff meeting. The data was associated with open dialogue from physicians about strategies to improve flow. Time was also available for a "shadowing shift" where a more efficient physician who discussed alternative approaches for patient care shadowed less efficient physicians. There was no monetary reward for efficiency. In this ED, patients are assigned to their treating physician on arrival during the triage process. Patients could be assigned to one of two areas in the ED: a low acuity area for ESI Level 4,5 patients or a higher acuity area for ESI Level 1,2,3 patients. Our ED uses an electronic patient tracking system where physicians may visualize and review assigned patients immediately and all ED times are tracked. Data is described with simple descriptive statistics. 95% confidence intervals (CIs) are presented where appropriate. Student's t-test was used for comparison of means.

Results

During the two-year study our ED saw 161,358 patients. In the period prior to implementation of the open data system we saw 79,681 patients (7/2009-7/2010) and 81,677 in the year following (9/2010-9/2011). August 2010 was excluded, as implementation was mid-month. In the pre-implementation time period the mean daily ED census was 218 vs 224 in the post implementation period. The average daily admission percentages were 11.17 vs. 11.66 in pre and post study period. In the year after implementation mean arrival to MD start time decreased from 36.82 min (95% CI 36.60,37.08) to 23.57 min (95% CI 23.43,23.73): difference of 13.24 min (95% CI, 12.97, 13.52; $p < 0.0001$). Standard deviation decreased from 31.35 to 19.79. ED length of stay decreased from 208.08 min (95% CI, 207.69-210.47) to 181.11 min (95% CI, 179.81-182.41: difference of 27.97 min (95% CI, 26.07, 29.87; $p < 0.0001$). Standard deviation decreased from 199.96 to 189.52.

Conclusion

The use of transparent physician data in combination with well defined goals for flow decreases time to MD and total length of

stay in the emergency department. The system instills ownership in the ED physician for the patient's time to physician and length of stay in the department. This system improved ED patient flow without added personnel or cost.

F31:7 Administration & management

AN AUDIT OF TRIAGE WITHIN A UK DISTRICT GENERAL HOSPITAL EMERGENCY SURGICAL RECEIVING UNIT.

SL Tyler, L Smith

Surgery, The Royal Cornwall Hospital, Truro, United Kingdom

Corresponding author: sarah_tyler32@hotmail.com

Key-words: Triage ; UK ; Emergency surgical unit

Aim:

The Royal Cornwall Hospital is a DGH serving a population of over 420,000. All surgical emergency admissions are admitted via a 29-bedded unit. Trust policy states that no patient should wait longer than 30 minutes for nurse led triage. The aim of this audit was to assess whether patients are triaged in a timely fashion.

Method:

7 consecutive days of admissions were audited. Time taken to obtain the first set of observations on the unit was recorded. Re-audit of another 7-day period occurred 6 months later.

Results:

Initial audit revealed the standard was achieved in only 34% of cases. Following presentation at a local audit meeting, measures were implemented, including adjustment of admission protocol with extensive education of nursing staff and junior doctors. Following re-audit the standard on the unit was achieved in 64%.

Conclusions:

The number of patients being triaged within the 30 minutes on the unit has almost doubled. This audit has demonstrated that with appropriate inclusion of the multi-disciplinary team improvements can be made in time to triage with simple adjustments, but in order to further progress more radical changes are needed. As a result we have recently secured a healthcare assistant dedicated to triage and plan to assess the impact of this in due course.

F31:8 Administration & management

THE EVALUATION OF READMISSIONS TO EMERGENCY DEPARTMENTS IN CENTRAL PART OF TURKEY

M Ergin (1), A Tuncar (1), N Karakus (1), Y Durduran (2), S Kocak (1), E Erdemir (1), AS Girisgin (1), M Gul (1), B Cander (1)

1. Emergency Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey
2. Public Health Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

Corresponding author: drmehmetergin@gmail.com

Key-words: Readmission ; Quality measurement ; Emergency Department

BACKGROUND: Readmission to emergency department (ED) is accepted as one of quality indicator of health care given at EDs. The study is to demonstrate the characteristics of patients who readmitted to our ED and results of their ED visits. **MATERIAL – METHOD:** The study was conducted at Necmettin Erbakan University Meram Medicine Faculty Emergency Department between 1 February and 15 April 2012. All patients who had history

of admission to an ED during last 72 hours and then readmitted to our ED were included regardless their age. RESULTS: The study included 152 patients of whom 53.9% (n=82) were men and 46.1% (n=70) were women. The median age was 45 (min – max; 1 - 91) year old. The percentage of patients who had health care insurance was 96.7% (n=147). In terms of comorbidity, 55.3% (n=84) of patients had at least one disease. The most common comorbidity was hypertension (25%; n=38). The median number of drugs used was 0 (min – max; 0 – 9). There were 96.1% (n=146) of patients who had one emergency visit while only 4.6% (n=4) had 2 visits and 0.7% (n=1) with 3 visits. 34% (n=52) of admissions were made to our ED, 30.9% (n=47) to community hospital ED, 23% (n=35) to private hospital ED, 13.2% (n=20) to education and research hospital ED and 5.9% (n=9) to other medicine faculty hospitals ED. The results of last ED visits were that 92.1% (n=140) of patients were discharged from ED and 7.2% (n=11) left ED with their own will. In terms of patients' complaint when readmitted to our ED, 97.4% (n=148) of those were medical whereas only 2% (n=4) were trauma related. After ED process, 22.4% (n=34) of diagnosis were related with infectious diseases, 19.7% (n=30) with gastrointestinal system and 15.1% (n=23) with neurological system. There were 63.8% (n=97) of patients discharged from our ED while 34.2% (n=52) of those were hospitalized, 1.3% (n=2) of those were transferred to another hospital and only 0.7% (n=1) of those left ED with their own will. CONCLUSION: It is important to understand the features of patients who were readmitted to ED. Emergency physicians should be more careful while evaluating these patients. The underlying causes of readmission should be solved to increase quality of health care and decrease ED overcrowding and risks of patients in terms of morbidity and mortality.

F31:9 Administration & management

EVALUATING THE SEVERITY OF PATIENTS ADMITTED TO THE EMERGENCY HOSPITALISATION UNIT WITH THE SIMPLIFIED SEVERITY INDEX 2: A COHORT STUDY.

R. Masmoudi, A-L. Feral-Pierssens, G. Sauvin
Emergency Department, European Georges Pompidou Hospital, Paris, France

Corresponding author: anne-laure.feral-pierssens@egp.aphp.fr

Key-words: severity index ; intensive care admission ; economic impact

Admissions of emergency patients in an intensive care unit are getting more difficult since they must present precised severity criteria to be admitted and places are rare. The lack of intermediate structures is then responsible for the use of the Emergency Hospitalisation Units (EHU) as "Monitoring Units" (MU). In our teaching-hospital, we used the Simplified Severity Index 2 (IGS2) in order to establish the severity of our patients' health when admitted to the EHU.

Material and method: We assessed a prospective cohort study of all patients admitted to the EHU between 12/01/10 and 01/30/11. Then, we assessed the IGS2-age score for all of them. Patients with a score (IGS2-age) ≥ 7 when the main diagnosis was one of the pre-selected diseases and patients with a score ≥ 15 without any diagnosis specificities should benefit from an admission in an appropriate MU considering the 2009 french guidelines.

Results : n=1106 patients included. Sex ratio=0.89. Age average=67.6 \pm 22.3 y.o. This population was representative of our EHU annual patients (6600 patients per year). Average IGS was 22.99 \pm 10.16. Among our cohort, 23.4% (259) of the patients presented the admission criteria in an MU. Average IGS2-age=20.47 \pm 8.43. 8% patients had an IGS2-age ≥ 7 with a pre-

selected disease. Among the 42 deceased patients, IGS2-age was 41.92 vs. 22.23 (p<0.001).

Discussion: A large percentage of our EHU patients are unstable and should benefit from an admission in an appropriate MU. Since there is lot of elders among our patients, we can suppose that subtracting the age to the IGS2 probably underestimates the number of patients that should benefit from these appropriate structures. Since the EHU is not conceived so as to monitor those unstable patients, the lack of intermediate structures has negative consequences on the quality of their health management. Moreover, the economic impact of those unstable patients should be studied since the burden in terms of activity and cost is not taken into account for our emergency department's budget.

F32:1 Cardiovascular 1

ONE-YEAR AND LONG TERM MORTALITY OF PATIENTS WITH ACUTE HEART FAILURE MANAGED IN AN EMERGENCY DEPARTMENT

D. Campillo (1), E. De Las Nieves (2), M. Jimeno (1), A. Martín (3), R. Merinero (4), I. Portero (3), R. Ruiz (5)

1. Internal Medicine, Hospital Severo Ochoa, Madrid, Spain
2. Emergency Department, Hospital Móstoles, Madrid, Spain
3. Emergency Department, Hospital Severo Ochoa, Madrid, Spain
4. Statistical Department, Universidad Complutense, Madrid, Spain
5. Emergency department, Hospital Severo Ochoa, Madrid, Spain

Corresponding author: davidcr85@hotmail.com

Key-words: Acute heart failure ; Cardiovascular mortality ; Prognosis score acute heart failure

Background

Acute heart failure (AHF) is a severe and growing health care problem. Although several prognostic scores have been developed, limited information is available concerning long-term prognosis of patients with AHF managed in the acute setting. There are already well established ICC prognostic scores, as the SHFM score, developed for hospitalized patients at Cardiology or Internal Medicine; but those scores are useless at an ER department because several items are not available before admission in a Cardiology/IM unit, the population included in those studies may differ from those attended at the ER, considering that there are patients that are referred for outpatient care after the ER visit. The objectives of this study were: 1) to determine 1-year and 5-year mortality of patients admitted to an ED because of AHF. 2) To determine potential clinical predictors of middle and long-term mortality among these patients.

Methods

This was a prospective observational study conducted in the ED of a referral Hospital in Madrid, Spain, from Dec,2002 to Feb, 2003. Patients over 14 years old with a final ED diagnosis of AHF were eligible for inclusion. Comorbidities, clinical presentation, ancillary tests, ECG and Chest Rx were prospectively collected. Informed consent was obtained in all cases and the study had IRB approval. Mortality was assessed in Dec, 2010 by direct telephone interview to all patients included, and to avoid recruitment losses, by reviewing the Mortality Registry of the Spanish National Institute of Human Statistics. We also evaluated potential variables that could help to predict 1-year, by means of risk analysis for discrete variables and regression studies for continuous variables. Finally, using multiple logistic regression analysis, we combined those variables that best performed as individual predictors of mortality to create a multi-variable predictive model of first-year mortality. Results were considered statistically significant if p value of the

regression coefficient was < 0.05 . Both descriptive and analytical statistics were performed using SPSS 13.0.

Results

144 patients were included, mean age 77.45 years (25% of the patients were ≥ 86 y) and 64% of the were female. At 5 years, 72 (50%) of patients included were died. Of these, 25% ($n = 36$) died in the first year of follow-up and another 25% ($n = 36$) in the following four years. Predictor factors at ED admission for 1-year mortality that showed the strongest predictive values were: advanced age, disability ($OR=2$, both), systolic and/or diastolic hypotension ($r=0,21$) and creatinine level over 1.5 mg/dL ($r = 0.18$) $p < 0.05$ for all analyses. Conversely, the initiation of ACEI therapy at the ED decreased this risk ($OR > 2$). Co-morbidity as hypertension, diabetes or COPD, as well as the presence of chest pain at admission, showed only a trend to be associated to 1-year mortality ($p < 0.1$; 90% confidence level). A logistic regression analysis was performed combining the most powerful variables, and a predictive model for mortality at the first year was generated. This model gives as output a score that represents the global probability of death in one year after an episode of AHF managed at an ED. Probability values for an individual > 0.5 (probability of death in the first year exceeding 50%) would allow the ED physician to easily identify a high risk group among HF patients.

$$x = (\text{age} \times 0,146) - (\text{gender} \times 1,341) + (\text{Cr} \times 1,055) - (0,063 \times \text{DBP}) - (1,576 \times \text{HT}) + (1,163 \times \text{chest pain}) - 8,104;$$

$$x = \log(p/(1-p)); p = (\exp(x))/(1+\exp(x))$$

age = in years

gender = 0 (women) 1 (men)

Cr = in mg/dl

DBP(diastolic blood pressure) = in mmHg

HT (hypertension) = 0 (yes) 1 (no)

chest pain = 0 (yes) 1 (no)

p = probability of death in the first year (0 to 1)

Conclusions

1) In our study we observed a 50% mortality rate within five years and 25% in the first year (0,25/year), in patients attended due to AHF in ED. Thus mortality rate occurs even in spite of the performance of optimized AHF treatment schemes. 2) We have identified easily available clinical variables that are strong individual predictors of 1-year mortality (age, gender, diastolic blood pressure, creatinine level and the presence of chest pain). We also have developed a model combining those variables to asses the risk of 1-year mortality that could be helpful to drive management decisions and to determine patients' prognosis.

F32:2

Cardiovascular 1

ELECTRICAL CARIOVERSION FOR RECENT ONSET ATRIAL FIBRILLATION: A SAFE, EFFECTIVE AND CHEAP TREATMENT IN THE EMERGENCY DEPARTMENT

R Volpin (1), F Stella (2), A Scudeller (1), F Borrelli (2), G Vettore

(1), F Tosato (1)

1. Pronto Soccorso ed Osservazione, Azienda Ospedaliera di Padova, Padova, Italy
2. Dipartimento di Medicina, Università degli Studi di Padova, Padova, Italy

Corresponding author: fede.stella@gmail.com

Key-words: atrial fibrillation ; atrial flutter ; electrical cardioversion (direct current cardioversion - DCC)

Introduction: Atrial fibrillation/flutter is the most common dysrhythmia presenting in the Emergency Department (ED).

Recent-onset atrial fibrillation is defined as a first detected or recurrent episode of atrial fibrillation lasting less than 48 hours.

According to international guidelines, if the patients is presenting with atrial fibrillation associated to unstable parameters, direct current cardioversion (DCC) is the emergency treatment; there are still no clear guidelines for patients presenting with atrial fibrillation and stable parameters, whether to choose electrical or pharmacological cardioversion.

Pharmacological or electrical cardioversion of stable patients in the ED with recent-onset atrial fibrillation with or without antecedent anticoagulation (according to European Society of Cardiology Guidelines) allow the ED physician to discharge these patients directly to home.

Objectives: we aimed to study safety and effectiveness of DCC as treatment for recent-onset atrial fibrillation/flutter in our Emergency Department in the years 2010-2011.

Methods: we retrospectively studied all the patients who underwent an electrical cardioversion as a treatment of recent-onset atrial fibrillation/flutter in the period January 2010-December 2011 in our Emergency Department, looking for success rate, acute and chronic adverse events and recurrence at 1, 3 and 6 months.

Results: A total of 386 patients were studied, 341 presenting with atrial fibrillation, 45 with atrial flutter.

96.63% of the patients were cardioverted to sinus rhythm; 13 patients (3.37%) were no responders with persistent atrial fibrillation. It is notable that all the 45 patients presenting with atrial flutter were successfully cardioverted to sinus rhythm.

Not one ED patient who was successfully cardioverted suffered a thromboembolic event. Two patients suffered, as an adverse event, a benign supraventricular arrhythmia that resolved in the ED. No other short or long term complications of the procedure were recorded.

The atrial fibrillation recurrence rate was 6.18% a 1 months, 10.29% at 3 months and 12.06% at 6 months respectively.

Conclusions: DCC is a safe procedure in patients with symptomatic recent-onset atrial fibrillation of less than 48 hours' duration. Not one patient who was cardioverted to sinus rhythm had a thromboembolic event. Overall adverse event rates were exceptionally low. The return visit rate for relapsed atrial fibrillation is quite high, and all patients should be made aware of this possibility.

According to our study, we conclude that DCC is safe and effective.

F32:3

Cardiovascular 1

ACUTE HEART FAILURE REGISTRY FROM HIGH-VOLUME UNIVERSITY HOSPITAL ED

H Hrabakova (1), J Karasek (2), P Ostadal (1), M Penicka (1), P Widimsky (1)

1. Cardiology, University Hospital Kralovske Vinohrady and 3rd Medical Faculty Charles University, Prague, Czech Republic

2. Cardiology, Emergency, University Hospital Kralovske Vinohrady and 3rd Medical Faculty Charles University, Emergency Medical Service ASCR, Prague, Czech Republic

Corresponding author: jirikarry@gmail.com

Key-words: heart failure ; emergency department ; independent mortality factors

Background: Acute heart failure (AHF) is associated with a poor prognosis.

Objectives: The objectives of this study are to describe mechanisms of AHF and to identify the predictors for all-cause mortality by patients admitted for hospitalization by emergency departments (EDs) as well as to compare European and American data.

Methods: We designed a prospective registry of consecutively admitted patients for AHF to a high- volume university hospital ED

during a 1-year period (n = 202; age, 75 ± 11 years; 51% men; ejection fraction, 38% ± 15%).

Results: The major causes of AHF were coronary artery disease, often with concomitant mitral regurgitation, hypertension, or atrial fibrillation (N90% of cases). At admission, 24.9% of patients had preserved ejection fractions (N50%); and only 7.7% fulfilled the definition of diastolic AHF. The 30-day and long-term mortality (median follow-up, 793 days) were 20.3% and 31.0%, respectively. A low systolic blood pressure (P = .006), reduced ejection fraction (P = .044), and low serum hemoglobin level (P = .01) emerged as the strongest predictors of all-cause mortality. In patients with AHF without acute myocardial infarction (MI) (63.9%), prescription, at discharge, of statins (P = .05) was independently associated with all-cause mortality.

Conclusions: The patient's blood pressure, ejection fraction, and hemoglobin values, at admission, were identified as the strongest predictors of all-cause mortality. In AHF not triggered by acute MI, long-term use of statins may be associated with reduced survival. The prevalence of diastolic AHF is low. The American AHF population had similar baseline characteristics; needed fewer intensive care unit admissions; had a better 30 days of prognosis, lower incidence of MI, and de novo AHF diagnoses. In a similar subgroup, we observed similar incidences of inotropic support and mechanical ventilation. Our results could not be generalized to all patients with AHF admitted to US EDs.

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Acute heart failure registry from high-volume university hospital ED: comparing european and US data Karasek J, Widimsky P, Ostadal P, Hrabakova H, Penicka M. Am J Emerg Med. 2011 Jun 2.

Group 2. There wasn't a statistically meaningful difference between groups (p>0.05). There were 50 patients in hemodynamically stable group in which three of them died while there were 4 patients in hemodynamically unstable group in which 3 of them died. The ratio of neutrophil/lymphocyte count was 5.64 in stable group and 2.05 in unstable group. The difference was statistically meaningful between groups (p<0.05). The ratio of neutrophil/lymphocyte count was 9.38 in non-survival group and 5.05 in survival group. There was a statistically meaningful difference between groups (p<0.05). **CONCLUSION:** It was thought that ratio of neutrophil/lymphocyte count can be used for prognosis of hemodynamically unstable patients with PE. However, the further studies were required in the future.

F32:5 Cardiovascular 1

VALUE OF A NEW SCALE IN THE DIAGNOSIS OF CONGESTIVE HEART FAILURE IN THE EMERGENCY DEPARTMENT

H. Ben Soltane, W. Bouida, H. Boubaker, MH. Grissa, A. Belaid, R. Boukef, S. Nouira

Emergency Department, University Hospital of Monastir, Monastir, Tunisia

Corresponding author: grissa.medhabib@gmail.com

Key-words: Acute heart failure ; Score ; dyspnea

Introduction: The recognition of decompensated heart failure is often difficult because of the poor correlation between symptoms and cardiac dysfunction. To enhance the emergency physician ability in the diagnosis of dyspneic patients with congestive heart failure (CHF), clinical scales have been proposed. The « Congestive Cardiac Failure Diagnosis Scale » (CCFD) developed from a multivariate analysis is evaluated in the present study.

Aim of the study: To assess diagnostic performance of the CCFD score for the identification of CHF in patients with acute dyspnea.

Patients and methods: Prospective observational study conducted in an ED between August 2008 and August 2011. We included patients aged ≥ 18 years consulting for acute dyspnea. We excluded all patients with hemodynamic instability, mechanical ventilation, cardiac arrest. Demographic characteristics, physical examination data and plasma concentration of BNP (Brain Natriuretic Peptid) were collected. The CCFD score was calculated for all patients and its performance in the diagnosis of cardiac failure is evaluated using the ROC curve. Patients were defined as having CHF (CHF+) when BNP level is > 400 pg/ml, and without CHF (CHF-) when BNP level is < 100 pg/ml. Between these values the diagnosis was based on 2 expert opinions.

Results: 1560 patients having dyspnea were included, mean age 67 ±14 years; sex-ratio (M/F): 1.1, 1030 patients (62.4%) were defined as (CHF+). BNP plasma level in CHF (+) group is significantly superior to (CHF-) group (610 pg/ml [100 ; 15241] versus 41 pg/ml [0 ; 397]) (p:0.001). The CCFD score is significantly higher in (CHF+) compared to (CHF-) (9.5±3 vs 4±3) (p: 0.001). Using a cut-off value of 6, the sensitivity is 91%; the specificity is 68%; the negative predictive value is 82% and the positive predictive value is 82%.

Conclusion: The CCFD score has a good performance for the identification of CHF in ED dyspneic patients.

F32:4 Cardiovascular 1

THE PROGNOSTIC VALUE OF RATIO OF NEUTROPHIL/LYMPHOCYTE COUNT IN CASE OF PULMONARY EMBOLUS

B Cander (1), E Atabey (1), M Ergin (1), AS Bodur (2), AS Girisgin (1), S Kocak (1), M Gul (1)

1. Emergency Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

2. Public Health Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

Corresponding author: drmehmetergin@gmail.com

Key-words: Pulmonary embolus ; Neutrophil count ; Lymphocyte count

BACKGROUND: The study is aimed to evaluate the relation between ratio of neutrophil/lymphocyte count with mortality in case of pulmonary embolus. **MATERIAL – METHOD:** The study was conducted retrospectively between 01 January 2010 and 30 May 2012 at Necmettin Erbakan University Meram Medicine Faculty Emergency Department. It included patient >18 year old and a definite diagnosis of PE according to computed tomography pulmonary angiography. The clinical situation of patients when admitted to ED was recorded according to Modified Early Warning Score (MEWS). The responsiveness, blood pressure and pulse rate were taken into account to determine hemodynamic instability. All data was recorded by SPSS 10.0 version and non-parametric tests were used. **RESULTS:** The study included 54 patients grouped into two according to MEWS. The patients with 2 and more MEW Score formed Group 1 (n=16) while the patients with 1 and less MEW Score formed Group 2 (n=38). The median value of ratio of neutrophil/lymphocyte count was 4.93 in Group 1 and 5.34 in

F32:6

Cardiovascular 1

ACUTE HEART FAILURE IN THE EMERGENCY AND CCU: ARE THERE MANAGEMENT DIFFERENCES?

S Laribi (1), P Troude (2), B Hangoc (3), C Durand (4), C Segouin (3), P Plaisance (5)

1. Emergency Department, APHP, Lariboisière Hospital and INSERM Unit 942, Paris, France, Paris, France
2. Public Health department, APHP, Lariboisière hospital, Paris, France, Paris, France
3. Public health department, APHP, Lariboisière hospital, Paris, France, Paris, France
4. Emergency department, APHP, Lariboisière hospital, Paris, France, Paris, France
5. Emergency Department, APHP, Lariboisière hospital, Paris, France, Paris, France

Corresponding author: said.laribi@lrh.aphp.fr

Key-words: AHF ; Emergencies ; Cardiac care unit

Introduction: Prevalence and incidence of heart failure are increasing due to the aging of the population and a better management of myocardial infarction. Acute heart failure (AHF) episodes are responsible for high rehospitalisation rates. Hospitalised patients are not admitted only in cardiology. The objective of this study was to compare patient characteristics and their hospital management depending on their initial arrival to the hospital: Emergency department (ED) or Cardiac care unit (CCU), taking into account the current recommendations of the European Society of Cardiology.

Méthods: Records of all patients admitted to the ED or directly hospitalised to the CCU with a principal diagnosis of acute heart failure were analysed from 1st October 2010 to 31st March 2011 in our institution. Demographic, clinical characteristics and hospital management of these patients were retrospectively collected from patient records. Patients were divided in 2 groups: those admitted to the ED and those directly admitted to CCU.

Résultats: Analyses focused on 197 patients: 149 patients were admitted to the ED and 48 patients were directly admitted to CCU without going through the ED. Patients in the CCU group were more severe than patients directly admitted to the ED. Few differences between groups were identified on the prescription of additional routine examinations. Concerning treatment, the 2 groups differed for both drug prescriptions and non-invasive ventilation use.

Discussion/conclusion:

No difference was found in quality of care between the two groups regarding the diagnostic and therapeutic approach. Indeed, some differences in treatment were observed but may be explained by differences in clinical characteristics.

The purpose of this study was to determine whether a new accelerated diagnostic protocol (ADP) for possible cardiac chest pain could identify low-risk patients suitable for early discharge.

Methods: This observational study was undertaken in an emergency department of Tunisia, that included patients aged 18 years and older presenting with chest pain due to suspected acute coronary syndrome (ACS). The STEMI were excluded. The evaluation of the ADP is based on the Thrombolysis in Myocardial Infarction [TIMI] score, the electrocardiograph findings and the troponin rate done at hospital admission and 2 hours later. ADP ranges from 0 to 3. It is negative when all the conditions below are satisfied: TIMI Score= 0, no electric ischemic variation during monitoring and negative troponin either in 0 H and 2 H. For a patient to be identified as low risk, all parameters in the ADP had to be negative.

The primary endpoint was major adverse cardiac events (MACE) within 30 days after initial emergency presentation. The MACE were death, myocardial infarction, cardiogenic shock.

Results: We recruited 151 patients, only 126 (83 %) completed 30-day follow-up. The mean overall age was 57 years, the sex ratio was 1, 5. A TIMI score = 0 was found in 25% of patients (n= 31), no ECG changes in 76% of patients (n=96) and negative troponin level at 2H in 93, 5% of patients (n=118). The ADP classified 24 patients as low risk. None (0 %) of these patients had a MACE. When the ADP was positive, the frequency of occurrence of MACE at 30 days increases from 6, 9%, for an ADP rate = 1, to 100% for an ADP rate = 3.

Discussion: Major adverse cardiac event occurs more often with the increase of ADP. This approach could identify safely low-risk patients, decrease the observation period and avoid the emergency congestion.

1. Martin Than. A 2-h diagnostic protocol to assess patients with chest pain symptoms in the Asia-Pacific region (ASPECT): a prospective observational validation study. Lancet 2011; 377: 1077-84

F32:8

Cardiovascular 1

COMPARATIVE EVALUATION OF PULMONARY EMBOLISM PROGNOSTIC SCORES IN EMERGENCY DEPARTMENT

I.C. Roca (1), D. Cimpoesu (2), M. Roca (3), M.D. Datcu (4)

1. Emergency Department, St. Spiridon Hospital, Iasi, Romania
2. Emergency Department, St. Spiridon Hospital, Iasi, Romania
3. Pneumology, Pneumology Hospital, Iasi, Romania
4. Cardiology, St. Spiridon Hospital, Iasi, Romania.

Corresponding author: iuliaroca@yahoo.com

Key-words: Pulmonary embolism ; Prognostic score ; Mortality

Aim: Pulmonary embolism is a life threatening disease and one of the main causes of in-hospital mortality. There are multiple risk stratification scoring systems for the forecast of the outcomes in patients with pulmonary embolism. **Material and methods:** We conducted a prospective observational cohort study to evaluate the comparative validity of four prognostic models: pulmonary embolism severity index (PESI), simplified PESI score, PESI risk classes and shock index, for predicting short-term mortality in acute pulmonary embolism. The PESI and PESI - simplified scores and shock-index were calculated. PESI scores were segregated into risk class (I-V) obtaining PESI classes. Shock index was dichotomized into 0 (for value <1) versus 1 (for value >1) risk groups. We determined the area under Receiver Operating Characteristic curve, the sensitivity, specificity, likelihood ratio (LR+, LR-) for PESI score, simplified PESI score, PESI risk classes and shock index, to compare the ability of these scoring tools. **Results:** The cohort

F32:7

Cardiovascular 1

THE UTILITY OF AN ACCELERATED DIAGNOSTIC PROTOCOL IN POSSIBLE CARDIAC CHEST PAIN

F. Amira, H. Ghazali, S. Souissi, H. Hedhli, S. Bellili, A. Sellami, M. Mougaida, B. Bouhajja

Emergency department, Regional Hospital of Ben Arous, Ben Arous, Tunisia

Corresponding author: feten_amira@hotmail.fr

Key-words: chest pain ; low-risk patients ; accelerated diagnostic protocol

Introduction: An accelerated diagnostic protocol (ADP) in possible cardiac chest pain was established and validated in a prospective observational validation study (ASPECT*) which was done in 14 emergency departments in the Asia-Pacific region (1).

consisted of 362 subjects. The mortality was 21.54%. The sensitivity, specificity and likelihood ratios were different between scores but the area under Receiver Operating Characteristic curve showed values in range 0.6-0.7. Conclusions: The assessed prognostic scores performed comparably for identifying pulmonary embolism patients at short-term risk of mortality, even for PESI score segregated in risk classes and dichotomized version of shock index.

F32:9

Cardiovascular 1

PROGNOSTIC FACTORS IN CHEST PAIN PATIENTS: A QUANTITATIVE ANALYSIS OF THE HEART SCORE

BE Backus (1), PA Doevendans (2), JC Kelder (3), AJ Six (4), EW Steyerberg (5), Y Vergouwe (5)

1. Emergency Medicine, Albert Schweitzer Hospital, Dordrecht, Netherlands
2. Cardiology, University Medical Center, Utrecht, Netherlands
3. Cardiology, St Antonius hospital, Nieuwegein, Netherlands
4. Cardiology, Hofpoort Hospital, Woerden, Netherlands
5. Department of public health, Erasmus Medical Center, Rotterdam, Netherlands

Corresponding author: backus@heartscore.nl

Key-words: HEART score ; Chest pain ; Regression analysis

Background

Risk stratification for chest pain patients at the emergency department is recommended in several guidelines. The HEART score is based on medical literature and expert opinion and calculates the risk of a major adverse cardiac event (MACE). We aimed to assess the predictive effects of the five HEART components and to compare performance of the original HEART score with a model based on regression analysis.

Methods

We analyzed prospectively collected data from 2388 patients. Primary endpoint was the occurrence of MACE within 6 weeks (AMI, PCI, CABG, significant stenosis with conservative treatment and death due to any cause). We performed univariate and multivariate regression analysis and an adjusted HEART score (HEART-adj) was developed. Performance of the original and adjusted HEART score was assessed. The clinical performance of HEART and HEART-adj was assessed by means of the net reclassification improvement (NRI).

Results

A total of 407/2388 patients (17%) had a MACE. Univariate regression analysis showed the same ordering of predictive effects as used in the HEART score. HEART-adj, based on multivariable logistic regression analysis, showed slightly better calibration and discrimination than the HEART score (c-statistic HEART 0.83, HEART-adj 0.85). HEART-adj proved in a decision curve analysis to be clinically more useful than HEART for decision thresholds over 25%. Nevertheless, the original HEART classified patients better than HEART-adj, when the previously defined thresholds of 2.5% and 40% were applied (NRI=14.1%).

Conclusion

The weights of the five elements of the HEART score previously based on literature and expert opinion are supported by multivariable statistical analyses, although some improvement in calibration and discrimination is possible by adapting the score. The gain in clinical usefulness is relatively small and supports the use of either the original or adjusted HEART score in daily practice.

F33:1

Education & Training

IMPROVEMENT OF SELF-REPORTED CONFIDENCE IN NURSES' PROFESSIONAL SKILLS IN EDKEYWORDS: EMERGENCY DEPARTMENT, PROFESSIONAL SKILLS, NURSE VP Rautava (2), E Palomäki (3), T Innamaa (1), M Perttu (4), P Lehto (2), A Palomäki (2)

1. Health care services, Health Care Services of Hämeenlinna City, Hämeenlinna, Finland
2. Department of Emergency Medicine, Kanta-Häme Central Hospital, Hämeenlinna, Finland
3. Faculty of Education, University of Jyväskylä, Jyväskylä, Finland
4. Emergency department, Central hospital of Seinäjoki, Seinäjoki, Finland

Corresponding author: veli-pekka.rautava@kshsp.fi

Key-words: emergency department ; professional skills ; nurse

Aim: The aim of this study was to assess nurses' self-reported confidence in professional skills before and after a great Emergency Department (ED) reform in Kanta-Häme Central Hospital.

Background: A great reform of emergency care took place in the province of Kanta-Häme locating in Southern Finland. Three separate out of hour services in primary health care (PHC) and one emergency room (ER) in hospital were combined into one big emergency department (ED) in April 2007.

Methods: Emergency nurses from primary and secondary care participated in transitional training which lasted from 2005 to 2007 and started two years before the establishment of the new organisation. During the training nurses improved their transition skills, defined house rules of the new clinic, visited out of hour services in PHC and ER in secondary care as well as improved their knowledge of new instruments and technology. Most important processes of critically ill ED patients were described and modelled with an electronic flow chart software. Transitional training was followed by weekly practical educational sessions in the new ED.

During the transitional training sessions nurses compiled lists of practical skills and measures needed in the ED. Lists were updated after the feedback from physicians in primary and secondary care and head physicians of Kanta-Häme Central Hospital. The final 233-item list consisted of 15 different categories, each of them containing from 5 to 42 items.

Based on the work described above, a questionnaire was developed to reflect ED nurses' skills in clinical measures but also to evaluate the need of professional education and practical training. Nurses working in the ED asked to fill in the questionnaire in January 2007 and in January 2011. When filling in the questionnaire, they had to assess for each of the 233 items whether they

- a) can independently carry out the specific measure without help of a more experienced ED nurse
- b) can do the specific measure with the advice or help of a more experienced ED nurse
- c) can not manage the specific measure.

Statistics were analyzed with SPSS for Windows 20. A non-parametric Mann Whitney U-test was used in assessing the differences between results from year 2007 and 2011. A probability value < 0.05 was considered statistically significant.

Results: Nurses' self-reported confidence in professional skills improved significantly in eight classes out of fifteen. These classes were cannulations, urinary catheterizations, patient monitoring, cardiac patients, equipments, triage and nurse practising, psychiatric patients as well as infection risk. Best results (nearly 100 per cent confidence in the second evaluation) were found in classes of urinary catheterizations, patient monitoring and infection risk. When studying the group of nurses participating in both surveys 2007 and 2011, we revealed improvements in all

fifteen categories. All but two of these changes were significant ($p < 0.05$).

Conclusions: In this study taking place during a great reform of emergency services, we found a significant improvement in the professional skills of nurses working in the ED. This improvement was especially uniform in those nurses working in the ED during the whole transition process.

According to our results, nurses' education and training program in ED may be successfully put into practise when based on the co-operation of nurses and physicians dedicated to emergency services.

F33:2

Education & Training

FRENCH YOUNG DOCTORS PERSPECTIVES OF EMERGENCY MEDICINE AS A PRIMARY SPECIALTY

Y Yordanov, B Dahan, A Kalpokdjian, J Sobotka, JL Pourriat

Emergency Department, EMS, and Forensic Emergency Medicine, Hôtel-Dieu – Assistance Publique des Hôpitaux de Paris, PARIS, France

Corresponding author: youriyordanov@gmail.com

Key-words: Primary specialty ; Residents ; Training

Introduction:

In 2006 in France, emergency medicine became a subspecialty. Since then, emergency medicine (EM) leaders have been advocating in favor of formal specialty recognition. The most common path to become an emergency physician is to complete medical school, start family medicine residency (3 years) and add a subspecialty training of 2 years in EM. Having EM as a primary specialty will disconnect EM from family medicine. EM physicians won't have, as they do today, the double qualification. This study assessed residents, and young physicians, perspectives of emergency medicine as a primary specialty.

Methods:

In November and December 2011, we conducted a web-based survey. It was distributed to young EM physicians or residency, via the AJMU network (association des jeunes médecins urgentistes). It was a simple survey, with two questions, and a comment section. The response rate was of 58% ($n = 284$, total = 489).

Results:

A minority of young doctors, 49,3% ($n=140$), would have chosen EM if it was a primary specialty. 72,2 % ($n=205$) would rather stay with the subspecialty and the current training program.

There were three types of comments:

- The vast majority insisted on the quality of life, fatigue, sleep loss, etc. associated with EM. Most young doctors were concerned about their abilities to work in EM for years. Those would like to remain a sub specialty of family medicine to be able to work as both, and have a «backup» plan.
- Then we had the primary specialty enthusiasts. They are very eager to see EM become a primary specialty. It will help developing the specialty in France. A primary specialty will grant a better, more complete, practical and theoretical training for young doctors. But it will also promote the academic part of our specialty, encouraging research in that field. An important point is that, according to most of these comments, EM becoming a primary specialty is the necessary first step to transforming EM as a carrier from what it is today to something they could do on a long scale.
- Then the last type of comments didn't consider starting EM training if it wasn't a subspecialty. Those already work or imagine there carrier as divided between EM work and family medicine.

Conclusions:

A majority of EM residents, in France, would have chosen another specialty if EM was a primary specialty. Comments were based on how they perceive EM today. Building a primary specialty will place emergency physicians in charge of defining their future. Young doctors and residents should be associated to the process, so we are able to pinpoint and tackle what could prevent future EM doctors from choosing that specialty.

F33:3

Education & Training

THREE YEAR TRAINING PROGRAM EMERGENCY MEDICINE IN THE NETHERLANDS: A FIRST EVALUATION FROM RESIDENT PERSPECTIVE

MI Gaakeer, SW Koning, R Veugelers

Emergency Department, University Medical Centre Utrecht, Utrecht, Netherlands

Corresponding author: s.w.koning@umcutrecht.nl

Key-words: Training and education ; Evaluation ; Emergency Medicine

Background: The training program of residents Emergency Medicine has formally been approved and introduced in November 2008 in the Netherlands.

Aim: First evaluation of this curriculum.

Methods: A questionnaire was composed out of ten items, concerning different aspects of the curriculum. The answers to the opinion questions were classified using the likert scale. The questionnaires were mailed to all currently enrolled residents.

Results: We mailed 189 residents, of whom 105 responded (55.6%). Of those 74.3% were women, the response rate for first, second and third years were respectively 21.9%, 29.5% and 48.5%. 72% were trained in a non-university training hospital. In general residents are satisfied with their training however 96.2% evaluated the current length as being too short. 77.9% would like to see it extended to five or even six years. Bedside teaching is assessed positive by only 34.3%. All rotations are assessed positive except the general practitioner rotation. Residents expect themselves to function quite well as an Emergency Physician (EP) after the current training program. According to 43.7% of residents their EP had enough time to be consulted and 40.7% found the EP sufficient clinically present during their shifts. When present 82.5% found their EP's easy accessible and 66.6% considered them as role model. There is a positive trend seen in supervision and role model when more EP's are employed at the ED.

Conclusion: In general the current training program is evaluated positively however there are some advisable improvements. The training program should be extended to five years, with better bedside teaching. Residents would like to have more supervision by an Emergency Physician. This could be achieved with more trained Emergency Physicians working in training hospitals.

F33:4

Education & Training

MULTIDISCIPLINARY TEAMWORK IN SIMULATION-BASED TRAINING FOR MANAGEMENT OF LIFE-THREATENING EVENTS: MORE STRESS, LESS PERFORMANCE!

A Ghazali (1), A Boureau-Voultoury (2), J Cardona (2), JY Lardeur (1), M Scépi (1), D Oriot (2)

1. Emergency Department, University Hospital, Poitiers, France

2. Pediatric Emergency Department, University Hospital, Poitiers, France

Corresponding author: denis.orient@gmail.com

Key-words: multidisciplinary team ; training ; simulation

Introduction: Simulation-based training is known to improve technical skills as well as non-technical skills, such as crisis resource management (CRM). Teamwork training is a crucial step to reach performance. Simulation-based training (SBT) is most effective when providers train as multidisciplinary team (MDT). Stress is known to alter performance. But teaching is often only offered to disciplinary learners (students, interns, MDs, nurses or nurses assistants), as well as debriefing. We studied stress and performance during SBT sessions, where teams were monodisciplinary teams (including only MDs playing different roles) or multidisciplinary teams.

Objectives: 1/ To evaluate team performance and the level of stress in leaders and followers in both groups; 2/ To evaluate the feeling of being unsatisfied in each learners of both groups.

Methods: During the last 12 months, we ran 158 SBT sessions with teams of 4 learners who were either only MDs (monodisciplinary team), playing different roles: physician, intern, nurse and nurse assistant or a real MDT belonging to Emergency Department or Pediatric Emergency Department of the University Hospital of Poitiers, France. Scenarios included infant and child life-threatening diseases or severe traumas on high fidelity mannequins (SimNewB, SimJunior, SimKelly of Laerdal*). We assessed team performance with a specific evaluation scale we developed that includes the assessment of CRM as well as the fulfillment of the algorithm and procedures required by the scenario. During the first part of the debriefing, the stress level and the feeling of being unsatisfied after the scenario were inquired from each learner on a 0 to 10 scale.

Results: Among the 158 sessions, 136 were performed by multidisciplinary teams and 22 by monodisciplinary teams. The stress level was higher in leaders than in followers whatever the composition of the team. The stress level was also higher in multidisciplinary team leader (7.36) than in monodisciplinary team leader (6.95) but did not reach significance. Stress of the 3rd follower (nurse assistant) was higher in multidisciplinary than in monodisciplinary team: 7.00 vs 5.23, $p=0.003$. Team performance was lower in multidisciplinary than in monodisciplinary team: 56.3/100 vs 67.1, $p=0.001$. Stress was directly correlated to the feeling of being unsatisfied ($p=0.01$).

Conclusion: There is a significant difference between real and fake MDT, regarding stress and performance. A real MDT simulation-based training provides more stress but less performance. This finding should be known to adapt a correct way of training with simulation in a more realistic person environment.

F33:5

Education & Training

EVALUATION OF THEORETICAL KNOWLEDGE LEVELS OF TURKISH EMERGENCY MEDICINE RESIDENTS

NO Dogan, G Pamukcu Gunaydin, Y Cevik, Y Otal, S Levent, G Cikrikci

Department of Emergency Medicine, Etlik Ihtisas Training and Research Hospital, Ankara, Turkey

Corresponding author: nurettinozgurdogan@gmail.com

Key-words: emergency medicine ; educational measurement ; teaching

Background: In this study, our goal was to assess the theoretical knowledge levels of emergency medicine residents, to find out the subjects that they are more successful and less successful, and to compare the knowledge levels of residents in university and training / research hospitals; by evaluating the results of a general examination that was performed on the residents of emergency medicine throughout Turkey.

Methods: The examination results of a total number of 30 training / research hospitals and university hospitals that agreed to take the examination were analysed retrospectively. The results of training / research hospitals and university hospitals were compared regarding distribution of main topics. Ethical committee approval was obtained.

Results: A total of 320 residents participated in the examination, which of 207 (64.7%) were working in university hospitals and 113 (35.3%) were in training and research hospitals. According to results, there was statistically significant difference between university hospitals and training hospitals in some subgroups (pediatric emergencies, gynecologic emergencies, internal medicine), however the number of correct answers did not varied.

Conclusion: Widespread increase in academic emergency departments obligate standardization of educational efforts. Emergency medicine residents should be directed according to appropriate guidelines in this area.

F33:6

Education & Training

A SIMULATOR-BASED STUDY OF IN-FLIGHT AUSCULTATION

JP Tourtier (1), N Libert (2), P Clapson (3), M Boursier (1), CE Astaud (1), D Jost (1), S Dubourdieu (1), L Domanski (1)

1. emergency department, Fire brigade of Paris, Paris, France

2. emergency department, Military hospital Val-de-Grâce, Paris, France

3. emergency department, Military hospital Percy, Clamart, France

Corresponding author: jeanpierre.tourtier@free.fr

Key-words: simulation ; aero-medical evacuation ; auscultation

Introduction :

Aeromedical evacuation creates a unique environment that challenges even the most experienced clinician. The availability and use of diagnostic tools is essential to the delivery of continuous, supportive en route care. Auscultation of the lungs can be essential when confirming the placement of endotracheal tubes, or diagnosing conditions such as pneumothorax, pulmonary edema and asthma. Cardiac auscultation is also helpful in assessing the integrity of heart. Hence the availability and use of a stethoscope is essential to the delivery of continuous, supportive en route care. But aero-medical evacuations occur in high ambient noise environments, and that can preclude the use of the conventional stethoscope.

The aim of this study was to compare the capabilities of a traditional and an amplified stethoscope (which is expected to reduce background and ambient noise and also to increase the signal strength) to assess breath and heart sounds during medical transport aboard a Boeing C135 plane.

Materials and methods :

We compared a recently available electronic stethoscope, the Littmann Electronic Stethoscope Model 3000, with a widely used conventional stethoscope, the Littmann Cardiology III (3M, St. Paul, Minnesota), in a prospective study. The clinical situation that was mimicked was aero-medical aero-evacuation of patients aboard a C 135 (medically configured), at standard flying altitude (10000 m). Measurements of ambient noise levels were practiced during cruising altitude. We assessed capability of five consenting clinicians at detecting in flight pathologic heart and lung sounds. We used the SimMan 3G® (Laerdal Medical, Stavanger, Norway) to assess cardiac and lung sounds. Seven abnormal sounds (crackles, wheezing, right and left lung silence; systolic, diastolic and Austin-Flint murmur) were simulated. Abnormal sounds and stethoscopes were both randomly selected, in order to limit an order effect. Measurements of ambient noise levels were practiced during cruising altitude. At the end of each pathological

examination, a diagnosis was asked. The comparison for diagnosis assessed (correct or wrong), between using the electronic and conventional stethoscopes, were performed as McNemar test, both for heart and lung auscultation. A significant difference was defined by $p < 0.05$.

Results :

We included five consenting participants: 4 intensivists, 1 nurse anesthiologist. They were invited from three French military hospitals (hospital Val-de-Grâce, Paris; hospital Percy, Clamart; hospital Bégin, Saint Mandé). Age of clinicians was 36 ± 11 years. A total of 70 evaluations were performed (30 heart auscultations, 40 lung auscultations). The ambient noise level was 85 ± 1 dB. For simulated cardiac sounds, diagnosis was right in 0/15 and 4/15 auscultations, respectively with conventional and electronic stethoscope (McNemar test: $p=0.13$). For simulated lung sounds, right diagnosis was found with conventional stethoscope in 10/20 auscultations, versus 18/20 with electronic stethoscope (McNemar test: $p=0.013$).

Discussion :

Aboard a C135, compared to the conventional Litmann Cardiology III stethoscope, the electronic model Litmann 3000 was considered by clinicians to be better for hearing lung sounds (mimicked by a mannequin-based simulator). No benefit was found for heart sounds. In flights on this type of plane, this prospective randomized study suggests that the main limitations of acoustic stethoscopes are partly solved by the electronic stethoscopes. Future developments in signal processing of sonic waves are undoubtedly necessary for better cardiac auscultation.

Long recognized and used in aviation training, simulation was initially adopted for medical training and crisis management in the field of anaesthesia but since has been used in an increasingly diverse group of medical specialties, including emergency medicine and surgery. Mannequin-based simulators offer a unique evaluation tool in aeromedical evacuation setting. They enable evaluation of advanced skills and management of rare and life-threatening scenarios, without endangering patients. Simulation remains a safe and useful tool to test new pieces of equipment before bringing them in clinical situation.

F33:7

Education & Training

VENTILATOR AT SIMULATED ALTITUDE: CHANGE IN FRACTION OF INSPIRED OXYGEN?

L.Franck (1), E. Forsans (1), F. Leclerc (2), C. Bourrhillon (2), JP Tourtier (1)

1. Intensive care department, HIA Val de Grâce, Paris, France

2. IMASSA, Brétigny, France

Corresponding author: laet92@aol.com

Key-words: ventilators ; FiO₂ ; altitude

Introduction:

The aeromedical evacuation system is expected to move patients in critical conditions faster and farther than in past events. It highlights the provision of essential care, with the establishment of a seamless en route care capability for ill patients as they move through the evacuation system. The delivery of essential care carries with it the burden of moving recently stabilized casualties to a facility to provide a higher level of medical support. As an example, high survival rates in the current war in Iraq are partially attributable to the success of critical care provided by the United States Air Force Critical Care Air Transport Team. Hence, the availability and use of a transport ventilator is essential to the delivery of continuous, supportive en route care.

Aerial evacuations of patients with significant pulmonary impairment are common and maintaining the appropriate fraction of inspired oxygen (FiO₂) is of key importance. Unfortunately, mechanical ventilators can suffer in their performance from variations in the environmental pressure. At cabins altitudes, aviation constraints associated with the Boyle-Mariotte's law can induce deleterious changes in the FiO₂ delivered by ventilators. Changes in barometric pressure with increasing altitude are associated with alterations in gas density, temperature, and humidity. This requires a considerable amount of flexibility in terms of ventilator options, without alteration of FiO₂ across a wide range of hypobaric conditions. We have assessed the ability of three ventilators to deliver to a normal lung model a FiO₂ set at different simulated altitudes.

Materials and methods:

Three ventilators were studied: the MEDUMAT Transport (Weinmann, Germany), the ELISEE 350 (Resmed, Australia) and the LTV-1200 (Care Fusion, USA). The ventilators were operated in an altitude chamber simulating altitudes of 8000 and 12000 feet (2400 and 3600 m), and at ground level 295 feet (90m). At each altitude ventilators were set to deliver, to a normal lung model, two tidal volumes (Vt): 450 and 750 ml, with a respiratory rate of 12 breathes per minute and a FiO₂ of 50%. Each ventilator had two separated sources of gas: bottled medical oxygen pressure and ambient air captured in the environment. Sensors (connected to the environment) measured the ventilator's supply pressure of oxygen, the barometric pressure outside and inside the hypobaric chamber, the ambient temperature and the fraction of oxygen in the hypobaric chamber. For a given setting, thirty-six measurements of the oxygen pressure at the entrance of the lung model and of the issued FiO₂ were performed (electromagnetic sensor calibrated on pure oxygen), using a stitching placed on the inspiratory limb of the ventilator, output of the Y-piece, closest to the entrance of the artificial lung. Our study was conducted on a test bed in terms ATPD (Ambient Temperature and Pressure, Dry). Data were corrected to BTPS (Body Temperature and Pressure). Comparisons of preset to actual measured values of FiO₂ were accomplished using a t test for each altitude.

Results:

Firstly, with a Vt set of 450 mL, Fi O₂ delivered was respectively at 295, 8000 and 12000 feet: for the LTV-1200, 49.06 ± 0.10 , 52.53 ± 0.06 and 53.97 ± 0.06 (FiO₂ measured vs FiO₂ set: $p < 0.0001$, $p < 0.0001$, $p < 0.0001$); for the ELISEE 350: 47.70 ± 0.28 , 47.95 ± 0.22 and 49.89 ± 0.22 (FiO₂ measured vs FiO₂ set: $p < 0.0001$, $p < 0.0001$, $p = 0.005$); for the MEDUMAT Transport: 49.33 ± 0.93 , 49.43 ± 0.55 and 47.59 ± 0.31 (FiO₂ measured vs FiO₂ set: $p = 0.0001$, $p < 0.0001$, $p < 0.0001$).

Secondly, with a Vt set of 700 mL, Fi O₂ delivered was respectively at 295, 8000 and 12000 feet: for the LTV-1200, 50.13 ± 0.17 , 53.56 ± 0.10 and 54.59 ± 0.12 (FiO₂ measured vs FiO₂ set: $p < 0.0001$, $p < 0.0001$, $p < 0.0001$); for the ELISEE 350: 49.54 ± 0.41 , 49.14 ± 0.49 and 54.57 ± 0.53 (FiO₂ measured vs FiO₂ set: $p < 0.0001$, $p < 0.0001$, $p < 0.0001$); for the MEDUMAT Transport: 49.86 ± 0.69 , 49.72 ± 0.66 and 48.21 ± 0.45 (FiO₂ measured vs FiO₂ set: $p = 0.23$, $p = 0.015$, $p < 0.0001$).

Conclusion:

FiO₂ delivered by the LTV-1200 and the ELISEE 350 tended to increase with altitude. MEDUMAT Transport delivered a FiO₂ without globally undergoing the influence of the altitude or set Vt. FiO₂ t is a critical metric in the care of the patient in flight. It is crucial for the clinician to be well versed in the performance characteristics of the ventilator he or she is using.

F33:8

Education & Training

USE OF THE KERNEL SUPPORT VECTOR MACHINE FOR PREDICTION OF NEED FOR ADMISSION AND TIME FOR DISPOSITION AMONG SIMULATED EMERGENCY DEPARTMENT PATIENTS DURING DISASTER EXERCISES

JM Franc (1), M Verde (2)

1. Emergency Medicine, University of Alberta, Edmonton, Canada
2. Anesthesia and Critical Care, L'Universita' degli Studi del Piemonte Orientale, Novara, Italy

Corresponding author: jeffrey.franc@gmail.com

Key-words: surge capacity ; emergency department simulation ; disaster medicine

INTRODUCTION: In times of increased patient numbers, such as mass casualty incidents or other disasters, hospital emergency departments often need to increase their surge capacity. Predicting the need for surge capacity is difficult, and more accurate predictions of which patients will need admission to hospital and how long they will spend in the department may be helpful. Traditionally, predictions of patient flow are often based on the patient's triage score; this method of prediction is often rudimentary. Computerized machine learning may offer a more accurate prediction rule. Using a large dataset of simulated patients, the present study investigates the use of the Kernel Support Vector Machine as a more accurate predictor of patient flow.

METHODS: The present study investigates methods to predict two response variables: (1) need for admission and (2) time for disposition for simulated disaster patients. Two decision tools are compared for predicting the need for admission: a simple classifier based on triage score and a Kernel Support Vector Classifier. For prediction of time to disposition, again two tools are compared: a simple model based on triage score, and a Kernel Support Vector Regression. The null hypothesis that simple decision tools are equal to Kernel based tools was tested against the alternative hypothesis that the methods are not equal. The data was obtained from 65 individual simulations of the SurgeSim emergency department surge capacity simulator (SurgeSim, Edmonton, Alberta, Canada). The original SurgeSim dataset contains 6887 observations (rows) and 266 predictors (columns). Unfortunately, the dataset is complicated. It contains observations of integers, numeric, character, text, and image references and has a complex dependency structure. As such, we limited the study to 66 columns that are most likely to contain information that is both available during a disaster situation and likely to influence the response variables. The dataset was divided into a training and test set by randomly selecting 1000 observations for the test set and leaving the remaining in the training set. Modeling used the ksvm function from the kernlab package of the R statistical computing language (R foundation for statistical computing, Vienna, Austria).

RESULTS: Using a simple triage code based prediction rule for admission gave an overall accuracy of 0.325 and a recall of 0.25. Use of the simple triage code based predictor for time to disposition was unsuccessful, as Pearson's product-moment correlation fails to show significant correlation between the observed and predicted values of time to disposition (Correlation Coefficient=0.169, 95% CI -0.05 to 0.37, p=0.13). Conversely, overall accuracy for the kernel support vector machine predictor of need for admission was 0.725, and recall was 0.6. Likewise, the kernel support vector machine predictor of time to disposition showed significant correlation by Pearson's product-moment correlation (Correlation coefficient 0.25, 95% confidence interval 0.03 to 0.044, p=0.02).

CONCLUSIONS: Prediction rules for need for admission and time to disposition decision based on the kernel support vector machine appear to be superior to simple decision rules based on triage code. These prediction rules may be valuable in times when emergency departments require increased surge capacity. Although the present model is complex, it is based on freely available statistics software and could potentially be implemented in a computerized patient tracking system.

F34:1

Cardiovascular 2

COMPARISON OF THE UNSTRUCTURED CLINICIAN GESTALT, THE WELLS SCORE AND THE REVISED GENEVA SCORE TO ESTIMATE PRETEST PROBABILITY FOR SUSPECTED PE.

A. Penaloza (1,2), F. Verschuren (1), G. Meyer (3,4), S. Quentin-Georget (2), C. Soulie (2), F. Thys (1), PM. Roy (2)

1. Emergency Department, Cliniques Universitaires St-Luc, Université Catholique de Louvain, Belgium.
2. L'UNAM Université, Angers, France ; Emergency Department, CHU Angers, Université d'Angers, France.
3. Department of Respiratory Diseases, Hôpital européen Georges Pompidou, Assistance Publique Hôpitaux de Paris, Paris, France
4. Université Paris Descartes, Sorbonne Paris Cité, Paris, France

Corresponding author: andrea.penaloza@uclouvain.be

Key-words: Clinical probability ; gestalt, clinical decision rule ; comparison

Objective: The assessment of clinical probability using clinical decision rules (CDRs) has become a cornerstone of diagnostic strategy for patients with suspected pulmonary embolism (PE), but little is known about the use of physician gestalt assessment of clinical probability. We evaluated the performance of gestalt assessment for diagnosing PE.

Methods: We did a retrospective analysis of a prospective observational cohort of suspected PE patients in emergency departments. Accuracy of gestalt assessment was compared with the Wells score and the revised Geneva score by the area under the curve (AUC) of receiver operating characteristic (ROC) curves. Agreement between the three methods was determined by kappa test.

Results: AUC differed significantly between the three methods and was 0.81 (95% Confidence Interval (CI): 0.78-0.84) for gestalt assessment, 0.71 (CI: 0.68 -0.75) for Wells and 0.66 (CI: 0.63-0.70) for revised Geneva score. The proportion of patients categorized as low clinical probability was statistically higher with gestalt than with revised Geneva score (43% vs 26%, p<0.001). Proportion of patients categorized as high clinical probability was higher with gestalt than with Wells (24% vs 7%, p<0.001) or revised Geneva score (24% vs 10%, p<0.001). PE prevalence in patients with low clinical probability was significantly lower with gestalt assessment than the revised Geneva score (7.6% vs 13.0%; p=0.02) and than the Wells score (7.6% vs 12.6%; p=0.01). PE prevalence in patients with high clinical probability was higher with gestalt assessment than with the Wells score (72.1% vs 58.1p=0.03). Agreement between the 3 methods was poor with all kappa values below 0.3. The percentage of discordant assessments was 52%, 48% and 45% for gestalt vs. revised Geneva score; gestalt vs. Wells score and revised Geneva score vs. Wells score, respectively. Major disagreement (patients classified in the low clinical probability group by one method and in the high clinical probability group by one other) occurred in 3% in gestalt vs. revised Geneva score, 4% in gestalt vs. Wells score and 1% in revised Geneva score vs. Wells score.

Conclusions: Gestalt assessment seems to perform better than CDRs due to better selection of non-high (low and moderate) and high clinical probability patients.

F34:2 Cardiovascular 2

VALUE OF BICYCLE EXERCISE TEST FOR CHEST PAIN PATIENTS AT THE EMERGENCY DEPARTMENT

B Backus (1), E Buys (2), L Cozijnsen (3), M Cramer (4), H de Beaufort (4), H den Ruijter (5), P Doevendans (4), B Groenemeijer (3), E Mast (6), J Poldervaart (5), J Six (7), W Tietge (8), R Veldkamp (9), A Wardeh (8)

1. Emergency Medicine, Albert Schweitzer Hospital, Dordrecht, Netherlands
2. Cardiology, Tergooi Hospital, Hilversum, Netherlands
3. Cardiology, Gelre Hospital, Apeldoorn, Netherlands
4. Cardiology, University Medical Center, Utrecht, Netherlands
5. Health Sciences, Julius Center, Utrecht, Netherlands
6. Cardiology, St Antonius Hospital, Nieuwegein, Netherlands
7. Cardiology, Hofpoort Hospital, Woerden, Netherlands
8. Cardiology, MC Haaglanden, Den Haag, Netherlands
9. Cardiology, MC Haaglanden, Leidschendam, Netherlands

Corresponding author: backus@heartscore.nl

Key-words: HEART score ; Chest pain ; Bicycle test

Objectives:

Chest pain is a very common reason for presentation at the emergency department (ED). After presentation at the ED patients are often assessed with additional testing, such as a bicycle exercise test. In order to facilitate diagnostic and therapeutic pathways we designed the HEART score for chest pain patients. HEART is an acronym of its components: History, ECG, Age, Risk factors and Troponin. Each of these may be scored with 0, 1 or 2 points. We aim to answer the question: how much does exercise testing contribute to the diagnosis and risk of MACE assessment after the HEART score is known?

Methods

This study included 248 patients who presented with chest pain at the ED of four participating hospitals in the Netherlands. Results of routinely performed exercise tests were reviewed and classified by an adjudication committee. The pre-test likelihood was estimated with the HEART score.

Results

In low-risk patients (HEART scores ≤ 3) 63.1% of the patients had a negative test, 28.6% were non-conclusive and 8.3% had a positive test; the latter were all false positive tests in terms of prediction of MACE.

In the intermediate-risk group (HEART-scores 4-6) 30.9% of the patients had a negative test, 60.3% were non-conclusive and 8.8% were positive, half of these were false-positives.

In the high-risk patients (HEART scores ≥ 7) 14.3% had a negative test, 57.1% were non-conclusive and 28.6% were positive, half of these were false-positives.

Conclusion

Exercise testing yields inconclusive results in about half of the chest pain patients at the ED and false positives occur frequently. In low-risk patients an exercise test cannot be recommended due to false positive tests. In intermediate-risk patients, negative exercise tests may contribute to the exclusion of disease. High-risk patients are rather candidates for early invasive strategies than for non-invasive diagnostics. In general, the exercise test adds little value when the HEART score is known.

F34:3 Cardiovascular 2

THE HEART SCORE FOR CHEST PAIN PATIENTS AT THE EMERGENCY DEPARTMENT VALIDATED IN A MULTI CENTRE ASIA-PACIFIC POPULATION

B Backus (1), J Six (2), J Greenslade (3), L Cullen (4), M Than (5)

1. Emergency Medicine, Albert Schweitzer Hospital, Dordrecht, Netherlands
2. Cardiology, Hofpoort Hospital, Woerden, Netherlands
3. Emergency Medicine, Royal Brisbane and Women's Hospital, Brisbane, Australia
4. Emergency Medicine, Royal Brisbane and Women's Hospital, Brisbane, Australia
5. Emergency Medicine, Christchurch hospital, Christchurch, New Zealand

Corresponding author: backus@heartscore.nl

Key-words: HEART score ; Risk stratification ; Chest pain

Objectives:

The role of the treating physician of patients with acute chest pain at the emergency department (ED) is to identify low risk as well as high risk patients for an acute coronary syndrome (ACS).

The HEART score for the early risk stratification of patients with chest pain contains five elements: History, ECG, Age, Risk factors and Troponin. Each of these may be scored with 0, 1 or 2 points. This study aims to perform an external validation of the HEART score in patients within the Asia-Pacific region.

Methods:

Data was used from 2906 patients presenting with chest pain to the EDs of 14 hospitals. The HEART scores were calculated without subjective interpretations. The predictive values for the occurrence of 30 day major adverse coronary events (MACE) were assessed. A comparison was made with the Thrombolysis in Myocardial Infarction (TIMI) score.

Results:

The low-risk group consisted of 820 patients (28.2%) with HEART score ≤ 3 . Fourteen (1.7%) patients were incorrectly defined as low risk. The high-risk population, 464 patients (16.0%) with a HEART score of 7-10, had a risk of MACE of 43.1%. The values of the C-statistic were 0.83 (0.81-0.85) for HEART and 0.75 (0.72-0.77) for TIMI.

Conclusion:

Utilization of the HEART score provided excellent determination of the risk for 30-day MACE. In the early diagnosis and risk stratification of chest pain patients HEART is superior as compared to the TIMI score. This study externally validates previous findings that the HEART score is a powerful clinical tool in this setting. Within one hour from presentation, it identifies (i) a large proportion of low-risk patients, who are potential candidates for early discharge without additional testing, and (ii) high-risk patients who are candidates for invasive strategies.

F34:4 Cardiovascular 2

REDUCTION OF MEDICAL CONSUMPTION IN LOW RISK CHEST PAIN PATIENTS

B Backus (1), M Cramer (2), G de Wit (3), P Doevendans (2), A Kingma (2), T Mast (2), A Mosterd (4), P Senden (4), J Six (5)

1. Emergency Medicine, Albert Schweitzer Hospital, Dordrecht, Netherlands
2. Cardiology, University Medical Center, Utrecht, Netherlands
3. Health Sciences, Julius Center, Utrecht, Netherlands
4. Cardiology, Meander Medical Center, Amersfoort, Netherlands
5. Cardiology, Hofpoort Hospital, Woerden, Netherlands

Corresponding author: backus@heartscore.nl

Key-words: Chest pain ; Medical consumption ; HEART score

Background

Patients with chest pain are often admitted for clinical observation, and treated as acute coronary syndrome (ACS) awaiting final diagnosis. Consequently, unnecessary diagnostics and treatment are common. The HEART score serves the clinician in the making of a quick diagnosis and consists of five elements: History, ECG, Age, Risk factors and Troponin.

Accurate risk stratification of chest pain patients in the emergency department (ED) by means of the HEART score may help to identify low risk patients, defined by HEART score ≤ 3 , who do not need additional work-up or hospitalization.

Methods

This study was performed in 280 patients in three hospitals in the Netherlands. These patients were participants of a prospective validation study of the HEART score in 2388 chest pain patients in the ED of ten hospitals. Numbers of hospitalization days, exercise tests, echocardiography and various other cardiology examinations were counted.

Results

Chest pain patients visiting the ED were classified as low-risk, based on the HEART score, in 102/280 (36.5%) of the cases. MACE did not occur in these 102 patients; the risk of MACE was 15/870 (1.7%) in the low HEART score group of the entire prospective study. Eighteen patients (17.6%) were hospitalized for a total of 28 days and additional cardiology work-up was done in 52 patients (51%). Numbers of examinations were: 27 (26.5%) exercise tests, 16 (15.7%) echocardiograms, 5 (5%) CT scans and 6 (5.9%) SPECT.

Conclusion

When a policy would be made to withhold redundant medicine in low-risk chest pain patients, with a HEART score ≤ 3 , hospitalizations would be saved in one fifth and various examinations in half of the patients. Improved risk stratification in chest pain patients may result in a reduction of medical consumption.

F34:5

Cardiovascular 2

WELLS AND GENEVA SCORES ANALYSIS FOR CLINICAL PROBABILITY ASSESSMENT OF PULMONARY EMBOLISM: THE BIAS OF HEART RATE-LOWERING DRUGS. A RANDOMIZED STUDY

P. Gayol (1), C. Bellec (1), F. Khalil (1), E. Bayle (1), A. Torcatoriu (1), MO. Batt (1), N. Meyer (2), J. Kopferschmitt (1)

1. Emergency Department, NHC University Hospital (Nouvel Hôpital Civil), Strasbourg, France

2. Department of Biostatistics, University Hospital, Strasbourg, France

Corresponding author: paul.gayol@chru-strasbourg.fr

Key-words: pulmonary embolism, ; clinical probability scores, ; heart rate-lowering drugs

Introduction: the evaluation of the clinical probability (CP) of patients with suspected acute pulmonary embolism (APE) at the time of admission from the emergency department is a fundamental step in the diagnostic approach of this disease. The main clinical scores used to predict APE are the WELLS score (W) and GENEVA score (G), already revised in 2006 and even recently. Objective: the goals of this study were: 1. to compare these scores and research of superiority between them to predict an APE; 2. to analyze the influence of heart rate-lowering drugs (long-term treatment) on final results of scores which attribute points to heart rate values. Method: A prospective study was performed from October 2009 to April 2011. Patients (pts) ≥ 18 years admitted in

the ED for clinically suspected APE at admission were included in the study. The decision-making algorithm was performed on the basis of CP scores (2006 modified W score group or 2006 revised G score group according to randomization) in combination with D-dimers and imaging. We merged low and intermediate risk categories of the G group. We only analyzed pts with a true-positive diagnosis of APE (APet+) that was made according to predefined criteria: a. troncular, lobar and/or segmental APE on multislice spiral CT angiography; b. high probability of APE on lung ventilation-perfusion scintigraphy; or c. echocardiographic signs of acute cor pulmonale if hemodynamic instability at presentation. Results: inclusion of 452 pts (190 men, 262 women). The number of pts under heart rate-reducing medication was 127 (28 %). The prevalence of APet+ was 24,5 % (111 pts: 51 W and 60 G). There was no difference between the 2 scores. Mean heart rate values of APet+ were: 1. With heart rate-lowering drugs (m=80,5), and 2. Without heart rate-lowering drugs (m=91,6). Discussion: none of both scores appeared more successful to predict APE. The heart rate seemed to be a weak point of these scores. Conclusion: the validity of 2 scores seems compromised for the patients treated by heart rate-lowering drugs (28 % in our study). These scoring models would also represent sources of error which can produce a lower score. This could lead to an underestimation of the risk for APE in this population, thus by modifying the initial diagnostic approach.

F34:6

Cardiovascular 2

COMPARISON OF ABCD2 SCORES AND BLOOD CRP, FIBRINOGEN AND D-DIMER VALUES FOR STROKE RISK IN PATIENTS WITH TRANSIENT ISCHEMIC ATTACK ADMITTED TO EMERGENCY DEPARTMENT

M Ozturk (1), E Akinci (2), Y Yüzbaşıoğlu (3), C Tanrikulu (1), F Coşkun (1)

1. Emergency department, Ankara Training and Research hospital, Ankara, Turkey

2. Emergency department, Konya Training and Research Hospital, Konya, Turkey

3. Emergency department, Atatürk Training and Research Hospital, Ankara, Turkey

Corresponding author: emineakinci@yahoo.com

Key-words: ABCD2 scores ; CRP, fibrinogen, d-dimer ; stroke

Introduction

Transient ischemic attack (TIA) is a clinical syndrome progressed with the lack of blood stream and characterized by transient symptoms related to acute, focal, cerebral or monocular dysfunction. The stroke risk within the first 3 months following TIA is 10-15%, and half of this group experienced a stroke within the first 48 hours. Important scores such as ABCD and ABCD2 have been developed in order to determine the risk of stroke among patients with TIA during the early period. However, the diagnostic gains of these methods are limited. These methods can be strengthened by the use of some coagulation markers and diagnostic tools such as magnetic resonance imaging. We also planned to assess stroke risk among patients with TIA admitted to emergency service by using ABCD2 score and coagulation markers.

Methods:

A total of seventy patients who admitted to the Ankara Training and Research Hospital and were diagnosed with TIA and accepted to be enrolled were included in the study.

CRP, fibrinogen and d-dimer values were examined and the patients were evaluated for the occurrence of stroke three months after the presentation of TIA.

Results:

10% of the patients had atrial fibrillation (AF) in their electrocardiographic exam. The ABCD2 score was low in 34.3%, moderate in 52.9% and high in 12.9% of the patients. In 55% of the patients, the d-dimer values were above the cut-off values, whereas 31% of them had CRP and 5.7% had fibrinogen values above their respective cut-off values. 14.3% of the patients suffered from a stroke within 90 days of the initial presentation with TIA. There is a statistically significant relationship determined between the presence of AF and stroke risk ($p < 0.001$). Of the coagulation markers, only the high CRP levels was found to be statistically significantly related to stroke risk ($p = 0.008$). Conclusion: Addition of the presence AF to the ABCD2 scores is thought to increase the prognostic value. A single biomarker is thought to not effective in determining a correct risk classification for TIA and stroke mechanisms.

F34:7 Cardiovascular 2

DO WEATHER CONDITIONS AFFECT ON STROKE? AN EMERGENCY DEPARTMENT POPULATION BASED STUDY FROM TURKEY

Y Cevik (1), NO Dogan (1), M Das (2), A Ahmedali (3)

1. Department of Emergency Medicine, Etlik Ihtisas Training and Research Hospital, Ankara, Turkey
2. Department of Emergency Medicine, Bayburt State Hospital, Bayburt, Turkey
3. Department of Emergency Medicine, Atatürk Training and Research Hospital, Ankara, Turkey

Corresponding author: nurettinogurdogan@gmail.com

Key-words: emergency medicine ; weather ; stroke

Objectives: Several factors may influence stroke subtypes and severity. Although previous studies have established a seasonal variation in stroke occurrence, none of these studies analysed meteorological parameters in an emergency department based population. We investigated whether ischemic or hemorrhagic strokes are related to weather conditions.

Methods: The study was conducted in an urban hospital during 15 months in Ankara, Turkey. Analysis was made of 373 stroke patients, who applied in the emergency department in this period. Meteorological data such as atmospheric temperature, humidity, wind speed, and air pressure were obtained from State Meteorological Service. Continuous variables were compared using t-test, Mann Whitney U test and ANOVA. Categorical variables were compared using Pearson chi-square test.

Results: In our study, there was no relationship between overall stroke applications and mean temperature ($p = 0.826$), relative humidity ($p = 0.688$), wind speed ($p = 0.972$), barometric air pressure ($p = 0.753$). Also, no relationship between stroke subtypes and weather variables was observed, however there was statistical significant difference between mean temperature and applications due to subarachnoid hemorrhage ($p = 0.021$).

Conclusion: Our study revealed that, there was no association between stroke occurrence and weather conditions except the relationship between subarachnoid hemorrhages and atmospheric temperature.

F34:8 Cardiovascular 2

D-DIMERS AND D-DIMER FIBRINOGEN RATIO, FOR RULING OUT MASSIVE/SUBMASSIVE PULMONARY EMBOLISM - THE ANSWER LIES IN THEIR LEVELS

B Tzadok (1), F Abd El Hadi (1), N Marei (2), B Elad (1), A Darawshe (1)

1. Emergency Department, Emek Medical Center, Afula, Israel
2. Emergency Department, Emek Medical Center, Afula, Israel

Corresponding author: batshev_tz@clalit.org.il

Key-words: pulmonary embolism ; d-dimers ; d-dimer/fibrinogen ratio

Back ground: Pulmonary embolism has a wide spectrum of clinical significance ranging from peripheral PE to massive PE. As emergency physicians we need to diagnose expediently massive pulmonary embolism which has potential for immediate mortality.

Objective: The goal of our study was to see if there are parameters in blood tests which could safely eliminate the risk of massive or submassive PE. We examined d-dimer levels and d-dimer/fibrinogen ratios.

Methods: We conducted a retrospective study of patients who underwent a workup for pulmonary embolism which included CT angiography, d-dimer and fibrinogen tests.

The patients were separated into two categories based on the results of CT angio. The first category included no PE or Segmental PE, the second category included massive/submassive PE.

Results: Two hundred and fifty three patient's records were assessed.

We checked the distribution of d-dimers between these two groups. We found that under a d- dimer level of 2,500ng/ml 98% had no PE or segmental PE and two percent had submassive or massive PE. (P value < 0.0001).

When the cutoff for d- dimers was 1,252ng/ml we found our results to be even more encouraging. There were no massive/submassive PE patients under this level. (p value < 0.0001) with a sensitivity level of 100%).

We also found that there were no massive/submassive PE patients with a d-dimer/fibrinogen ratio above two. (P value of 0.0002).

Conclusion

Our study determined that there are d- dimer levels and d-dimer/fibrinogen ratios which tell us that there is a minimal risk for massive/submassive PE. We can conclude from this that patients with these safe values have a very low risk for massive/submassive PE and may not need a workup for PE in the emergency department.

G11:1 Other 2

PREDICTION OF ELDERLY CARE EMERGENCY READMISSIONS USING THE LACE INDEX.

EJ Roscoe, M Harrison

Emergency department, Northumbria Healthcare NHS Trust, Newcastle-upon-Tyne, United Kingdom

Corresponding author: roscoe.eleanor@gmail.com

Key-words: Elderly ; Readmissions ; LACE index

Purpose: Emergency hospital readmissions have been shown to be costly, common and potentially avoidable. Several studies have attempted to identify risk factors for readmission and develop models for its prediction; a Canadian study highlighted four contributors to readmission and defined the LACE index. To date, no study has investigated whether this may be extrapolated to a

British population. Given the UK Government's growing interest in preventing hospital readmission, our study aimed to determine if this index could be used to reduce emergency readmissions and aid in adherence to readmission targets, which have significant financial implications.

Materials and Methods: A retrospective cohort study was conducted on a total sample of 105 elderly care patients (age range 60-99). Two groups of patients were studied. All patients were admitted to an acute elderly care ward between September 2010 and August 2011. Computer generated lists of patients who were readmitted to the hospital within a 30 day period of discharge, and those that did not return were used. Fifty-four readmissions were randomly selected and 51 non-readmissions were similarly chosen. Notes were reviewed for patient demographics, DNAR status, mortality rate and patients were retrospectively assigned a LACE score using data relating to their index admission.

Results: A statistically significant ($p=0.0086$) difference between LACE scores of the two cohorts was found, with a LACE score of >8 predicting readmission ($p=0.0012$). Number of emergency department visits in the preceding 6 months made a significant contribution to the likelihood of readmission ($p=0.0196$). In addition, a significant difference between DNAR status of each cohort was found ($p=0.0001$), with readmitted patients having a far higher number of DNAR orders. Moreover, given that it has been claimed the LACE index may be used to predict 30-day mortality; a mortality rate was determined as 25.9% upon readmission.

Conclusions: Despite the fact that the LACE index was developed in a country with a distinctly different model of healthcare, we have shown it can be used to predict UK emergency elderly readmissions. Modifications may have to be made to increase its relevance to British patients but preliminary results are encouraging. Moreover, this study may be indicative that the index could be adopted by other countries aside from the UK and Canada. Furthermore, we have identified an important risk factor for readmission in the number of preceding emergency department visits. This could be a useful starting point for further investigation and ultimately in the prevention of unnecessary readmission.

Hospital of Brussels, Belgium, an acute hospital with 721 beds. In this month 5431 patients consulted the ED. Palliative care patients where defined as the following: "A palliative care patient is a patient that suffers from an incurable, progressive and life-threatening disease, with no chance of obtaining remission, stabilisation or improvement of the disease".

Adult patients were defined as persons of 18 years or older. Although patients can be palliative because of several categories of diagnoses, this study focused on the subgroup of oncological palliative patients.

Patients who frequented the ED during the weekend were excluded from this study. Patients who were referred by the policlinic were also excluded. Data were collected regarding demography, medical situation, referral, DNR (Do Not Resuscitate)-code, admission and the influence of the palliative character on the course of the ED contact.

•**Results:**

On average 2 palliative oncological patients consulted the ED per day. This represents 1,6% of the total number of patients that visited the ED in this period. Four revisits were registered. 54,5% were female and the mean age was 70 years. The main oncological diagnoses were gastro-intestinal (22,5%) and the respiratory cancers (20,0%). 15,0% of the patients had a DNR-code.

One patient out of two was referred by a doctor whereof 76,2% were referred by a general practitioner. The most frequent predominant complaints where pain (27,5%), dyspnoea (22,5%) and neurologic symptoms (22,5%). Pain was present in 55,0% of the cases and 63,3% of them received an analgesic treatment.

In a quarter of the cases the doctor in the ED consulted an oncologist or a doctor of the treating speciality. The palliative support team of the hospital was not consulted for any of the patients. The most frequent classes of tentative diagnoses were respiratory (27,5%), neurological (20,0%), gastro-intestinal (15,0%) and orthopedical (10,0%). 79,5% of patients were admitted to the hospital. 8,6% was discharged from the ED although admission was indicated.

•**Conclusion:**

The main result of this study is that the size of the population of palliative care patients in the ED should not be underestimated. Another important finding is that pain is a very frequent complaint and that only half of the patients got a treatment for it. The most surprising result is that the palliative care team was not contacted in any of the cases, despite the fact that the University Hospital of Brussels and the associated Free University of Brussels are leading centres in the development of palliative care in Belgium.

Despite the high prevalence of palliative oncologic patients in the ED and their need for adequate and efficient care, their palliative character was taken into account only to a limited extent. Recommendations are that, first, one should try to care for these patients at home as long as possible because studies show that admission of patients at the end of life is associated with dying in hospital. Studies also show that palliative care patients prefer to be taken care of and die at home.

However, if the patient visits the ED, the doctor should pay attention to adequate symptom therapy and try to achieve optimal communication with the patients and his loved ones, but also with the general practitioner, a doctor of the treating specialism and/or a doctor of the palliative care team. One must always determine whether hospitalization is really necessary. Advanced care planning can improve the quality of care for palliative care patients in the ED by, for example, assigning a DNR-code. The need for adequate education of caregivers in the ED in palliative care, especially in pain and symptom control, is great as well as the need for further research in palliative care in the ED and the development and introduction of a specific care model.

G11:2

Other 2

PALLIATIVE PATIENTS ADMITTED TO THE EMERGENCY DEPARTMENT: A RETROSPECTIVE ANALYSIS OF THE ADULT ONCOLOGICAL POPULATION.

A Vermeir (1), W Distelmans (2), I Hubloue (1)

1. Emergency Department, Universitair Ziekenhuis Brussel, Brussels, Belgium

2. Palliative care unit, Universitair Ziekenhuis Brussel, Brussels, Belgium

Corresponding author: Annelies.Vermeir@gmail.com

Key-words: palliative care ; oncology ; adults

•**Background:**

Although palliative care is not the primary focus on the emergency department (ED), palliative care patients frequently visit the ED. However, literature about palliative care in the ED is rare.

•**Goal:**

The aim of this study was to get an overview of the population of palliative care patients who frequent the ED and to formulate guidelines to improve the care for those patients.

•**Method:**

This study implemented a monocentric retrospective analysis. During one month, adult palliative oncologic patients were selected from the total population of the ED from the University

G11:3

Other 2

END OF LIFE IN AN EMERGENCY DEPARTMENT : A ONE-YEAR RETROSPECTIVE STUDY

M Floccia (1), C Gil-Jardine (2)

1. Geriatric Mobile Team, CHU Bordeaux, Pessac, France
2. Emergency Department, CHU Bordeaux, Bordeaux, France

Corresponding author: cedric.giljardine@gmail.com

Key-words: end of life ; emergency department ; death

Introduction :

Management of end of life in emergency departement (ED) is a more frequently asked question in France. In fact, 75% to 85% of french people die today in the hospital against 36 to 58% in the 70s and the 90s.

Objectif

The aim goal of this study is the description of the population who die in the ED and the reason of their consultation.

Materials and Méthods

This is a retrospective single-center observational study conducted in an emergency department (ED) of a University Hospital, this service has an orientation in neurology and traumatology. It is divided into four sectors: a reception, a unit of Very Short Duration Hospitalization, a unit of short-term hospitalization and emergency resuscitation unit (ICU). The study was conducted over a year, including all patients who died in the ED between February 1, 2008 and January 31, 2009. We excluded from the study patients who died in ICU. It was conducted using a paper questionnaire completed by the investigator through the reading of the medical record. The study was set up with an agreement between the emergency and the mobile team of geriatrics that occurs in the ED of the hospital.

Résultats

51 patients died in the ED between February 1st 2008 and January 31st 2009. The average age is 83,8 from 34 to 102 years old. 33 patients come from home and the other 18 lived in a nursing home. General Practitioners address 27% of the patients to the emergency departement, and for 29 % it was their family. The others arrived after consulting an other medical practionner or a nurse.

The delay between admission and death was on average 22,8 hours from 0,21 to 66 hours. Only one « trusted person » is identified. 59% of the patients has a member of their entourage who was present in the ED.

Half of these admission is dued to a neurological disease. There was only 13% of bedridden patients before their hospitalization and it corresponded to a break with the previous state in 81% of the case.

The death was unattended in only 14% of the case and the patient identified as at the end of their life enjoyed a collegial reflection.

Conclusion

In this study, emergency patients who died were mostly identified as the end of life, but it seemed impossible to anticipate this situation, since the episode that led to the emergency event corresponded to an acute break with the previous state. These situations which mainly concern the elderly are bound to increase. A reflection on the management of such complex situations as emergency services became necessary.

G11:4

Other 2

THE RELATIONSHIP BETWEEN RED CELL DISTRIBUTION WIDTH AND MORTALITY IN CRITICALLY ILL PATIENTS

NB Akıllı (1), HS Akça (2), E Akıncı (1), R Köylü (1), B Cander (1)

1. emergency department, Konya Training and Research Hospital, konya, Turkey
2. emergency department, Konya Training and Resarch Hospital, konya, Turkey

Corresponding author: drbelginakilli@hotmail.com

Key-words: RDW ; critical patient ; mortality

Aim: In the literature, Red cell distribution width (RDW) has been reported as an independent indicator for mortality observed in the group of diseases such as coronary heart disease, pneumonia and paralysis. In this study, we aimed to examine whether RDW can be a predictive parameter or not for mortality and sepsis and relationship between apache2 – sofa scores and RDW.

METHODS: This prospective study was planned on patients hospitalized in intensive care unit, Konya Training and Research Hospital. At the time of submitting, RDW levels, scores of APACHE 2 and SOFA, period of being treated in intensive care unit and period for the patient attached to mechanical ventilator were all recorded. The patients were monitored in terms of ventilator associated pneumoni and sepsis. Data were transferred to SPSS for Windows 15.0 programme. RDW values were divided into quartiles < 13.6, 13.6-15.6, 15.6-16.7 and > 16.7. RDW quartiles were compared and significance between the groups were analysed by One-Way-ANOVA test, postoc analysis was made using Scheffe test. For the determination of lineer relationship, the spearmen korelasyon test was applied. Finally intra hospital mortality was determined by the Cox regression model.

RESULTS: A total of 97 patient were included in the study. Of these, 54 were male, 43 were female. While the RDW quartiles were compared age, urea, SOFA scores were significantly different, there was no significant differences between the haemotocrit, WBC, creatinin, SGOT, SGPT, CRP, APACHE scores, intra intensive unit periods and periods for being attached to mechanical ventilator. RDW was correlated with the scores from urea, APACHE 2 and SOFA ($r=0.35$ $p<0,05$, $r=0.2$ $p<0,05$, $r=0.30$ $p<0,05$). When the intra hospital mortality rates taking into account, RDW was significantly higher (OR=1.4, %95 CI 1.0-1.9 $p=0.017$). In addition, age and APACHE score were found associated with mortality. 21 % of the patients , sepsis were developed and no differences were observed between RDW quartiles.

CONCLUSION: Results obtained by this study suggests that RDW of intensive care unit patients at the time of submitting to hospital is a powerfull sign of mortality and independent factor from other risc factors. It is also correlated with the APACHE and SOFA scores at the time of submitting.

G11:5

Other 2

CLINICAL PREDICTION RULES FOR FEBRILE CHILDREN: DIAGNOSTIC VALUE IN PRIMARY OUT-OF-HOURS CARE

Y. van Ierland (1), G. Elshout (2), MY Berger (3), Y Vergouwe (4), M. de Wilde (5), J van der Lei (5), HA Moll (1), R Oostenbrink (1)

1. General Paediatrics, ErasmusMC - Sophia Children's Hospital, Rotterdam, Netherlands
2. General Practice, ErasmusMC, Rotterdam, Netherlands
3. General Practice, University Medical Center Groningen, Groningen, Netherlands
4. Public Health - Center for Medical Sciences, ErasmusMC, Rotterdam, Netherlands
5. Medical Informatics, ErasmusMC, Rotterdam, Netherlands

Corresponding author: y.vanierland@erasmusmc.nl

Key-words: Primary emergency care ; Children under the age of 16 years ; Serious bacterial infections

Introduction: The majority of children who present to primary out-of-hours care have fever as one of their main complaints. About 1% of these children have a serious bacterial infection, like sepsis, meningitis, or pneumonia. Studies on identification of serious bacterial infections in primary care are scarce and current guidelines are predominantly based on expert opinion and studies from secondary or tertiary care settings. Clinical prediction rules (CPRs) for febrile children may be powerful tools to improve clinical decision making. Such tools may especially be useful at General Practitioner Cooperatives (GPCs; out-of-hours assessment centres), where GPs of a certain district rotate shifts and are less familiar with the patients they assess. Unfortunately, lack of external validation in low-prevalence populations hampers their implementation and use in clinical practice.

Objective: To evaluate the diagnostic value and applicability of published CPRs for serious bacterial infections in the low-prevalence out-of-hours care setting.

Patients and Methods: Observational study among children (<16 years) who consulted the GPC with fever (March 2008-February 2009). Alarming signs of serious febrile illness and clinical management were available from routine clinical practice data and were manually recoded with a structured electronic data-entry program. From literature, we selected 8 eligible CPRs for serious bacterial infections, 1 was developed in the primary care setting, 7 in secondary care settings. Original CPR-variables were matched with alarming signs in the GPC-dataset. When CPR-variables were unavailable in the GPC-population they were assumed to be normal/absent. As outcome measure we used 'referral to the emergency department (ED)' as a proxy for 'serious bacterial infections'. Performance of CPRs was assessed by applying the original CPR to the GPC-population. For CPRs which gave a high/low risk prediction (n=3), we evaluated the observed frequency of referral in both high and low risk groups. For CPRs which gave a continuous risk prediction (n=5), we evaluated referral frequencies in the upper and lower ends of the predicted risk. Discriminative ability (referral versus no referral) was assessed by calculating the sensitivity and specificity for CPRs with high/low-risk classifications and the area under the receiver operating characteristic curve (ROC-area) for CPRs with continuous risk predictions.

Results: 9,794 GPC-contacts were eligible, 54% were boys, median age was 2.3yrs (IQR 1.0-4.6) and 8.1% were referred to the ED. Frequencies of CPR-variables observed in the GPC-population varied from 0.5% (cyanosis, drowsy) to 25% (temperature \geq 40°C). Alarming signs that were most frequently used as CPR-variables were 'ill appearance', 'inconsolable', and 'abnormal circulatory or respiratory signs'. Referral frequencies were generally low in the low-risk groups/lower ends of the predicted risk (range 0-38%) and high in the high risk groups/upper ends of the predicted risk (range 13-100%). Sensitivities ranged from 42-54% (derivation settings: 80-97%), specificities from 68-89% (derivation settings: 35-89%). ROC areas ranged from 0.52 to 0.81 (derivation settings: 0.69-0.82), with best performance of CPRs for children <3 months of age.

Conclusions: Published CPRs for serious bacterial infections performed moderately in the primary out-of-hours care population, to some extent comparable with derivation settings. Some CPRs, for example those developed for young children, may in addition to currently available guidelines, already be supportive in structural assessment of febrile children in primary care. Still, development of new CPRs with only variables available in primary care or updates of published CPRs with inflammatory marker point-of-care-tests are desirable to improve diagnostic ability.

G11:6

Other 2

HARMLESS ACUTE PANCREATITIS SCORE TO PREDICT MILD CLINICAL COURSE OF THE ACUTE PANCREATITIS IN THE EMERGENCY DEPARTMENT

SW Kang

1. Emergency department, Hospital severance, Seoul, Korea, (South) Republic of

Corresponding author: woo8067@yahoo.co.kr

Key-words: Pancreatitis ; Prognosis ; Hospital emergency service

Purpose: Several scoring systems and biochemical markers have been proposed for the early prediction of acute pancreatitis. The Harmless Acute Pancreatitis Score (HAPS) is a novel scoring system to recognize acute pancreatitis patients with non-severe clinical course. The aim of this study was to evaluate the usefulness of HAPS to predict good prognosis of acute pancreatitis in the emergency department (ED).

Methods: We reviewed retrospectively the electronic medical records of the patients presented to emergency department with acute pancreatitis from January 2010 to December 2011. The parameters constituting HAPS including physical signs of peritonitis (rebound abdominal tenderness), hematocrit and serum creatinine levels were abstracted. Severe clinical course was defined as having one of the followings: presence of mortality in hospital, necrosis as assessed by contrast CT, need for artificial ventilation or dialysis. The diagnostic performance of HAPS for predicting harmless course was evaluated by sensitivity, specificity, and predictive values.

Results: During study period, 144 patients with final diagnosis of acute pancreatitis were included. Among 144 patients, 79 patients were predicted to have a non-severe course by HAPS, of whom 4 patients progressed to severe pancreatitis. The sensitivity, specificity, positive and negative predictive values were 61.5%, 81.8%, 94.9% and 27.7%, respectively.

Conclusion: This study suggests that HAPS is simple and can be assessed within a few hours in the ED. HAPS also showed a high positive predictive value that predicts a non-severe course of acute pancreatitis. Therefore, HAPS may be used as a scoring system to identify non-severe acute pancreatitis in the ED.

G11:7

Other 2

A PREDICTION RULE TO IMPROVE THE DIAGNOSIS FOR ACUTE APPENDICITIS IN THE EMERGENCY WARD

I Barreña (1), S Carbajo (2), L Corton (2), A García de Vicuña (3), M Montejo (2), L Shenguelia (2)

1. Emergency department, Cruces University Hospital, Osakidetza, Barakaldo, Spain
2. Emergency department, Cruces University Hospital, Osakidetza, Barakaldo, Spain
3. Emergency Department, Cruces University Hospital, Osakidetza, Barakaldo, Spain

Corresponding author: eunatea@euskaltel.net

Key-words: Acute Appendicitis ; Prediction rules ; Diagnostic accuracy

Introduction: Acute appendicitis (AA) is one of the most common acute surgical conditions of the abdomen. Nevertheless, the indications for appendectomy are associated with a high preoperative rate of false diagnoses. Diagnosis of appendicitis is difficult; however several clinical scales have been elaborated to improve diagnostic accuracy.

Aim: We tried to identify the variables that are linked to AA in our context and based on them to develop a simple diagnostic and prognostic model to help to stratify emergency ward patients with

clinically suspected AA, in order to reduce unnecessary surgical procedures while ensuring patients safety and quality of care.

Methods: Retrospective observational study. Analysis of a database of 278 consecutive patients admitted to the emergency ward of a tertiary hospital with suspected AA. We performed a descriptive analysis of the variables and a comparative regression analysis being AA the result variable. Bi-variate regression was used to predict clinical parameters associated with AA, such as: age, sex, related symptoms and signs, risk factors, co-morbid diseases, laboratory findings and ultrasound, and multivariate logistic regression to construct the model.

Results: 30% of the suspected AA were women and 44% men. In patients older than 31 years 12% of the suspected AA were finally confirmed as AA. Main reasons of consultation were abdominal pain and fever (75.3%) of AA. 87% of the AA had pain <48 hours of evolution. 50% of those who suspected AA and had fever or feverishness, were finally confirmed as AA. 23.4% of the AA suspicions came with pain located at right iliac fossa and 96.8% of AA confirmed had localized pain in the right iliac fossa. 35% of the AA had a positive Blumberg's sign and 28.40% leukocytosis. 4.3% of the scans with a diagnosis of AA was negative in biopsy. A CT scan was performed in 19.1% of the patients and 26.9% were diagnostic of AA. The sensitivity was 93.6% and specificity of 97.4%. 7.5% of the patients were readmitted and 1.4% of them were diagnosed of AA. Of these patients only one was discharged prior to performing ultrasound to be negative. 9.6% of patients treated are resolved within 4 hours, with 0.8% in the case of AA. 64.5% of the diagnoses of AA stay more than 8 hours at the emergency ward. 54% of diagnostic imaging tests are requested after 2 hours of arrival at the emergency ward and after diagnosis 45% of the patient takes more than 4 hours to be involved. Bi-variate analysis of the 11 considered variables at the beginning, defined that sex, hours of evolution, Blumberg and leukocytes were associated with AA. According to our results no other factors or variables were significantly associated with AA. The ROC curve of our model had an area of 0.788 (95% IC 0.732 to 0.843).

Conclusions: The follow-up of patients without final diagnosis can be made at home. The delay times can be improved especially in testing images and surgery. We believe that a validated scale can improve our diagnostic ratios.

G11:8 Other 2

X-RAYS, ARE WE ORDERING TOO MANY?

R Goldschlager (1), J Solomon (1), H Roth (1), S Green (1,2), J Green (1), S Hampton (1), A Krishnan (1), S Robson (1), M Spanger (3), R Gunn (2), P Cameron (4)

1. Medicine Nursing and Health Sciences, Monash University, Melbourne, Australia
2. Emergency Department, Eastern Health, Melbourne, Australia
3. Radiology, Eastern Health, Melbourne, Australia
4. Emergency Department, Alfred Health, Melbourne, Australia

Corresponding author: romigoldschlager@gmail.com

Key-words: Chest X-ray ; Acute Coronary Syndrome ; Clinical decision rule

Background

CXR are commonly used in the work-up of emergency department patients who present with suspected acute coronary syndrome (ACS). There is limited evidence to support their use. Furthermore current literature suggests that many X-rays are performed unnecessarily. The Canadian ACS guidelines dictate the use of CXR in patients who present to the emergency department with chest pain and suspected ACS. These guidelines were developed retrospectively to have a sensitivity of 100%. They have not been subsequently validated.

Aims

This study aims to

1. Quantify the number of unnecessary CXRs ordered in the emergency department
2. Validate the Canadian ACS guidelines

Methods

A large validation study was conducted comparing recommendations for CXR according to the ACS guidelines with participants' actual CXR findings. Participants were selected from the emergency department of an Australian metropolitan hospital over a 12-month period. Blinded researchers classified the findings of each participant's CXR as 'insignificant' or 'clinically significant', depending on whether an abnormality was found which altered diagnosis or management. Emergency department histories were then used to determine whether participants met the criteria for CXR according to the ACS guidelines. The study endpoint was the number of participants with clinically significant CXR findings who were not recommended for CXR according to the ACS guidelines. Analyses included sensitivity and specificity with 95% confidence intervals and Kappa agreement statistics.

Results

Among the 2,407 participants eligible for enrolment 85.5% (n=2058) had insignificant radiological findings. According to the ACS guidelines 48.1% (n=1398) of participants could forgo CXR, however this missed 125 participants (5.2%) with clinically significant CXR abnormalities. The ACS guidelines were 64.2% sensitive (95% CI: 0.59-0.70) and 61.9% specific (95% CI: 0.60-0.64).

Conclusion

This study verifies that there are large numbers of unnecessary CXRs ordered for patients with chest pain and possible ACS. We found the ACS guidelines to be substantially less sensitive than previously reported. Alternative guidelines are required to safely reduce the number of unnecessary CXRs performed in the emergency department.

G21:1 Toxicology

THE USE OF THERAPEUTIC RED CELL EXCHANGE IN THE TREATMENT OF SEVERE CARBON MONOXIDE POISONING: AN ACADEMIC EMERGENCY DEPARTMENT'S EXPERIENCES

S Zengin (1), M Yilmaz (2), B Al (1), C Yildirim (1), E Yavuz (1), A Akcali (1)

1. Emergency Department, Gaziantep University, Gaziantep, Turkey
2. Hematology, Gaziantep University, Gaziantep, Turkey

Corresponding author: zengins76@gmail.com

Key-words: Carbon-monoxide poisoning, ; Therapeutic red cell-exchange ; Emergency Department

Background: Carbon-monoxide (CO) is the most common cause of fatal poisoning worldwide, especially during the winter. Therapeutic red cell exchange (TREC) has been used in the treatment of many different diseases.

Objective: The objective of this study is to evaluate the efficacy of TREC on the clinical status, outcome, and discharge of patients with severe CO poisoning.

Method: The study was conducted retrospectively in the Emergency and Hematology Departments of Gaziantep University from November 2011 to April 2012. Twelve cases of TREC treated severe carbon-monoxide poisoning cases were included in this study. Demographic data, clinical status, and patient outcomes were checked retrospectively.

Results: The mean carboxyhemoglobin level decreased from 59.7±12.7% (38-79%) to 17±9.4% (8-43%), and the Glasgow Coma Scale score increased from 4±1.6 (3-8) to 9.4±3.5 (3-14) after TREC

therapy. Rhabdomyolysis developed in one case. Of patients, eleven were discharged with positive recoveries, two patients were admitted into the ICU, and one patient died.

Conclusion: TREX can be an effective treatment for reducing mortality and morbidity in severe CO poisoning.

G21:2

Toxicology

AWARENESS OF CYANIDE POISONING BY BELGIAN EMERGENCY PHYSICIANS.

K Anseeuw, G Dieltiens

1. Emergency Department, ZNA Stuivenberg, Antwerp, Belgium

Corresponding author: kurtanseeuw@yahoo.com

Key-words: cyanide poisoning ; awareness of cyanide poisoning ; treatment of cyanide poisoning

Carbon monoxide and hydrogen cyanide are major combustion products during fires and high quantities of cyanide (CN) may be released. There is growing evidence of CN as a significant toxicant in fire smoke victims. Mortality and morbidity associated with CN inhalation can only be reduced by early recognition of CN toxicity and timely administration of an antidote. CN toxicity should be suspected in patients involved in enclosed-space fires presenting with altered mental status, cardiovascular changes (especially persistent hypotension) and elevated lactate levels. Several CN antidotes are available. Given the safety advantages of empiric treatment with hydroxocobalamin (OHCo) for fire smoke victims, this seems to be the antidote of choice.

An online survey was sent out to 843 emergency physicians on the mailing list of the Belgium Society for Emergency and Disaster Medicine. The questionnaire consisted of questions about exposure to patients suffering from smoke or CN poisoning, general treatment of CN toxicity, awareness of CN poisoning by fire smoke inhalation and the preferred antidotal treatment in this case. Response rate was 27%. Mean age was 42 SD \pm 9 years with 31% French and 69% Dutch speaking. The male/female ratio was 71/29%. Respondents were trained in emergency medicine (54%), in acute medicine (23%), were residents (17%) and others (6%). Median duration of working in the emergency department (ED) is 10 years.

Median number of suspected and actual CN intoxications treated during their career was 1 case (with a maximum of 70 and 10 respectively). During the last year was this none. Reported available antidotes in their hospital were nitrites (19), 4-DMAP (7), thiosulfate (17), dicobalt EDTA (7) and OHCo (65). The availability within the ED and the fast medical car is respectively for nitrites (11/7), 4-DMAP (8/5), thiosulfate (14/7), dicobalt EDTA (5/5) and OHCo (78/71). The most frequently used treatments in suspected and CN poisonings are, respectively, oxygen (94/91), supportive treatment (69/72) and OHCo (57/75).

Median number of annual smoke inhalation victims treated pre-hospitally and within the ED were 5 and 10 cases respectively. Performed diagnostic testing in smoke inhalation victims include carboxyhaemoglobin levels (90% of respondents), arterial bloodgas analysis (67%), chest X-ray (52%), electrocardiogram (50%), lactate (36%) and CN levels (9%).

Estimated probability of CN formation during fires and of CN poisoning by smoke inhalation was, respectively, none by 2% and 2%, low by 12% and 19%, reasonable by 32% and 40%, high by 37% and 27% and absolute by 18% and 13%. Indications for CN antidote use in smoke inhalation victims include cardiorespiratory arrest (78%), elevated lactate (75%), decreased consciousness (62%), gasping (60%) and hypotension (51%). Though 27% will unnecessarily administer antidotal therapy in the presence of soot

precipitates and 22% with elevated carboxyhaemoglobin levels. Probability of OHCo administration if antidotal therapy is indicated, is absolute in 61%, likely in 19%, reasonably in 9%, low in 5% and absolutely not in 5%.

Analysis shows statistically significant correlations ($p < 0.05$) between the choice of OHCo as preferred antidote and the number of suspected and actual cases of CN intoxications treated in the past year, availability in the hospital, recent use of OHCo and French speaking physicians. Correct indications for using OHCo were statistically significant correlated with annual number of smoke inhalations treated in the ED, availability and recent use of OHCo and self estimated probability of CN formation and intoxication during fire. Correct diagnostic testing in smoke inhalation was statistically significant correlated with number of suspected and actual CN intoxications treated during the past year, time working in the ED and availability and recent use of OHCo. Correct treatment in smoke inhalation was statistically significant correlated with time working in the ED and presence and recent use of OHCo.

In conclusion, exposure to suspected or actual CN intoxications is very rare. Only one third of the respondents declare to have access to CN antidotes either in their hospital, ED or the fast medical car. The awareness of CN poisoning by smoke inhalation is very low, diagnostic features rather unknown and only 61% will administer the preferred antidote if antidotal therapy is indicated. There seems to be a clear need for raising awareness and education.

G21:3

Toxicology

BLOOD LACTATE LEVELS ON INTOXICATIONS AND USAGE OF LACTATE CLEARANCES FOR DETERMINATE TO THE EFFECTIVENESS OF TREATMENT

E. Akıncı (1), NB. Akıllı (1), R. Köylü (1), O. Koylu (2), K. Ivelik (1), ET. Sert (1), B. Cander (1)

1 Emergency Department, Konya Training and Research Hospital, Konya, Turkey

2, Biochemistry Department, Konya Training and Research Hospital, Konya, Turkey

Corresponding author: emineakinci@yahoo.com

Key-words: Drug intoxication ; lactate clearance ; lactate

Introduction

The aim of this study is to measure the lactate levels at the beginning and also at the 6th and 24th hours with the clearance rate of lactate and to determinate the availability of the usage of these parameters assessment on drug poisoning

Material and Methods

Patients over 18 years old who treated in emergency department critical care unit of Konya Training and Research Hospital for drug intoxications between the dates of November 2011 to February 2012 and agreed to participate in the study were selected.

Patients were divided into five groups according to take drugs such as paracetamol, organophosphates, selective serotonin receptor inhibitors (SSRIs), non steroid anti-inflammatory drugs (NSAIDs) and other (amitriptyline, salicylate, valproic acid, amoksisiklin)

After their physical examination, and decontamination, venous blood samples were taken for analyzing the blood gases and lactate clearances were calculated by determining the lactate levels at first admission (lactate 1) and on 6th (lactate, 2) and 24th hours.

Lactate levels over 1.7 mmol /L were considered as positive.

Statistical Analysis

Data analysis was performed using SPSS for Windows 11.5 package program. Shapiro Wilk test whether the distribution of continuous variables were close to normal. Significance of the difference

between the groups in terms of average one-way Analysis of Variance (One-Way ANOVA) with the significance of the difference in terms of median values was examined by the Kruskal-Wallis test.

Results

80 patients were included in the study. 68.8% of patients were female, 31.3% were male. From their drugs most commonly used drug was NSAID and also second most common was paracetamol. Between the groups, there were no statistically significant differences according to their mean age and sex distribution ($p = 0.064$ and $p = 0.055$).

The mean lactate level was 1.34mmol/l at first admission. 31% of patients on admission, 20% of patients on the sixth hour and 1.3% of patients on twenty-fourth hour had higher lactate levels above 1.7 mmol / l.

The rate of lactate clearance was 19% on 6th hour and 29% on the 24th hour

In paracetamol group, there was a significant decrease on 6 th hour according to other drug groups. ($p < 0.01$). And even so in paracetamol group, the clearance of lactate was significantly increased on 24th hour, too. ($p < 0.05$).

Discussion

The baseline amount of lactate produced per day is 0.8 mmol / kg / hr (300 mmol / day). And the liver clears 70% of lactate. Tissue lactate accompanied by a progressive worsening effect of the cell was found to be an important feature. Elevation of lactate levels can be detected due to drugs on drug poisoning. Especially for paracetamol intoxication, the rate of lactate clearance can be increased and blood lactate levels can be reduced by appropriate and adequate fluid therapy

G21:4

Toxicology

EFFECTS OF INTRAVENOUS SODIUM BICARBONATE THERAPY ON SURVIVAL IN AN EXPERIMENTAL RAT MODEL WITH INTRAGASTRIC HYDROCHLORIC ACID INGESTION

A Bagriyanik (1), H Ciftcioglu (2), G Ersoy (2), N Gokmen (3), B Kazanci (4), S Yanturali (5), O Yilmaz (6)

1. Department of Histology and Embriology, University of Dokuz Eylul, School of Medicine, Izmir, Turkey

2. Emergency Medicine, University of Dokuz Eylul, School of Medicine, Izmir, Turkey

3. Anesthesiology and Intensive Care, University of Dokuz Eylul, School of Medicine, Izmir, Turkey

4. Department of Emergency Medicine, State Hospital of Kocaeli, Kocaeli, Turkey

5. Department of Emergency Medicine, University of Dokuz Eylul, School of Medicine, Izmir, Turkey

6. Laboratory Animal Science, University of Dokuz Eylul, School of Medicine, Izmir, Turkey

Corresponding author: gurkan.ersoy@gmail.com

Key-words: Metabolic acidosis ; hydrochloric acid ; sodium bicarbonate

Introduction

Intoxications with accidental or suicidal corrosive agent ingestion is a serious source of mortality and morbidity here in our country. Corrosive agents especially with acidic content cause serious systemic side effects following ingestion such as serious metabolic acidosis. Metabolic acidosis that develops in a short time seriously threatens the life and ought to be treated, corrected rapidly and aggressively in the emergency department.

We aimed to investigate the effect of IV sodium bicarbonate therapy on survival of rats in a experimental model in which intragastric hydrochloric acid was experimentally ingested.

Materials and Methods

In our study, we used 19 female wistar albino rat under ketamine and xylazine anesthesia. After dissection of the neck area of the rats, we inserted branule into the esophagus and injected 18% hydrochloric acid (1ml/rat) solution via this branule. Later, the rats

were randomly divided into (NaHCO₃) (n=7), isotonic (isotonic NaCl) (n=7) and control groups (n=5).

We performed blood gases analysis before and after the 20., 40. and 140. minute of intragastric ingestion of hydrochloric acid solution. We documented the development of metabolic acidosis in all rats and finished the study at the 150th minute of the study. In the 20th minute, after performing the blood gas analysis, we infused IV NaCl 0.9% (0.9 ml/rat) solution to isotonic and NaHCO₃ (3 mEq/kg, 0.9 ml/rat) to NaHCO₃ group. For the control group nothing was infused. Death time of the rats during the observation period was recorded. At the 150th minute of the study we discontinued to observe the rats and terminated the study.

Results

After we developing experimental metabolic acidosis, 5 rats in the NaHCO₃ and 1 rat in the control group died before observation time was over. This result was statistically significant ($p=0.025$).

Discussion

In our study, we observed that survival time for the rats in the NaHCO₃ group was shorter than the rats in the isotonic group. Intravenous NaHCO₃ therapy did not prolonge the survival of the rats since there were more deaths in this group

G21:5

Toxicology

PREVALENCE OF INTOXICATION BY NEW RECREATIONAL DRUGS: PRELIMINARY DATA BY THE ITALIAN NETWORK OF EMERGENCY DEPARTMENTS INVOLVED IN THE NATIONAL EARLY IDENTIFICATION SYSTEM

M Aloise (1), E Buscaglia (1), F Chiara (1), A Giampreti (1), CA Locatelli (1), D Lonati (1), T Macchia (2), L Manzo (3), P Papa (4), VM Petrolini (1), C Rimondo (5), L Rocchi (4), C Rognoni (1), G Serpelloni (6), S Vecchio (1)

1. CENTRO ANTIVELENI - CENTRO NAZIONALE DI INFORMAZIONE TOSSICOLOGICA, IRCCS FONDAZIONE SALVATORE MAUGERI, PAVIA, Italy

2. Department of Therapeutic Research and Medicines Evaluations, Istituto Superiore di Sanità, ROMA, Italy

3. CENTRO ANTIVELENI - CENTRO NAZIONALE DI INFORMAZIONE TOSSICOLOGICA, IRCCS FONDAZIONE SALVATORE MAUGERI E UNIVERSITA' DI PAVIA, PAVIA, Italy

4. Laboratory of Analytical Toxicology, Clinical Chemistry Service, IRCCS Policlinico San Matteo Foundation, PAVIA, Italy

5. Addiction Department, ULSS 20 Verona, VERONA, Italy

6. Department for Antidrug Policies, Presidency of the Council of Ministers, ROMA, Italy

Corresponding author: carlo.locatelli@fsm.it

Key-words: New recreational drugs ; Synthetic cannabinoids ; Toxicological analysis

Objective: In recent years, "old drugs of abuse" have been joined by "new recreational drugs of abuse" (NeDA). The number and the severity of patients admitted to the emergency departments (EDs) for NeDA is unknown in Italy and in most cases the standard toxicological screening results negative. The underestimation of this phenomenon could have direct implication on early diagnosis and clinical management. A study was conducted through the EDs network referring to the Pavia Poison Centre (PPC) in order to evaluate the actual prevalence and clinical features of NeDA intoxications. Methods: All consecutive cases referred to the PPC (January 2010-October 2011) for suspected/confirmed substances of abuse poisoning were evaluated; cases presenting history for NeDA or atypical-clinical pictures after old drug abuse were included. All cases were assessed for age, history, acute clinical manifestations, evolution and toxico-analytical investigations. Cocaine, opiates, cannabis, amphetamine/methamphetamine were defined as "old drugs"; all the others were considered NeDA. Ethanol intoxication and body-packers were excluded. Results: Among 665 cases of substances of abuse intoxication, 192/665 (29%) met the inclusion criteria. In 52/192 (27%) NeDA were

declared; 7% of patient was unable to report the taken substances. The most common clinical manifestations were agitation (42%), tachycardia (37%), coma (22%), mydriasis (19%), gastrointestinal discomfort (18%) and hallucinations (14%); 2 fatal cases were registered. Laboratory investigations were performed in 94% of cases (181/192); 70% of biological samples/products were delivered to PPC by courier for non-urgent analysis. The NeDA identified were: MDMA (25 cases), synthetic-cannabinoids (17), ketamine (16), GHB/GBL (6), caffeine (6), atropine-scopolamine (6), butylone (2), MDPV (1), armine/dimethyltryptamine (1), MDA (1), 4-MEC (1). Conclusion: The network of EDs referring to PPC and the support of the advanced toxicological-analysis are useful for the identification of sentinel/atypical cases: however, this cannot quantify the phenomenon. The toxicological evaluation, the identification of lab-confirmed NeDA intoxications permits regulatory actions by the Department for Antidrug Policies (DPA) and Ministry of Health aimed at prevention and control, such as the inclusion of the NeDA in the list of controlled substances. Acknowledgements: Study carried out with the support of DPA - Presidency of the Council of Ministers

G21:6

Toxicology

A 3 YEAR-RETROSPECTIVE ANALYSIS OF INTOXICATION AT AN ACADEMIC EMERGENCY DEPARTMENT IN TURKEY

M Ergin (1), H Nak (1), MR Ozer (1), N Karakus (1), Y Durduran (2), MA Onal (1), S Kocak (1), AS Girisgin (1), M Gul (1), B Cander (1)

1. Emergency Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey
2. Public Health Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

Corresponding author: drmehmetergin@gmail.com

Key-words: Intoxication ; Emergency Care ; Critical care

BACKGROUND: Emergency departments are entry points into health care system for patients with intoxication. So that the data coming from EDs is very important in the development of intoxication science. We are presenting 3 year-experience of an academic emergency department at Turkey. **MATERIAL – METHOD:** The study was conducted at Necmettin Erbakan University Meram Medicine Faculty Emergency Department. The hospital data system was searched and demographic features, type of intoxication, type of exposure, agent, ICD code, modified early warning score, procedures, patients' complains, laboratory results and result of ED visits and admissions were recorded. **RESULTS:** The study included 479 patients whose mean age was 41.41±/ 20.32 (min-max: 4-93). The female patients were 58.7% of all. The reason distribution was suicide attempt (39.9%), accidental exposure (30.3%) and drug adverse reactions (23.8%). The most common types of exposure were peroral (78.7%), inhalation (9.8%) and intravenous (2.9%). The most common types of drugs were medical drugs (47.2%), agricultural drugs (15.7%) and industrial chemicals (15.4%). The most common ICD-10 codes were T46 (13.2), T62 (9.8%) and T39 (9%). The time interval between exposure and admission to ED was 4-5 hours for 7.9% patients and more than 5 hours for 6.7% patients. MEWS score had median value 0 points (min-max: 0-6). Two patients (0.4%) were cardiac arrest when admitted to ED. 15 female patients (3.1% of all) were pregnant. The detoxification procedures performed were gastric lavage (40.7%), active charcoal (36.3%), antidotal treatment (5.8%), dialysis (2.5%), hemodialysis (0.4%). In terms of results of emergency visits, 45.3% of patients were admitted to observation unit of ED, 21.1% discharged from ED, 16.3% admitted to other

clinics/CCUs, 10.9% admitted to CCU of ED, 5% left ED with their own will, 1% transferred to another hospital and 0.4% left ED without permission. Total admission duration was 3.9 ±/ 6.8 day (min-max: 0-61). **CONCLUSION:** Intoxication is important reason of admissions to ED. Emergency physicians should be familiar with agents, most common at their localization, and their treatment choices.

G21:7

Toxicology

PROTECTIVE EFFECT OF CAFFEIC ACID PHENETHYL ESTER ON CARBON MONOXIDE POISONING IN RATS

A. Karaca Ergül (1), T. Yardan (1), A. Baydin (1), A. Bedir (2), A. Bozkurt (3), S. Bilge (4), S. Gulten (2), A. Erdal (4)

1. Department of Emergency Medicine, Ondokuz Mayıs University, Faculty of Medicine, Samsun, Turkey
2. Department of Biochemistry, Ondokuz Mayıs University, Faculty of Medicine, Samsun, Turkey
3. Department of Physiology, Ondokuz Mayıs University, Faculty of Medicine, Samsun, Turkey
4. Department of Pharmacology, Ondokuz Mayıs University, Faculty of Medicine, Samsun, Turkey

Corresponding author: tyardan@yahoo.com

Key-words: Carbon monoxide poisoning ; caffeic acid phenethyl ester ; antioxidant activity

Objective: Carbon monoxide (CO) intoxication leads hypoxia and oxidative damage in various tissues. There are many studies asserted that caffeic acid phenethyl ester (CAPE) has antioxidant effects. The aim of the study is to evaluate the antioxidant effect of CAPE in carbon monoxide poisoning in rats.

Methods: Fourty Sprague-Dawley male rats were included in the study. The rats were divided into 5 groups, existing 8 rats in each group. These groups were control, CO, CAPE 5, CAPE 10 and CAPE 20. The rats, excluding control group, were exposed to a mixture of 3000 parts per million (ppm) CO in air for 30 minutes. The 2 ml serum physiologic has been administered intraperitoneally (i.p.) to control and CO group. In addition, 5, 10, 20 µmol /kg CAPE was given i.p. to the other groups respectively for 5 days. Rats were sacrificed after performing of passive avoidance and locomotor activity tests in fifth day of the experiment. Malondialdehyde (MDA) and glutathione levels were measured in plasma, brain and heart tissues.

Findings: Comparing the plasma MDA levels in rats; it was lower in CAPE 10 and CAPE 20 groups than CO group (p<0.01). The brain MDA levels of CO group were significantly higher than the control and other groups (p<0.01). There was no significant difference between the groups in respect to glutathione levels in plasma, brain and heart tissues (p>0.01). While results of passive avoidance test were lower in CO group than control group, it was higher in CAPE 5 and CAPE 10 groups than CO group (p>0.01). The locomotor activity test results showed no significant difference between the groups (p>0.01).

Conclusions: CAPE treatment prevents the increases of lipid peroxidation activity in CO poisoning. Additionally, CAPE has positive effects on learning and memory impairment developed after CO intoxication.

G21:8

Toxicology

A NEW ARRHYTHMOGENIC MARKER IN PATIENTS WITH CARBON MONOXIDE POISONING: TP-E

NB Akıllı (1), H Akıllı (2), E Akıncı (1), B Cander (1), ZD Dündar (3), R Köylü (1), M Polat (4)

1. emergency department, Konya Training and Research Hospital, Konya, Turkey
2. Cardiology department, NE University Meram faculty of Medicine, Konya, Turkey
3. Emergency department, KONYA TRAINING AND RESEARCH HOSPITAL, Konya, Turkey
4. Emergency department, KONYA TRAINING AND RESEARCH HOSPITAL, KONYA, Turkey

Corresponding author: drbelginakilli@hotmail.com

Key-words: carbonmonoxide poisoning ; Tpeak-end ; arrhythmia

OBJECTIVE: In addition to cardiac injury, different and fatal arrhythmias may develop with carbon monoxide poisoning. In this study, we aimed to investigate the changes of the Tp-e, the Tp-e dispersion, and the Tp-e/QT ratio as a risk factor for arrhythmic events in patients with carbon monoxide poisoning.

METHOD: All patients (18 years of age and older) admitted to the emergency department of Konya Training and Research Hospital with acute carbon monoxide poisoning from 2011 to 2012 were enrolled in the study. Blood samples were collected on admission to the emergency department for analysis of serum carboxyhemoglobin (COHb), electrolytes and cardiac biomarkers. The patients with electrolyte imbalances were excluded from the study. 12-lead electrocardiograms (ECG) at a paper speed of 25 mm/second were performed in all patients on admission. The QT intervals were measured from the beginning of the QRS to the end of T-wave in all leads and the means of the measurements were calculated. The Tp-e was measured in each precordial lead. A line between the peak of the T-wave and the isoelectric line was drawn and then the intersection of the tangent to the downslope of the T-wave and the isoelectric line was marked. The Tp-e was calculated by measuring the distance between these two points in each precordial lead and then the mean value of the measurements of 6 leads was calculated. T-waves smaller than 1.5 mm in amplitude were not measured. The Tp-e dispersion was defined as the difference between the maximum and minimum Tp-e values of the precordial leads. The Tp-e/QT ratios were calculated in the ECGs with 60-100 beats/minute heart rate. The Tp-e/QT ratios for lead V6 were also calculated so lead V6 reflected the left ventricular transmural axis best. Two independent experts obtained the measurements and the average of them were recorded. Blood sampling and ECGs were repeated at the 6th and the 24th hours. The length of stay in the hospital of the patients were also recorded.

RESULTS: A total of 94 patients were enrolled in the study. The mean age of patients was 39.6±17.2 years. 45 (47.9%) of the patients were male and 49 (52.1%) were female. On admission, the mean systolic blood pressure was 119±16 mmHg, the mean diastolic blood pressure was 71±10 mmHg and the mean pulse was 94±10 beats/min. The mean COHb levels were 30.6±10.0% at hour 0, 6.4±4.0% at the 6th hour and 1.8±0.9% at the 24th hour. The serum Troponin I levels were elevated in 6 (6.4%) of the patients at hour 0, in 13 (13.8%) of them at 6th hour and in 9 (9.6%) of them at 24th hour. At hour 0, the Tp-e was 90±13, the Tp-e dispersion was 28±12, the Tp-e/QT was 0.26±0.04 and the V6 Tp-e/QT was 0.25±0.05. At the 6th hour the Tp-e was 82±10, the Tp-e dispersion 22.4±9.4, the Tp-e/QT was 0.23±0.03 and the V6 Tp-e/QT 0.22±0.04. At the 24th hour the Tp-e was 74±10, the Tp-e dispersion was 17±6.9, the Tp-e/QT was 0.20±0.04 and the V6 Tp-e/QT was 0.19±0.02. The change in time in the Tp-e, the Tp-e dispersion, the Tp-e/QT and the V6 Tp-e/QT values were statistically significant (p<0.001). There were statistically significant correlations between the COHb levels at hour 0 and the Tp-e and

the Tp-e dispersion (r=0.39 and r=0.29, p<0.001 and p=0.011 respectively). Although no significant correlation was determined between serum Troponin I levels and the ECG parameters at 0 hour and the 6th hour (p>0.05), there were statistically significant correlations between the serum Troponin I levels at the 24th hour and the Tp-e, the Tp-e/QT and the V6 Tp-e/QT (r=0.37, r=0.29 and r=0.49; p=0.004, p=0.027 and p<0.001 respectively).

CONCLUSION: According to the recently increasing studies, the Tp-e interval amplification is associated with the malignant ventricular arrhythmias. Increases in the Tp-e interval and the Tp-e dispersion have been shown in patients with Brugada, short QT, long QT syndromes, and myocardial infarction. In our study, the Tp-e and the Tp-e dispersion were prolonged at hour 0 and the 6th hour and the results are consistent with the available literature. According to our results, the observation period of the carbon monoxide poisoned patients with these increased ECG parameters should be prolonged to 24 hours even if the COHb and Troponin levels return the normal levels.

G21:9

Toxicology

A COMPARISON OF THE EFFECTS OF N-ACETYL CYSTEINE AND ETHYL PYRUVATE ON EXPERIMENTAL TESTICULAR ISCHEMIA-REPERFUSION INJURY

S Türkmen (1), A Mentese (2), E Karagüzel (3), Y Karaca (4), A Küçük (5), A Uzun (2), E Yulug (6), S Türedi (1)

1. Emergency department, Karadeniz Technical University, Trabzon, Turkey
2. Biochemistry department, Karadeniz Technical University, Trabzon, Turkey
3. Urology department, Karadeniz Technical University, Trabzon, Turkey
4. Emergency department, Trabzon Research and Training Hospital, Trabzon, Turkey
5. Pediatric surgery department, Çanakkale Onsekiz Mart University, Trabzon, Turkey
6. Histology department, Karadeniz Technical University, Trabzon, Turkey

Corresponding author: drsuhturkmen@hotmail.com

Key-words: Testicular torsion-detorsion ; Ethyl pyruvate ; N-acetylcysteine

Objective: To compare the effects of NAC and EP on experimental testicular ischemia reperfusion (I/R) injury.

Design: Randomized, controlled, experimental study

Setting: University hospital

Animal (s): Twenty-four mature male Wistar rats

Intervention (s): Rats were divided into four groups; control, torsion-detorsion (T/D) group, ethyl pyruvate (EP) group and N-acetylcysteine (NAC) group. In the pretreatment of the NAC and EP groups, 20 mg/kg NAC and 50 mg/kg EP were given intraperitoneally 30 min before detorsion.

Main Outcome Measure(s): Serum ischemia modified albumin (IMA), tissue and serum malondialdehyde (MDA) and myeloperoxidase (MPO) activity levels and histopathological damage scores were then compared.

Result (s): Ethyl pyruvate and N-acetylcysteine exhibited a protective effect against I/R injury. Of the biochemical parameters evaluated as a result of testicular I/R, only IMA levels were significantly elevated. There was a strong and significant correlation between serum IMA levels and histopathological injury scores, and the increase in serum IMA level exhibited a strong parallel with the rise in histopathological injury. In the EP group, although histopathological injury score was similar to that of the control group, serum IMA levels were significantly elevated.

Conclusion (s): Both NAC and EP, the effects of which on I/R injury are evaluated here, reduce such injury in testicular T/D. Comparing their effects on IMA levels, NAC may be regarded as a relatively more effective treatment than EP.

G22:1

Imaging

CTPA RV/LV RATIO AND CLOT BURDEN VS PESI IN PREDICTING MORTALITY RATES IN PE PATIENTS

M Mulkeen (1), K Saraya (1), A Rafique (2)

1. Emergency Department, Ealing Hospital NHS Trust, London, United Kingdom
2. Radiology Department, Ealing Hospital NHS Trust, London, United Kingdom

Corresponding author: matthew.m@cheerful.com

Key-words: CTPA ; Pulmonary Embolism ; PESI

Objectives & Background :

One of the main causes of early death after Pulmonary Embolism (PE) is right ventricular (RV) failure. Hence, it seems plausible to use indicators of RV function (RV enlargement on CTPA) as predictors of prognosis after PE.

PESI is a validated prognostic model which estimates the risk of 30-day mortality in patients with acute PE. We previously validated the PESI score in our cohort of patients and also assessed immediate mortality at 1, 3 & 7 days with an aim of identifying patients with low immediate mortality rate suitable for ambulatory care.

Methods:

In this observational retrospective case note and radiological study of 1,606 patients undergoing CTPA in Ealing Hospital between 30/12/2009 & 20/12/2011, we identify all patients (n = 150) diagnosed with PE on CTPA admitted through Ealing Hospital ED. We derive CTPA RV/LV ratio and clot burden for these 150 PE patients.

We compare the predictive accuracy and effectiveness of CTPA derived RV/LV ratio and clot burden for predicting mortality rates of PE patients at 30 days by comparison with PESI score category and risk class as validated in previous published studies.

Results:

CTPA RV/LV ratio > 1 alone is not predictive of increased mortality in PESI Low Risk Class PE Patients.

Increasing clot burden in association with increased RV/LV ratio correlates to a higher PESI Risk Class.

Conclusion:

In PESI derived Low Risk Class Patients, a CTPA RV/LV ratio < 1 and minimal clot burden can re-assure the ED clinician in management of these patients in an ambulatory care setting.

hypotension and hypoperfusion. It is a result of different etiologies which may necessitate different treatment protocols. Until the underlying etiology is determined, treatment can be harmful.

RUSH is a diagnostic method using ultrasonography, which can define almost all underlying reasons of shock. There have been many trials related with its usage and usefulness during last three years. The trials about RUSH is accepted and draw attention.

Physicians examine hearth (eg. existence of pericardial effusion, defect in motion of wall), abdomen (eg. existence of fluid in morrison pouch and perisplenic region), vena cava inferior and abdominal aort (eg. Measurement of diameters) and lung (eg. findings of pneumothorax; loss of sliding lung sign and B-line nor sea shore sign, and heomothorax) by using ultrasound according to RUSH protocol. This is a similar bed-side procedure like FAST exam performed by emergency physicians to examine trauma patients. However, RUSH is performed to find reasons of non-traumatic hypotension.

RUSH is a imaging protocol defining how to use ultrasonography in patients with non traumatic shock. It is not a routine ultrasonographic imaging method performed by radiologists, which RUSH can't be replaced over. RUSH should be used to define situations which can be lethal and must require immediate treatment by a bed-side ultrasonography.

G22:4

Imaging

UTILITY OF CERVICAL SPINAL AND ABDOMINAL COMPUTED TOMOGRAPHY (CT) IN DIAGNOSING OCCULT PNEUMOTHORAX IN BLUNT TRAUMA PATIENTS: CT IMAGING PROTOCOL MATTERS

H Akoglu (1), E Unal Akoglu (2), S Evman (3), T Akoglu (4), A Denizbasi Altinok (5), O Guneyisel (1), O Ecmel Onur (5), E Onur (6)

1. Emergency Medicine, Dr. Lutfi Kirdar Kartal Education and Research Hospital, Istanbul, Turkey
2. Emergency Medicine, Zonguldak Ataturk State Hospital, Zonguldak, Turkey
3. Thoracic Surgery, Umraniye Education and Research Hospital, Istanbul, Turkey
4. Radiology, Tirebolu State Hospital, Giresun, Turkey
5. Emergency Medicine, Marmara University Pendik Education and Research Hospital, Istanbul, Turkey
6. General Surgery, Fatih Sultan Mehmet Education and Research Hospital, Istanbul, Turkey

Corresponding author: drhaldun@gmail.com

Key-words: pneumothorax ; abdominal computed tomography ; cervical computed tomography

Background:

Small pneumothoraxes (PX) which are not initially recognized with a chest X-ray and diagnosed by a thoracic CT are described as occult PX (OCPX). The objective of this study is to evaluate C-spine and abdominal CT for diagnosing OCPX and overt PX (OVPX).

Methods:

All blunt trauma patients who presented consecutively to ED over a 26-months period were included. Among all the CCTs (6155 patients) (Chest CT) conducted during that period 254 scans were confirmed to have a true PX. Their C-spine and abdominal CTs were compared with the findings in CCTs.

Results:

Among these patients, 254 had a diagnosis of PX confirmed with CCT. OCPXs were identified on the CCT of 128 (70.3%) patients, while OVPXs were evident in 54 (29.7%) of the cases. CT imaging of the C-spine was performed in 74% of OCPX and 66.7% of OVPX trauma victims. Only 45 (35.2%) of these OCPX patients and 42 (77.8%) of OVPX patients were detected by C-spine CT. Abdominal CT (ACT) was performed in almost all patients, and 121 of 127

G22:2

Imaging

WHAT IS RUSH? HOW RUSH WORKS? RUSH, EMERGENCY IMAGING, EMERGENCY ULTRASONOGRAPHY

AS Girisgin (1), AA Sevimli (2), M Ergin (3), F Koyuncu (4), S Kocak (1), ZD Dunder (5), B Cander (1)

1. Emergency Medicine, NEU Meram Medical School, KONYA, Turkey
2. Emergency Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey
3. Emergency department, NEU Meram Medical School, KONYA, Turkey
4. Emergency Medicine, Mevlana University, KONYA, Turkey
5. Emergency Department, Konya Education and Research Hospital, Konya, Turkey

Corresponding author: sgirisgin@yahoo.com

Key-words: RUSH ; Emergency imaging ; Emergency ultrasonography

RUSH is abbreviation of Rapid Ultrasonud in Shock and is a bed-side procedure for ultrasonographic evaluation of patients with non-traumatic shock. Shock is a clinical situation which includes

(95.3%) of these studies correctly identified an existing OCPX. Sensitivity of C-Spine and abdominal CT was 35.1% and 96.5%; specificity was 100% and 100%, respectively.

Conclusions:

Almost all OCPXs, regardless of intrathoracic location, could be detected by ACT or by combining C-spine and abdominal CT screening for patients. If T1-2 junction is used as the caudad extent, C-spine CT does not have sufficient power to diagnose more than a third of the cases.

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G22:5

Imaging

LUNG ULTRASOUND: A VISUAL STETHOSCOPE FOR THE EMERGENCY PHYSICIAN

Y Wimalasena

1. EMRS, NHS Greater Glasgow and Clyde, Glasgow, United Kingdom

Corresponding author: yashvi299@yahoo.co.uk

Key-words: ultrasound ; lung ; diagnosis

Introduction

Dyspnoea is a common presentation in the emergency department (ED). Emergency physicians (EPs) often need to make rapid diagnoses and treatment plans with limited clinical information. In these patients, clinical evaluation with history taking and physical examination alone is non-specific and chest x-ray (CXR) findings can be misleading, especially with portable machines. Over the last decade lung ultrasound (US) has been validated as a reliable, quick, bedside investigation for identifying lung pathology. Most of these trials were conducted by European and American clinicians, hence all the studies hail from these regions. There is not yet a published UK study investigating the feasibility of lung US in UK ED practice. The aim of this retrospective analysis was to investigate the feasibility and reliability of lung US carried out in busy UK EDs in the detection of four common causes of dyspnoea, namely, pulmonary oedema (PO), pneumothorax, pleural effusion/haemothorax and consolidation.

Methods

Retrospective analysis of lung US conducted by the author between the periods of Feb 2011 to Dec 2011 was compared to chest radiographs reported by consultant radiologist blinded to Lung US results. The patients included were those presenting with dyspnoea to either City Hospital ED between Feb and Oct 2011 or New Cross Hospital ED between Oct to Dec 2011 and treated by the author. No ethics approval was sought as the author routinely utilises lung US when assessing patients presenting with dyspnoea and patient care was not altered from the normal care given. Every patient was consented prior to ultrasound. The author utilises the eight zone scanning technique in which two anterior and lateral intercostal spaces are scanned in each hemithorax. Each patient had a lung US conducted as part of their assessment and then had a CXR as per normal practice.

Analysis

For each pathology, lung US sensitivity and specificity was calculated.

Results

In total 61 patients were included in this study.

Lung US feasibility was 100%.

For PO, lung US sensitivity was 90% (CI 69-97) and specificity 87.5% (CI 73-94). For Pleural effusion, lung US sensitivity was 100% (CI 65-

100) and specificity (CI 93-100). For Pneumothorax, lung US sensitivity was 100 (CI 65-100) and specificity 98% (CI 98-100). For Consolidation, lung US sensitivity was 33% (CI 12-65) and specificity 89% (CI 77-95)

Discussion

It is evident from this study that lung US can be utilised in busy UK EDs to aid EPs make accurate diagnosis in patients presenting with dyspnoea. Lung US possesses the added advantage of being repeatable, non-ionising and available at the bedside. The finding of this study agrees with the published data in regard to lung ultrasound sensitivity and specificity for pulmonary oedema, pneumothoraces and effusions. However the sensitivity for consolidation was lower than that of published trials.

Limitations of this study include the facts that it was a retrospective analysis and the fact that the investigator was not blinded to patient's clinical presentation. The gold standard for comparison was CXR. CXR is an imperfect gold standard but is still widely used in clinical practice as the first line investigation when assessing patients presenting with dyspnea, hence it been chosen as the reference standard.

Conclusion

With increase in training and exposure, lung US will in the future become an added resource in the form of a visual stethoscope for EPs when dealing with sick patients presenting with dyspnoea.

G22:6

Imaging

THREE-DIMENSIONAL ULTRASOUND FEASIBILITY EVALUATION IN EMERGENCY MEDICINE ROUTINE CLINICAL PRACTICE

E De Villa, C Donnini, A Guzzo, F Innocenti, R Pini, S Squarciotta

1. Emergency Department High Dependency Unit, Careggi University Hospital, Florence, Italy

Corresponding author: innocentif@aou-careggi.toscana.it

Key-words: tridimensional echocardiography ; fesibility ; Left ventricular function

Background: Three-dimensional (3D) echocardiographic quantitative evaluation of left cardiac chamber showed better agreement with reference methods (magnetic resonance imaging) than 2D conventional imaging, but it requires a dedicated probe and troublesome acquisition technique. The latest generation devices allow a rapid and simple bed-side image acquisition and a complete (morphological and functional) cardiac information can be obtained from a single view and re-evaluated off-line. This could reduce the acquisition time and the critically ill patient's discomfort and make 3D-echocardiography potentially feasible in routine clinical practice. A new probe combining good 2D imaging and high quality 3D was tested in an unselected series of patients (pts), admitted in the Emergency Department (ED), both in stable and critical clinical conditions. Aim of this study was to test feasibility of 3D imaging and quantitative evaluation.

Methods: In a consecutive series of pts, admitted in the Observation Unit (OB) and High Dependency Unit (HDU) in our Emergency Department, clinical indicated echocardiography was performed with the X5-1 probe (iE33-Philips Medical System) and image quality in 2D and 3D was evaluated. Modified Early Warning System (MEWS) was evaluated during the exam. Quantitative evaluation of left ventricular (LV) volumes and ejection fraction (EF) was performed both in 2D and 3D imaging. Echocardiograms were performed alternatively by experienced or in-training operators, already able to perform a bed-side bidimensional echocardiography; all operators were asked to indicate, at the end

of the exam, acoustic windows' quality and clinical conditions eventually limiting images' acquisition.

Results: Two-hundred-ninety pts were examined, 206 in HDU, 67 in OB and 17 as out-patient. Main diagnosis at admittance were chest pain (36.2%), atrial fibrillation (12%) and dyspnea (9.7%). In 9 pts it was not possible to perform echocardiography, nor with 2D nor with 3D imaging modality, secondary to high Body Mass Index (BMI), chronic obstructive pulmonary disease, left pneumothorax or fixed position. In 72 more pts the operator judged the overall quality of the exam poor, both for lack of patients' compliance (38 pts) and/or poor acoustic window (34 pts). However we were able to obtain a quantitative evaluation in 250 pts from 2D images and in 226 from 3D images (86 vs 80%, $p=0.012$). Patients in whom it was not possible to obtain 3D-quantitative data showed a higher respiratory rate [r/min] (Range (R): 10-45, Mean (M): 20 ± 7 vs R: 11-40, M: 18 ± 5 ; $p=0.01$) but not significant differences in heart rate [b/min] (R: 50-160, M: 82 ± 23 vs R: 42-150, M: 78 ± 19 b/min, $p=NS$), MEWS during the exam (R: 0-6, M: 1.7 ± 1.6 vs R: 0-6, M: 1.3 ± 1.2 , $p=NS$) and BMI [kg/m²] (R: 17.6 - 44.8, M: 26.8 ± 5.6 vs R: 16.9 - 64, M: 26.2 ± 5 , $p=NS$).

End-Systolic LV Volume (ESV), End-Diastolic LV Volume (EDV) and EF showed a very good correlation in 2D and 3D echocardiography: 2D EDV 87 ± 41 ml, 3D EDV 80 ± 46 ml ($r=0.785$, $p<0.0001$); 2D ESV: 42 ± 33 ml, 3D ESV: 42 ± 40 ml ($r=0.866$, $p<0.0001$); 2D EF: $54\pm15\%$, 3D EF $52\pm14\%$ ($r=0.69$, $p<0.0001$).

We compared 3D feasibility among an experienced and in-training operators, that respectively examined 146 and 144 subjects: patients evaluated by in-training operators had similar values of MEWS (1.3 ± 1.3 vs 1.5 ± 1.3 , $p=NS$), heart rate (80 ± 21 vs 78 ± 18 b/min, $p=NS$) and BMI (26 ± 6 vs 27 ± 5 kg/m², $p=NS$) compared to the ones examined by experienced operator, but a significantly lower respiratory rate (17 ± 5 vs 20 ± 7 r/min, $p=0.002$). 3D images quality allowed quantitative evaluation in a similar proportion of patients (78% for in-training and 77% for expert operator, $p=NS$).

Conclusions: With advanced technology equipment, feasibility of 3D imaging appeared very good in a series of non selected pts, including a significant proportion of critically ill pts. Despite tachypnea was a limiting factor, image quality in 2D and 3D modality, performed with the same probe, was very good and allowed quantitative evaluation in most of the pts. A good agreement in quantitative evaluation of LV volumes and EF was observed between 2D and 3D imaging and it seems that this technique does not require a long training period for operators able to perform a base-line echocardiography.

G22:7

Imaging

EMERGENCY DEPARTMENT EVALUATION OF CHEST PAIN BY EXERCISE STRESS-ECHO

S Bigiarini (1), A Conti (1), C Donnini (1), F Innocenti (1), D Lazzeretti (1), R Pini (1), M Zanobetti (1)

1. Emergency Department High Dependency Unit, Careggi University Hospital, Florence, Italy

Corresponding author: innocentif@aou-careggi.toscana.it

Key-words: Chest Pain ; Exercise Stress Echo ; inducible ischemia

INTRODUCTION: Diagnostic assessment of patients admitted to Emergency Department (ED) with spontaneous chest pain represent a frequent and challenging task for emergency physician. **METHODS:** Between 2008, June15 and 2011, July31, 239 subjects with an episode of spontaneous chest pain, non modified EKG and negative cardiac necrosis markers after at least 12 hours from the index event, were evaluated with exercise stress-echo (ESE). Chest

pain was evaluated with Chest Pain Score (CPS), that takes into account chest pain characteristics (crushing, pressing, heaviness =3; sticking, pleuritic, pinprick =1), localization (substernal or precordial =3; epigastric, left chest, neck, lower jaw=1), radiation (as either arm, shoulder, back, neck, lower jaw =1; absence =0), associated symptoms (as dyspnea, nausea, diaphoresis =2; absence =0), recurrence in the previous seven days (yes =3, no =0). Patients with inducible ischemia (li) were asked to undergo a coronary angiography (CA). Patients with a negative exam were discharged and they were contacted by telephone at least six month after discharge, to investigate symptoms recurrence or new cardiovascular events. The study population was divided into two subgroups, according to the presence of inducible ischemia (ES+ presence of li, ES- absence of li).

RESULTS: Mean age of the study population was 61 ± 11 years and 69% patients were male, 11% were affected by diabetes, 39% by dyslipidemia, 56% patients were hypertensive and 21% patients had a known Coronary Artery Disease (CAD). Medications most frequently assumed were ACE-inhibitors in 28% patients, acetylsalicylic acid in 28%, beta-blockers in 24%, angiotensin II receptor antagonists in 18% and Ca-antagonist in 14%. Eleven patients showed non-conclusive test, in most cases (7) for physical deconditioning; in one case the patient reported an acute coronary syndrome during follow-up. Among 35 patients with ES+, 32 carried out CA, while 3 refused to perform it. CA showed the presence of significant coronary artery disease in 29 subjects.

Among 193 patients with ES-, 2 patient referred an acute coronary syndrome at follow-up and 5 patients performed CA, according to treating physician indication, that in 2 cases showed critical coronary stenosis.

Patients with ES+ were significantly older (68 ± 9 vs 60 ± 11 years, $p<0.001$), more frequently affected by peripheral arterial disease (54% vs 46%, $p<0.0001$) and by a previous known CAD (37 vs 21%, $p=0.037$); they also had a significantly worst CPS value (7 ± 3 vs 5 ± 3 , $p<0.0001$). Known cardiovascular risk factors, as hypertension, diabetes and dyslipidemia, showed a similar prevalence regardless of demonstration of li. At baseline echocardiogram, ES+ subjects showed larger left ventricular (LV) dimension: end-diastolic (53 ± 6 vs 50 ± 6.5 ml, $p=0.004$) and end-systolic diameter (37 ± 8 vs 33 ± 7.5 mm, $p=0.031$), end-diastolic LV volume index (48 ± 13 vs 54 ± 11 ml/m², $p=0.033$), with a similar LV ejection fraction (61 ± 11 vs $59\pm10\%$, $p=NS$) and at comparable baseline segmental kinesis expressed as Wall Motion Score index (ES+ 1.23 ± 0.35 vs ES- 1.14 ± 0.34 , $p=NS$). Work load expressed in terms of metabolic equivalents (METs) was similar in both groups of patients (ES+: 5.7 ± 1.4 vs ES-: 7.5 ± 8 , $p=NS$).

Overall ESE showed a sensitivity of 90%, a specificity of 98%, a positive predictive value (PPV) of 90%, a negative predictive value (NPV) of 98% and an accuracy of 97%.

CONCLUSIONS: The exercise stress-echo is a very accurate and feasible diagnostic tool for the assessment of patients presenting to the ED with spontaneous chest pain.

G22:8

Imaging

TRAINING IN TRANSVAGINAL SONOGRAPHY USING PELVIC ULTRASOUND SIMULATORS VERSUS LIVE MODELS: A RANDOMIZED CONTROLLED TRIAL

J. Moak (1), S. Larese (1), J. Riordan (1), A. Sudhir (1), C. Ghaemmaghami (1), G. Yan (2)

1. Emergency Medicine, University of Virginia, Charlottesville, VA, United States

2. Department of Public Health Sciences, University of Virginia, Charlottesville, VA, United States

Corresponding author: james.moak@virginia.edu

Key-words: ultrasound ; transvaginal ; simulation

Background

Transvaginal sonography (TVS) is a core component of emergency medicine (EM) training in the United States. Pelvic ultrasound simulators (PS) may be useful in teaching TVS, but no literature exists comparing their use to live model (LM) training.

Objectives

We sought to compare the training of novices in TVS using PS versus LM. We hypothesized that there would be no difference between the two training types.

Methods

This was a prospective, randomized controlled trial involving 3rd year medical students trained in TVS with either PS or LM. The study took place at an academic medical center with an emergency medicine residency program, and was approved by our institutional review board (IRB). At our institution all 3rd year students are enrolled in a required one-week course in EM. During the academic year 24 small groups, each consisting of five to seven students, rotate through our department on a biweekly basis. In 2011-12 students were randomized by group to PS vs LM training based on the dates of their rotation. One-hour didactic sessions in TVS were conducted by the same instructor. We employed Blue Phantom (Redmond, WA) intrauterine and ectopic pregnancy models for PS training and standardized patient educators for LM training. The patient educators had prior experience training and evaluating students in the performance of a pelvic exam. Three days after training, students were tested using a standardized patient educator (LM). The patient educator scored students' professionalism using a 10-point questionnaire. An observing test proctor, blinded to students' prior training, scored their scanning technique using an 18-point questionnaire. Image acquisition was assessed by blinded expert review of saved images using a 12-item data sheet. Our primary outcome measure was the total number of favorable responses on these three test instruments combined such that a perfect score would equal 40 (100%). Secondary outcome measures were scores within each of the three categories (professionalism, scanning technique, and image acquisition). An additional secondary outcome measure was students' rating of how well their training prepared them for testing on a live model using a 0-10 Likert scale from "not very well" (0) to "very well" (10). Poisson regression was used to test for group differences in overall performance, professionalism, scanning technique, and image acquisition. Student's t-test was used to compare how subjects in each group rated their training. Descriptive statistics and mean rating scores with standard deviation were used where appropriate.

Results

145 students were eligible for the study. Eleven were excluded due to absences, leaving 134 students in the final analysis. Sixty-two students underwent PS training, and 72 LM training. Three students in the PS group (4.8%) and six in the LM group (8.3%) reported prior experience in TVS before initiation of the study; none had performed more than three scans. Two students in the PS group (3.2%) and three in the LM group (4.2%) performed TVS on actual ED patients between the training and testing dates. Mean scores on the combined 40-point assessment tool were 56% for the PS group and 69% for the LM group ($p = 0.001$). For professionalism we found no significant difference in mean scores between the PS group, 71.3%, and the LM group, 74.7% ($p = 0.45$). However, students randomized to the PS group had lower mean scores for scanning technique, 59.7%, than their peers in the LM group, 72.5% ($p = 0.001$). A similar disparity was demonstrated by blinded review of saved images; students in the PS group visualized and accurately identified pelvic structures 37.1% of the time while those in the LM group did so 59.5% of the time ($p = 0.001$). Based on their training experience, students in the PS group rated their

preparedness for testing less favorably than those in the LM group, with mean values of 4.4 (SD 2.4) vs. 6.2 (SD 2.4) respectively ($p < 0.001$).

Conclusion

When used to train novices in TVS, pelvic ultrasound simulators appear less effective than live models. Students trained on a PS performed more poorly in terms of scanning technique and image acquisition than those who underwent LM training, yet there was no difference in professionalism. Further study is warranted to evaluate the convenience and cost-effectiveness of simulators as an adjunct to live model training.

G22:9

Imaging

POTENTIAL IMPROVEMENT IN MATERNAL MORTALITY WITH POINT-OF-CARE ULTRASOUND IN A RESOURCE LIMITED REGION OF SIERRA LEONE.

A Au (1), K Paziana (2), A Husain (1), B Ku (1), JM Fields (1)

1. Emergency Department, Thomas Jefferson University, Philadelphia, PA, United States

2. Emergency Department, Johns Hopkins University, Baltimore, MD, United States

Corresponding author: arthurkau@gmail.com

Key-words: Ultrasound ; Antenatal care ; Sierra Leone

Study Objectives:

In Sierra Leone, the maternal mortality rate is estimated to be 1,000-2,000 per 100,000 live births, and is amongst the highest in the world. Point-of-care (POC) ultrasound has become increasingly available and has the potential to improve diagnostic capabilities in resource limited settings. This study sought to determine whether the use of POC ultrasound in a rural clinic of Sierra Leone has the potential to improve antenatal care (ANC).

Methods:

This was a prospective observational study. ANC providers at a rural clinic in the Kono District of Sierra Leone were instructed in transabdominal ultrasound (TAU). Core instructional content included didactic and practical hands-on training sessions supervised by 3 emergency physicians fully credentialed under the American College of Emergency Physicians' (ACEP) criteria for TAU. All pregnant patients presenting to the ANC clinic over a two-week period during February 2012 underwent TAU by the trained ANC providers. All sonographic findings and resultant effect on plan of care were recorded and included in this study.

Results:

A total of 105 patients presented to the ANC clinic and underwent TAU. 99 (94.2%, 95 CI: 88.0-97.3%) patients were found to have intrauterine pregnancies (IUPs) with a median estimated gestational age of 29 weeks (range 8 weeks - 38 weeks). Four (3.8%, 95 CI: 1.5-9.4%) patients had no signs of IUP and a confirmatory negative pregnancy test. Two patients in this study had the appearance of a molar pregnancy on TAU, which resulted in a much higher than expected rate of gestational trophoblastic disease (GTD) in this cohort (1.9%, 95 CI 0.2-6.7%) when compared to previously reported frequencies (0.1-0.2%, $p < 0.001$). Both patients were referred to the local surgeon for definitive treatment.

Conclusion:

POC US led to a significant diagnostic finding in 6% of patients and to an immediate change in management in 2%. In addition, POC US helped guide ANC counseling in 94% of patients by confirming IUP and gestational age. Our findings suggest that POC ultrasound may positively impact ANC in resource-limited settings. Further investigation in this region is warranted to determine whether the incidence of GTD is truly higher in this population.

G23:1

Infectious Disease / Sepsis

EMPIRIC ANTIBIOTIC THERAPY IN THE EMERGENCY DEPARTMENT: A DRUG USE REVIEW

N Hosseinpour Tabrizi (1), M Walschot (2), S Steurbaut (3), I Wybo (4), M Diltor (5), A Dupont (3), I Hubloue (1)

1. Department of Emergency Medicine, UZ Brussel, Brussels, Belgium
2. Department of Internal Medicine, UZ Brussel, Brussels, Belgium
3. Department of Clinical Pharmacology & Pharmacotherapy, UZ Brussel, Brussels, Belgium
4. Department of Microbiology and Infection Control, UZ Brussel, Brussels, Belgium
5. Department of Intensive Care Medicine, UZ Brussel, Brussels, Belgium

Corresponding author: tabrizinima@gmail.com

Key-words: empiric therapy ; emergency department ; drug use review

Background: Prescribing an antibiotic treatment has a low threshold for both the general practitioner as for the hospital-physician frequently leading to inappropriate antibiotic prescriptions. Lack of experience is one of the important factors. Furthermore, an intravenous therapy is not always necessary. An early switch to oral therapy after a short intravenous antibiotic therapy (IV AB) of two to three days yields savings in costs and nursing time.

Objectives: To make a drug use review of prescribed empiric IV AB with a focus on amoxicillin-clavulanate (AC) for patients admitted to the emergency department (ED) who were consecutively hospitalized.

Materials and Methods: The medical files of all patients who were hospitalized after an ED visit between January 1st and December 31st 2008 and who received IV AB were examined. Patients were categorized to the kind of administrated IV AB. Patients who received oral AB before their admission to the ED were excluded. The group of intravenous AC was analyzed in detail. All patients with intravenous AC stopped within 72h were selected for further analysis. We used drug utilization information from the hospital pharmacy. The total dose AC was divided by the number of administrations to obtain the number of days that a patient had received AC. The Clinical Working Station (a program for archiving medical patient information) was used to check how long the patient was treated with intravenous AC, the indication for treatment and the reason for discontinuation of intravenous AC. Microsoft Excel was used for registration and analyzing the data.

Results: 14,248 patients were hospitalized after admission to the ED and 2,470 of them (17.3%) received IV AB of whom 957 (38.7%) had received intravenous AC. The mean age of those receiving IV AC was 44.6 ± 28.0 years with a male:female ratio of 1.3 : 1. 538 patients were treated with intravenous AC with a registered stop of this therapy within 72 hours. However, in 62.5% of them drug utilization information from the hospital pharmacy (total dose AC received) and the information in the medical file in the Clinical Working Station were discordant because the intravenous AC was actually given more than 72h. The correct total number of patients who were treated with intravenous AC and in whom it was stopped within three days was 202 (37.5%) with a mean age of 58.6 ± 24.2 years and a male:female ratio of 0.87:1. 46% of those patients were switched to oral AC therapy, in 15% IV AC was stopped with a switch towards other IV AB because of the microbiological results, and 13% received other IV AB because of their clinical deterioration during the first 72h (persistent fever, increase of inflammatory parameters and blood results,...). In 10% of 202 patients the intravenous AC was stopped because the patient didn't need AB in the first place. The mean age in the latter group was 70.0 ± 15.0 years with a male:female ratio of 1.22:1. 40% of them were hospitalized for pulmonary pathologies, 30% for gastroenterology and abdominal surgery, 25% for cardiology and 5% were admitted for infectiology and dermatology.

Conclusion: Unnecessary use of intravenous AC was not common in our study. Only a small percentage (10%) of patients who were hospitalized after admission to the ED received intravenous AC although no antibiotic treatment was needed. The threshold for adopting a "wait and see" attitude by the medical practitioner is often high especially in the case of respiratory pathologies, gastroenteritis, cholestasis, peri(myo)carditis, influenza,... On the other hand, the most important reason to stop the intravenous AC on medical wards was the switch to oral therapy (45%). This is a reassuring finding in terms of cost benefits. In addition, the patient will be less dependent during his hospital stay with a lower risk for catheter sepsis - that might result in a shorter length of stay. However, further studies are needed for analyzing the initial reasons for starting AB. More guidelines, teaching and supervision by multidisciplinary teams of experienced medical practitioners are necessary.

G23:2

Infectious Disease / Sepsis

IS POSTEXPOSURE TREATMENT WITH ANTIBIOTICS EFFECTIVE FOR THE PREVENTION OF LYME DISEASE AFTER A TICK BITE IN ASYMPTOMATIC PATIENTS PRESENTING WITHIN 72 HOURS AFTER A TICK BITE?

O Sir

Emergency Department, UMCN St Radboud, Nijmegen, Netherlands

Corresponding author: o.sir@seh.umcn.nl

Key-words: Tick bite ; Lyme disease ; Antibiotics

Background:

Lyme disease is caused by infection with *Borrelia burgdorferi* (BB) transmitted by ticks in temperate areas, typically causing erythema migrans (EM) an expanding circular rash around the infectious tick attachment site. Untreated or inadequately treated infection can cause arthritis, polyneuropathy and encephalopathy. Serologic testing for antibodies to BB is known to have quite a number of false positive and negative results.

Since approximately 25% of ticks in the Netherlands are infected the question rises if it is safe and effective to treat all (asymptomatic) tick bites with antibiotics.

Search strategy:

Medline (Pubmed interface) was searched: (Lyme Disease AND (Anti-Bacterial Agents Mesh OR antibiotics)) AND ((Clinical trial[pt] OR randomized[tiab] OR placebo[tiab] OR clinical trials[mh] OR randomly[tiab] OR trial[tj])) AND (prophylaxis OR prophylactic) Limits: Humans, (Randomized) English.

14 Hits were found. One study (Costello, 1988) was found in the references of the already found articles. After exclusion of the non-structured reviews, six clinical trials (Shapiro, Hasin, Korenberg, Agre, Costello, Nadelman) and one systematic review (Warshafsky) were analysed and rated. Two studies (Korenberg, Hasin) were excluded after full-text review because the trials were about different diseases (B. Afzelli/B. Garinii, B. Persica). One study (Costello) was excluded because of poor methodological quality (18% exclusion rate for unknown reasons; unknown if there was any randomisation). The systematic review (Warshafsky) was not included because it included Costello's study and two of the already found studies (Agre, Shapiro).

Results:

Nadelman (2001) showed that doxycycline 200mg once, significantly reduces the proportion of people aged 12-82 with erythema migrans at the site of the tick bite (and people with any evidence of Lyme disease) in New York state. The number needed

to treat (NNT) to prevent one occurrence of EM was 36 (95% CI: 19-244)

Agre (1993) compared a penicillin or tetracycline for 10 days to placebo in children aged 3-19 years in New York state, were 25-50% of all ticks were infected. Only one of the 90 patients in the placebo group developed EM (NS).

Shapiro (1992) conducted a large RCT comparing amoxicillin for 10 days to placebo in children and adults (age 1-83) in Connecticut USA where 15% of ticks were infected. Two of the 173 patients in the placebo group had a symptomatic infection. One had EM, the other had early disseminated Lyme disease. Follow up was done during one year. The difference did not reach statistical significance. Shapiro also tested the compliance to antibiotics: in only 42% of cases AB were found in the urine.

Conclusions:

Only one of the three RCT's showed that antibiotics successfully can prevent erythema migrans in asymptomatic tick bites attached less than 72 hours. However the NNT was high: 36 (95% CI: 19-244) and one has to take into account that antibiotics have relatively frequent side effects.

So, since erythema migrans is usually the first sign of Lyme disease, the best strategy would be to give antibiotics only to people with erythema migrans.

fosfomicyn (6.6%). The greatest percentages of antibiotic resistance were from penicillin, amoxicillin and ampicillin (19.7% each respectively). The extended spectrum beta-lactamase producing bacteria (ESBL) were negative for 94.3% of the patients. 13.2% of the patients met CUTI's criterion of these 50% had received antibiotic treatment in the previous week and the other 50% had received antibiotic for at least a week but no more than 4 weeks. The empirical antibiotic treatment was adequate in 65.6%, inadequate in 14.8% and unknown in 19.7%. The statistical significant matches for the antibiotic resistant variable were age ($p=0.000$), recent history of urinary tract surgery ($p=0.047$), previous UTI ($p=0.034$), CUTI's ($p=0.010$), comorbidity for CUTI ($p=0.026$). The diagnoses made in the emergency department of a community acquired UTI's met our study characteristics with a statistical significance of ($p=0.019$), these were discharged from the emergency department with ($p=0.001$), and were prescribed antibiotic with ($p=0.003$), which was significantly the correct one ($p=0.08$).

Conclusions

Penicillin, amoxicillin, and ampicillin are not ideal in the treatment of UTI's in our area, except when associated with a betalactamase inhibitor. In order to adequately prescribe empirical antibiotic treatment bacterial resistance studies are fundamental.

G23:3

Infectious Disease / Sepsis

EMPIRIC ANTIBIOTIC THERAPY OF URINARY TRACT INFECTIONS IN THE EMERGENCY DEPARTMENT

C Baena (1), J De Oleo (1), MD Gonzalez (2)

1. Family Medicine Resident, Hospital Virgen del Castillo, Yecla, Spain
2. Emergency department, Hospital Virgen del Castillo, Yecla, Spain

Corresponding author: Carobaenab@hotmail.com

Key-words: Urinary tract infections ; bacterial drug resistance ; emergency department

Objectives

Determine antibiotic resistance in our region in order to prescribe the appropriate empiric antibiotic treatment for patients diagnosed of urinary tract infection (UTI), complicated urinary tract infection (CUTI) – this includes UTI's in men, pyelonephritis and prostatitis - and urinary sepsis attended at the emergency department.

Method

It is an observational descriptive transversal study. The cases were selected based on the diagnoses made in the emergency department of UTI, CUTI and urinary sepsis during 2010 . The total of 456 cases was recruited, but only 122 cases met the inclusion criterion which was: Patient age higher than 14, positive urine culture and non-pregnant women. An excel sheet was designed to organize the information, and then a data capture protocol was designed in order to lower the information bias. Here the information was divided in two groups one defined as community acquired UTI's which gathered all the diagnosis of non CUTI and the group of CUTI's. The statistical treatment was done with the SPSS 15 program. 19 variables were analyzed, grouped in socio-demographic variables, comorbidities, types and characteristics of the UTI's, urine culture results and antibiotic prescription.

Results

Of the 122 revised cases, 65.6% corresponded to females and 34.4% males. The mean age was 56.13. The most frequent isolated bacteria was Escherichia coli (79.5%), followed by Klebsiella pneumonia, Proteus mirabilis, Staphylococcus saprophyticus and klebsiella oxitoca (3.3% each respectively). The antibiotics most frequently prescribed were cephalosporins (24.6%), quinolones (18.9%), betalactams plus betalactamase inhibitor (15.6%) and

G23:4

Infectious Disease / Sepsis

EVALUATION OF A CLINICAL PATHWAY FOR SEPSIS IN EMERGENCY DEPARTMENT : A PROSPECTIVE COHORT STUDY

P Bilbault, M Boulin, M. Mihalcea, M. Gandoin, H. Slimani, C. Kam

Emergency Department, Hautepierre University Hospital, Strasbourg, France

Corresponding author: pascal.bilbault@chru-strasbourg.fr

Key-words: sepsis ; evaluation ; emergency room

Background

Sepsis is still a leading cause of death in critical patients. Emergency Departments (ED) are in an unique position to recognize and start treatments in sepsis that optimize patient outcomes. Management of sepsis has been well established in critical care units since the last update of the Surviving Sepsis Campaign (SSC) in 2008. But these guidelines are not fully transferable to ED settings.

Objectives

The aim of our study was the evaluation of a clinical pathway (CP) based on the SSC for severe sepsis and septic shock in our ED.

Methods

In 2008 we built a CP for sepsis to improve quality of care in the management of the sepsis syndrome in our tertiary university hospital ED. The objectives of the CP were to increase the rapidity of recognition and treatment in case of severe sepsis and septic shock. For this, CP included clinical definitions of sepsis, monitoring of vital signs (every 15min), investigation of infection source, fluid therapy (20 to 40mL/kg of crystalloids) and administration of broad-spectrum antibiotic therapy within 3hrs of diagnosis of severe sepsis. The CP was an integral part of the patient's medical record.

We conducted a prospective cohort study between January 2010 and December 2010 to evaluate the filling quality of the CP, focusing on the quality of the fluid challenge in case of hypotension and the time as to when to initiate the antibiotic treatment.

Results

Of 31,576 ED visits, 175(0.6%) patients were included and 77 of them had hypotension with fluid challenge (mean age 61±19yrs; 55% males). 15 patients developed septic shock. The origin of sepsis was pulmonary infection (28%), urinary tract infection (24%), abdominal infection (22%) and unknown origin in ED setting (24%). The mean volume of fluid replacement was 0.91L [0.5-2.5] in 61min. 53.2% of fluid challenges fulfilling the rules of the CP in terms of volume and duration. The average time to initiate antibiotics was 5.9hr and ranged from 0.25 to 33hrs.

Around 50% of severe sepsis/septic shock patients had an incorrect fluid challenge, especially the volume was far below the recommended levels. Concerning the antibiotic treatment initiation, the mean time was twice that recommended with large outliers. When the physicians were questioned, no clear answers were given, but the most frequent reasons cited were time pressure and scepticism.

One question that remains unresolved is how many of the septic patients were not recognized and who did not have the CP completed.

Conclusion

Despite intensive training given to junior and senior Emergency physicians and the elaboration of this specific pathway, the management of sepsis is still poor in our ED. In order to improve quality of care in the management of sepsis in our ED, a more simplified CP would be more useful and perhaps also train the nurses to recognize early signs of severe sepsis (like a "sepsis code").

G23:5

Infectious Disease / Sepsis

PREDICTORS OF MORTALITY IN SEPTIC SHOCK: FINDINGS FOR 57 PATIENTS DIAGNOSED ON ADMISSION TO EMERGENCY OR WITHIN 24 HOURS OF ADMISSION TO INTENSIVE CARE

FS Akgun (1), Y Bayindir (2), C Ertan (3), E Gedik (4), U Kayabas (2), T Tugal (4), N Yucel (3)

1. Emergency Department, Malatya State Hospital, Malatya, Turkey
2. Clinical Infections, Inonu University Faculty of Medicine, Malatya, Turkey
3. Emergency Department, Inonu University Faculty of Medicine, Malatya, Turkey
4. Anesthesiology and Reanimation, Inonu University Faculty of Medicine, Malatya, Turkey

Corresponding author: cem.ertan@inonu.edu.tr

Key-words: Emergency department ; Septic shock ; Risk factors

Introduction: Although there have been recent advances in diagnostics and therapeutic interventions for sepsis, mortality remains high, and patients who develop shock are at highest risk for death. The aim was to identify risk factors that influence outcome for patients who are diagnosed with septic shock in the ED on presentation or within 24 h after admission to ICU.

Methods: A retrospective study of 57 adult patients with septic shock was conducted between March 1, 2006 and August 31, 2009. Associations between risk factors and death were first tested in a series of univariate models. Multivariate logistic regression was used to assess the independent effect of septic shock on occurrence of death by the 3rd, 7th, 14th and 28th day of hospitalization.

Results: The patients were 23 males and 34 females of median age 67 years (range, 20 to 92 years). Thirty-three (58%) of 57 patients died in hospital and 24 (42%) survived. Multivariate analysis identified low blood pH (OR <0.001; 95% CIs <0.001-0.525) and low bicarbonate level (OR 0.813; 95% CIs 0.698-0.948) at ED or ICU admission as useful predictors of 3-day in-hospital mortality. Low blood pH (OR <0.001; 95% CIs <0.001-0.114), low

bicarbonate level (OR 0.803; 95% CIs 0.686-0.941) and high MEDS score (OR 1.410; 95% CIs 1.054-1.888) was a risk factor for 7-day in-hospital mortality. Low blood pH (OR <0.001; 95% CIs <0.001-0.045), low bicarbonate level (OR 0.747; 95% CIs 0.614-0.910), long duration of symptoms (OR 1.487; 95% CIs 1.037-2.132), high MEDS score (OR 1.561; 95% CIs 1.060-2.301), and high SOFA score (OR 1.571; 95% CIs 1.123-2.196) were risk factors for 14-day in-hospital mortality. Renal failure (OR 7.580; 95% CIs 1.283-44.769), lower pulmonary tract infection (OR 3.576; 95% CIs 1.104-11.583), high MEDS score (OR 1.420; 95% CIs 1.047-1.927) and high APACHE II score (OR 1.343; 95% CIs 1.125-1.604) were risk factors for 28-day in-hospital mortality.

Conclusion: Several factors that may signal poor short-term outcome for this patient group: low blood pH, low serum bicarbonate level, delayed ED admission; lower respiratory tract infection and renal failure; high MEDS score, high APACHE II score, and high SOFA score.

G23:6

Infectious Disease / Sepsis

EFFECTIVENESS OF THE PIRO SCORE IN PROGNOSTIC STRATIFICATION OF PATIENTS WITH SEPSIS IN THE EMERGENCY DEPARTMENT

M Baioni, S Bianchi, F Caldi, E De Villa, E Guerrini, E Innocenti, R Pini

Emergency Department High Dependency Unit, Careggi University Hospital, Florence, Italy

Corresponding author: innocentif@aou-careggi.toscana.it

Key-words: PIRO score ; Prognosis stratification ; Sepsis

INTRODUCTION: The Predisposition, Insult/Infection, Response, and Organ dysfunction (PIRO) model was originally conceived with the aim to classify septic syndromes. A score, based on this model, was subsequently derived in order to predict mortality in septic patients admitted to Intensive Care Unit (ICU). The purpose of this study is to verify the effectiveness of PIRO score in prognostic stratification of patients referred to the ED with a diagnosis of sepsis, severe sepsis or septic shock.

METHODS: This survey was performed on patients admitted to the Emergency Department – High Dependency Unit (ED-HDU) of the University Hospital of Careggi (Florence) from June 2008 to December 2011 with evidence of sepsis, including patients with severe sepsis or septic shock according to the criteria SCCM / ESICM / ACCP / ATS / SIS 2001. For each patient we calculated the PIRO Score at admission in ED and after 24 and 48 hours of stay. The values of PIRO score were then categorized according to the original model of Howell et al. These values were correlated with major indicators of outcome (28-day mortality, ICU-need, permanent disability meant as a reduction of residual functional status assessed by Activity of Daily Living (ADL) at 6 months), both as continuous value and using the score classes of the original article.

The PIRO Score was assessed as follows (Howell et al. 2011):

P score: age <65 0 pt, age 65-80 1 pt, age > 85 2 pts, chronic obstructive pulmonary disease 1 pt, liver disease 2 pt, nursing home resident 2 pt, malignancy 1 pt (2 pts if metastasis are present)

I score: pneumonia 4 pts, skin/soft tissue infection 0 pt, any other infection 2 pts.

R score: respiratory rate >20 breaths/min 3 pts, heart rate > 120 bpm 2 pts.

O score: BUN > 20 2 pts, PaO₂<60 mmHg or PaCO₂ >45 mmHg 3 pts, serum lactate > 4.0 mmol/L 3 pts, Systolic Blood Pressure (SBP)

<70 mmHg 4 pts, SBP 70-90 mmHg 2 pts, SBP >90 mmHg 0 pt, platelet count < 150000/mcL 2 pts.

Values were categorized as class 0 if PIRO <5, class 1 if PIRO 5-9, class 2 if PIRO 10-14, class 3 if PIRO 15-19, class 4 if PIRO >19

RESULTS: The study population consisted of 341 patients (173 males and 168 females), with a mean age 74±15 years, 11% coming from other health institutions; in 93% of cases at least one comorbidity was found, particularly terminal illness in 65 subjects, immunodeficiency in 119, haematologic malignancy in 23, solid tumor in 56, chronic obstructive pulmonary disease in 74, ischemic heart disease in 73, diabetes mellitus in 75, chronic kidney disease in 76. The observed 28-days mortality was 27% (92 patients), 26 patients were transferred to an ICU. Sixty-nine (20%) patients were admitted with diagnosis of sepsis (mainly pneumonia), 145 (43%) of severe sepsis and 127 (37%) of septic shock, which 99 (37%) were pulmonary sepsis, 42 (16%) urinary, 20 (8%) abdominal, in 20 (8%) the infection source was skin, brain or heart, and in 91 (34%) the source was not found.

The PIRO score was significantly related with 28-days mortality either if calculated at ED entrance (12.5 ± 3.9 in live to 28 days vs. 15.4 ± 3.1 on the deceased at 28 days, $p = 0.001$) and after 24 (11.0 ± 3.5 to live in 28 days vs. 14.2 ± 3.2 deaths in 28 days, $p = 0.001$) and 48 hours of ED-HDU staying (11.0 ± 3.3 in live to 28 days vs. 17.5 ± 0.7 deaths in 28 days, $p = 0.007$). There was no difference according to ICU-need or with the presence of residual disability. Categorizing the PIRO score values as the original model proposed by Howell et al., vasoactive therapy was employed tendentially more frequently in the groups with higher score (respectively 0%, 23%, 30%, 50% and 80%, $p = 0.011$, for significance $p < 0.01$ after Bonferroni correction). Twenty-eight days mortality was significantly higher according to the categorized score evaluated at 24 hours (respectively, 0 %, 20%, 31% and 64%, $p = 0.004$) and tendentially with the score evaluated after 48 hours of ED-HDU stay (0%, 13%, 36%, and 88%, $p = 0.011$).

Pulmonary sepsis showed significantly higher "R" sub-scores both after 24 hours (2.2 ± 1.5 vs 0.9 ± 1.4 , $p = 0.006$) and 48 hours of stay in ED-HDU (2.1 ± 1.7 vs 0.8 ± 1.4 , $p = 0.015$), while there were no differences in "P" and in "O".

CONCLUSIONS: The PIRO score proved to be a reliable tool for the prognostic stratification of a population of septic patients admitted to ED.

G23:7

Infectious Disease / Sepsis

IS MEASUREMENT OF TISSUE DOPPLER LEFT VENTRICULAR TEI INDEX ASSOCIATED WITH SEPSIS MORTALITY?

M Gul (1), A Harmankaya (1), H Akilli (2), T Abdukhalikov (2), B Cander (1), AS Girisgin (1), A Aribas (2), M Ergin (1)

1. Emergency Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

2. Cardiology Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

Corresponding author: drmehmetergin@gmail.com

Key-words: Sepsis ; Tissue doppler imaging ; TEI index

BACKGROUND: Sepsis is a life-threatening disease with high mortality and morbidity. Cardiac depression, has an important role in sepsis mortality. The effective rapid manner in diagnosis and starting treatment are important in the early hours of septic patients.

MATERIAL - METHOD: This prospective study included patients with >18 year old who were diagnosed as sepsis at Emergency Service or Intensive Care Unit of Necmettin Erbakan University Meram Medicine Faculty Hospital between 1 August 2011– 30 May

2012. Patients were grouped in two which were sepsis (n=24) and severity sepsis-septic shock (n=31) in terms of severity of disease. Patients were grouped according to Sepsis Guideline 2008. There were also three subgroups in terms of mortality and morbidity; group 1 (n= 11) included patients who had died during the first 3 days after admission; group 2 (n= 16) with ones who died between the 4th and 28th day and group 3 (n=28) with ones who live more than 28 days. TEI index [left ventricular lateral and septum walls idioventricular contraction time (IVCT), idioventricular relaxation time (IVRT) total and ejection time (ET) rate] was measured and recorded.

RESULTS: In our study, 55 patients were included who has not cardiac failure in story and their median age was 72 years old (min 21– max 96). There were 26 (47%) women. Also, 28 people were included in the control group who had not a sepsis and cardiac failure. Patients with sepsis, left ventricular TEI index values were mentoined as median values. In the study, we made a comparison between sepsis patients and severe sepsis-septic shock patients in terms of left ventricular TEI index values. Also comparison between survival and non-survival group in terms of left ventricular TEI index values was performed. The highest median value of septum wall TEI index found in the group 2. In all sepsis groups, we found that when the median level of left ventricular septum and lateral wall TEI index, it was thought to be closely related mortality.

CONCLUSION: Septum and lateral walls TEI index, closely associated with heart failure and predicting mortality. However, there is need for further advanced research.

G23:8

Infectious Disease / Sepsis

IS MEASUREMENT OF TISSUE DOPPLER RIGHT VENTRICULAR TEI INDEX ASSOCIATED WITH SEPSIS MORTALITY?

M Gul (3), A Harmankaya (3), H Akilli (1), T Abdukhalikov (1), B Cander (3), A Aribas (1), M Ergin (3), B Akilli (2)

1. Cardiology Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

2. Emergency Department, Konya Education and Research Hospital, Konya, Turkey

3. Emergency Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

Corresponding author: drmehmetergin@gmail.com

Key-words: Sepsis ; Tissue doppler imaging ; TEI index

BACKGROUND: Sepsis is a life-threatening disease with high mortality and morbidity. Cardiac depression, has an important role in sepsis mortality. The effective rapid manner in diagnosis and starting treatment are important in the early hours of septic patients.

MATERIAL - METHOD: This prospective study included patients with >18 year old who were diagnosed as sepsis at Emergency Service or Intensive Care Unit of Necmettin Erbakan University Meram Medicine Faculty Hospital between 1 August 2011– 30 May 2012. Patients were grouped according to Sepsis Guideline-2008. Patients were grouped in two which were sepsis (n=24) and severity sepsis-septic shock (n=31) in terms of severity of disease. There were also three subgroups in terms of mortality and morbidity. The group 1 (n=11) included patients who had died during the first 3 days after admission; the group 2 (n=16) with ones who died between the 4th and 28th day and the group 3 (n=28) with ones who live more than 28 days. TEI index [right ventricular wall idioventricular contraction time (IVCT), idioventricular relaxation time (IVRT) total and ejection time (ET) rate] was measured and recorded.

RESULTS: In our study, 55 patients were included who has not cardiac failure in story and their median age was 72 years old (min – max: 21 - 96). There were 26 (47%) women. Also, 28 people were included in the control group who had not a sepsis and cardiac failure. In the study, we made a comparison between sepsis patients and severe sepsis-septic shock patients in terms of right ventricular TEI index values. Also comparison between survival and non-survival group in terms of right ventricular TEI index values was performed. Patients with sepsis, right ventricular TEI index values were mentoined as median values. The highest median value of TEI index found in the group 2. In all sepsis groups, we found that when the median level of right ventricular TEI index, it was thought to be closely related mortality.

CONCLUSION: Right ventricular TEI index, closely associated with heart failure and predicting mortality. However, there is need for further advanced research.

G23:9

Infectious Disease / Sepsis

ACUTE MYOCARDIAL DYSFUNCTION DURING SEPSIS

A Becucci, S Bianchi, A Conti, E Guerrini, F Innocenti, R Pini, M Zanobetti

Emergency Department High Dependency Unit, Careggi University Hospital, Florence, Italy

Corresponding author: innocentif@aou-careggi.toscana.it

Key-words: Acute Myocardial dysfunction ; Sepsis ; Echocardiography

Background: Sepsis-related mortality is predominantly due to multiple organ dysfunction and heart involvement has been repeatedly documented. In this study including septic patients of intermediate severity, admitted to an Emergency Department High Dependency Unit (ED-HDU), we evaluated the prevalence of acute myocardial dysfunction (AMD) and we tested the diagnostic performance of known biomarkers to identify AMD.

Methods: This is a retrospective analysis performed in severe sepsis and septic shock patients according to the definitions SCCM/ESICM/ACCP/ATS/SIS 2003 admitted to an ED-HDU from June 2008 to February 2012. Patients with known history of heart disease were excluded from the analysis. Anamnestic data and main clinical and laboratoristic parameters were obtained for each patient from the ED and HDU. A phone follow-up was performed to assess the outcome after one month.

Echocardiography was performed within two days from the admission in the ED. LV dysfunction was defined as an LVEF less than 55% and right ventricular (RV) dysfunction as a Tricuspid Annular Plane Systolic Excursion less than 18 mm (RV TAPSE<18 mm). Patients were divided in two groups according to the presence (D+) or absence (D-) of AMD.

Results: Study population included 105 patients, 49 males and 56 females with a mean age of 73±15 years; 46 patients developed septic shock. Mean SOFA at ED entrance was 5.4±2.7 and after 24 hours it was 5.5±2.9; within 28 days 33 patients died, 9 during the first 48 hours. Patients who died were significantly older (81±9 vs 71±15 yrs, p<0.0001), with worst organ damage both at ED entrance (T0-SOFA 6.6±2.9 vs 5.0±2.6, p=0.027) and after 24 hours (T1-SOFA 7.4±3.2 vs 5.6±2.7, p=0.005). An AMD was detected in 42 patients (41%) and it involved LV in 34, RV in 1 and both ventricles in 7. AMD prevalence was comparable regardless the presence of septic shock (35% in patients with vs 44% in patients without septic shock, p=NS). We did not observe the presence of a significant LV dilation in presence of AMD, with similar mean end-diastolic diameter (46±5 mm in D+ and 46±6 mm in D-, p=NS). Mean LVEF in patients with AMD was 43±8%, range 28-53%. D+ patients were significantly older (77±10 vs 71±17 years, p=0.038) but they did not

show more comorbidities, as evidenced by a similar Charlson index in the two groups (4.5±3.4 in D+ vs 3.3±3.3 in D-, p=NS). Indexes of disease severity, like SOFA score (5.7±2.4 in D+ vs 5.4±3.1 in D-, p=NS) and APACHE II (20±5 in D+ vs 19±6 in D-, p=NS), were similar. Lactate levels were also similar at ED entrance (2.9±3.4 in D- vs 3.6±3.2 in D+), after 24 (1.5±1.4 in D- vs 2.1±2.1 in D+) and 48 hours (1.3±1.2 in D- vs 1.5±1.7 in D+, all p=NS). Hemodynamic profile, in terms of heart rate and systolic pressure was similar regardless presence of AMD. Vasopressor support with norepinephrine was used in a comparable proportion of patients (39% in D- vs 45% in D+, p=NS), no inotropic drug was used. Presence of AMD did not determine an increase in 28-days mortality (45% in D- vs 34% in D+, p=NS). Comparing patients in D+ and D-, repeated measurements at ED entrance, at 24 and 48 hours of Troponine I and NTpro-BNP were performed. Troponin I (p=0.015) and NT pro-BNP (p=0.023) showed a significantly different trend where single determinations only tended to be different. Maximum NTpro-BNP was also significantly higher in D+ (10025±15889 in D- vs 34602±39650 in D+ pg/ml). We evidenced a significant inverse correlation between LVEF and NTpro-BNP after 24 hours (r=-0.664, p=0.009) and maximum NTpro-BNP (r=-0.704, p=0.011).

In a ROC analysis, NTpro-BNP after 24 hours showed a fair diagnostic value (AUC 0.725, p=0.013), while maximum NT pro-BNP, reached during the first 48 hours showed a good diagnostic value (AUC 0.828, p=0.001). Examined biomarkers did not show any significant difference according to mortality.

Conclusions: In a population of patients affected by severe sepsis or septic shock, admitted in a ED-HDU we evidenced a relevant AMD prevalence, with a more frequent involvement of the LV. Among the biomarkers of common clinical use NTpro-BNP is the one that shows the best diagnostic performance. NT proBnp could be useful to identify patients who require a thorough investigation by an echocardiogram, for the early detection of AMD in order to guide fluid replacement and the timing to start with vasopressors and inotropic drugs.

G24:1

Traumatology 1

EPIDEMIOLOGY OF PENETRATING TRAUMA IN AN URBAN US POPULATION

R Johnson (1), L Moreno-Walton (2), L Myers (3)

1. medical student, Louisiana State University Health Sciences Center, New Orleans, United States

2. Emergency Medicine & Research Genetics, Louisiana State University Health Sciences Center, New Orleans, United States

3. Biostatistics, Tulane University School of Public Health & Tropical Medicine, New Orleans, United States

Corresponding author: DoctorMoreno@gmail.com

Key-words: Trauma ; Injury ; Epidemiology

BACKGROUND:

Trauma continues to be the major cause of death for Americans between the ages of 2-40 years of age. Mortality and morbidity present a burden to the healthcare system and are associated with significant social costs to the individual and to society.

PURPOSE: Identification of epidemiologic factors which correlate with a greater predisposition to becoming a victim of penetrating trauma.

METHODS:

A retrospective chart review of patients prospectively entered on the trauma registry of an urban teaching hospital as having sustained penetrating traumatic injuries (PTI) over a consecutive 6 month period. 375 patients met these criteria. A standard data extrapolation instrument was used to obtain information from the

medical records. Charts were reviewed twice, by two investigators, and data compared for agreement. Results for each variable were entered onto an excel spreadsheet using double data entry. Totals and percentages were calculated and compared to the general population based on U.S. Census and Department of Health and Hospitals data.

RESULTS:

Males represent 47% of the general population and 86.1% of PTIs. The general population has equal age distribution from ages 5- 74, but 15-24 year olds and 25-34 year olds made up 43.6% and 32.1% of the PTIs. 63%, of the population and 84% of the PTIs are African-American. 71.12% of PTIs were gunshot wounds, 25.4% stab wounds and 3.48% other weapons. 63.8% had only one injury site. 78.9% were first time victims. 85% did not require emergent procedures. 28.9% went directly to OR, 17.4% to the floor, 9.4% to the ICU, and 38.2% were discharged from the ED. 61% were intoxicated on arrival (alcohol only 19.3%, multiple drug intoxication 18.2%). 83.4% were able to give past medical history: 29.4% confirmed past alcohol use and 21.4% past marijuana use. Alcohol use was higher in the PTI group than in the general population.

CONCLUSION:

Male gender, age between 15-34, African-American ethnicity and alcohol intoxication and history of use are significant risk factors for PTI at our study site. The highest incidence in the 15-24 year age group is cause for considerable concern. This group should be targeted for education and prevention strategies to reduce their risk. Multi-center studies are needed to confirm these findings.

G24:2

Traumatology 1

CONSISTENCY IN INTER-PLAY BETWEEN REVISED TRAUMA SCORE(RTS) AND COMPUTED TOMOGRAPHY(CT) IN TRAUMATIC BRAIN INJURY(TBI)

S Bajgur (1), K Kiran (1), V Madinur (1)

1. Neurosurgery, Karnataka Institute of Medical Sciences, Hubli, India

Corresponding author: impunchi@gmail.com

Key-words: Revised Trauma Score ; Traumatic Brain Injury ; Marshal et al CT Classification

Background: Classifying the severity of Traumatic Brain Injury (TBI) and its management at a shift and precise manner is the need of "Golden Hour". The goal of this study was to check consistency between Revised Trauma Score (RTS), a composite of the Glasgow Coma Scale (GCS), systolic blood pressure and respiratory rate, a validated triage tool that does not require sophisticated equipment or extensive training of emergency response personnel for its administration, with the Computed Tomography (CT) findings, as an aid in classifying the severity and its management.

Methods: Patients presenting to the Emergency Room (ER) of a government-run tertiary hospital in Hubli, were surveyed. GCS, SBP and RR were prospectively collected to compute the RTS. Primary outcome measures were CT scan severity of TBI (assigned retrospectively by an experienced neurosurgeon using the Marshall classification) and death in the ER. All variables were treated as categorical and analyzed by the Chi-square test

Results: 54 patients (mean age 36 +/- 16 years; 43 male; 70% road traffic accident, 24% falls) included. RTS severity was positively correlated with CT severity (p=0.009) and death in the ER (p< 0.001).

Conclusions: The RTS represents a convenient and inexpensive intervention that can potentially be adopted by emergency medical programs in resource limited setting to enhance head injury care.

Revised trauma Score is better than Glasgow Coma Scale taken alone in determining the extent of head injury.

Implications: The model predictions may support clinical practice in emergency medicine in resource limited set up.

G24:3

Traumatology 1

THE ROLE OF OXIDATIVE STATUS IN INITIAL EVALUATION OF PAEDIATRIC PATIENTS WITH GRADED TRAUMATIC BRAIN INJURY

Ha Kaya (1), Oz Sogut (1), Me Gokdemir (1), Le Albayrak (1), Ta Abdullah (2)

1. Emergency department, Harran University, Sanliurfa, Turkey

2. Biochemistry department, Harran University, Sanliurfa, Turkey

Corresponding author: drosogut@harran.edu.tr

Key-words: Paediatric head injury ; ;

Purpose: To investigate and compare the oxidative and antioxidative status in paediatric patients in terms of reflection of injury severity and hospital mortality with varying severity of traumatic brain injury (TBI) during the early post-traumatic period. Materials and methods: Fifty-two consecutive paediatric patients with isolated TBI and 31 age- and sex-matched healthy controls were enrolled. Patients were divided into two groups based on their Glasgow Coma Scale (GCS) scores recorded upon admission to the emergency department within the first 24 h of trauma. Accordingly, the study included 23 patients with moderate to severe TBI (GCS scores of ≤ 13) and 29 patients with mild TBI (GCS scores of > 13). Plasma total oxidant status (TOS), total antioxidant status (TAS), and the oxidative stress index (OSI) were assessed as predictors of early oxidative changes in serum using a novel automated method.

Results: TOS and OSI values were significantly higher in trauma patients than in controls (TAS, not significantly related). Compared to patients with mild TBI, TOS and OSI values were markedly elevated in patients with moderate to severe TBI. However, TAS levels did not show significant changes in either group of patients. Both GCS scores and Revised Trauma Scores were negatively correlated with the TOS and OSI, but neither was significantly correlated with the TAS. The TOS and OSI were significantly higher in non-survivors than in survivors. However, there was no significant difference in TAS levels between survivors and non-survivors.

Conclusion: Paediatric patients with isolated TBI are exposed to extensive oxidative stress, which varies with injury severity.

G24:4

Traumatology 1

CLINICAL PROFILE OF MUSCULOSKELETAL INJURIES ASSOCIATED WITH THE 2011 VAN EARTHQUAKE IN TURKEY

G. Görmeli (1), CA Görmeli (2), R. Dursun (3)

1. orthopedics and traumatology, van training and research hospital, van, Turkey

2. radiology, van training and research hospital, van, Turkmenistan

3. emergency service, van training and research hospital, van, Turkey

Corresponding author: ggormeli@yahoo.com

Key-words: Earthquake ; ; injury profile ; ; musculoskeletal injury.

Objectives: The aim of this study is to report injury patterns and treatment of musculoskeletal injuries admitted to Van Training and Research Hospital after the 2011 Van earthquake.

Patients and methods: One hundred and fiftyone male and 134 female patients aged 1 to 84 (mean, 38.6) years admitted with musculoskeletal injuries. We conducted a retrospective review of medical records to document the injury profile, damage locations and types, treatment and prognosis.

Results: Of the 285 patients, 95 sustained with minor soft tissue injuries, 144 had fractures and 81 of them necessitated surgery. Fortysix patients were determined to have crush injuries and 28 of them had compartment syndromes. Open fractures, multiple fractures and comminuted fractures were common. Surgical treatments included debridement, external fixation, open reduction and internal fixation.

Conclusion: A great ratio of fractures involve the extremities. Lower extremity fractures were commonly involved than upper extremity. Multiple and comminuted fractures were common in all fractures. Infection rate was lower in the Van earthquake.

recorded mortality rate in the MSCT group was significantly lower than that in the non-MSCT group (18% vs. 80%, $p < 0.05$). Multivariate adjustment for TRISS confirmed that MSCT was an independent predictor for 28-day mortality (adjusted odds ratio, 7.22; 95% confidential interval [CI], 1.76-29.60; $p < 0.01$). In the less severe subgroup (TRISS < 50), SMR showed no significant difference between recorded and expected mortality either in the MSCT group or in the non-MSCT group, suggesting that there might not be a beneficial effect of MSCT on survival in less severe traumatic patients. Interestingly, in the more severe subgroup (TRISS >50), SMR showed a significant difference only in the MSCT group (SMR, 0.65; 95% CI, 0.41-0.9; $p < 0.05$), while not in the non-MSCT group. In addition, in the hemodynamically unstable subgroup (shock index which is calculated just before MSCT >1), SMR showed a significant difference only in the MSCT group (SMR, 0.54; 95% CI, 0.16-0.91; $p < 0.05$).

Conclusion: MSCT ahead of emergency surgical intervention was associated with improved survival, especially in patients with high risk of death and hemodynamically unstable patients.

G24:5

Traumatology 1

WHOLE-BODY MULTISLICE COMPUTED TOMOGRAPHY AHEAD OF EMERGENCY SURGICAL INTERVENTION TO CONTROL HEMORRHAGE IMPROVES SURVIVAL IN PATIENTS WITH SEVERE BLUNT TRAUMA.

D. Wada (1), Y. Nakamori (1), K. Yamakawa (2), Y. Yoshikawa (1), T. Kiguchi (1), H. Ogura (2), Y. Kuwagata (2), T. Shimazu (2), O. Tasaki (3), T. Hamasaki (4), S. Fujimi (1)

1. Emergency and Critical Care, Osaka General Medical Center, Osaka, Japan
2. Biomedical Statistics, Osaka University Graduate School of Medicine, Osaka, Japan
3. Traumatology and Acute Critical Medicine, Osaka University Graduate School of Medicine, Osaka, Japan
4. Emergency Medicine, Nagasaki University Graduate School of Biomedical Sciences, Nagasaki, Japan

Corresponding author: dk0116-w@live.jp

Key-words: Whole-body multislice computed tomography ; Emergency surgical intervention ; the standardized mortality ratio

Introduction: Whole-Body Multislice Computed Tomography (MSCT) has gained importance in the early diagnostic phase of trauma care. The diagnostic value of MSCT for seriously injured patients, however, has not been thoroughly clarified. The objective of this study was to assess whether MSCT has a beneficial impact on survival in blunt trauma patients who required emergency surgical intervention.

Methods: This was a retrospective study conducted from January 2004 to December 2010 in the two level-I trauma centers in Japan. Inclusion criteria were the patients of blunt trauma who required emergency bleeding control (surgery or transcatheter arterial embolization). Exclusion criteria were the patients who were transferred from other hospitals; the patients of traumatic cardiorespiratory arrest at arrival; the patients with severe brain injury which was the direct cause of death. The primary outcome was 28-day mortality. Twelve candidate prognostic variables possibly related to outcome were evaluated. Multivariate logistic regression analysis was used to assess the covariates that were associated with 28-day mortality. In addition, we evaluated the standardized mortality ratio (SMR, ratio of recorded to expected mortality by TRISS) for a subgroup of patients with MSCT and without MSCT.

Results: A total of 152 patients (mean ISS, 35.3 ± 14.2) fulfilled the above criteria. One hundred thirty two (87%) patients underwent MSCT during early resuscitation phase, 20 (13%) did not. The

G24:6

Traumatology 1

THE EFFECT OF APPLICATION OF "OXIDISED CELLULOSE (BLOODCARE™)" POWDER ON HEMOSTASIS TIME IN AN EXPERIMENTAL HEPARINIZED RAT MODEL WITH FEMORAL ARTERY BLEEDING

K. Ozturk (1), G. Ersoy (2), E. Ocmen (3), V. Ozaydin (4), O. Yilmaz (5), N. Gokmen (6)

1. Emergency Medicine,, Education and Training Hospital of Okmeydani, Istanbul, Turkey
2. Emergency Medicine,, University of Dokuz Eylul, School of Medicine, Izmir, Turkey
3. Department of Anesthesiology and Intensive Care, University of Dokuz Eylul, School of Medicine, Izmir, Turkey
4. Emergency Medicine,, Ministry of Health, University of Medeniyet, Education and Training Hospital of Goztepe, Istanbul, Turkey
5. Laboratory Animal Science, University of Dokuz Eylul, School of Medicine, Izmir, Turkey
6. Anesthesiology and Intensive Care, University of Dokuz Eylul, School of Medicine, Izmir, Turkey

Corresponding author: gurkan.ersoy@ymail.com

Key-words: Hemorrhage ; Oxidised Cellulose ; Hemostasis

Objective

Our aim was to research the effect of "oxidised cellulose" on hemostasis time in an experimental heparinized rat model with femoral artery bleeding.

Method

After approval of the ethics committee, femoral artery of 14 rats were cannulated under anesthesia and IV heparin was injected. arterial bleeding was created by an needle on the other femoral artery . Then, the rats were divided into; study (compression and "oxidized cellulose"was applied onto the bleeding site) and control groups (only standart weight compression was applied).

Results

In the study group, hemostasis was achieved in 2 minutes. In the control group, only one rat's bleeding was stopped at 4th minute; however, bleeding didn't stop in the rest even at the end of the study. The difference between two groups was statistically significant.

Conclusion

In our study, we determined that, application of "oxidised cellulose" (Bloodcare™) shortened the hemostasis time significantly compared to the control group in an experimental model of bleeding created by femoral artery puncture of heparinized rats with branul tip.

G24:7

Traumatology 1

RETROSPECTIVE STUDY ON TRAFFIC ACCIDENTS AND FALLS OF ELDERLY IN A BELGIAN UNIVERSITY ED

S De Clercq (1), R Haesendonck (1), K Milisen (2), M Sabbe (3), E Vlaeyen (4), E Willems (2)

1. Faculty of Medicine - Emergency Medicine, Catholic University, Leuven, Belgium
2. Centre for Health Services and Nursing Research, Catholic University, Leuven, Belgium
3. Dept of Emergency Medicine, University Hospitals, Leuven, Belgium
4. Centre for Health Sciences and Nursing Research, Catholic University Leuven, Leuven, Belgium

Corresponding author: lea.vanroelen@uzleuven.be

Key-words: trauma ; elderly ; falls

Introduction: There are limited epidemiologic data on accidents in a geriatric population. The purpose of this study was to investigate the incidence of falls, traffic accidents and other causes of trauma in a population group older than 60 years, admitted in a university dept. of Emergency Medicine in Belgium. In addition, the characteristics, co-morbidity and mortality were evaluated in the study population.

Methods: The study was approved by the ethical committee of the university hospital. A retrospective analysis of medical records of all admitted patients in the ED, older than 60 years with a trauma were examined for the year 2010 and compared with an ad random convenience sample for 2005.

Results: 2546 patients for 2010 and 594 patients for 2005 were included in the study. In 2010, 75.3 % were fall accidents, 8 % traffic accidents and 16.7 % other accidents. Men represent 36.9 % and are significantly more represented in the traffic accident group (58.8 %). Trauma severity using AIS is significantly higher in the fall accident group and falls result 3.4 times more in hospitalization. Age and co-morbidity of hypertension, valve insufficiencies and psychological problems are predictors of hospitalization and mortality (60 patients during hospitalization). Comparing the results of 2010 with the ad random sample of 2005 reveals an increase of 5 % in fall accidents.

Conclusions: Trauma care for elderly is an increasing challenge. This study confirms that fall accidents represent the highest incidence in the study population. In addition, after a fall accident the severity is higher and results in a higher hospitalization and mortality incidence. Fall prevention for elderly becomes a burning issue.

measurement device in minor to moderate head trauma patients in the emergency department.

Methods

We conducted a one-month prospective, monocentric, single-blind study in an urban emergency department in France. Every patient, presenting to the ED with a head trauma, was included. For all patients the triage process was conducted according to the department protocols, and the rSO₂ was measured using the NONIN 7600 device. 2 probes were applied on the forehead of the patients, these probes giving us 2 rSO₂ values. Those values were concealed and unknown by the EM physician in charge of the patient.

Results

We included 70 patients in one month. Mean age was 49,8 years, and the sex ratio was 2/1 (47 males, 23 females). 3% were transferred to a neurosurgery department, 12% were admitted for more than 24h, 46% had a 6 hours surveillance then were discharged and 39% were immediately discharged. 31% of the patient had a CT scan, based on the physicians' evaluation. The mean right rSO₂ was 68,1% (+/- 12,5%), the left was 70,6% (+/- 10,6%). Mean right-left rSO₂ difference was 9,2% (+/- 12,2%). We didn't find any significant correlation between the NIRS values and patients' 24 hours outcome, nor radiological findings (all CT scan, except one, were normal). But the right-left rSO₂ difference was significantly correlated with the CT scan decision (p=0,005).

Conclusion

The NONIN 7600 is a quick and easy to use device that we used to measure the rSO₂ for minor and mild head trauma patients. We found a significant correlation between the right-left rSO₂ and the CT scan decision, but none with patients' clinical or radiological outcome. We strongly believe that a much more powerful study could unveil a link between rSO₂ and brain injury in the ED. That study could eventually define rSO₂ limit values associated with brain injury and intracranial hematomas.

G24:9

Traumatology 1

TRAUMA DEATHS IN SWEDEN 1999-2009, CAUSE AND TRAUMA MECHANISM

K Åslund, D Bäckström

Department of Clinical and Experimental Medicine, Linköping University, Linköping, Sweden

Corresponding author: kristian.aslund@lio.se

Key-words: cause of death ; trauma death ; trauma mechanism

Background

Trauma is one of the leading causes of morbidity and mortality world wide. Trauma in Europe and especially Scandinavia has shown a different trauma pattern than in North America. In Scandinavia blunt trauma is dominating and traffic crashes is a dominating trauma mechanism, gunshots and penetrating injuries are in minority.

Trauma research in Scandinavia has been sparse and has had small populations. The trauma mortality incidence has been reported to be 30-77 per 100 000 inhabitants per year. High frequencies of pre-hospital deaths, 85-86 % have been reported. In Sweden, a mostly rural country in Scandinavia, lives approximately 9 million inhabitants.

The purpose of this study was to analyze the extent of fatal trauma in Sweden. We also wanted to analyze the trauma mechanism over a period of time.

Material & Methods

Data was collected from the National Board of Forensic Medicine (NBFM) in Sweden. NBFM was still using International Classification

G24:8

Traumatology 1

NEAR-INFRARED SPECTROSCOPY (NIRS) FOR PATIENTS WITH MINOR OR MODERATE HEAD TRAUMA IN THE ED

N Azzouz, Y Yordanov, J Sobotka, A Kalpokdjian, JL Pourriat
Emergency Department, EMS, and Forensic Emergency Medicine, Hôtel-Dieu – Assistance Publique des Hôpitaux de Paris, Paris, France

Corresponding author: youri.yordanov@gmail.com

Key-words: Head trauma ; Minor head trauma ; near-infrared spectroscopy

Introduction

Cerebral oximetry (rSO₂) is used in cardio-paediatric and neurosurgery, as part of a multimodal monitoring system. It can be measured by non-invasive equipment based on near-infrared spectroscopy technology (NIRS). It has been used to predict intracranial subdural and epidural hematomas in severe head trauma patients. Or main aim was to evaluate the use of an rSO₂

of Diseases (ICD) 9 during the study period and to avoid coding errors, this study kept the original code.

All deaths in Sweden during 1999-2009 caused by external causes were included in the study. Children (age below 18 at time of death) were excluded. Deaths by poisoning, death by errors made by the health care or death by operations of war were excluded. Patients who lacked E code, age or gender were excluded as well. Patients were grouped into both groups of causes and groups of trauma mechanism, based on their E-code. Grouping of trauma mechanism resulted in 13 different groups: Hanging, Traffic, Drowning, Gunshot, Unknown injury, Cutting injury, Fire, Choking, Nature, Other accidents, Late effects of injury, Impact violence and Fall.

Results

There were 21 287 traumatic deaths during 1999-2009. The overall incidence was 27 per 100 000 inhabitants per year and decreased during the study period $r=-0.66$ $p=0.02$. Traffic crashes $r=-0.86$ $p=0.001$, drowning $r=-0.79$ $p=0.04$ and gunshots $r=-0.74$ $p=0.009$ decreased. Hanging $r=0.71$ $p=0.015$ was the only trauma mechanism with increasing incidence.

The most common cause of death was hanging 24 %, followed by traffic crashes 21%, falls 14%, drowning 11%, gunshots 8%. The remaining categories had a combined total of 22%. The majority, 46% was unintended, 43% was suicides, 4% homicides and in 6% the intention was unknown. 13% died in-hospital and 87% died out of hospital.

Discussion

The trauma mortality incidence has decreased during the 11 years studied. The decrease in death due to drowning and traffic crashes could be a result of preventive programs by the government in combination with generally improved road safety, such as safer cars and better roads.

Instead of using ICD-9-categories to form trauma mechanism groups we removed the intention of the trauma and examined the actual events. When excluding the intention of the trauma, we could reveal hangings as the most common trauma mechanism. This is a new finding that have not been shown before in Scandinavia while proportion of pre-hospital deaths is similar to earlier studies.

Suicides seem to be more common than what have been shown in similar studies in Scandinavia. Wisborg et al found 33 % suicides and Hansen et al found 9 % in a sample including survivals. Our high number could in part be explained by our design where all injured have both a trauma mechanism and an intention.

G31:1 Biomarkers 1

IMPORTANCE OF NGAL VALUE IN THE DIFFERENTIAL DIAGNOSIS BETWEEN ACUTE AND CHRONIC RENAL FAILURE

A Duman (1), P Durukan (2), C Kavalci (3), S Ozkan (4), O Salt (5), MB Sayhan (6)

1. Emergency Department, Erciyes University Faculty of Medicine, Kayseri, Turkey
2. Emergency Medicine, Erciyes University Faculty of Medicine, Kayseri, Turkey
3. Emergency Department, Ankara Numune Training and Research Hospital, Ankara, Turkey
4. Department of Emergency Medicine, Erciyes University Faculty of Medicine, Kayseri, Turkey
5. Department of Emergency Medicine, Erciyes University Faculty of Medicine, Kayseri, Turkey
6. Emergency Department, Trakya University Faculty of Medicine, Edirne, Turkey

Corresponding author: polatdurukan@gmail.com

Key-words: Renal failure, Acute ; Renal failure, Chronic ; NGAL protein

Objective: In the present study, we aimed to investigate whether blood NGAL value plays a role in the differential diagnosis between acute and chronic renal failure.

Method: Fifty patients presented to emergency department with acute renal failure, 30 patients presented to ED with chronic renal failure and 20 healthy individuals as control group were included in this study. Blood pH, HCO₃⁻, BUN, creatinine and potassium values were evaluated in all patients. Blood NGAL values were evaluated in all groups of the study. BUN, serum creatinine and NGAL values were statistically compared between the patient groups and the controls.

Results: There was a significant difference in NGAL value between control and acute renal failure groups as well as between control and chronic renal failure groups ($p < 0.05$). However, there was no significant difference between acute renal failure and chronic renal failure groups ($p > 0.05$). BUN value in control group was also significantly different from acute renal failure and chronic renal failure groups ($p < 0.05$). No such difference was present between acute renal failure and chronic renal failure groups. This was also true for serum creatinine values, which were significantly different in control group from acute renal failure and chronic renal failure groups ($p < 0.05$). In serum creatinine values, no significant difference was found between acute renal failure and chronic renal failure groups ($p > 0.05$).

Conclusion: In conclusion, elevated NGAL value was found to be irrelevant in the differential diagnosis between acute renal failure and chronic renal failure, although it was suggestive in the early diagnosis of impaired renal function.

G31:2 Biomarkers 1

EVALUATION OF COPEPTIN LEVELS IN DIFFERENTIAL DIAGNOSIS OF LIFE THREATENING CHEST PAIN

L Avsarogullari (1), A Duman (1), P Durukan (2), A Ipekci (1), M Koyuncu (1), S Muhtaroglu (3), S Ozkan (4)

1. Emergency Department, Erciyes University Faculty of Medicine, Kayseri, Turkey
2. Emergency Medicine, Erciyes University Faculty of Medicine, Kayseri, Turkey
3. Biochemistry Department, Erciyes University Faculty of Medicine, Kayseri, Turkey
4. Department of Emergency Medicine, Erciyes University Faculty of Medicine, Kayseri, Turkey

Corresponding author: polatdurukan@gmail.com

Key-words: Copeptin ; Chest pain ; Troponin

ABSTRACT

Aim: Chest pain in emergency departments is a problem frequently encountered and difficult to evaluate. In the differential diagnosis; life-threatening situations such as acute coronary syndrome, pulmonary embolism and aortic dissection must be considered and detection at the life threatening situation and emergency treatment and intervention planning should be the first step. Many markers such as CK, CK-MB, troponin, D-dimer, are still used for the differential diagnosis of life-threatening chest pain.

In this study, we aimed to show whether or not there is a relationship between plasma copeptin levels and life-threatening chest pain and to determine whether or not we can use the levels of copeptin as a marker in the differential diagnosis of life-threatening and non-life-threatening causes of chest pain in the emergency room.

Patients and Methods: One hundred fifty patients with complaint of chest pain who were admitted to the Emergency Department of Erciyes University Faculty of Medicine, between 1 September 2010 and 28 February 2011 were included in the study. The patients were divided into two groups. Group 1 included 90 patients diagnosed with life-threatening causes of chest pain such as acute

myocardial infarction, pulmonary thrombo embolism, and aortic dissection. Group 2 included 60 patients with non-life-threatening and non-specific chest pain. The control group included 30 healthy subjects who had no history of any disease and no pathological findings in the physical examination.

In order to evaluate the levels of biochemical parameters such as CK, CK-MB, Troponin I, D-dimer, and Copeptin, blood sample was obtained for once from the patients.

Results: When the biochemical parameters (CK, CK-MB, troponin, D-dimer, AST, and LDH) were statistically analysed, it was found that there was a statistically significant difference between Groups 1 and 2 ($p < 0.001$). When the groups were evaluated in respect of their copeptin levels, copeptin levels were 1.03 ± 0.56 ng/ml for group 1, 0.50 ± 0.32 ng/ml for group 2 and 0.48 ± 0.27 ng/ml for the control group. The statistical evaluation of the level of copeptin showed that there was a statistically significant difference ($p < 0.05$), but no statistically significant difference between the control group and Group 2 ($p > 0.05$).

Conclusion: According to the findings we obtained; it can be concluded that plasma copeptin can be used as a biomarker in differential diagnosis of chest pain with life-threatening and non-life-threatening causes in addition to other biomarkers.

G31:3

Biomarkers 1

COPEPTIN AND HS-TROPONIN IN EMERGENCY DEPARTMENT PATIENTS – CONFUSION OR CLARITY IN SUSPICION OF ACUTE CORONARY SYNDROME?

H Dormann (1), H Eisenbarth (1), M Farnbacher (2), S Hertel (3), U Klinger (1), M Vogt (4), JO Vollert (5)

1. Emergency Department, Klinikum Fürth, Fürth, Germany
2. Gastroenterology, Klinikum Fürth, Fürth, Germany
3. Statistics, ThermoFisher Scientific, Henningsdorf, Germany
4. Cardiology, Klinikum Fürth, Fürth, Germany
5. S, ThermoFisher Scientific, Henningsdorf, Germany

Corresponding author: ursula.klinger@klinikum-fuerth.de

Key-words: biomarkers ; acute coronary syndrome ; rapid rule-out

Objectives: Copeptin Q (CoQ) has been shown to be a reliable marker for diagnosis and prognosis of acute myocardial infarction (AMI) in patients with chest pain. Many AMI-patients however present to the emergency department (ED) with non-specific complaints. The aim of this study was to assess the diagnostic and prognostic value of CoQ with regard to AMI in an unselected ED population.

Methods: In 200 consecutive ED patients with the suspicion of ACS POCT Troponin I or high-sensitive Troponin T (hsTnT) and CoQ levels were measured at the time of ED admission. The results were blinded to the ED physicians. A second measurement of hsTnT was performed 6 hours after admission. Besides the cardiovascular risk factors and the in-hospital procedures, the discharge diagnosis was correlated to hsTnT and CoQ levels. Readmission rates and all-cause mortality within 30 and 90 days were assessed and correlated to hsTnT and CoQ levels.

Results: Of the 200 consecutive patients, three patients were excluded because of a missing measurement of hsTnT, resulting in a final number of 197 patients (mean age 65 ± 17 yrs; 51.8% female). 33.0% of patients presented with chest pain, 13.2 % with dyspnea, 8.6% with abdominal pain and 39.1% presented with nonspecific complaints like dizziness, syncope or dorsal pain. In 21.8% onset of symptoms were within 3 hours before ED admission and in 42.1% the precise moment of pain onset could not be determined reliably because of the patients' lack of knowledge.

The final diagnosis was a cardiac one in 38.1% of patients. 17.8% of patients ($n=35$) had ACS, with AMI in 13.2 % of patients ($n=26$). CoQ levels were significantly higher in AMI patients compared to those in patients with other diagnoses ($p=0.006$). A CoQ level below 14 pmol/L combined with a hsTnT level below 14 pg/ml correctly excluded AMI with a negative predictive value of 98.6%. Serum CoQ above 70 pmol/L turned out to be a significant predictor of 30 days-all-cause mortality independent of the final discharge diagnosis ($p=0.022$). Compared to other patients AMI-patients had a significant higher 90 days-mortality (19.2% vs 5.2%; $p < 0.001$).

Conclusions: CoQ determination in the ED is an effective and useful tool in the rule-out and diagnosis of AMI in an ED patient population. Furthermore, CoQ is a predictor of survival in an ED population even in the majority of patients who turn out to suffer from non-cardiac complaints.

G31:4

Biomarkers 1

EVALUATION OF OXIDATIVE STATUS AND TRACE ELEMENTS IN PATIENTS WITH BENIGN PAROXYSMAL POSITIONAL VERTIGO

H Kaya (1), M Gokdemir (1), O Sogut (1), M Ayan (2), F Bozkus (3), I Ilyen (3), A Kocyigit (4)

1. Emergency department, Harran University, Sanliurfa, Turkey
2. Emergency Medicine, Gaziosmanpasa University, Tokat, Turkey
3. Otolaryngology, Head and Neck Surgery,, Harran University, Sanliurfa, Turkey
4. Biochemistry, Harran University, Sanliurfa, Turkey

Corresponding author: drosogut@harran.edu.tr

Key-words: Benign paroxysmal positional vertigo ; total oxidant status ; trace elements

Objective: Benign paroxysmal positional vertigo (BPPV) is the most common disorder of the inner ear characterized by short episodes of rotatory vertigo triggered with changes in head position. The molecular mechanisms of BPPV have not yet been clearly defined in neuro-otology field. Disorders of oxidant and antioxidant balance are observed in various forms of acute onset vertigo. Oxidative stress is also implicated in the pathogenesis of inner ear disturbances. To the best of our knowledge, this is the first study investigating oxidant and antioxidant status of patients having BPPV in conjunction with trace elements and comparing them with those of age and sex matched healthy controls.

Materials and methods: Thirty-six consecutive adult patients with BPPV and 38 eligible healthy volunteers as control subjects were enrolled. We assessed the total antioxidant status (TAS) total oxidant status (TOS), iron (Fe), copper (Cu), zinc (Zn) and magnesium (Mg) of the plasma and the oxidative stress index (OSI) using a novel automated measurement method developed by Erel.

Results: Mean age of the patients with BPPV and the control group were calculated (45.75 ± 13.02 and 44.74 ± 13.56 years, respectively; $p > 0.05$). Compared to healthy controls, plasma TAS levels were markedly decreased in patients with BPPV (0.95 ± 0.015 vs. 1.09 ± 0.20 mmol Trolox equivalent/L; $p = 0.001$). However, TOS levels and OSI values did not show significant changes in BPPV patients compared with those in controls. Plasma Fe levels of patients with BPPV were significantly lower than those of healthy controls (81.75 ± 23.06 vs. 99.21 ± 31.89 mg/dL; $p < 0.01$) (Cu, Zn and Mg; not significantly related).

Conclusion: In this study, we demonstrated that both levels of total antioxidants and iron were decreased in patients with BPPV. These findings may be an evidence of significant deficiencies of antioxidant system and iron in BPPV patients. Further investigations are required to clarify the role of antioxidant status and trace elements in the etiopathogenesis of BPPV.

G31:5

Biomarkers 1

PERFORMANCES OF AGE-ADJUSTED D-DIMER CUT-OFF TO RULE OUT PE.

A Penaloza (1), PM Roy (2), J Kline (3), F Verschueren (1), G Le Gal (4), S Quentin-Georget (2), N Delvau (1), F Thys (1)

1. Emergency department, Cliniques Universitaires St-Luc, Université Catholique de Louvain, Belgium., Brussels, Belgium
2. Emergency department, CHU Angers, Université d'Angers, France., Angers, France
3. emergency department, Carolinas Medical Center, Charlotte, USA, Charlotte, United States
4. Pneumology departement, Centre hospitalier universitaire de la Cavale Blanche, Brest, France, Brest, France

Corresponding author: andrea.penaloza@uclouvain.be

Key-words: pulmonary embolism ; D-dimer ; Diagnostic strategy

Background: With advancing age, the use of conventional threshold ($<500 \mu\text{g/L}$) for the D-dimer results in a sharp increase in the number of patients needed to test to exclude one pulmonary embolism without imaging study. Age-adjusted D-dimer cut-off has recently been proposed to increase D-dimer usefulness in older patients suspected of pulmonary embolism (PE).

Objective: We externally validated this age-adjusted D-dimer cut-off using different D-dimer assays in a multicenter sample of emergency department patients.

Methods: Secondary analysis of 3 prospectively collected databases (2 European, 1 American) of PE suspected patients. D-dimer performance for ruling out PE was assessed by calculating negative likelihood ratio (nLR) for D-dimer with age-adjusted D-dimer cut-off ($< \text{age} \times 10$ in patients over 50 years) and with conventional cut-off ($< 500 \mu\text{g/dl}$). Test efficiency was assessed by the number needed to test (NNT) to rule out PE in one patient.

Results: Among 4,537 patients included, overall PE prevalence was 10.1%. In overall population, nLR was 0.06 [95% CI: 0.03-0.09] with conventional cut-off and 0.08 [0.05 -0.12] with age-adjusted cut-off. Using age-adjusted cut-off, nLR was 0.08, 0.09 and 0.06 for Vidas®, Liatest® and MDA® assays respectively. Use of age-adjusted cut-off produced favorable effect on NNT in the elderly, the greatest decrease was observed in patients > 75 years: NTT halved from 8.1 to 3.6. The proportion of patients over 75 years with normal D-dimer was doubled (27.9% vs 12.3%). Using the conventional D-dimer cut-off, in patients > 75 years, the false negative rate was 1.5% (CI: 0.1- 7.0) vs 3.9% (CI: 1.6- 7.9) with the age-adjusted cut-off, without statistically significant differences compared to conventional cut-off.

Conclusions: Our study shows that age-adjusted D-dimer had low nLR allowing its use as a rule-out PE strategy in non-high pre-test clinical probability patients; as well using Vidas®, Liatest® or MDA® assays. This age-adjusted cut-off increased clinical usefulness of D-Dimer in older patients. A large prospective study is required to confirm these results.

G31:6

Biomarkers 1

EFFECT OF ELEVATED BLOOD GLUCOSE ON OUTCOME IN ACUTELY DECOMPENSATED HEART FAILURE: RESULTS FROM AN INTERNATIONAL OBSERVATIONAL COHORT

S Laribi (1), E Gayat (2), A Mebazaa (2)

1. Emergency Department, APHP, Lariboisière Hospital and INSERM Unit 942, Paris, France, Paris, France
2. Unit 942, INSERM, Paris, France, Paris, France

Corresponding author: said.laribi@lrh.aphp.fr

Key-words: Admission glycemia ; Acutely Heart Failure ; Prognosis

Background: Elevated blood glucose has been reported to be prognostically meaningful in patients with cardiac diagnoses, such as coronary artery disease. The short-term prognostic impact of hyperglycaemia in the setting of acutely decompensated heart failure (ADHF) is unknown, however.

Methods: In a multinational analysis of subjects with ADHF, we examined the ability of blood glucose concentrations at presentation to predict all-cause mortality by 30 days. Fully-adjusted models for prognosis included prior diagnosis of diabetes mellitus as a covariate.

Results: 6212 subjects with ADHF (mean age 72 years, 52.5% male) were studied; the median blood glucose concentration on arrival was 7.5 mmol/L, and 41% had prior diabetes mellitus (DM). After 30 days, 618 patients (10%) had died. Compared to survivors, decedents had significantly higher median blood glucose concentrations (8.9 versus 7.4; $p < 0.0001$). In a fully-adjusted model including prevalent DM, an elevated blood glucose was a strong independent predictor of 30 day mortality in ADHF (OR = 2.19; 95% CI = 1.69-2.83; $P < 0.001$). In time-to-event analyses, the risk associated with hyperglycaemia appeared early, was sustained to 30 days (HR = 1.97, 95% CI = 1.55-2.49, $p < 0.0001$) independent of prevalent DM. The risk associated with hyperglycaemia appeared consistent across patient with preserved (HR = 5.41, 95% CI = 2.44 – 12.0; $p < 0.001$) and impaired systolic function (HR = 2.37, 95% CI = 1.57 - 3.59; $p < 0.001$) as well as with and without diabetes mellitus. In reclassification analyses, elevated blood glucose added significant prognostic information to clinical parameters alone (net reclassification improvement = 4.4%; $p = 0.01$; integrated discrimination improvement = 0.011; $p < 0.001$).

Conclusions: Among patients with ADHF, blood glucose concentrations at presentation are powerfully prognostic for death by 30 days, independent of a diagnosis of DM or other clinical variables. As blood glucose is easily modifiable, it may represent a valid target for therapeutic intervention.

G31:7

Biomarkers 1

LIPOPROTEIN-ASSOCIATED PHOSPHOLIPASE-A2 CAN BE A DIAGNOSTIC MARKER FOR VENOUS THROMBOEMBOLISM

S Kocak (1), B Ertekin (2), M Ergin (1), B Cander (1), M Gul (1), ZD Dundar (3), S Bodur (4), I Mehmetoglu (5)

1. Emergency Department, Necmettin Erbakan University Meram Faculty of Medicine, Konya, Turkey
2. Emergency Department, Beyhekim State Hospital, Konya, Turkey
3. Emergency Department, Konya Training and Research Hospital, Konya, Turkey
4. Public Health Department, Necmettin Erbakan University Meram Faculty of Medicine, Konya, Turkey
5. Biochemistry Department, Necmettin Erbakan University Meram Faculty of Medicine, Konya, Turkey

Corresponding author: skocak@konya.edu.tr

Key-words: Lipoprotein-associated phospholipase-A2 ; pulmonary embolism ; deep venous thrombosis

Background: Lipoprotein-associated phospholipase-A2 (Lp-PLA2) has drawn attention as an indicator for increased cardiovascular risk. There is a few numbers of trials which measured level of Lp-PLA2 during acute illness. The study was conducted to show the diagnostic value of Lp-PLA2 in case of suspicion for acute pulmonary embolism (PE) and deep venous thrombosis (DVT) at emergency department (ED). **Method:** The study included patients who had been suspected for PE and/or DVT and admitted to our ED consecutively between October 2009 and March 2010. There was a control group including persons which had not had any history for cardiovascular disease and had not used any drug. Once the

diagnosis was determined, the blood sampling was taken from patients. Plasma Lp-PLA2 levels were measured by ELISA method which was commercially available kit. The diagnostic value of Lp-PLA2 was expressed in terms of receiver operating characteristic curves, sensitivity, specificity, predictive measures and likelihood ratios. It was also evaluated whether there was any correlation between Lp-PLA2, C-reactive protein (CRP) and D-Dimer levels. Results: This study included 30 patients with PE, 30 patients with DVT and 35 patients in control group. The mean age of all was 59.8±14.7; 57.7±17.2; 51.5±17.2 and the ratio of male patients was 50%; 43.3%; 48.6% respectively. Lp-PLA2 levels were low in PE and DVT groups in respect to control group, which was statistically significant (21.2±16.5; 19.3±9.9; 41.4±8.1 nmol/min/mL respectively and p<0.01). The mean duration for blood sampling was 49.1±36.5 (median 46.5) hours for PE group and 40.7±44.6 (median 20.3) hours for DVT group. These are found that the area under curve (AUC) for PE group was 0.864 (CI 95%: 0.769-0.960); when cut off value for Lp-PLA2 was 26.7 nmol/min/ml which was optimum value, sensitivity was 70% and specificity was 94%. These are found that the area under curve (AUC) for DVT group was 0.951 (CI 95%: 0.888-1.015); when cut off value for Lp-PLA2 was 29.3 nmol/min/ml which was optimum value, sensitivity was 90% and specificity was 91%. There was no statistically significant correlation between Lp-PLA2, CRP and D-Dimer levels. Conclusion: The Lp-PLA2 level was shown to decrease significantly in the early period of acute PE and DVT. According to this data, the decrease in levels of Lp-PLA2 is thought to be used for diagnostic purpose.

G31:8

Biomarkers 1

NT-PRO BNP AS A PROGNOSTIC MARKER IN COMMUNITY ACQUIRED PNEUMONIA

H Alonso Valle (1), M Andres Gomez (1), LF Colomo Mármol (2), P Muñoz Cacho (3), M Tazón Varela (4)

1. Emergency Department, Hospital Marques de Valdecilla, Santander, Spain
2. Biochemistry department, Laredo Hospital, Laredo, Spain
3. Preventive Medicine, Laredo Hospital, Laredo, Spain
4. Emergency department, Laredo Hospital, Laredo, Spain

Corresponding author: urggrl@humv.es

Key-words: NT-proBNP ; community-acquired pneumonia (CAP) ; Prognosis

Objective: To evaluate the relationship between plasma amino-terminal fragment of pro-brain natriuretic peptide (NT-proBNP) in an emergency department at the time of diagnosis of community acquired pneumonia (CAP) and the severity of it determined as mortality at 30 days.

Methods: A prospective observational cohort analytical study, which divides patients according to NT-proBNP as a factor exposure monitoring is performed for 30 days and analyzed the mortality rate.

Inclusion of subjects 14 years or more dynamically from February to April 2012, with clinical and radiographic diagnosis of CAP and extraction of NT-proBNP as they are seen consecutively in the emergency department of a hospital that provides coverage to a population of 94,743 people.

The assessment was performed by at least two doctors, and retrospective review was performed of the radiographs by a radiology expert external to the field.

In a second phase, followed up within 30 days to determine poor outcome, defined as death.

The result was a predictor of blood levels of NT-proBNP, while the dependent variable was mortality at 30 days.

Results: 110 patients were collected consecutively, being included in the study 96 (87.27%). The value of NT-proBNP half in survivors

at 30 days was 1544.77 ng / l (SD: 2466.67) vs. nonsurvivors 17804.85 ng / l (SD: 24952.46), and the median 411 (RIC: 1638) vs. 4829 (IQR 39 689). After applying the Kolmogorov-Smirnov and see that the distribution of NT-proBNP departed from normality, we use hypothesis tests to compare nonparametric (U Mann-Whitney) to compare survivors and nonsurvivors at 30 days and found statistical significance of p = 0.0029.

Conclusions: NT-proBNP levels at the time of diagnosis of CAP is a good predictor of early mortality at 30 days.

G31:9

Biomarkers 1

COPEPTIN IN THE DIAGNOSIS OF PULMONARY THROMBOEMBOLISM

F Savran (1), B Cander (1), O Karaoglan (1), M Ergin (1), AS Girgin (1), A Dur (2)

1. Emergency Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey
2. Emergency Department, Bezmi Alem Foundation University Medicine Faculty, İstanbul, Turkey

Corresponding author: drmehtemertgin@gmail.com

Key-words: Biomarkers ; Copeptin ; Pulmonary Embolism

BACKGROUND: Although trials about diagnosis and prognosis of pulmonary thromboembolism (PE) have been standing many years, mortality is up to 15% in normotensive patients and 58 % in ones with cardiogenic shock. There is no available biomarker for accurate diagnosis for acute PE with high sensitivity and specificity. This study was to investigate the value of copeptin in diagnosis of PE. METHOD-MATERIAL: This was descriptive and cross sectional study population included 34 patients who admitted due to new onset or recently increased dyspnea at our emergency department between 1 to 31 September 2011. Of 24 patients were diagnosed as PE and of 10 patients who didn't have PE were in control group based on computed tomography pulmonary angiography. RESULTS: When cut off point was selected as 18 pmol/L; copeptin had 50% sensitivity; 70% sensitivity; 80% PPV; 37% NPV. Patients who were diagnosed a PE and high pulmonary artery pressure had copeptin levels statistically greater than control group. (P<0.027) CONCLUSION: According to results, copeptin is not reliable biomarker in diagnosis of acute PE but prospective trials with large number of patients are required.

G31:10

Biomarkers 1

THE RELATION BETWEEN IGF-1, GH, IGFBP3 LEVELS AND STROKE AND COMORBID DISEASE

E Akinci (1), E Atayık (2), HC Halhallı (3), D Uçöz (3)

1. Emergency department, Konya Training and Research Hospital, Konya, Turkey
2. Department of Allergy and Immunology, Cumhuriyet University School of Medicine, Sivas, Turkey
3. Emergency department, Ankara Training and Research Hospital, Ankara, Turkey

Corresponding author: emineakinci@yahoo.com

Key-words: Growth hormone ; stroke ; IGF1, IGFBP3

Objectives

The GH/IGF axis (GH: growth hormone; IGF: insulin-like growth factor) includes IGF-1 and -2, specific receptors, and at least six insulin-like growth factor binding proteins (IGFBP). Human and animal studies have shown that the IGF axis, particularly IGF-1, is related to stroke risk. In the present study, we aimed to determine

the relationship between IGF-1, GH, IGFBP3, and stroke and comorbid diseases.

Methods

This prospective study was conducted between August 2010 and December 2010 at the Emergency Department of Ankara Training and Research Hospital after approval by the local ethics committee. Patients diagnosed with ischemic stroke within 24 hours of symptom onset were included in the study. Gender, age, waist circumference, diabetes mellitus, hypertension, history of stroke, systolic and diastolic blood pressure, lipid profile, and GH, IGF-1, and IGFBP-3 levels were recorded.

Results

Fifty patients with ischemic stroke and 30 control patients were included. GH levels were significantly higher in stroke patients than in the control group (0.57 versus 0.06, respectively; $p<0.001$), as were IGFBP3 levels (3234.6 \pm 1135.3 versus 2264.1 \pm 451.5, respectively; $p<0.001$). However, IGF-1 levels were significantly lower in stroke patients (93.5 versus 142, respectively; $p<0.001$). Logistic regression analysis revealed that GH (odds ratio: 24.972; 95% confidence interval: 2.362-263.974) and IGFBP3 (odds ratio: 1.002; 95% confidence interval: 1.0003-1.003) are significant markers for ischemic stroke, but IGF-1 is not a significant marker.

Conclusions

According to the results of this study, IGF-1 is not related to ischemic stroke, but high levels of GH and IGFBP3 are related to ischemic stroke. Further studies are needed to determine the diagnostic or prognostic usage of these markers in ischemic stroke patients.

Key words: Growth hormone; stroke; insulin-like growth factor-1; insulin-like growth factor binding protein-3.

mean age of 72.8 \pm 13.5 year old. The control group had 16 (53%) female patients and mean age of 52.4 \pm 18.8 year old. There was a significant difference ($p<0.05$). The AMI group had IMA, WBC and CRP level 1.22 \pm 0.16 ABSU; 23.3 \pm 5.9; 44.4 \pm 10.4 whereas the control group had 0.82 \pm 0.13 ABSU; 9.8 \pm 4.9; 3.3 \pm 1.9, respectively. There were significant differences between AMI and control group in terms of IMA, WBC and CRP levels. ($p<0.0001$; $p<0.0001$; $p=0.005$, respectively). Time interval from first symptoms to blood sampling was 52.2 \pm 29.0 (median: 51.5) hours. The area under curve (AUC) was 0.996 (95%CI: 0.986-1.000), sensitivity with 94.1% and specificity with 100% according to 1.05 ABSU that was optimum cut off value according to ROC analysis. Conclusion: The specificity and sensitivity results of IMA supported the results of both clinical and trials about diagnostic value of IMA in cases with AMI. However, there is a need for further studies about early diagnostic value of IMA since time duration between first symptoms to blood sampling was long.

G32:2

Biomarkers 2

COMPARISON OF SERUM "CREATININE" AND "NEUTROPHIL GELATINASE-ASSOCIATED LIPOCALIN" LEVELS FOR THE EARLY DIAGNOSIS OF ACUTE KIDNEY INJURY SECONDARY TO RHABDOMYOLYSIS IN AN EXPERIMENTAL RAT MODEL

H Gunes (1), G Ersoy (2), O Yilmaz (3), M Unlu (4), A Sarihan (5), B Gullupinar (6), N Gokmen (7)

1. Emergency Medicine, Public Hospital of 25 Aralik, Gaziantep, Turkey
2. Emergency Medicine, University of Dokuz Eylul, School of Medicine, Izmir, Turkey
3. Laboratory Animal Science, University of Dokuz Eylul, School of Medicine, Izmir, Turkey
4. Pathology, University of Dokuz Eylul, School of Medicine, Izmir, Turkey
5. Emergency Medicine, Public Hospital of Basaksehir, Istanbul, Turkey
6. Emergency Medicine, Public Hospital of Toros, Mersin, Turkey
7. Anesthesiology and Intensive Care, University of Dokuz Eylul, School of Medicine, Izmir, Turkey

Corresponding author: gurkan.ersoy@gmail.com

Key-words: Emergency Medicine ; Acute Kidney Injury ; Neutrophil Gelatinase-Associated Lipocalin

Introduction and Objectives

We claimed to study the diagnostic value of serum "neutrophil gelatinase-associated lipocalin and creatinine levels for the diagnosis of acute kidney injury in early period in rats at which acute kidney injury was created experimentally secondary to rhabdomyolysis.

Materials and Methods

Tail veins of rats under ether anesthesia were cannulated with branule and baseline blood samples were drawn. Later rats were divided into; study (n=7) and control (n=7) groups. Glycerol 50% (2ml/rat) was injected intramuscularly to rats in study group. No additional procedure was done for the control group. For serum "neutrophil gelatinase-associated lipocalin" and "creatinine" levels, blood samples were drawn in the 2th and 24th hours from all rats. Later, left unilateral nephrectomy was performed in order to confirm the development of acute kidney injury.

Results

Pathologic findings of developed acute kidney injury was confirmed by microscopic studies In both groups, no increase was determined for the levels of serum creatinine in the second hour but in study group, significant increase was determined in the 24th hour compared to the baseline levels. This means that acute kidney injury was developed in all rats of study group but not in the control group.

G32:1

Biomarkers 2

THE ROLE OF ISCHEMIA-MODIFIED ALBUMIN IN DIAGNOSIS OF ACUTE MESENTERIC ISCHEMIA

S Kocak (1), B Ertekin (2), E Erdemir (3), M Ergin (1), AS Girisgin (1), B Cander (1), M Gul (1), T Acar (1)

1. Emergency Department, Necmettin Erbakan University Meram Faculty of Medicine, Konya, Turkey
2. Emergency Department, Beyhekim State Hospital, Konya, Turkey
3. Emergency Department, Kahramanmaraş Necip Fazil City Hospital, Kahramanmaraş, Turkey

Corresponding author: skocak@konya.edu.tr

Key-words: ischemia-modified albumin ; acute mesenteric ischemia ; biomarker

Background: Acute mesenteric ischemia (AMI) remains significant since delayed diagnosis is associated with higher mortality rate although it is rare. Biomarkers and radiological diagnostic methods, currently available, are far from being ideal for early and accurate diagnosis. In this study the role of Ischemia Modified Albumin (IMA), as a novel biomarker, was assessed in the diagnosis of AMI. Method: The study was conducted at an academic emergency department. Blood sampling was taken from patients with suspicion of AMI on the basis of history, physical examination, radiological findings and laboratory data to measure serum level of IMA. The study included patients who had been operated and had exact diagnosis of AMI. The control group included patients with nonspecific abdominal pain. The levels of IMA, CRP and WBC count were compared between AMI and control group to find whether there was a correlation or not. Also diagnostic potential of IMA was performed in this study.

Results: The study included 17 patients in AMI group and 30 one in control group. The AMI group had 9 (53%) female patients and

Again, in both groups, no increase was determined for the serum levels of "neutrophil gelatinase-associated lipocalin" either in the 2nd and 24th hours.

Conclusion

We revealed that, serum "neutrophil gelatinase-associated lipocalin" was not a good marker for the early diagnosis of acute kidney injury in this rat model.

G32:3

Biomarkers 2

THE EFFECT OF MECHANIC VENTILATION ON LEVELS OF COPEPTIN, MRPROADM AND PROCALCITONIN IN PATIENT GROUP WITH SEVERE SEPSIS AT ED

B Cander (1), O Karaoglan (1), F Savran (1), M Ergin (1), SS Erdem (2), TK Sahin (3), M Gul (1), T Acar (1)

1. Emergency Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey
2. Biochemistry Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey
3. Public Health Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

Corresponding author: drmehmetergin@gmail.com

Key-words: Sepsis ; Copeptin ; MR-proADM

BACKGROUND: The study was to evaluate the effect of mechanic ventilation on levels of copeptin, procalcitonin, MRproADM levels in patient group with severe sepsis. **MATERIAL – METHOD:** The study was conducted at Selcuk University Meram Medicine Faculty Hospital Emergency Department and Critical Care Unit. The study included patients who had diagnostic criteria for sepsis recommended at International Sepsis Conference so that 48 patients with severe sepsis in which 25 were on mechanic ventilation (MV) were included in the study. **RESULTS:** The levels of copeptin and MRproADM on patients with MV were higher than those without MV in patients with severe sepsis ($p<0.05$). The mortality rate in patients with MV was also higher than those without MV ($p<0.05$). Furthermore, the levels of copeptin and MRproADM were higher in patient group with mortality than one survived ($p<0.05$). **CONCLUSION:** The patients with sepsis who have high level of copeptin and MRproADM have higher rate for mechanical ventilation and mortality. However there is need for further studies.

G32:4

Biomarkers 2

THE PROGNOSTIC VALUE OF 'RATIO OF NEUTROPHIL/LYMPHOCYTE COUNT, C-REACTIVE PROTEIN, PROCALCITONIN AND RED CELL DISTRIBUTION WITH' LEVELS IN SEPSIS

B Cander (1), FE Visneci (1), A Karagoz (2), M Ergin (1), AS Bodur (3), F Altunay (1), S Kocak (1), AS Girisgin (1), M Gul (1)

1. Emergency Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey
2. Nephrology Department, Konya Education and Research Hospital, Konya, Turkey
3. Public Health Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

Corresponding author: drmehmetergin@gmail.com

Key-words: Sepsis ; Neutrophil/lymphocyte ratio ; Red cell distribution with

BACKGROUND: Ratio of neutrophil/lymphocyte count (N/L) is an indicator of inflammation. It is said that N/L ratio is a prognostic factor and an indicator of admission for acute myocardial infarction, acute appendicitis, acute renal failure, chronic obstructive lung disease. On the other hand, red cell distribution with (RDW) is used as a prognostic indicator for malignancies and coronary artery diseases. The prognostic value of 'ratio of N/L, C-reactive protein(CRP), procalcitonin and RDW' levels in sepsis was investigated in the study. **MATERIAL – METHOD:** The study is conducted retrospectively at Necmettin Erbakan University Meram Medicine Faculty Hospital and Konya Education and Research Hospital. It included 643 patients with diagnosis of sepsis according to international sepsis criteria. The demographic data, laboratory and clinical results were documented from hospital data system. The SPSS v.10 was used to document data and Pearson Chi Square Test, Independent Samples Test and Logistic Regression were performed. **RESULTS:** There was no statistical difference between genders in terms of mortality ($p>0.05$). There were significant statistical difference between survival and non-survival groups in terms of age, ratio of N/L, CRP and RDW ($p<0.05$) but not significant in terms of procalcitonin and admission duration ($p>0.05$). In the logistic regression model including age, ratio N/L, CRP and RDW; it was found that the relation between prognosis and age, ratio of N/L and CRP had statistical significance. **CONCLUSION:** We found that age, ratio of N/L count and CRP level were significant factors in prognosis in sepsis. There is need for further prospective studies.

G32:5

Biomarkers 2

DOES LACTATE PREDICT PROGNOSIS IN A RELATIVELY UNSELECTED EMERGENCY DEPARTMENT POPULATION?

D Datta (1), CA Walker (1), C Graham (2), AJ Gray (1),

1. Emergency Medicine Research Group Edinburgh, Emergency Department, Royal Infirmary of Edinburgh, Edinburgh, United Kingdom
2. Wellcome Trust Clinical Research Facility, University of Edinburgh, Edinburgh, United Kingdom

Corresponding author: deepankardatta@nhs.net

Key-words: Lactate ; Sepsis ; Emergency Department

Objectives & Background: Lactate measurements are routinely performed in unwell patients presenting to the Emergency Department. Lactate is continuously produced in low quantities as a by-product of anaerobic metabolism but is rapidly metabolised by the liver under normal physiological conditions. However, physiological stress can alter cellular mechanisms and therefore lactate levels. Hyperlactataemia has been shown to be associated with in-hospital mortality in both sepsis and trauma. Initial lactate levels in patients presenting to emergency departments (whilst frequently performed) have rarely been investigated for use as a prognostic factor outside of these two population groups. This study aims to determine whether serum lactate is a marker of prognosis in a relatively unselected population presenting to the Emergency Department.

Methods: We carried out a prospective observational cohort study of 740 consecutive patients presenting to the Emergency Department of a tertiary referral hospital between 11th May and 11th August 2011 and who had arterial lactate concentrations measured as part of their standard care. The main outcome measure was 30-day mortality. Statistical analyses were performed using two-sample t-tests, Chi square tests and comparison of proportions as appropriate for variables of interest.

Results: A significant difference ($p<0.0001$) was noted between the log[lactate] between the patients alive at 30 days ($n=620$,

mean=0.25, standard deviation=0.7) and those who had died at 30 days (n=120, mean=0.88, sd=1.05). The mean difference between samples was 0.6 (95% confidence intervals 0.4 to 0.8).

Conclusion: Initial lactate was a significant predictor of 30-day mortality in a relatively unselected group of patients presenting to the Emergency Department. Further work needs to be performed to delineate optimum cut-offs for prognostication.

G32:6

Biomarkers 2

THE PROGNOSTIC VALUE OF PROCALCITONIN, COPEPTIN, MRPROADM FOR PATIENTS DIAGNOSED WITH SEPSIS AT EMERGENCY DEPARTMENT

O Karaoglan (1), B Cander (1), F Savran (1), M Ergin (1), SS Erdem (2), TK Sahin (3), AS Girgin (1), C Dikmetas (1)

1. Emergency Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey
2. Biochemistry Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey
3. Public Health Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

Corresponding author: drmehmetergin@gmail.com

Key-words: Copeptin ; Procalcitonin ; MR-proADM

BACKGROUND: Sepsis is defined as inflammatory response of host against infection. It is an important cause of mortality especially for patients with immunosuppression and requiring critical care. In this study, we compared diagnostic and prognostic value of procalcitonin, copeptin and MRproADM in sepsis. MATERIAL – METHOD: The study was conducted at Selcuk University Meram Medicine Faculty Hospital Emergency Department and Critical Care Unit. The study included patients who had diagnostic criteria of International Sepsis Conference so that 12 patients with sepsis, 31 one with severe sepsis and 17 one septic shock were included in the study. RESULTS: there were statistical difference between patients who died and ones who survived ($p<0.05$). there also was a correlation between copeptin and MRproADM in terms of hospitalization duration ($p<0.05$). The study showed an important correlation between copeptin, procalcitonin, MRproADM and APACHE II and SOFA score ($p<0.01$). RESULTS: We thought that copeptin and MRproADM can be used to estimate prognosis in sepsis, like procalcitonin. However, there is need for further studies.

G32:7

Biomarkers 2

THE DIAGNOSIS AND PROGNOSTIC VALUE OF COPEPTIN AND MR-PROADM IN CASES OF SEVERE SEPSIS

B Cander (1), O Karaoglan (1), F Savran (1), M Ergin (1), SS Erdem (2), TK Sahin (3), S Kocak (1), MA Onal (1)

1. Emergency Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey
2. Biochemistry Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey
3. Public Health Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

Corresponding author: drmehmetergin@gmail.com

Key-words: Sepsis ; Copeptin ; MR-proADM

BACKGROUND: Sepsis is defined as inflammatory response of host against infection. It is an important cause of mortality especially for patients with immunosuppression and requiring critical care. In this

study, we compared diagnostic and prognostic value of copeptin and MRproADM in severe sepsis. MATERIAL – METHOD: The study was conducted at Selcuk University Meram Medicine Faculty Hospital Emergency Department and Critical Care Unit. The study included patients who had diagnostic criteria of International Sepsis Conference so that 31 patients with severe sepsis and 17 one septic shock were included in the study. RESULTS: There was a statistically important correlation between levels of copeptin vs APACHE II and SOFA scores; level of MRproADM vs APACHE II and SOFA scores ($p<0.05$). Copeptin had 95% sensitivity and 20% specificity whereas MRproADM had 100% sensitivity and only 16% specificity. CONCLUSION: We thought that copeptin and MRproADM can be used to estimate prognosis in severe sepsis. However there is need for further studies.

G32:8

Biomarkers 2

C-NATRIURETIC PEPTIDE IS ASSOCIATED WITH THE SEVERITY OF CRIMEAN-CONGO HEMORRHAGIC FEVER

A Engin (1), FM Kukul Guven (2), MM Polat (1), OO Turgut (3), KA Turkdogan (4), MB YILMAZ (3), A ZORLU (5)

1. Infectious Diseases, Cumhuriyet University Medical School, SIVAS, Turkey
2. Emergency Department, Cumhuriyet University Medical School, SIVAS, Turkey
3. Cardiology, Cumhuriyet University Medical School, SIVAS, Turkey
4. EMERGENCY SERVICE, ISPARTA STATE HOSPITAL, ISPARTA, Turkey
5. Cardiology, Bulanik State Hospital, MUS, Turkey

Corresponding author: kenan-ahmet@hotmail.com

Key-words: Crimean-Congo hemorrhagic fever; ; C-Natriuretic Peptide ; Risk stratification

Objective: Crimean-Congo hemorrhagic fever (CCHF) is characterized by vascular dysfunction, indicating the involvement of endothelial cells. C-Natriuretic Peptide (CNP) plays a critical role in the coordination of vascular tone and is associated with prognosis in critically ill patients such as sepsis and septic shock. We investigated whether CNP was related to severity of CCHF.

Methods: Forty-eight consecutive patients with a laboratory confirmed diagnosis of CCHF and 40 age-sex matched healthy volunteers as the control group were prospectively enrolled into the study. Patients were classified according to the disease severity into a non-severe group (n=28) and severe group (n=20).

Results: The CNP levels were detected to be 0.43 (0.4-0.7) ng/ml, 0.87 (0.7-1.0) ng/ml and 1.27 (0.8-1.7) ng/ml in the control group, the non-severe group and the severe group, respectively. According to the receiver operator characteristics curve analysis: optimal cut-off value of CNP to predict disease severity was found as > 1.22 ng/ml, with 89.3% specificity and 55% sensitivity. C-Natriuretic Peptide > 1.22 ng/ml, lactate dehydrogenase > 480 IU/L, and aspartate aminotransferase > 202 IU/L were found to have prognostic significance in univariate analysis. In multivariate logistic regression analysis with forward stepwise method; C-Natriuretic Peptide > 1.22 ng/ml (Odds ratio=8.336, $p=0.016$) and lactate dehydrogenase > 480 IU/L (Odds ratio=16.206, $p=0.002$) remained associated with disease severity after adjustment for confounding variables.

Conclusions: CNP measurement could help risk stratification in patients with CCHF.

G33:1

Traumatology 2

EVALUATION OF PATIENTS WITH SCALP LACERATION IN TERMS OF TREATMENT TECHNIQUES

D. Öztürk, E. Altunbilek, M. Sönmez, C. Kavalci, ED. Arslan, S. Akay

1. emergency, numune research and training hospital, ankara, Turkey

Corresponding author: cemkavalci@yahoo.com

Key-words: Scalp Laceration ; Suture ; Hair Apposition

Introduction and Aim: Any trauma causing skin disintegration might result in a rise in infection risk, function loss and cosmetic problems. Protecting skin integrity or healing skin disintegration will minimize these risks. Skin lacerations are common findings in patients consulting to emergency department (ED) as a result of trauma. Lacerations can be covered with four methods or appliances. These methods are suture, stapler, surgical tapes and tissue adhesives. Scalp lacerations are important in terms of both trauma accompanying them and cosmetics in respect of its anatomic localization. In our study, we aim to evaluate the effectiveness of suture, stapler and hair apposition techniques used in the treatment of scalp lacerations in patients consulted to emergency department.

Appliance and Method: Upon receiving hospital ethics committee approval, we researched the effects of the applied method on wound healing, complication and patient satisfaction by recording to the study form the data of the patients having linear lacerations in scalp, whose hairs are one cm long at least and lacerations' length are shorter than 10 cm and whose reports about wound healing, complication and satisfaction are present in hospital information and communication system among patients consulting to emergency department in the last seven months.

Findings: In our study, 134 individual were examined as 49 from stapler (36.6%), 48 from suture (35.8%) and 37 from hair apposition (27.6%). In our study, there was no significant difference statistically between methods applied in scalp laceration treatment and laceration length ($p=0.675$). There was no significant difference statistically between methods applied in scalp laceration treatment and hair length ($p=0.285$). There was a significant difference statistically between techniques used and satisfaction after seven- fifteen days on behalf of hair apposition (respectively $p1=0.047$ - $p2=0.034$). There was a significant difference statistically between the techniques used and cosmetic problems after 15 days ($p=0.012$). The cosmetic problem occurring after 15 days was significantly minimized in patients treated with hair apposition.

Conclusion: The patients consulting to emergency department for linear scalp lacerations can securely be treated with suture, stapler and hair apposition techniques irrespective of laceration length and hair length. However; hair apposition technique has advantages in terms of patient satisfaction as having low rates of cosmetic problems and complication in comparison with other techniques.

G33:2

Traumatology 2

TRAUMA SCORES; ARE THEY SUFFICIENT?

GE Khalifa

Emergency, Al Rahba Hospital, Abu Dhabi, United Arab Emirates

Corresponding author: gabbas@emirates.net.ae

Key-words: injury severity scores ; physiological scores ; Anatomical scores

Introduction

Trauma is an important cause of mortality and morbidity the first four decades of life.

Since it involves the most active group of the society, improvement of trauma care and prevention of avoidable deaths are among the main goals of health care systems of many countries.

The outcome of trauma victims is dependent on three main factors; the severity of injury, the patient characteristics (age, sex, co-morbidities...) and the quality of care provided to the patients.

On the other hand, evaluating processes of care and outcomes of injured patients are important if improvements in the quality of care delivered to injured patients are to be accomplished.

Trauma scores can be used for making more objective, standardized, and accurate judgment on whether the injury was a life threatening one or not.

Trauma scoring systems have been developed to evaluate the trauma severity, the degree of the harm in the human body, the prognosis after traumatic injury, and the improvements in trauma care quality.

It is also used by Public health Managers and planners for trauma resource allocation.

Also, both civilian mass casualty contingency planning and military expeditionary medical resourcing benefit immensely from knowledge of the number, nature and severity of anticipated casualties.

Objectives

Is to review the most common existing trauma scores and evaluate them using clinical scenarios to demonstrate their advantages or limitations .

Results

Severity classifications can be nominal, ordinal or interval in nature. Many injury severity characterizations are nominal scales where verbal definitions are used to place injuries in various dissimilar bins of severity or complexity. Ordinal scales (Ordinal: any positive whole number defining a thing's place in a series) assign a number to states of severity. Interval scales also assign numbers, but there is an implicit expectation of some consistency in the intervals between the numbers.

Focal organ scores:

- limb salvage scoring systems like
 - Predictive Salvage Index (PSI)
 - Mangled Extremity Severity Score (MESS)
 - Limb Salvage Index (LSI)
 - Nerve Injury, Ischemia, Soft-Tissue Injury, Skeletal Injury, Shock, and Age (NISSSA) Score
 - Hannover Fracture Scale-97 (HFS-97)
- The Ocular Trauma Score (OTS) provides a single probability estimate of an eye trauma patient will obtain a specific visual range by six months after injury.

Types of Trauma Scores or scales

Anatomical Scores:

- Abbreviated Injury Severity Score (AIS)
- Injury Severity Score (ISS)
- New Injury Severity Score (NISS)
- Anatomic Profile (AP)
- International Classification of Diseases- Clinical Modifications (ICD-CM)

Physiologic scores :

- Revised Trauma Score (RTS)
- Glasgow Coma Scale (GCS)
- Acute Physiology and Chronic Health Evaluation (APACHE).
- Sequential Organ Failure Assessment (SOFA)
- Prehospital Index (PHI) uses four components; systolic blood pressure, pulse, respiratory status and level of consciousness.

valuation-

Combined scores

- Trauma and Injury Severity Score (TRISS)
- International Classification of Diseases Based ISS (ICISS)

Pediatric Scores:

- Glasgow Pediatric Coma Score
- Glasgow Infant Coma Score
- Pediatric Trauma Score (PTS)

The ISS were developed to provide a quantitative measure of trauma severity and evaluation of patient care compared to with standard value.

The main usage of injury scoring systems is for comparison of any particular trauma care system

with the MTOS (Major Trauma Outcome Study) series; both TRISS and ASCOT models are widely used in this regards .

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much angulation is acceptable in terms of functional recovery or residual symptoms.

Objective

Is NS enough to manage 5th MC fractures with angulation < 50 degrees.

Method

All the patients who were diagnosed with 5th MC neck fracture were included. Patients who had any other 5th MC fracture were excluded. Data was collected for 5 months period from Oct to Feb 2012. The study was carried out at University hospital Birmingham.

Results

We had 68 patients diagnosed with 5th MC fracture. Among those there were 8 females and 60 male. The mean age was 36yrs (16-60 yrs). 13 patients had ORIF (rotation, angulation > 50)and 10 had some special splints so were excluded from the group. Rest of the 39 had NS and 2 had plastering done. Both groups (as per discharge letters) were followed up to 2 months and there were no complaints about outcome, which was described as grip and range of movements.

Conclusion

The management of fifth metacarpal neck fractures is still controversial (Poolman et al., 2005). The role of manipulation is doubtful as the initial reduction achieved is difficult to maintain by non-operative means (Braakman, 1997; Lowdon, 1986). This is also supported by the fact that angulation at the fracture site has little influence on the functional outcome (Ford et al., 1989; McKerrill et al., 1987; Porter et al., 1988; Statius Muller et al., 2003). The extent of acceptable palmar angulation remains debated, varying from 20 to 70°, as does the threshold for surgical management (Braakman et al., 1998; Ford et al., 1989; Hansen and Hansen, 1998; McMahon et al., 1994; Statius Muller et al., 2003).

Our study has small number but results show no significant difference in the out come for pts managed with NS or plaster. This supports the existing evidence. Therefore patients with 5th MC fractures who don't qualify for ORIF should be managed with NS instead of any kind of plastering.

G33:3

Traumatology 2

NEIGHBOUR STRAPPING IS ENOUGH TO MANAGE 5TH MC FRACTURES WITH ANGULATION < 50 DEGREES

J Kayani, M Majeed, R Smith, A Willcock

ED, QEHB, BIRMINGHAM, United Kingdom

Corresponding author: azam.majeed@uhb.nhs.uk

Key-words: Neighbour strapping ; 5th Metacarpal ; Management

Background

Fifth metacarpal neck fracture "Boxers fracture" is a common injury seen in the emergency departments. Its most common in young and active people. The reported incidence is as high as 20% of all hand fractures (Hunter and Cowen, 1970). The usual expected time to full recovery is 2 to 3 months (Hansen and Hansen, 1998; Porter et al., 1988). There are many different ways of managing the fracture starting from neighbour strapping to internal fixation. The extent of acceptable palmar angulation remains under debate; recommendations in the literature vary from 20 degrees to 70 degrees (Braakman 1998a; Ford 1989; Hansen 1998a; Konradsen 1990; Kuokkanen 1999; McMahon 1994; Sorensen 1993; Statius Muller 2003; Theeuwes 1991). A biomechanical study concluded that 30 degrees is the upper limit for acceptable final angulation (Ali 1999). Although investigations have shown that palmar angulation of the neck of the fifth metacarpal rarely gives rise to any functional disability, no clinical study has provided a conclusive answer to the question of how

G33:4

Traumatology 2

PEDIATRIC MINOR TRAUMA ED VISITS - CHARACTERISTICS OF INJURY USING A NEW MDS SYSTEM OF DATA COLLECTION.

E. Mashiach (1), M. Ivancovsky (2), S. Ronen (2), M. Billia (2), U. Vanger (2), Y. Waisman (1)

1. Emergency medicine department, Schneider Children's medical center of Israel, Petah Tikva, Israel

Corresponding author: eranma2@012.net.il

Key-words: child ; injury prevention ; emergency medicine

Background:

Injuries are the leading cause of death and disability among children in the Western world. In Israel, approximately 180,000 ED visits are attributed to trauma. From which - 25,000 pediatric patients are hospitalized and 180 die.

Systematic analysis of routinely collected data is mandatory for the monitoring and prevention of childhood injuries and for the development of additional interventions designated to minimize child injury.

An innovative Israeli multi-center study designated to assess the use of a Minimal Data Set (MDS) as recommended by the WHO, and establish a national system for collecting injury and safety data (NAPIS – National Pediatric Injury & Safety Surveillance). MDS registry includes four variables: mechanism of injury, object

involved in the injury, location where injury took place and activity during injury.

Objectives:

The purpose of this study is to present the most current data on childhood injuries and to identify risk factors and risk groups, as analyzed from ED visits to Schneider Children's Medical Center of Israel, the large pediatric hospital in Israel.

An additional objective of this study is to develop a national pediatric injury database based on data collected in the ED.

Methods:

Data sources for children aged 0-18 admitted to the Unit of Emergency Medicine between feb2011-may2012, Collected by MDS, and our own hospital registry system (ATD) which records time and reason for admission, injury results and demographic data.

Results:

MDS data included 3600 annual ED visits attributed to pediatric minor trauma.

The analysis of MDS data revealed that almost 50% of injuries were attributed to falls, in which blunt injuries where 27%, bruises and lacerations 10% of injury types. One third of ED visits were due to 'other' and 11% of ED visits were due to traffic accidents. Home and yard accidents, mostly related to falls, were registered in more than 40%, and 40% of all accidents occurred in kindergarten or school.

The most common products/objects involved in injuries were ED visit and hospitalization rates were highest in infants and toddlers aged 1-4 years.

The male and female ratio is increased up to 2.5 times by adolescence.

Arab children and Ultra-Orthodox children are at the highest risk for injuries. Mortality, hospitalization and ED visit rates were much higher in those population groups.

Conclusions:

Collecting the MDS data in the ED seems to be feasible and accurate.

Most of injuries are unintentional injuries, the most frequent mechanism of injuries was due to falls, the main object involved in the injuries was floor, and most common locations of them were at home during free time or in education institutes while studying.

The MDS provides important information for decision makers and is helpful in promoting programs and projects to reduce injuries in children.

G33:5

Traumatology 2

A PROSPECTIVE SURVEY AND AUDIT OF SPORTS INJURIES IN A PAEDIATRIC EMERGENCY DEPARTMENT

J Le Geyt (1), C Stewart (2)

1. Paediatric Emergency Medicine, Chelsea and Westminster Hospital, London, United Kingdom
2. Paediatric Emergency Department, Chelsea and Westminster Hospital, London, United Kingdom

Corresponding author: cgstewart@doctors.org.uk

Key-words: Paediatric ; Sport ; Injuries

Objective

The number of children sustaining sporting injuries and seeking medical attention has been increasing over the last few years in the UK. Paediatric emergency departments are the first point of contact for many of these children. The aim of this study was to survey the characteristics of sports injuries presenting to a paediatric emergency department and evaluate our ability to diagnose and manage them.

Method

A prospective study was conducted, including 50 consecutive patients presenting with any injury sustained during sport, over a period of 3 months during the winter season. Data were collected on demographics, sporting history, mode of injury and health intervention prior to presentation. The most frequently occurring injury was then audited for the quality of the assessment done.

Results

The most frequently presenting sports were rugby, football, and basketball. Only 8% of children presenting were classed as "elite" athletes, 50% played sport at club level, and the rest participated recreationally; the latter two groups having little or no sports medicine support. 55% met the government's target of 60 minutes moderate exercise per day. The most common injuries involved the ankle (26%), fingers or hand (26%) and wrist (18%).

Ankle injuries were audited for quality control incorporating the Ottawa Ankle and Foot Rules. Examination was scored out of 9 with a mean score of 5 (+/-3) occurring. High ankle sprains (0%) and navicular injuries (11%) were poorly assessed. There was no documentation for grade of sprain.

Conclusions

Sports injuries form an important part of the PED remit. For many of these children, no other sports medicine input and education will be received. The documented examination of ankle injuries showed areas that are regularly being overlooked. The poor performance in ankle examination must be assumed to be replicated in other musculoskeletal assessments.

We will be initiating specific musculoskeletal education sessions for practitioners, and re-auditing our practice after 6 months. We are also initiating the same study in other paediatric emergency departments to compare practice.

G33:6

Traumatology 2

THE USEFULNESS OF MRI IN THE DIAGNOSIS OF ACUTE DISLOCATIONS OR SUBLUXATIONS OF THE PATELLA? PROSPECTIVE STUDY ON 39 CASES.

JJ Banihachemi (1), JN Ravey (2), JF Fage (1), E Carpentier (1), D Saragaglia (1)

1. Clinic of Sports Traumatology and Othopedics Emergency department, CHU Grenoble Hôpital Sud, Grenoble, France
2. Clinic of radiology and medical Imaging, Bone and Joint Unit, CHU Grenoble Hôpital Sud, Grenoble, France

Corresponding author: jjbanihachemi@chu-grenoble.fr

Key-words: Patella dislocation ; MRI ; Traumatology

Spontaneously reduced patella dislocations and subluxations are not easily identifiable in emergency departments.

Hypothesis: MRI could help establish a diagnosis as it can show transient lesions, ruptures of the medial patellofemoral ligament (MPFL) or associated lesions (anterior cruciate ligament ACL, cartilage, etc.)

Objective: Evaluate the usefulness of MRI in the diagnosis of acute dislocations or subluxations of the patella.

Material and Method

From April 2007 to May 2010, we collected data in a prospective manner from 70 cases with acute patella instability from which 39 cases with complete medical records were selected for the study. The case population was made up of 24 men and 15 women, mean age 22.8 +/- 10.5 years (range: 11-46). The patients were admitted to the emergency department with either a confirmed dislocation (25 cases) or a suspected patella subluxation (14 cases) after medical history interview and clinical examination (conducted by a junior practitioner). All patients were given standard X-rays (F, L,

sky line view at 30°) during the emergency treatment and an MRI average wait time of 13.7 +/- 15 days (2-90). On the X-rays we tried to identify a possible femoral trochlea dysplasia as well as osteochondral fractures. We also, as far as possible, measured the height of the patella. On the MRI we investigated bone bruise lesions of the lateral condyle and of the medial side of the patella, MPFL lesions, osteochondral fractures and some associated lesions (ACL or medial collateral ligament MCL).

Results

The MRI confirmed acute patella instability in 37 out of 38 cases (97.4% of cases). In one case, it was misdiagnosed due to an ACL rupture. As the diagnosis was doubtful in 14 cases, the MRI helped establish a diagnosis in 13 cases (92.8%).

In addition the MRI showed: 25 MPFL lesions, 31 lesions on the medial side of the patella (25 edemas), 31 lesions of the lateral condyle (edema), and 7 cartilage fragments detached in the joint (2 repositionings performed in an emergency) and 5 associated lesions (3 ACL and 2 femoral MCL).

In conclusion, taking into account these results, the MRI seems necessary to diagnose and evaluate acute patella instabilities.

G33:7

Traumatology 2

DOES TRAUMA TEAM TRAINING IMPROVE TEAM PERFORMANCE IN THE TRAUMA BAY ?

L Overholt Nielsen (1), S Lundbye-Christensen (2), T Heide Faaborg (1), M Borup (1), J Ahrenkiel Nielsen (1)

1. Department of anaesthesiology, Sygehus Vendsyssel, Hjørring, Denmark

2. Center for Cardiovascular Research, Department of Cardiology, Aalborg Sygehus, Aarhus University hospital, Aalborg, Denmark

Corresponding author: lineonielsen@hotmail.com

Key-words: team training ; trauma team ; simulation

Background:

The main focus of this study is to examine whether structured trauma team resuscitation training augmented by simulation improves team performance. By improvement means higher efficiency of patient care and improved leadership and communication.

Capella et al in Teamwork training improves the clinical care of trauma patients found improved team performance resulting in improved efficiency of patient care in the trauma bay. The study was based on data from a level 1 trauma center.

So far, no published data have been available from a level 2 trauma center such as Sygehus Vendsyssel, Hjørring. The aim of this study is to describe a quality improvement effort focused on the trauma team. The trauma team consisted of doctors, nurses and medical laboratory technicians with different skill levels and not all with ATLS and ATCN training. Therefore we asked ourselves; Does trauma team training improve team performance in the trauma bay at Sygehus Vendsyssel, Hjørring ?

Design:

This is a quality assurance study in which a number of 27 trauma resuscitations were evaluated in the period June 2011 to April 2012. It is an intervention study based on a pretraining and posttraining design. The trauma team training was conducted two days in October 2011.

The members of the trauma team were all introduced to an evaluation tool which then was used team to assess team performance. This tool was used to obtain clinical data such as time from arrival at the trauma bay to first and second diagnostic imaging and the time gap in between these two, second diagnostic imaging to CT-scan, arrival to CT-scan, CT-scan to removal of spine

board and arrival to removal of spine board. Furthermore, ratings of leadership and communication were assessed.

Comparing pretraining and posttraining resuscitations we calculated means and standard deviations and p values for clinical parameters using the independent samples T-test. All hypotheses have also been tested using the Mann-Whitney test which supported our findings. Logistic regression analysis was used to identify trends regarding leadership and communication. All analysis were made in STATA version 11.2

Results:

The trauma team showed no significant improvement in clinical parameters or ratings regarding leadership and communication.

There was a borderline significant improvement in efficiency when looking at the time from arrival at the trauma bay to removal of the spine board (56,52 minutes – 43,42 minutes, p = 0,064). Also a borderline significant trend in ratings of communication was seen with higher ratings of call-outs (p = 0,068).

Conclusion:

We found no statistic significant improvement in efficiency of patient care and in leadership and communication by structured trauma team resuscitation training. Despite that we believe that trauma team training will improve team performance in the trauma bay resulting in improved efficiency of patient care. We strengthen our argument with the fact of borderline significance in time from arrival to removal of spine board and in higher ratings of call-outs despite a relatively low number of evaluated trauma resuscitations. We therefore recommended that structured trauma team training augmented by simulation should be continued regularly at Sygehus Vendsyssel, Hjørring.

G33:8

Traumatology 2

THE PREDICTIVE VALUE OF THE NICE “RED TRAFFIC LIGHTS” FOR SERIOUS INFECTIONS IN FEBRILE CHILDREN AN INTERNATIONAL STUDY IN DIFFERENT URGENT ACCESS SETTINGS

E Kerkhof (1), M Lakhanpaul (3), S Ray (2), F Buntinx (4), M Thompson (5), MY Berger (6), HA Moll (1), R Oostenbrink (1)

1. General Paediatrics, ErasmusMC-Sophia children's hospital, Rotterdam, Netherlands

2. Paediatric Intensive Care Unit, Great Ormond Street Hospital, London, United Kingdom

3. General and Adolescent Paediatrics Unit, UCL Institute of Child Health, London, United Kingdom

4. Department of General Practice, Catholic University Leuven, Leuven, Belgium

5. Department of Primary Health Care Sciences, University of Oxford, Oxford, Netherlands

6. Department of General Practice, University of Groningen, Groningen, Netherlands

Corresponding author: e.kerkhof@erasmusmc.nl

Key-words: NICE guideline 'Red traffic lights' ; Serious infections ; Alarming signs and symptoms

ERNIE is an acronym for the European Research Network on recognising serious InfEctions. The principal investigators are: Marjolein Berger, Frank Buntinx, Bert Aertgeerts, Monica Lakhanpaul, David Mant, Henriette Moll, Rianne Oostenbrink, Richard Stevens, Matthew Thompson, Ann Van den Bruel and Jan Verbakel.

Background

Fever is one of the most common presenting problem for children at the emergency department. Early recognition and treatment of children with serious infections improve prognosis, however early identification of these patients can be difficult.

We aim to evaluate the discriminatory power of the NICE “Red traffic light” system to identify serious infections in febrile children in different urgent care access units across Europe.

Methods

The "Red traffic light" (RTL) system, based on 18 alarming signs or symptoms, was validated in seven patient populations from primary care and emergency care departments including 6,284 children. Results were stratified for high and low prevalence settings. We distinguished "general" and "disease specific" RTLs. The discriminatory power of one or more RTLs was tested by calculating positive likelihood ratios and plotted in a receiver operating characteristic (ROC) curve.

Findings

In low prevalence settings, general RTLs with high discriminatory power (+LR >4) were "Ill appearance", "Tachypnea", "Chest wall retractions" and "Age <3 months & temperature high prevalence settings, high discriminatory power was observed for general RTLs "No response to social cues", "Ill appearance", "Does not wake or stay awake", and for disease specific RTLs "Non-blanching rash", "Bulging fontanelle", "Neck stiffness" and "Focal neurologic symptoms". Having 3 or more RTLs substantial contributed to prediction of presence of serious illness. The ROC area of all RTLs is high in both low (0.83; 95%CI 0.78-0.88) and high prevalence settings (0.71; 95%CI 0.69-0.73). Adding "disease specific" RTLs to "general" RTLs did not improve diagnostic performance in low prevalence setting.

Interpretation

Almost all "Red traffic lights" of the NICE guideline contain discriminatory power in high and low prevalence settings. "General" RTLs perform better in low prevalence settings than "disease specific" RTLs. The risk of a serious infection increased with the number of positive RTLs. Our results underline the importance of the discriminatory power of individual and combined RTLs. Observed significant differences between predictive value of various RTLs may indicate further improvement of clinical guidelines.

There was agreement that patients age <85 years with moderate, mild or no pre-morbid disease, not requiring residential care, should be eligible for transfer, but no consensus about patients with severe systemic disease.

It was agreed that patients who were alert or had fluctuating conscious level, with a systolic blood pressure (SBP) >70mmHg were suitable, and cardiac arrest was a contra-indication to transfer. There was non-consensus about transfer of unconscious/intubated/ inotrope-dependent patients.

Speed was accepted as important, with agreement the referral should be made on the basis of clinical diagnosis and that CT confirmation prior to transfer is unnecessary (ultrasound assessment desirable).

Hypotensive resuscitation was supported with fluids required for SBP <70mmHg. There was no agreement about use of blood products before or during transfer.

It was agreed a paramedic escort was sufficient for transfer. Disagreement remains on whether specific supporting staff/facilities (e.g. vascular anaesthetists, intensive care beds) need to be available in the receiving hospital prior to transfer and where the patient should be transferred to on arrival (theatre/ CT/ ward).

Conclusion

There is broad agreement about patients who should be eligible for transfer, and the need for speed. Disagreements about patient management issues remain. These findings have formed the basis of guidelines recently approved by the College of Emergency Medicine, Vascular Surgical Society and the Royal College of Radiologists in the UK.

G33:9 Traumatology 2

OPERATION REQUIRED, DON'T YOU AGREE? RESULTS OF A DELPHI CONSENSUS STUDY ON THE TRANSFER OF PATIENTS WITH RUPTURED ABDOMINAL AORTIC ANEURYSM FROM GENERAL HOSPITALS TO SPECIALIST VASCULAR CENTRES

RJ Hinchliffe (1), TP Ribbons (3), JT Powell (2), P Ulug (2)

1. St George's Vascular Institute, St George's Healthcare NHS Trust, London SW17, United Kingdom
2. Vascular Surgery Research Group, Imperial College, London, United Kingdom
3. Emergency department, Dorset County Hospital, Dorchester, United Kingdom

Corresponding author: tamsinribbons@doctors.org.uk

Key-words: Guidelines ; Ruptured abdominal aortic aneurysm ; Transfer

Background and Objectives

Ruptured abdominal aortic aneurysm (rAAA) is an emergency that commonly presents to emergency departments not supported by the vascular surgical facilities required to provide definitive care, necessitating transfer to another unit. There is little evidence about optimum pre-operative and transfer conditions, and much variability in practice between centres across the UK.

This paper explores areas of consensus concerning inter-hospital transfer of patients with a clinical diagnosis of rAAA.

Methods

A three round Delphi questionnaire approach was used among 19 vascular and 6 endovascular surgery and 13 emergency medicine specialists to explore clinical management issues for emergency inter-hospital transfer. Consensus was reported when 70% of respondents were in agreement.

Results

G34:1 Management & ED Organisation

IMPLEMENTATION OF DIAGNOSTIC-THERAPEUTIC GUIDELINES FOR PATIENTS TREATED IN THE OBSERVATION UNIT: ONE YEAR RESULTS

R Marino, A Tua, C D'Anna, A Rossi, R Petrino

Emergency Department, St. Andrea Hospital Vercelli, Vercelli, Italy

Corresponding author: aldotua@gmail.com

Key-words: Observation Unit ; Guidelines ; diagnostic-therapeutic

The Observation Units in the ED have the main objective of prolonging the ED treatment and surveillance of patients, so to lower the risk of rapid discharge and to increase the appropriateness of admissions.

In 2010 our Regional government requested to each ED to write a series of local guidelines, based on the available evidence, on the management of several common pathological conditions that could be treated in the Observation Unit. The objectives were to quantify and evaluate the activity and to standardize the treatment of such conditions with the aim to grant the best outcome and to enhance admission appropriateness. Each guideline contain some outcome indicator and sometime some process indicator, that must be reached within the maximum period of observation that is fixed at 30 hours.

In our ED, after 1 year of implementation of the guidelines, we evaluated the achievement of the objectives given by the indicators, and confronted the same results with what happened in 2009, when the guidelines were not yet implemented. The results are shown in the table. The presented data demonstrate that the implementation of specific diagnostic-therapeutic pathways drives to a better quality of care and a higher appropriateness of admissions, leading in the end to an economical benefit.

G34:2 Management & ED Organisation

CRITICAL CARE IN EMERGENCY MEDICINE: AN IMPORTANT REALITY

G Ruggiano (1), R Camajori Tedeschini (2)

1. Emergency Department, Ospedale S. Maria Annunziata, Florence, Italy
2. emergency department, ospedale s. maria annunziata, florence, Italy

Corresponding author: germana.ruggiano@asf.toscana.it

Key-words: Critical Care Medicine ; emergency department hdu ; medical training

Critical Care Medicine is an important part of Emergency Medicine as critical patients usually present to the Emergency Department and need high assistance well before being admitted to an Intensive Care Unit. Recent evidence indicates an increase in the number of critically ill patients, both in the emergency department (ED) and the intensive care unit (ICU.)

In the management of critical clinical situations such as acute myocardial infarction, acute stroke, multi-organ trauma, or sepsis, is often time constrained to achieve a successful outcome, and the EM physician must have deep knowledge of Critical Care Medicine.

In our Emergency Medicine we created an High Dependency Unit in 2002. Its purpose was to manage and treat critical patients who need a higher level of care than can be given on an ordinary ward, but who don't fit ICU admission criteria. Each year around 350 patients have been admitted to our HDU with a mean mortality rate during HDU stay of 6-7%, and a subsequent intrahospital mortality rate of 15%. The Mean APACHE II score was 17.2 (that is associated with a 26.2 % mortality rate). The mean HDU stay is about 3.5 days. The rate of ICU admission from the Emergency Department was 1.31% before HDU was created, and 0.96% afterwards, a net reduction of 27%. The in-hospital mortality rate in the medical wards was 3.7 % before the HDU, and 2.9% afterwards, a reduction of 22%.

In our reality, the HDU is a critical care area for the first 24-48 hours, but it also an important continuous source of study and cultural training for the Emergency physician.

Emergency physician often have to perform invasive procedure in emergency clinical situations; it is thus necessary that the Emergency physician is technically proficient in these procedures. The HDU is a site where the Emergency physician can learn and hone these technical skills. The HDU also allows an observation of the evolution of critical disease by the Emergency Physician(EP).

hospital can be an important factor in facilitating this flow. For instance, patients who are likely to require a short emergency department visit can often be assigned to low acuity areas. Conversely, patients who are likely to require admission to the hospital may be assigned to areas with such resources as cardiac monitors, and nursing staff. The University of Alberta Hospital in Edmonton, Alberta, Canada is a large tertiary care hospital. The emergency department receives approximately 250 adult and pediatric patients each day. In order to facilitate the flow of patients who are likely to be treated in the emergency department and discharged, a new rapid assessment zone (RAZ) was introduced to the emergency department approximately 6 months prior to the present study. In order to be candidates for this rapid assessment zone, patient's are required to be of low acuity and suitable for treatment and discharge in this area. That is, admitted patients are not to be placed in this area. At present there is a brief guiding document for use by the triage nurse to assist in this decision. The goal of this study is to create an admission rule based on logistic regression to predict which patients are unlikely to require admission to the hospital and are thus suitable for inclusion in the rapid assessment zone. A logistic regression model was fitted to the existing data with the null hypothesis of all coefficients equal to 0 was tested against the alternative hypothesis that some coefficients do not equal 0.

METHODS: In this retrospective cohort study, data from one week of emergency department visits was obtained from the emergency department information system computer. This data included the patient's age, gender, triage score using the Canadian triage assessment score (CTAS), pulse, respiratory rate, Glasgow coma scale, systolic blood pressure, and arrival by ambulance or not. These factors were considered for inclusion, as predictors for the binary outcome measure of admission versus no admission. The observations were used to fit a generalized linear model using a binomial random component and the logit link. Goodness of fit was assessed by the Hosmer-Lemshow statistic, and model adequacy was assessed using the generalized coefficient of determination (R-squared).

RESULTS: Data was available for 2486 emergency department visits. This included 526 admissions and 1960 discharges. Mean age was 48 years. Assigned CTAS was 30 code 1, 484 code 2, 1204 code 3, 615 code 4, and 153 code 5. Only 566 observations included complete data, and these were used to fit the binomial logistic model. Only age, sex, CTAS, respiratory rate, and ambulance arrival had confidence intervals for the coefficients that did not cross 0. Pulse, GCS, and systolic blood pressure coefficients crossed zero. The minimal AIC value of 500.62 for the model included the age, sex, CTAS, respiratory rate, and GCS terms. Notably however, the simpler model without the GCS term had an AIC value of 500.67 – matching the terms that appeared significant in the confidence intervals. Thus, for the sake of parsimony, the final model was fit with only the age, sex, CTAS, respiratory rate, and ambulance arrival terms. The Hosmer-Lemshow statistic was 13.0 (p=0.11). The generalized coefficient of determination (R-squared) was 0.306.

CONCLUSIONS: The present study suggests that the factors of age, gender, triage score, respiratory rate, and arrival by ambulance are the most important for predicting need for eventual admission. This is valuable information, since the current criteria for placement in the RAZ does not include the factor of arrival by ambulance or gender, which should be considered for addition. Although, the Hosmer-Lemshow statistic did not reveal statistically significant lack of fit, the generalized coefficient of determination was relatively low indicating that the model could explain only 30% of the variation in admission rate.

G34:3 Management & ED Organisation

USE OF LOGISTIC REGRESSION TO PREDICT THE NEED FOR ADMISSION AMONG EMERGENCY DEPARTMENT PATIENTS: A MODEL TO PREDICT PATIENT SUITABILITY FOR A RAPID ASSESSMENT ZONE

JM Franc (1), M Verde (2)

1. Emergency Medicine, University of Alberta, Edmonton, Canada
2. Anesthesia and Critical Care, L'Universita' degli Studi del Piemonte Orientale, Novara, Italy

Corresponding author: jeffrey.franc@gmail.com

Key-words: rapid assessment zone ; logistic regression ; prediction of admission

INTRODUCTION: Facilitating patient flow through the emergency department can sometimes be difficult administration task. The ability to predict which patients will require admission to the

G34:4 Management & ED Organisation

PATIENTS' FLOW IN EMERGENCY DEPARTMENT BE INNOVATIVE, BE SIMPLE

A Wazzan

Emergency Department, King Abdulaziz Medical City, National Guard Health Affairs, Jeddah, Saudi Arabia

Corresponding author: dramwaz@hotmail.com

Key-words: Patient flow ; overcrowding ; innovation

Overcrowding is a universal problem that faces most health care systems. Although it is a hospital wide problem, emergency departments' patients and staff are the first to be affected. Studies have proved the relationship between overcrowding and negative outcomes in patients' care

Hospital wide changes are a major necessity in managing emergency overcrowding. Decision makers in any health care facility should unblock the outgoing end at the hospital to allow better efflux of patients out of the emergency department. "Change should start from within" this is a mainstay of any success. Emergency administrators should work on their departments to initiate the success story. Emergency patients' flow is the backbone process of any emergency department. Identifying the process with areas of stagnation, weakness, and strength is the first step towards improvement.

The innovative ideas come to improve the baseline patient flow. Thinking out of the box is the bottom line. In our department, we adopted 3 ideas all at once: direct bedding, Vertical vs. horizontal patient care, Rapid Assessment zone (RAZ). Each of these changes had its own advantages and disadvantages. The process overall had become better but with many challenges. Changing culture of patients and health care provider is a major one.

Quality indicators, patient and staff satisfaction, boarding patients statistics and higher administration feedback were all monitored to assess the progress of the change and the success of the project. The whole experiment was a success and team spirit was seen on many occasions. I highly recommend adopting any of these protocols or any combination to improve the patient flow in any emergency department. This should be tailored to the department and hospital needs.

Settle the actions needed to improve the safety of the health personnel working in the Emergency Departments through the analysis and comparison of the episodes of violence in three different settings; a level III Emergency Department in a country area (Borgosesia, Italy), a level II ED in an urban area (Vercelli, Italy), both managed by the same local Health Trust (ASL "VC") and a level I Emergency Department in a metropolitan area (Turin, Italy), all in the same administrative region (Piedmont).

MATERIALS AND METHODS

A questionnaire consisting of 22 items derived from a larger validated 95 items one (ILO/ICN/WHO/PSI Workplace violence in the health sector survey, Geneva 2003) was developed, weighted and administered in June 2011 to 225 health professionals, 172 (76,4%) of whom responded. The results of 169 questionnaires returned and considered valid were analyzed.

RESULTS

13% and 17,8 % (p NS) respectively of health care professionals of the level I Emergency Department and local Health Trust reported suffering physical assault whereas 72% and 74,7% (p NS) cited a verbal assault at least in the last year.

The most of aggressions comes from relatives or caregivers with a significant difference between local Health trust and metropolitan EDs (74,4% vs 54% respectively p< .001). The majority of health professionals are worried about physical and verbal assault, and 70% of them believe education is fundamental to better manage the issue.

Interestingly almost all of health professionals, irrespectively from ED, declare to know the existence of an assault reporting procedure, but only 20 % really apply to.

CONCLUSION

A large rate of professionals has suffered both physical and verbal assault without any significant difference between country, urban and metropolitan social environment.

Education is believed to be a key element to raise health professionals safety and it should take into account two fundamental aspects: a correct relationship with the patients and their caregivers and self defense techniques.

Reporting the assaults according to local procedure is important for correctly assessing the problem leading to right preventing strategies

G34:7 Management & ED Organisation

G34:6 Management & ED Organisation

ANALYSIS, COMPARISON AND MANAGEMENT OF ASSAULTS TO HEALTH CARE PROFESSIONALS IN 3 DIFFERENT EMERGENCY DEPARTMENTS

G Alberto (1), L Desimone (1), T Ferraris (2), M Rosso (3)

1. Emergency Department, ASL VC, Borgosesia, Italy
2. Health Department, ASL VC, Borgosesia, Italy
3. Emergency Department, A.O. Ordine Mauriziano di Torino, Turin, Italy

Corresponding author: fgw@fastwebnet.it

Key-words: assault ; management ; health care professionals

Health professionals are likely to be victims of both physical and verbal assault more than other workers. However, both in Italy and internationally, there has been an inadequate categorization of the incident types which staff are exposed to, particularly in Emergency Departments, leading to greater difficulties in defining and comparing research results.

OBJECTIVE

SHORT TERM MORTALITY AFTER DISCHARGE FROM THE EMERGENCY DEPARTMENT

OS Gunnarsdottir (1), V Rafnsson (2)

1. Office of Education, Research and Development, Landspítali University Hospital, Reykjavik, Iceland
2. Department of Preventive Medicine, University of Iceland, Reykjavik, Iceland

Corresponding author: vilraf@hi.is

Key-words: Non-causative diagnosis at discharge from the emergency department ; Eight, 15, and 30 days follow up after discharge home from the emergency department ; All cause mortality and suicide

Introduction: Death within short time after discharge of the patient from the emergency department (ED) is an alarming outcome. Symptom-based or non-causative diagnoses are common in the ED, and approximately 20% receive such diagnosis when discharged home from the ED. The aim was to study the association of all cause death and selected cause of death within 8, 15, and 30 days after discharge with non-causative diagnosis at discharge.

Methods: The source of data was computer records on patients 18 years or older who were discharged from the ED during the years 2002-2008, comprising 227 097 visits. Vital status was ascertained

for all patients visiting the ED by record linkage of personal identifier with nation-wide death registry. The follow-up started on date of each discharge and ended on date of death or at end of the 8, 15, and 30 day, which ever came first. The patients with non-causative diagnosis (International Classification of Diseases: Symptoms, sign, abnormal findings, and ill-defined causes, R00-R99) were compared with those with other diagnosis at discharge in Cox-model and hazard ratio (HR) and 95% confidence interval (CI) calculated, adjusted for gender and age.

Results: Non-causative diagnosis had been given to 14% of those died within 8 days after discharge. Altogether 156 patients had died within 8 days after discharge or 0.07% of the total number of visits. The crude mortality per 100 000 was 68.7, (95%CI 58.5 to 80.6) for death within 8 days, 116.2 (95%CI 102.5 to 131.8) within 15 days, and 209.6 (95%CI 190.9 to 230.1) within 30 days. Analysing death within 8 days, the HR was higher for men than women and increasing age was significantly associated with high mortality. The HRs of all causes of death within 8, 15, and 30 days for patients with non-causative diagnosis were 0.64 (95%CI 0.41-1.01), 0.70 (95%CI 0.50-0.99), and 0.82 (95%CI 0.65 to 1.04) respectively, as compared with patients with other diagnoses, adjusted for gender and age. The HRs within 30 days among those with non-causative diagnosis at discharge were 1.48 (95%CI 1.03 to 2.13) for malignant neoplasm, and 3.72 (95%CI 1.44 to 9.60) for suicide, and 0.50 (95%CI 0.32 to 0.79) for diseases of the circulatory system as compared with patients with other diagnoses. Conclusions: Death within 8 days after discharge home from the ED is a rare event. The association of non-causative diagnosis at discharge with early death can be used to compare the performance of one ED with that of other EDs. Patients discharged with non-causative diagnosis had increased 30 days mortality due to malignant neoplasm, and suicide; and decreased 30 days mortality due to diseases of the circulatory system. Death shortly after discharge of patients with non-causative diagnosis may indicate a misjudgement of the patients' condition at the time of discharge.

fracture on presentation. There were 93 male and 143 females. The mean age was 53 yrs. All patients with traumatic elbow effusion but no fractures were included in the study. It was conducted in University hospital Birmingham from Nov 2011 to April 2012. Patients <16yrs, with open elbow injuries, olecranon bursitis and known RA, were excluded.

Results

During the 6 months period we had total 643 pts booked with upper arm injuries. 280 pts had elbow injuries and under went X rays. Among those 86 had positive fat pads on x rays, 62 pts had confirmed fracture but 24 pts had only positive fat pad. 14 pts (58%) were discharged from ED with GP follow up. 10 pts (42%) were followed up in the fracture clinic and 6 pts (60%) among those were discharged without further investigation. Only 4 pts (40%) were thought to have fracture but were discharged with same treatment (collar and cuff sling) and no follow up.

Conclusion

Norell(1) in 1954 first time discussed radiographic soft tissue alterations (fat pad sign) following elbow trauma. This has led to the controversy whether there is any significance of positive elbow fat pad signs in the absence of obvious fracture and would a repeat x ray affect the management. Early reports (3, 4) suggested that joint effusion, in the absence of an obvious fracture, was associated with a high incidence of occult fracture. Our results clearly suggest that the incidence of finding an occult fracture with fat pad is very low (16%). Still it doesn't effect further treatment and follow up. All patients had the same treatment and follow up irrespective of suspected occult fracture.

Therefore clinical bottom line is that positive fat pad doesn't always mean an occult fracture and even then it doesn't affect the further management.

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G34:8

Management & ED Organisation

DOES RAISED FAT PAD ALWAYS MEAN AN OCCULT ELBOW FRACTURE?

M Majeed, J Smith, D Yeo

ED, QEHB, BIRMINGHAM, United Kingdom

Corresponding author: azam.majeed@uhb.nhs.uk

Key-words: Fat pad sign ; Occult elbow fracture ; Further management

Background

Radiological diagnosis of elbow fractures can sometimes be very challenging when the only finding is raised fat pad. The clinical significance of fat pad has always been controversial. Previous studies have suggested that when fat pads are raised, a fracture is likely to be present (1). Other studies have suggested that all patients with traumatic elbow effusion but no evident fracture should undergo repeat elbow x rays 7-14 days later (2). According to our local survey involving ED physicians, radiologists and orthopaedists all of them treated raised fat pads as fractures until proven otherwise.

Objective

To find out the relation between fat pad sign and occult elbow fracture.

Patient & Method

We did a retrospective analysis of the patients who presented with elbow injuries and were found to have raised fat pad sign but no

POSTER PRESENTATIONS

P001 Administration & Healthcare policy

SATISFACTION LEVELS OF THE PATIENTS ADMITTED TO EMERGENCY CLINIC OF A STATE HOSPITAL

FE Topal (1), F Topal (2), E Şenel (3), C Mansuroğlu (4)

1. Emergency Medicine, Çankırı State Hospital, Çankırı, Turkey
2. Gastroenterology, Çankırı State Hospital, Çankırı, Turkey
3. Dermatology, Çankırı State Hospital, Çankırı, Turkey
4. Dermatology, Maltepe University, İstanbul, Turkey

Corresponding author: Mr Senel Engin (enginsenal@enginsenal.com)

Key-words: patient ; satisfaction level ; emergency clinic

Emergency departments of hospitals are obliged to accept patients and dedicated to provide uninterrupted public service. The objection of this descriptive and prospective study was conducted to evaluate the satisfaction levels of the patients who admitted to a public hospital emergency department between 01 January 2011 and 31 December 2011.

440 patients older than 16 years were enrolled in the study and all of them signed informed consent form. A total of 32 questions (31 close and 1 open-ended) were included in the questionnaire. Paramedics participating in this study were informed and educated before the onset of the study about the study process.

According to the survey results a total of 95 % of the patients were satisfied with the physical conditions of the emergency clinic of our hospital. In general, 97 % of the patients were contented with our emergency clinic.

Patient satisfaction surveys play a leading role on the planing, delivery and improvement of health services. Periodical implementation of these surveys would be useful to provide increase the quality of the services.

RESULTS: 26/80 plastic surgeons responded to the survey (32.5%). Half take ED call, all of whom are required to do so by the hospital where they have privileges. Fewer years in practice is a significant predictor for taking call ($p = 0.0288$). The single statistically significant reason for reluctance to take call ($p=0.024$) was "being consulted for cases where I don't feel my services are needed" (31% who take call (TK), 89% who don't (NTK)). Financial reasons were the only statistically significant inducements to taking call. 100% of TK and 75% of NTK surgeons would take call voluntarily if they were paid a stipend ($p=0.0061$), 100% TK and 75% NTK would take call voluntarily if they were guaranteed payment for uninsured patients ($p=0.0113$), and 92% of TK and 50% of NTK would take call voluntarily if their malpractice insurance were covered by the hospital.

CONCLUSIONS: In our State, plastic surgeons would be more available to take call if they were consulted more selectively and if they were offered better financial compensation.

LIMITATIONS: The study was performed in one State. The response rate of 32.5% is low, but is standard for a survey study.

P003 Administration & Healthcare policy

DISPARITIES IN HEALTHCARE RESEARCH: HOW THIS IMPACTS THE WAY YOU PRACTICE MEDICINE

SH Bowman (1), UA Ezenkwele (2), SL Heron (3), L Moreno-Walton (4)

1. Emergency Medicine, John Stroger Hospital, Chicago, United States
2. Emergency Medicine, Woodhull Medical and Mental Health Center, Brooklyn, United States
3. Emergency Medicine, Emory University, Atlanta, United States
4. Emergency Medicine & Research Genetics, Louisiana State University Health Sciences Center, New Orleans, United States

Corresponding author: Mme Moreno-walton Lisa (DoctorMoreno@gmail.com)

Key-words: Research ; Healthcare disparities ; Policies and practice

Objectives: Best practices are based on research that has always and is still predominantly conducted on Caucasians. Due to genetic and cultural differences, these practices are not best for all patients and may even be harmful. Underrepresented minority (URM) researchers are under-funded in bench, translational and clinical research. This impacts the diseases which are researched. Research has been historically biased toward the majority population, resulting in the establishment of best practices which cannot be successfully applied to all populations. Physicians need to question the reliability of applying general practice standards to minority populations.

Methods: A thorough review of the current literature was undertaken to review health status outcomes for multiple disease processes as well as to determine the populations which were studied to develop standards of care and best practice standards for the most common disease processes, to determine the funding patterns of US national organizations and agencies with the largest research funding budgets, and to review the disease entities most frequently funded, ease of approval by Institutional Review Boards, and clinical trials enrollment patterns.

Results: In all disease processes except suicide and drug overdose, health status outcome is worse for URMs. Research studies are almost always performed on the majority population and on diseases where they predominate as patients. Based on their percentage in the US population, URMs are vastly underfunded as researchers by national organizations and agencies. Studies focusing on disease processes which are most common in minority

P002 Administration & Healthcare policy

A STATE-WIDE SURVEY INVESTIGATION OF THE REASONS FOR LACK OF AVAILABILITY OF PLASTIC SURGEONS FOR EMERGENCY DEPARTMENT CALL

S Kaiser (1), L Moreno-Walton (2), L Myers (3)

1. medical student, Louisiana State University Health Sciences Center, New Orleans, United States
2. Emergency Medicine & Research Genetics, Louisiana State University Health Sciences Center, New Orleans, United States
3. Biostatistics, Tulane University School of Public Health & Tropical Medicine, New Orleans, United States

Corresponding author: Mme Moreno-walton Lisa (DoctorMoreno@gmail.com)

Key-words: Consultations ; Plastic Surgery ; Availability

BACKGROUND: Changes in the United States healthcare system have resulted in a lack of specialist availability for Emergency Department (ED) call. Plastic surgery is the specialty that the greatest proportion of ED's report difficulty in obtaining.

OBJECTIVE: To determine the reasons that plastic surgeons are reluctant to take ED call.

METHODS: This is a prospective survey study. Using SurveyMonkey.com, a link to a nine question multiple choice survey was emailed to plastic surgeons listed in the American Society of Plastic Surgeons website as practicing in our State. They were asked about their call status, reasons for taking or not taking call, and inducements to take call. Non-responders were sent another email 2 weeks later encouraging response to the survey.

populations are less likely to be funded or to receive IRB approval. Patients who consent to studies are more likely to be Caucasian non-Hispanics, resulting in a significant underrepresentation of Hispanics and African Americans in outcome measures reporting. Conclusion: Physicians should not de facto apply current best practices to the evaluation and treatment of URM patients. Efforts must be made to increase the training of URM investigators and the employment of the concept of justice in research, a tenet of the Helsinki Accord and the Belmont Report.

P004 Administration & Healthcare policy

EMERGENCY ROOM OBSERVATION UNIT –OSPEDALI RIUNITI DI PINEROLO EXPERIENCE

M. Civita (1), S. Ferrero (1), C. Condo' (1), E. Laurita (1), S. Tedeschi (1), E. Mana (1), MC Sfasciamuro (1), E. Funari (2), GA Cibinel (1)

1. Emergency Department, Ospedali Riuniti di Pinerolo, Pinerolo (TO), Italy
2. Nurse Department, Ospedale S. Luigi, Orbassano (TO), Italy

Corresponding author: Mr Laurita Emanuela (emanuela.laurita@alice.it)

Key-words: emergency room observation unit ; emergency department ; healthcare policy

In Italy the Emergency Room Observation Unit (EROU) has been introduced since 1990. Piedmont regional decree defines EROU as a functional unit within the complex structure of Emergency Department (ED), an intermediate solution between the discharge and the admission. In Pinerolo ED, began the activities of EROU in January 2006 (specific for the city and rural area, with 136,000 inhabitants. - 1345Km2): in 2011 the number of patients admitted in ED was 46,383. The hospital has an Emergency Medicine Unit managed by medical and nursing staff shared with the adjacent ER with 6 highly monitored beds.

In EROU there are internal protocols shared for the management of the major diseases.

in our working reality there are observation unit for specialistic diseases (urology, surgery, orthopedics, neurology, nephrology) within the hospital wards. The patients are managed by specialists with the supervision of ER staff.

AIM

Aim of the study are the evaluation of EROU (in ED and in specialistic wards), the comparison among hospitalization rates in the periods before and after Department of Emergency Medicine-EROU inauguration, and the main diseases treated in EROU

Data on the activities of EROU have been retrospectively, including period of recovery, the number of patients treated, using the informatic system of the hospital.

RESULTS

The total number of EROU is an average of 3996/year. The rate of admissions in EROU has been constant for years (9% of the patients in ER), the percentage of discharge after observation has not changed in time (70%)

Instead if we analyze instead the rate of hospitalization in the year prior to the opening of EROU, we can see a significantly reduction (from 12.8% in 2006 to 11.2% in 2011, $p < 0.01$). The diseases are mostly treated in EROU: cardiac disease (18.2%), abdominal (13.7%), respiratory (13%), trauma (11.1%), neurological (6.6%), metabolic disorders and poisoning (3.4%). The average time of hospitalization is between 6 and 36 hours.

CONCLUSIONS

The experience of EROU in Pinerolo has a significant impact in reducing the number of hospital admissions and inappropriate hospitalization. These rates seems to be stable over time despite

the high turnover of ED medical and nursing staff and the increased number of patients admitted in ER every year. It may be relevant to verify the effectiveness of EROU also in other situations, with and without a dedicated staff, sharing to a national level, the admission criteria and guidelines for a correct application of the unit potentialities.

P005 Administration & Healthcare policy

PROFILES OF THE PATIENTS WHO APPLY TO THE PRIVATE HOSPITAL EMERGENCY ROOM

S OZDINC

Emergency Department, Afyon Kocatepe University Medical Faculty, Afyonkarahisar, Turkey

Corresponding author: Melle Ozdinc Serif (drseri03@hotmail.com)

Key-words: emergency room ; hospital ; patients profile

Introduction: Several patients apply to an emergency room (ER) in which provide continuous care, however there is a gap in knowledge on the overall role and characteristics of private hospital's emergency care in Turkey. The first application centers are the public hospitals, the second ones are the private hospitals and the last ones are university hospitals, respectively. When the patients who apply to ER were examined, we noted that many of them were not emergency. The patients who are not urgent cases adversely affect action of the ER. There are several reasons of excessive patient increase in ER. They are short waiting time, rapid investigation, therapy and consultation, and whole day work. We aimed to determine the profile of emergency application in emergency rooms (ERs) of private hospitals and to identify patient number, hospital preference, and system factors during a month.

Material and methods: The data on 1175 patients who applied to ER had been collected, compiled and analysed from a private hospital archive records, retrospectively for a month period between 01-31.10.2010. Demographical features, application date, medical interventions in ERs, consultations, rates of hospitalization and discharge and also diagnosis of the patients were analyzed. The SPSS 18 program were used in for evaluation of the data.

Results: 44% of the patients who apply to the hospital were men. It was detected that, they frequently applied to hospital during Sunday at 16 PM to 24. The most diagnosed diseases were infections, abdominal pain, acute pain. Injccction, resuscitation, sture, observation were performed to 40% of the patients in the ERs. The consultation rate was 5%, hospitalization rates at servis was 3.6% and also at intensive care unit was 0.3%. The most hospitalization reasons were chest pain, acute abdomen, metabolic problems, respectively Ratio of the patients with red code was 4%, with yellow was 32% and green was 64%.

Conclusion: The most of the patients who apply to ER had not emergency. They should highly probable apply to the family medicine or the other policlinics. So the patients without emergency may frequently increase on work load of ER. This problem may solve by way of create educated and conscious patients, efficient family medicine practice, regular policlinic care, open- space area etc.

P006

Administration & Healthcare policy

THE EVALUATION OF EMERGENCY OVERCROWDING AT COMMUNITY HOSPITALS OF MINISTRY OF HEALTH IN TURKEY

O Koc (1), B Cander (2), M Ergin (2), M Okumus (3), FE Topal (4), A Kucuk (5), G Bayraktar (5)

1. General Manager of Treatment Services, The Turkish Ministry of Health, Ankara, Turkey

2. Emergency Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

3. Emergency Department, Sutcu Imam University Medicine Faculty, Kahramanmaraş, Turkey

4. Emergency Department, Cankiri Community Hospital, Cankiri, Turkey

Corresponding author: Mr Ergin Mehmet (drmehtemtergin@gmail.com)

Key-words: Overcrowding ; Emergency Care ; Quality Management

BACKGROUND: Emergency department (ED) overcrowding is defined as situation in which need for emergency care is much more than sources of ED. ED overcrowding is a serious problem for both healthcare professionals and patients. **AIM:** Treatment Service Headship of Turkish Ministry of Health (TMH) applied 'Questionnaire of Evaluation of Emergency Care in Community Hospitals of TMH' to patients/patients' relatives and healthcare professionals simultaneously to address factors causing ED overcrowding correctly and find solutions. **MATERIAL _ METHOD:** This study was done in 53 different community hospitals of A1,A2 and B group at 12 different cities between 23 March – 8 April 2011. There were 1005 patients/patients' relatives and 334 health care professionals as participants. This questionnaire was applied by face to face interview and by an independent research company. **RESULTS:** while %43.5 of 1005 participants were patients, 56.5% were patients' relatives. The most common complain was abdominal pain, nausea and vomiting. There were 57% of participants thinking that 'he/she was in emergency'. The rate of patient/patient relative who admitted to ED four times or more in a year was 40.3%. Patients/patients relative recommended that there should be health care source other than ED especially after 17.00 o'clock whereas majority of health care professionals that emergency care shouldn't be free in price and must be charged. **CONCLUSION:** This overcrowding study is important since it was the first one made at community hospital of TMH. New regulations according to these results are expected and will be planned.

acutely ill patients and decreased response times². Delays due to ambulance diversion as well as overcrowding of transportation and EDs are major doubts on access to lifesaving care³. Because of limited resources of public health care we need more effective emergency care to answer to the growing demand of patients⁴. Recent studies have mainly reported on different mathematical theories, ambulance locating systems and tools to shorten response times⁵.

Objectives. Our aim was to study whether focusing ambulance administration to one center is able to immediately reduce ambulance response times for the most severe emergency cases (group A and B calls) in the area of Riihimäki, Southern Finland.

Materials and Methods. Riihimäki area consists of three municipalities with together 45 970 in-habitants. The total area is 1182 square kilometers. Before 2012, there were three different organizations offering ambulance services. In the beginning of 2012 major reorganization of field emergency care took place. All ambulance services were focused under one administration lead by head of ED. A simple one-line organization was built together with Central Hospital of Kanta-Häme and the Rescue Department of Kanta-Häme. In this phase no resources to ambulances or personnel were added. Main goal was to even response times throughout the area.

This study is a retrospective analysis of the most critical ambulance responses (groups A and B) in the Riihimäki area. Using a national database, all ambulance response times in the severity groups A and B were collected concerning the first three months in 2012 and compared to those of the preceding three months. Data was analyzed by SPSS for Windows 20 using a non-parametric Mann-Whitney U-test. The results are presented as mean (SEM).

Results. Numbers of the 3-month emergency ambulance responses were 418 and 452 in 2011 and 2012, respectively. In the immediate 3-month follow-up period an increase on demand was revealed without significant change in population. A non-significant decrease of the average re-sponse time was noted: 533 (28) vs. 528 (20) seconds.

Discussion. Our short observational study did not reveal any significant change in ambulance response times despite of some trend of decreasing dispersion. Follow-up period was during winter time when weather changes such as snowing, snowstorms or cold (up to -30oC) might have had significant effects on transportation and response times. Since data was collected immediately after reorganization, possible benefits of shared education and development of personnel or the forthcoming added resources were not to be evaluated.

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P007

Administration & Healthcare policy

REORGANIZING AMBULANCE SERVICES - IMMEDIATE EFFECT ON AMBULANCE RESPONSE TIMES

M Niskanen (1), M Saarinen (3), AK Palomäki (2), VP Rautava (1), A Palomäki (1)

1. Department of Emergency Medicine, Kanta-Häme Central Hospital, Hämeenlinna, Finland

2. School of Management, Tampere University, Tampere, Finland

3. Ambulance Services, Kanta-Häme Rescue Department, Hämeenlinna, Finland

Corresponding author: Mr Rautava Veli-pekka (veli-pekka.rautava@kshsp.fi)

Key-words: ambulance services ; response time ; reorganization

Background. Ambulance response time is considered to be a crucial factor for patient survival in emergency cases and it can be held as a qualitative indicator of emergency medical services¹. Earlier studies have revealed an association between improved survival of

P008

Administration & Healthcare policy

EARLY DETECTION OF CRITICALLY ILL PATIENTS IN A CLINICAL SETTING: POSSIBLE MEDICAL IMPACT ON HOSPITAL ORGANIZATION

B Claessens, M Smet, C Boone, B Devriendt, P Dillen, J Stroobants

Emergency department, ZNA Middelheim, Antwerp, Belgium

Corresponding author: Mr Stroobants Jan (jan.stroobants@zna.be)

Key-words: modified early warning system ; ill detection ; safety organisation

Introduction:

The risk of mortality on an Intensive Care Unit (ICU) is related to the patient's medical condition (past and current). Mortality becomes higher when critically ill patients are not detected early on the hospital wards, or not treated in a timely correct fashion. To address this problem an early warning system was introduced in our hospital in 2009.

With a retrospective analysis we tried to address some important medical organization problems in the hospital.

1/Can a higher Modified Early Warning System (MEWS score) predict the admission on an intensive care ward and the duration of hospital admission?

2/What is the relationship between the maximum MEWS score and the rate of mortality during an admission and also the rate of mortality within 1 year after discharge?

3/ By using the MEWS scores: Are the call outs of the Medical Emergency Teams (MET) within the hospital predictable? And can these call outs, and the consequent transfer to ICU, be avoided?

Methods:

A retrospective study was conducted after the introduction of a MEWS scoring system on 4 surgical wards. Hospital data (MEWS scores, the duration of admission, the ICU admissions, the in hospital mortality, the re-admission rates and the mortality after discharge) was analyzed between 01/06/2009 and 31/12/2010. During the same period, data for the MET call outs on these wards, were also analyzed, together with the data for a same period prior to MEWS score introduction.

Results:

The hospital data from a total of 147 patients were analyzed. A high MEWS score was clearly related to a higher rate of admission to the ICU, although 67 patients with a high MEWS score remained on their ward. Patients with an increased MEWS score had an almost exponential rise in duration of hospital admission. A very low mortality was observed during the first admission (2 patients), although 23 patients died within 1 year. The clinical condition of patients who were treated by the MET, in terms of speed in clinical deterioration, was clearly different from those patients who were admitted to the ICU, and very difficult to predict with the MEWS score.

Conclusion:

As expected, patients with a high MEWS score were more critically ill, and half of our patients needed admission to the ICU. The rest could be managed on the ward (or had received a DNR order on the ward). Mortality was mainly after hospital discharge, which could have a major impact on medical follow up.

MET call outs for ward patients could not be predicted by MEWS score.

P009

Administration & Healthcare policy

BLUE CODE, EMERGENCY, IN- HOSPITAL ARREST BLUE CODE: IS IT A REAL EMERGENCY?

S. E. Eroğlu, O. Urgan, A. Denizbaşı, O. Onur
Emergency department, Marmara University , Istanbul, Turkey

Corresponding author: Mme Onur Ozge Ecmel (ozberkozge@gmail.com)

Key-words: Blue Code ; Emergency ; in-hospital arrest

Introduction: Cardiac arrests in hospital areas are common and delays in treatment are associated with lower survival.. As a result, hospitals implement rapid response teams called as 'Blue Code Teams' to reduce preventable in-hospital deaths. Education regarding the rapid response team program had been provided in all hospital settings in Turkey, but true 'Blue Code' activation is rare, it is abused by medical personel in practice. This research aimed to search the cases of wrong blue codes and reasons of abuse.

Material and Methods: Our hospital implemented a rapid response team composed of 2 experienced nurses and an emergency physician or an intensive care unit doctor to respond to all calls for hospital arrests except in intensive care units and emergency room. A 'Blue Code' was defined as any patient with an unexpected cardiac or respiratory arrest requiring resuscitation and activation of a hospital-wide alert. Education regarding the rapid response team program had been provided through presentations to all hospital personels, then data from all 'Blue Code' activation collected for 3 months.

Results: Total 38 'Blue Code' activation were announced in 3 months. The last diagnosis of the patients were cardiopulmonary arrest (3 cases), conversive disorder (18 cases), syncope (6 cases), presyncope(11 cases). Code activation was done by doctors in 76% of all cases, others were by nurses and others. The most common reasons of wrong alarm were rush of the patient's relatives and need for help.

Discussion: The optimal triggers for rapid response team activation have not been rigorously determined. Our study findings show that more research is needed to establish the overall effectiveness, and optimal implementation of rapid response teams.

P010

Administration & Healthcare policy

A QUESTION OF TRUST?

JC. Real (1), B. Gimenez (1), E. Valero (1), S. Sanchis (2), J. Armas (1)

1. Emergency Department, Hospital del Vinalopó, Elche, Spain.
2. Management department, Hospital del Vinalopó, Elche, Spain.

Corresponding author: Mr Real López Juan Carlos (creallopez@hotmail.com)

Key-words: trust and satisfaction ; Emergency department ; Physicians

Objective

The main objective of the current study was to generate and promote trust (confidence) amongst patients and staff within the Emergency departments (ED) in the hospital and Out of Hours Primary Care Services of the health service department Elche-Crevillente- Aspe.The promotion of trust was fundamental after the inauguration of this new health service department in an area with an already existing and well established health service

department compromising of the General Hospital of Elche and where patients have free access and choice within this close geographical area. Funding of the health service in this area is by capitation and financial compensation is stipulated for health services and resources used by patients attending the other health department thus making it imperative to achieve patients trust and attract patients to attend from the other health department. Patients trust is also important to avoid unnecessary hospital admissions and reduce second opinions and the number of complaints. There were four reasons to choose the ED for the following study: it is the least regulated port of entry for patients; it combines hospital and community staff; it affects all kinds of patients; and there is direct economic impact.

Material and Methods

AD Hoc Investigation, analyzed two patients sample by direct interview technique (telephone) on a structured questionnaire measuring perceived patient's trust and determining a combined perceived patient's trust indicator. The first sample included 300 patients (200 SUH and 50 in each CAP) that attended the Emergency Department prior to interview in December 2010 and a second sample of 300 patients in June 2011.

The margin of error in the overall sample was $\pm 5.77\%$, in the hospital sample $\pm 7.07\%$ and $\pm 10\%$ in the CAP sample with a confidence interval of 95.5% (two sigma) and for $p=q=50\%$. (the figures for each CAP are estimates as both samples were too small) Statistical analysis was performed using the Student's t-test, comparing the two different samples. Manpower Salud, examined the level of trust within the organization through personal interviews with managerial staff having a direct impact on the functioning of the ED, and two focus groups including health department managers and representatives of health care professionals of the ED. The development of this project followed a 9 step approach: Implementation of the model, principles and values, patient's expectations, generation of harmony with the patients, identification of problems and needs, establish decisions and agreements, attention to and resolution of complaints, management of conflicts and good practice in management of trust. Each step was discussed and formulated by a specialized task force of 20 individuals including various health care and non-health care professionals.

Results

After establishing this project a post intervention survey was conducted to evaluate the external perceived patient's trust indicators, showing an improvement in all studied quality indicators. Emergency attendances increased from 5000 initially (June 2010) to 11000 in April 2011. Patient attendances in other departments decreased from 1100 to 400, between the months of June 2010 and March 2011, resulting in an economic saving of 80000€. Regarding complaints, a decreasing trend was observed from 20 complaints in Oct 2010 to 7 in April 2011 in our ED and from 3 complaints in Dec 2010 to none in March 2011 at the Out of Hours Primary Care Services.

Discussion

The novelty of this present study shows that for the first time a health service department opts for a humanistic based project improving personal qualities to generate patient's trust. This has been promoted by the management, seeking improvements in health attendances and decrease in the economic spending.

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P011

Administration & Healthcare policy

IS WHOLE BODY CT SAFE AND COST EFFECTIVE IN MANAGING MT (MAJOR TRAUMA) PATIENTS IN EMERGENCY DEPARTMENT (ED)?

J Kayani, M Majeed, G Plant, J Rasquin, D Yeo, U Salanke
ED, QEHB, BIRMINGHAM, United Kingdom

Corresponding author: Mr Majeed M Azam (azam.majeed@uhb.nhs.uk)

Key-words: Whole Body CT ; Major trauma centre ; Most effective and safe

In all patients with multi system blunt trauma (significant mechanism) whole body CT (WBCT) is safe and cost effective.

Design

Retrospective observational study.

Setting

Level 1 Major trauma centre (Queen Elizabeth Hospital, Birmingham).

Patients

All patients admitted following blunt multi system trauma from April 2011- April 2012 were included in the study.

Intervention

Whole body computed tomography (CT of the head, cervical spine, chest, abdomen, and pelvis), with the following inclusion criteria: (1) motor vehicle crash at greater than 35 mph, (2) falls of greater than 15 ft, (3) car vs. pedestrian, (4) assaulted with a depressed level of consciousness. (5) Ejection from vehicle. Radiological findings and changes in treatment based on these findings were recorded.

Main Outcome Measure

- Alteration in the normal treatment plan as a direct result of CT scan findings.
- How much money was saved?

(These alterations include early hospital discharge, admission for observation, operative intervention, and additional diagnostic studies or interventions).

Results

452 patients with mean age of (55yrs) underwent whole body CT during the 12-month observation period, of which 336 (74%) patients had a positive scan. This had lead to change in their further management plan. 116 patients were discharged home as whole body CT was negative and physiological parameters were stable during there 4hrs stay in ED. This saved around £38000 by spending only £20000.

Conclusion

Improvements in CT scan technology have brought about new paradigms in the use of CT scans in trauma. It's faster, cheaper and more accurate. Its use is more mechanism driven then just on physiological parameters. This method of CT scanning has been both welcomed and encouraged in current climate. By instituting a protocol of liberal scanning and studying the results of a mechanism-driven approach for CT scanning, we changed treatment plan for 74% patients, saved £93000 and unnecessary admission as well. On the other end if we would have just observed these 116 patients for 24 hrs we would have spent more money, resources and still might have done CT at the end. Therefore whole

body CT should be encouraged on arrival in patients with MT for all these valid reasons.

P012 Administration & Healthcare policy

QUININE CAN MAKE YOU BLIND!

V Gupta, J Kayani, M Majeed, H Shahzad
ED, QEHB, BIRMINGHAM, United Kingdom

Corresponding author: Mr Majeed M Azam (azam.majeed@uhb.nhs.uk)

Key-words: Quinine ; Blindness ; Over dose

Introduction:

Quinine is a commonly used drug in travellers to prevent malaria and in elderly people for night cramps. It is rapidly absorbed with therapeutic half life of 7-11 hours which can prolong to 26hrs in cases of over dose. The known general side effects are nausea, vomiting, tremor, tinnitus and deafness. The other system related problems are cardiac arrhythmias, renal failure and visual disturbances which are dose dependent. The minimum dose leading to fatalities has been reported as 6g (1). In a study of 48 cases, the mean time from ingestion to onset of minor symptoms was 3.5 hours, blindness developed somewhat later, after a mean of 9 hours (2).

Case report

A 52 yrs old gentleman presented to ED with blindness of both eyes. He had taken an overdose of co-codamol and quinine tabs last night with intention to kill himself. All his base line observations and system examination was normal. The only positive finding he had was dilated both pupils and complete loss of vision(both eyes). Fundoscopy showed pale retinae.

On searching the toxbase we found out that quinine can lead to loss of vision as it can cause vasoconstriction of retinal/ciliary blood vessels. The treatment is conservative. Patient was admitted under the care of medical team to check paracetamol levels and and ophthalmology review was organised on the ward. There was no treatment offered and patient was reviewed in the ophthalmology clinic at 1 and then 2 weeks interval where the VA 6/12 both eyes.

Discussion

Quinine is rapidly absorbed from the gastrointestinal tract, producing the typical symptoms of cinchonism, which are tinnitus, headache, nausea, tremor, hypotension, and gastrointestinal upset. There is marked individual variability of tolerance to quinine. Pupillary dilatation is a consistent feature of acute quinine poisoning, both in humans and experimental defects. It must indicate either a neurological efferent pathway defect or local sphincter paralysis. Successful treatment of the visual loss from quinine depends on a knowledge of the mechanism of toxicity and its localisation in the retina. Accurate information on both these aspects is lacking as little experimental work has been done in recent years. The possibilities are that the retinal changes are due to either arterial vasoconstriction and inner retinal ischaemia or to a direct toxicity of the neuroretina, and these alternatives have been debated since the 1890s without conclusive evidence being obtained for either hypothesis. In the absence of any therapeutic manoeuvre of proven benefit in established blindness resulting from quinine its prevention is of paramount importance. Quinine is widely used for the treatment of muscle cramps and is believed by many who take it to be non-toxic. Labelling tablet containers to warn that toxicity may occur from even a small number of tablets taken in excess of the recommended dose might prevent death and permanent disability. Preventing elevated plasma levels may be achieved

either by reducing absorption from the gastrointestinal tract or by increasing clearance of the drug from the circulation. Advances in the management of quinine overdosage will only be made if more is understood about the mechanism of toxicity and treatments evaluated within the context of controlled trials.

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P013 Administration & Healthcare policy

FREQUENT FLIERS AND HOT SPOTTERS: CHARACTERIZING RESOURCE USE OF DISTINCT SUBGROUPS OF FREQUENT USERS OF THE ED

A Hamedani, A Polsinelli, J Svenson

Division of Emergency Medicine, University of Wisconsin, Madison, United States

Corresponding author: Mr Svenson James (jes@medicine.wisc.edu)

Key-words: ED Utilization ; Case Management ; Costs

Study Objectives: Emergency department (ED) visits are increasing annually with 39.4 visits/100persons as of 2007. With this increasing case load, focus should be placed on patients who are frequent users of the ED. Efforts have been made to characterize this 'frequent user' population in the hopes of implementing systems or protocols to reduce ED utilization. These efforts have yielded conflicting results largely because of great variance within the population. If we can define distinct subgroups within this population, then more targeted strategies, (e.g. intensive case management or chronic pain protocols) could be attempted. The objective of this study is to characterize resource utilization among frequent users of the ED; specifically to examine differences in use among distinct subgroups of 'frequent fliers' and 'hot spotters' (Gawande, New Yorker, 2011).

Methods: This is a retrospective study of ED visits from a single academic medical center, with annual volume of about 45000. All patients with ≥ 7 visits in any calendar year between 2008-2011 were identified. Demographic and ED encounter-specific data (including tests ordered) for each visit was then obtained. We define "frequent fliers" as those with ≥ 7 visits but $< 10\%$ admissions and "hot spotters" as those with ≥ 7 visits with a greater than 50% admission rate.

Results: There were 779 patients who had ≥ 7 visits in any one of the calendar years. Of these patients, 213 (27.3%) were categorized as a frequent flier for at least one calendar year and 279 (35.8%) as hot spotters. The overwhelming majority (601, 77%) were frequent users for only one year. Overall frequent users made up approximately 8% of ED caseload over all four years. Frequent fliers accounted for 26% of these visits, while hot spotters accounted for another 25%. Frequent users arrived in the ED by ambulance 5013 times from 2008 to 2011 with hot spotters accounting for 49% of these arrivals and frequent fliers accounting for 24%. The average length of stay all frequent users was 4.2 hours. Frequent fliers averaged 3.3 hours and hot spotters averaged 4.7 hours. Hot spotters had a higher triage acuity than frequent fliers (2.7 vs 3.3). Frequent fliers account for only 2% of the admissions of the group, while hot spotters account for 60%. Frequent users obtained 2,778 CT scans, 231 MRI scans, and 7,174 X-rays over the four-year period. Hot spotters accounted for 44% of CTs, 48% of MRIs, and 52% of X-rays while frequent fliers

accounted for 26%, 16%, and 22% respectively. Over the study period, frequent users obtained 37 EEGs, 4,222 EKGs, and 453 sonogram studies. Hot spotters accounted for 59% of EEGs and 55% of EKGs while frequent fliers accounted for 5% and 18% respectively. Frequent fliers did use slightly more sonogram studies with 38% compared to hot spotters using 32%. During the four year period 75 blood products were administered in the frequent user population with hot spotters using 72% of these products while frequent fliers used only 8%.

Conclusions: Those who frequent the ED can be divided into distinct subgroups of frequent fliers and hot spotters. The hot spotter subgroup utilizes relatively more ED resources across many categories. Efforts to reduce ED utilization in the hot spotter population may lead to a higher impact on reducing high-cost resource use.

P014 Airway

THE IMPACT OF AN EDUCATIONAL INTERVENTION TO IMPROVE SUCCESSFUL ENDOTRACHEAL INTUBATION BY EMERGENCY MEDICINE RESIDENTS

JL Avegno (1), JF Engle (1), L Roberts (1),
L Moreno-Walton (2)

1. Emergency Medicine, Louisiana State University Health Sciences Center, New Orleans, United States

2. Emergency Medicine & Research Genetics, Louisiana State University Health Sciences Center, New Orleans, United States

Corresponding author: Mme Moreno-walton Lisa (DoctorMoreno@gmail.com)

Key-words: Endotracheal intubation ; Airway management ; Resident Education

OBJECTIVES

Successful emergency airway management is a critical component of emergency medicine (EM) residency training. EM residency training leads to more timely intubation of patients in the Emergency Department (ED) and skills tend to increase with years of training (1,2). The so-called "difficult airway" (DA) can be defined using a variety of anatomic and physiologic criteria, and is commonly encountered in the ED (3). Successful management of this procedural subset is more likely with adequate training and preparation (4). No study has evaluated whether the introduction of a brief educational intervention and a predictive DA checklist improves certain characteristics of resident intubation. This research studies the effect of such an intervention on the number of intubation attempts, time to successful intubation, faculty involvement in the procedure, and use of adjunct devices.

METHODS

A retrospective chart review of all intubated patients at University Hospital (UH) in New Orleans was performed between September 2006 and June 2010. UH is a Level I trauma center affiliated with a fully accredited EM residency training program in an inner-city setting, with an ED patient volume of approximately 70,000 per year. Demographic, physiologic, and intubation procedural data was collected and recorded in a worksheet immediately after ED intubation. In July 2008, residents received a lecture on management strategies for the DA and participated in simulation exercises based on DA scenarios; a detailed checklist of DA predictors was added to the standard intubation form and was completed prior to each ED intubation. Overall procedural outcomes were compared pre- and post-intervention using generalized estimating equations and z statistics.

RESULTS

There were 266 successful intubations recorded in the pre-intervention period and 373 in the post-intervention period. In the

post-intubation period, 33.2% of intubations met checklist criteria for a potential DA. Time from official procedural preparation to successful intubation did not vary between the two groups (11.6 minutes pre; 10.8 minutes post, $p=0.30$). There was no significant difference in the number of attempts made (1.4 pre; 1.3 post, $p=0.44$) or faculty intervention in the procedure (1.5% pre, 3.75% post, $p=0.09$). Intubations using an adjunct device increased post-intervention (8.2% TO 11.6%), and there was a significant difference in the number of successful intubations that were assisted by adjuncts ($p=0.7449$). Also, success on the second attempt was more likely if an adjunct was used ($p=0.243$).

CONCLUSIONS

Difficult intubations, as defined by standard checklist, are relatively common occurrences in ED intubations. A brief, one-time DA educational module and standard checklist resulted in a few appreciable changes in EM resident intubations. Further research is needed to more clearly define the relationship between DA education and EM resident intubation performance.

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P015 Airway

SURGICAL AIRWAY IN JAPANESE EMERGENCY DEPARTMENTS: MULTI-CENTER PROSPECTIVE OBSERVATIONAL STUDY IN JAPAN

YH Hagiwara (1), KH Hasegawa (2), MO Okubo (3)

1. Emergency department, Tokyo metropolitan medical center, Tokyo, Japan
2. Emergency department, Massachusetts general hospital, Boston, United States
3. Emergency department, Okinawa chubu hospital, Okinawa, Japan

Corresponding author: Mr Okubo Masashi (masashiokubo914@gmail.com)

Key-words: Airway ; Surgical airway ; cricothyrotomy

Background:

Surgical airway is a critical procedure for emergency physicians. However, comprehensive studies evaluating current practices of surgical airway in Japan are lacking.

Objective:

We sought to characterize current practice of surgical airway in Japanese EDs.

Method:

Design and Setting: We conducted a multi-center prospective observational study using the Japanese Emergency Airway Network (JEAN) registry of ED at 11 academic and community hospitals across Japan during a 22 months period (from March 2010 through December 2011). Data fields include ED characteristics, patient and operator demographics, method of airway management, number of attempts and adverse events.

Participants: All patients undergoing surgical airway in ED were eligible for inclusion.

Data analysis: We present descriptive data as proportions with 95% confidence intervals (CIs). We report Odds ratio (OR) with 95%CI with chi-square testing.

Result:

The database recorded 3,277 intubations (capture rate 95.9%), including 28 surgical airways (0.9%; 95% CI, 0.6%-1.2%). Surgical

airway was performed for medical emergencies in 10 encounters (0.4%; 95% CI, 0.2%-0.7%) and for trauma in 18 (3.0%; 95% CI, 2.0%-4.8%). Indication for trauma was higher than for medical emergency (OR=8.5; 95% CI, 3.9-18.5). The specialty on initial attempt was emergency medicine resident (42.9% [12/28]; 95% CI, 26.5%-60.9%), emergency physician (42.9% [12/28]; 95% CI, 26.5%-60.9%), post-graduate-year 1 or 2 transitional year resident (10.7% [3/38]; 95% CI, 3.7%-27.2%) and other specialties (3.6% [1/28]; 95% CI, 0.6%-17.7%). Success rate of surgical airway was 96.4% (27/28; 95% CI, 82.3%-99.4%). Surgical airway as a rescue for failed rapid sequence intubation was performed in 2 of 590 encounters (0.3%; 95% CI, 0.09%-1.2%). Adverse events were reported in 9 encounters (32.1%; 95% CI, 17.9%-50.7%).

Conclusion:

In this prospective multi-center observational study in Japan, we observed that the majority of surgical airway was performed for trauma encounters and that emergency medicine residents or emergency physicians performed the majority of surgical airway.

P016

Airway

COMPARISON OF PEDIATRIC AND ADULT AIRWAY MANAGEMENT IN JAPANESE EMERGENCY DEPARTMENT (ED): MULTI-CENTER PROSPECTIVE OBSERVATIONAL STUDY IN JAPAN

YH Hagiwara (1), KH Hasegawa (2), MO Okubo (3)

1. Emergency department, Tokyo metropolitan medical center, Tokyo, Japan
2. Emergency department, Massachusetts general hospital, Boston, United States
3. Emergency department, Okinawa chubu hospital, Okinawa, Japan

Corresponding author: Mr Okubo Masashi (masashiokubo914@gmail.com)

Key-words: Airway ; Pediatric airway ; Adult airway

Background:

Pediatric emergency airway management is recognized as relatively difficult compared to that of adult. However, comprehensive studies evaluating current practices of ED airway management in Japan are lacking.

Objective:

We sought to compare the success and complication rate between pediatric and adult intubation.

Method:

Design and Setting: We conducted a multi-center prospective observational study using the Japanese Emergency Airway Network (JEAN) registry of EDs at 11 academic and community hospitals in Japan during a 22 months period (from March 2010 to December 2011). Data fields include ED characteristics, patient and operator demographics, method of airway management, number of attempts and adverse events. We defined pediatric patient as 18-year-old or younger and adult as 19-year-old or older.

Participants: All patients undergoing emergency intubation in ED were eligible for inclusion.

Primary analysis: We described pediatric and adult intubation in terms of success rate on first attempt, within 3 attempts and complication rate. We present descriptive data as proportions with 95% confidence intervals (CIs). We report Odds ratio (OR) with 95% CI with chi-square testing.

Result:

The database recorded 3,277 intubations (capture rate 95.9%), including 105 pediatric intubations (3%) and 3172 adult intubations (97%). The proportion of pediatric intubation varied among sites from 0.8% to 7%. Success rates of pediatric intubation on first attempt and within 3 attempts were 61/105 (58%; 95%CI: 49%-67%) and 96/105 (91%; 95%CI: 85%-95%), respectively. Success

rates of adult intubation on first and within 3 attempts were 2161/3172 (68%; 95%CI: 66%-70%) and 3057/3172 (96%; 95%CI: 95%-97%), respectively. Success rates of pediatric intubation on first and within 3 attempts were lower than adult intubation (OR=0.65; [95%CI: 0.44-0.96]; OR=0.40; [95%CI: 0.20-0.81], respectively). We recorded 15 complications with pediatric intubations (14%; 95%CI: 9%-22%) and 358 complications with adult intubations (11%; 95%CI: 10%-12%). There was no significant difference in complication rate between pediatric and adult group (OR=1.31; [95%CI: 0.75-2.29]).

Conclusion:

In this first prospective multi-center observational study in Japan, we observed that success rates of pediatric intubation on first and within 3 attempts were both lower than adult intubation. This study has the limitation of reporting bias and confounding by indication.

P017

Airway

EXTERNAL VALIDATION OF LEMON METHOD IN EMERGENCY DEPARTMENT SETTING: PROSPECTIVE OBSERVATIONAL STUDY IN JAPAN

YH Hagiwara (1), KH Hasegawa (2), MO Okubo (3)

1. Emergency department, Tokyo metropolitan medical center, Tokyo, Japan
2. Emergency department, Massachusetts general hospital, Boston, United States
3. Emergency department, Okinawa chubu hospital, Okinawa, Japan

Corresponding author: Mr Okubo Masashi (masashiokubo914@gmail.com)

Key-words: Airway ; LEMON ; prediction of difficult airway

Background:

Prediction of difficult laryngoscope is vital in airway management in emergency department. Although LEMON (look externally, evaluate 3-3-2, mallampati, obstruction/obesity, neck mobility) method is developed as a prediction rule for difficult laryngoscope, there are few external validation studies in ED setting.

Objective:

We evaluated LEMON method was able to predict difficult intubation in ED setting.

Method:

Design and Setting: We conducted a prospective observational study at community hospital in Japan during a 22 months period (from March 2010 to December 2011). Data fields include ED characteristics, patient and operator demographics, each criteria of LEMON, method of airway management, number of attempts and adverse events.

Participants: All patients undergoing emergency intubation in ED were eligible for inclusion.

Primary analysis: We present descriptive data as proportions with 95% confidence intervals (CIs). We report Odds ratio (OR) with 95% CI with chi-square testing.

Result:

We recorded 452 intubations (capture rate 99%). 445 intubations were included for analysis, excluding 7 intubations for loss of LEMON evaluation. Intubations with 0 LEMON criteria, 1, 2, 3 and 4 were 307/445 (69%; 95% CI, 65%-73%), 110/445 (24%; 95% CI, 21%-29%), 18/445 (4%; 95% CI, 3%-6%), 7/445 (2%; 95% CI, 0.8%-3%) and 3/445 (0.7%; 95% CI, 0.2%-2%), respectively. The success rates of intubation within 2nd attempts among patients without LEMON criteria and among patients with at least one LEMON criteria were 282/307 (92%; 95% CI, 88%-94%) and 108/138 (78%; 95% CI, 71%-84%), respectively. The success rates of intubation within 2nd attempts were lower among patients with at least one

LEMON criteria than without LEMON criteria (odds ratio=0.3 95% CI, 0.2-0.6).

Conclusion:

In this prospective observational study in Japan, we observed that LEMON criteria is related difficult laryngoscope in ED setting.

P018

Airway

FOREIGN BODY IN OROPHARYNX

S Karaman (1), E Acar (1), C Şen Tanrikulu (1), A Bayramoğlu (2)

1. Emergency Department, Erzurum District Training and Research Hospital, Erzurum, Turkey

2. Emergency Department, Atatürk University Medical Faculty,, Erzurum, Turkey

Corresponding author: Mr Karaman Serhat (drserhatkaraman@hotmail.com)

Key-words: foreign body ; oropharynx ; emergency department

Noisy inhalation is one of the first findings in which may be every kinds of respiratory tract pathology in childhood. Can take different forms and different respiratory sounds are called. Inhalation sound may be different ways and is named. Partial upper airway obstruction as a result of turbulent air flow through the narrow section reveals a high frequency sound is called stridor. Abnormal breath sounds should be examined from the viewpoint of airway obstruction for each child.

10-year-old girl was brought in emergency department by a team of 112 due to respiratory distress. The patient, had cyanosis, agitated and stridor, was transferred to CPR room. It was learnt that she was suddenly got worsen while you was having dinner. The patient's airway patency was investigated with laryngoscope. Foreign body, caused partial obstruction and moved by inhalation in oropharynx, was determined. Foreign body was removed from oropharynx with laryngoscope and Magill forceps. Oxygen support was given to the patient with mask. Rapid clinical improvement was observed in the patient. Fingertip pulse oxygen rate was increased from 76% to 99%. The patient's vital signs, observed about 6 hours in emergency department, were remained stable. Intervention and evaluation are primarily determined by degree of respiratory distress. Dyspnea, apnea, cyanosis, retraction, such as in situations that require urgent intervention of the airway should be controlled first, and then diagnosis procedures should be done. A simple procedure which can be life threatening may done with the help of Magill forceps and laryngoscope, being Emergency Department, and foreign bodies, being in the upper respiratory tract, can be easily removed. This case should be considered while necessary equipment is determining for Emergency Department.

P019

Airway

ANGIOEDEMA OR ...? LIPOID PROTEINOSIS WHICH INFILTRATE THE TONGUE MUST BE KEPT IN MIND AMONG THE DYSPNEIC PATIENTS IN EMERGENCY DEPARTMENT.

SH Eren (1), I Korkmaz (1), S Ozcelik (2), I Salk (3), A Coşkun (1), FMK Guven (1), FB Imamoglu (2), S Ozbay (4)

1. Emergency Department, Cumhuriyet University Hospital, Sivas, Turkey

2. Dermatology Department, Cumhuriyet University Hospital, Sivas, Turkey

3. Radiology Department, Cumhuriyet University Hospital, Sivas, Turkey

4. Emergency Service, Numune State Hospital, Sivas, Turkey

Corresponding author: Mr Sevki Hakan Eren (shakaneren@gmail.com)

Key-words: Angioedema ; Lipoid proteinosis ; respiratory distress

Introduction: Lipoid proteinosis is a rare otosomal resesif inherited disease which is more prominent with dermatologic manifestations. The etiopathogenesis is unclear. Clinical results occur due to the extracellular and perivascular deposition of periodic acid-schiff (PAS) (+) hyaline amorphous material especially on the skin, mucous membranes and internal organs. Pharynx, larynx mucous membranes, tongue, soft palate and tonsil involvement can cause dyspnea and respiratory distress may even require tracheostomy.

Case: The 65 year old female was admitted first to State Hospital Emergency Department with complaints of hoarseness, shortness of breath, wheezing, swelling around the face . She was diagnosed as angioedema after the first examination was referred to university hospital, while her complaints did not improved after the treatment, methyl prednisolone 60 mg, 45.5 mg ranitidine and 50 mg maleate pheniramin. Diabetes mellitus, skin rash, depression, were identified in his history. The patient had admitted previously with the same complaints and was discharged after improving in her complaints. The patient was diagnosed firstly as angioedema. Her complaints did not dissolve with an additional corticosteroid treatment. Due to the thickened tongue she was consulted with dermatology. A lipoid proteinosis pre-diagnosis was made. Brain computer tomography was obtained and there were bilateral symmetric temporal lob calcifications which confirmed the diagnosis. She was referred to emergency department unit and symptomatic treatment was applied. The complaints decreased in the next day and she was discharged after informing about her disease.

Conclusion: Lipoid proteinosis which infiltrate the tongue must be kept in mind among the dyspneic patients in emergency department.

Keywords: Angioedema, Lipoid proteinosis, respiratory distress

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P020

Airway

EFFECT OF C1-INH CONCENTRATE AND ICATIBANT IN ANGIOTENSIN-CONVERTING-INHIBITOR-INDUCED ANGIOEDEMA

M Bas (1), J Greve (2), U Straßen (1), T Hoffmann (2)

1. Otorhinolaryngology, Technical University Munich, Munich, Germany

2. Otorhinolaryngology, Universital Hospital Essen, Essen, Germany

Corresponding author: Mr Bas Murat (m.bas.hno@googlemail.com)

Key-words: Angiotensin-Converting-Inhibitor-Induced Angioedema ; Bradykinin ; Icatibant

The most life-threatening adverse event of angiotensin converting enzyme inhibitor (ACEi) therapy is angioedema with an incidence of 0.2-0.5%. Since the world-wide extension of this drug group, the

ACEi induced angioedema is the most frequently drug related angioedema. In contrast to hereditary angioedema (HAE), this angioedema form is localised usually in the head and neck region, preferred in the upper aero-digestive tract, with potentially life-threatening airway obstruction.

Although bradykinin is known to play a major role in the pathophysiology of ACEi-induced angioedema, so far none pharmacotherapy is approved to treat acute ACEi induced angioedema.

To evaluate a possible causal treatment option, we have treated eight patients with acute ACEi-induced angioedema with pasteurized C1-INH (Berinert® P) and eighteen patients with the bradykinin B2 receptor blocker icatibant. Both drugs are well known treatment options in the bradykinin induced hereditary angioedema. The angioedema attacks are all localised in the upper aerodigestive tract.

In addition, we assessed retrospectively the clinical course of 48 patients who were treated in our clinic due to an ACEi-induced angioedema within the last seven years. These patients were administered with prednisolone and clemastine.

Following treatment with icatibant complete symptom remission was reported on average after 4.8 hours (SD: 1.6 hours) on the other hand 10.4 hours (SD: 3.4 hours) after application of C1-INH and 32.8 hours (SD: 19.3 hours) after treatment with prednisolone and clemastine.

Our results indicate that icatibant is for the treatment of ACEi induced angioedema the therapy of choice. C1-INH concentrate could be a satisfied alternative in absence of icatibant. The potential effectiveness of icatibant and C1-INH concentrate must be verified in a randomized study.

P021 Airway

A CASE REPORT WITH BLOODY DISCHARGE FROM NOSE

T Acar (1), H Seker (2), T Colak (1), S Girisgin (1), M Gul (1), B Cander (1)

1. Emergency department, University of Necmettin Erbakan, Meram Medical Faculty, Konya, Turkey

2. Pediatric department, University of Necmettin Erbakan, Meram Medical Faculty, Konya, Turkey

Corresponding author: Mr Acar Tarik (drtarikacar@gmail.com)

Key-words: BLOODY DISCHARGE ; NOSE ; foreign bodies

BACKGROUND: Slip or introduction of foreign bodies into the nose is more common in children. Unilateral, long-lasting foul-smelling discharge from nose makes us consider foreign bodies in pediatric patients and the paranasal malignancy in elderly patients. It can occur in children, debilitated patients and mentally retarded persons. Symptomatology of the foreign body in the nose is nasal congestion, mouth breathing, snoring, nasal discharge, epistaxis, purulent discharge, pain, fever, and fatigue. A case in which a foreign body in nose was treated as flu was reported. **CASE:** 3-year-old girl was admitted to a medical center a week ago due to nasal congestion, runny nose and diagnosed as flu. The treatment was rearranged due to the persistence of the complaints in another hospital. The patient admitted to our hospital had black-colored discharge coming from her nose. The examination revealed grade 2-3 bilateral hypertrophy of tonsils and normal right and left tympanic membrane. Foreign body in left nasal cavity was noticed and removed. Foreign bodies were battery. The patient's nasal cavity was washed with saline. Antibiotic and analgesic medications were prescribed. **CONCLUSION:** Emergency physicians should consider foreign objects in nose when symptoms of upper

respiratory tract infections persist. If a clock battery is removed, necrosis depending on leakage of battery should be considered.

P022 Biomarkers

THE CORRELATION BETWEEN MARKERS WITH THE ACUTE EXACERBATION AND SEVERITY OF THE ILLNESS IN PATIENTS WITH ACUTE URTICARIA AND ANGIOEDEMA

E Akıncı (1), E Atayık (2), MN Erdem (3), B Esen (3), M Ozen (3), F Coşkun (3)

1. Emergency department, Konya Training and Research Hospital, Konya, Turkey

2. Department of Allergy and Immunology, Cumhuriyet University School of Medicine, Sivas, Turkey

3. Emergency department, Ankara Training and Research hospital, Ankara, Turkey

Corresponding author: Melle Akıncı Emine (emineakinci@yahoo.com)

Key-words: acute urticaria, angioedema ; D-dimer, fibrinogen ; microCRP

Introduction

Urticaria and angioedema are among the commonly encountered clinical conditions in the emergency department (ED). The severity of these conditions ranges from a simple rash to life threatening uvular edema. Studies in the literature generally focused on patients with chronic urticaria and there appears to be no study on evaluating the markers in patients with acute urticaria or angioedema. We aimed to evaluate the correlation between the coagulation and inflammation markers with the acute exacerbation and severity of illness in patients presenting to the ED with acute urticaria and angioedema.

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Materials and Methods

This was a prospective study performed at the Ankara Training and Research Hospital Emergency Department (ED), Ankara, Turkey. The patients included in the study were those attending the ED and consequently diagnosed with acute urticaria or angioedema in the period from May 1st to September 30th. The blood microCRP (C-reactive protein), fibrinogen and D-dimer levels of the patients were measured.

Results

Of the two hundred and two patients in the study 187 had acute urticaria and 15 had angioedema. The D-dimer and microCRP values were above the cut-off values in the patients with acute urticaria and this was statistically significant. No elevation in the D-dimer, fibrinogen and microCRP levels were observed in 15 patients with acute angioedema. An increase in the levels of these three markers was also observed as the severity of rashes increased in patients with acute urticaria. D-dimer was found to be the marker that was most correlated with the severity of rashes, whereas fibrinogen was the least correlated marker with the severity of rashes.

Conclusion

In conclusion, we found D-dimer and microCRP to be two valuable markers that can be used in determining the severity of acute urticaria. However, further investigations are needed to determine

the usability of D-dimer, microCRP and fibrinogen in determining the severity and exacerbation of angioedema in patients suffering from this condition.

P023

Biomarkers

PREDICTIVE VALUE OF ISCHEMIA MODIFIED ALBUMIN AS A REPERFUSION CRITERIA IN ACUTE STEMI

T.Y. Kılıç (1), S. Bayata (2), P.H. Kara (1), M. Kosde eoglu (3), E.E. Unluer (1)

1. Emergency Department, Izmir Katip Çelebi University, Atatürk Research and Training Hospital, Izmir, Turkey
2. Cardiology Department, Izmir Katip Çelebi University, Atatürk Research and Training Hospital, Izmir, Turkey
3. Biochemistry Department, Izmir Katip Çelebi University, Atatürk Research and Training hospital, Izmir, Turkey

Corresponding author: Melle Kara Pinar Hanife (hpinkara@hotmail.com)

Key-words: Ischemia modified albumin ; myocardial infarction ; reperfusion

Background: Thrombolytic treatment is very important to open infarct associated artery (IAA) and protect heart muscle in acute ST segment elevated myocardial infarction. When this treatment fails patient can need interventions such as angioplasty. To give this decision reperfusion of IAA should be fast, right and non-invasive after thrombolytic treatment. Relief of chest pain, normalization of ST segment elevation in electrocardiography (ECG), observation of specific arrhythmias and early peak of cardiac proteins (CK-MB, troponin, myoglobin) are used as a reperfusion indicator. In this study, role of Ischemic Modified Albumin(IMA) as an early and new marker of ischemia in reperfusion after thrombolytic treatment was studied.

Material and Method: In patients receiving thrombolytic treatment with the diagnosis of acute STEMI, blood IMA, troponin and CK-MB levels were measured simultaneously in the beginning of treatment(0 th hour), at the 6th, 12th, and 24 th hours. The association between three diagnostic variables of reperfusion and levels of troponin, CK-MB and IMA was examined.

Results: The beginning IMA values were significantly higher in patients than the control group ($p < 0,005$). It is found that the IMA values reach its peak levels at similar times with CK-MB and troponin.

Discussion: Therefore it is thought that IMA can be used as a biochemical marker that increase after reperfusion as troponin and CK-MB.

P024

Biomarkers

DIAGNOSTIC AND PROGNOSTIC VALUE OF PROCALCYTONIN AND PHOSPHORUS IN ACUTE MESENTERIC ISCHEMIA

dr Gul (1), dr ucar karabulut (2)

1. Emergency, Necmettin Erbakan University Meram Medical Faculty, konya, Turkey
2. Emergency, Baskent University Konya Hospital, konya, Turkey

Corresponding author: Mme Ucar Karabulut Keziban (dr_kezi@hotmail.com)

Key-words: Acute Mesenteric Ischemia ; Procalcitonin ; Phosphorus

Background

In this experimental study carried out on rabbits using an acute mesenteric ischemia (AMI) model, the availability of serum

procalcitonin and phosphorus levels in the early diagnosis of AMI was investigated.

Methods

21 New Zealand rabbits were used. Subjects were named as the groups of Controls, Sham and Ischemia. No intervention was performed in the subjects in the control group. In the subjects from Sham and Ischemia groups, laparotomy was performed with middle line incision. However, Superior Mesenteric Artery was found and tied in those from Ischemia group after the performance of laparotomy. From the animals in 3 groups, blood was drawn at the hours of 0, 1, 3 and 6, and Procalcitonin and Phosphorus were studied in these samples.

Results

The increase in serum phosphorus and procalcitonin levels was found to be statistically significant in the ischemia group compared to the control and the sham groups ($p < 0.05$). Phosphorus and procalcitonin levels were found to increase, beginning from the 1. hour after ischemia had been developed and this rise was found to continue for 6 hours ($p < 0.05$).

Conclusion

We conclude that phosphorus and procalcitonin are essential parameters that can be used in the early diagnosis and prognosis of AMI.

P025

Biomarkers

SERUM LEVELS OF SALUSIN-ALPHA AND SALUSIN-BETA IN STROKE.

CF Demir (1), M Yildiz (2), N Ilhan (3), H Gungor (3), M Gurger (2), H Beydilli (4), I Kilicaslan (5), MN Bozdemir (6)

1. Department of Neurology, Firat University, School of Medicine, Elazığ, Turkey
2. Department of Emergency Medicine, Firat University, School of Medicine, Elazığ, Turkey
3. Department of Biochemistry, Firat University, School of Medicine, Elazığ, Turkey
4. Department of Emergency Medicine, Muğla Sıtkı Kocman University, School of Medicine, Muğla, Turkey
5. Department of Emergency Medicine, Gazi University, School of Medicine, Ankara, Turkey
6. Emergency Medicine, Antalya Training and Research Hospital, Antalya, Turkey

Corresponding author: Mr Yildiz Mustafa (aciltip@gmail.com)

Key-words: salusin ; stroke ; emergency department

Salusin- α and β are novel multifunctional bioactive peptides. These peptides should be concomitantly biosynthesized from prosalusin in humans and regulate hemodynamics, mitogenesis and atherogenesis. The purpose of this study was to investigate the relationship between the serum salusin-alpha and salusin-beta levels and stroke.

Thirty healthy subjects (control group) and 32 patients with stroke (study group) were included in the study. Serum salusin-alpha and salusin-beta levels of the groups were compared.

The mean age of the patients was 62.34 ± 16.18 (max:83-min:27) years. The average age of the the control group was 66.17 ± 6.75 years. Mean Salusin alfa in the control and study groups were $20,35 \pm 1,96$ pg/ml and $18,99 \pm 1,65$ pg/ml, respectively. No statistically significant difference was detected in serum salusin-alpha levels between the control and study groups ($p=0,822$). Mean Salusin beta in the control and study groups were $31,95 \pm 10,1$ pg/ml and $11,28 \pm 1,04$ pg/ml, respectively. Serum salusin-beta levels were statistically significantly lower in stroke patients as compared to control groups ($p=0,005$).

In conclusion, we demonstrated that salusin beta levels are decreased in stroke patients could be meaningful risk factor for stroke. We believe that more studies are needed in this subject.

P026

Biomarkers

THE ASSOCIATION BETWEEN APELIN-12 LEVELS AND PAROXYSMAL SUPRAVENTRICULAR TACHYCARDIA

M. Gurger (1), A. Celik (2), E. Gul (3), M. Sahan (3), KB. Bursalı (3), U. Gumusay (3), MA. Kobat (2), M. Balin (2), IM. Celiker (3), C. Can (3)

1. Emergency Department, Firat University, School of Medicine, Elazığ, Turkey
2. Cardiology Department, Elazığ Training and Research Hospital, Elazığ, Turkey
3. Emergency Department, Elazığ Training and Research Hospital, Elazığ, Turkey

Corresponding author: Mme Gürger Mehtap (drmhtp@yahoo.com)

Key-words: Paroxysmal Supraventricular Tachycardia ; apelin ; emergency department

Introduction:

The peptide apelin and the apelin receptors are present in the heart, the systemic and pulmonary vasculature and there were studies that showed the changes of plasma apelin levels in myocardial infarction, heart failure and pulmonary hypertension. Previously, the relation between AF and apelin levels were shown in a few studies. All of these studies showed the lower levels of apelin levels were associated with AF and also it was related to the recurrence of arrhythmia.

There was no published data exists to date about the level of apelin-12 in patients with PSVT. So, we aimed to investigate the apelin-12 levels in patients with AV tachyarrhythmias and compare with lone AF.

Method:

From March 2011 to March 2012, eighty-eight consecutive patients with supraventricular tachycardia who were admitted to our emergency room with palpitation. These subjects were matched on the basis of age, sex and ethnicity to 30 control subjects recruited from a healthy population. Forty-four of patients with SVT had atrial fibrillation and other forty-four of them had atrioventricular tachyarrhythmias including; AV nodal reentrant tachycardia (AVNRT) or AV reentrant tachycardia (AVRT). Individuals were considered eligible for enrolment if they had at least one documented electrocardiogram with AF had a structurally normal heart on echocardiography. Other individuals were considered eligible for enrolment if they had AVNRT or AVRT on admission to emergency and had a structurally normal heart on echocardiography.

Result:

There were no significant differences between three groups with respect to sex distribution, age, frequencies of major coronary risk factors, serum creatinine, calcium, potassium, total cholesterol, LDL-C, HDL-C, triglyceride, LVEF, left atrial diameter, systolic and diastolic blood pressure ($p > 0.05$ for all).

Patients in AF group and patients in SVT group had significantly lower apelin-12 levels than control group, separately ($p < 0.001$ and $p < 0.001$, respectively). In post-hoc analysis; there was no significant difference in apelin-12 levels between AF and SVT group ($p = 0.9$).

Conclusion: In conclusion, we demonstrated that apelin levels are decreased in PSVT patients could be meaningful risk factor for arrhythmia. We believe that more studies are needed in this subject.

P027

Biomarkers

MCV: AS A NOVEL INDICATOR OF MORTALITY IN CRITICALLY ILL PATIENTS

NB Akıllı (1), E Akıncı (1), R Köylü (1), HS Akça (2), H Mutlu (1), B Cander (1)

1. emergency department, Konya Training and Research Hospital, konya, Turkey
2. emergency department, Konya Training and Resarch Hospital, konya, Turkey

Corresponding author: Mr Akıllı Nazire Belgin (drbelginakilli@hotmail.com)

Key-words: mean corpuscular volume ; critically ill patients ; mortality

AIM: The number of reports on how some haematological parameters could be independent indicators for mortality has been increasing in recent time. In this study, we aimed to investigate the relationship between mean corpuscular volume (MCV) and mortality for critically ill patients in intensive care unit.

METHODS: The patients hospitalized in intensive care unit of Konya Training and Research Hospital were examined in the study. At the time of submitting to hospital, age, gender, pulse, GCS, haemotocrit, haemoglobine, WBC, MCV, urea, creatinin, CRP, APACHE 2 and SOFA scores were recorded. The periods for the patients attached to mechanical ventilator, periods for hospitalization and also mortality rates for 30 days were documented. Data were transferred to SPSS for Windows 15.0 programme. MCV values were divided into quartiles as follows: <81.5 (1st group), $81.5-86.2$ (2nd group), $86.2-92.4$ (3rd group) and >92.4 (4th group). Comparison between MCV quartiles were made. Differences between the groups were detected by One-Way-ANOVA test. In order to assess linear relationship and to measure 30 days mortality rate, Spearman correlation test and Cox regression modelling were applied, respectively.

RESULTS: A total of 97 patients were included in the study. Of the patients, 55% were male, 45% were female. When the MCV quartiles were compared there was no significant differences between haemoglobin, urea, creatinin, SGOT, SGPT, CRP, APACHE2, SOFA, periods for hospitalization in the intensive care unit and periods for the patients attached to mechanical ventilator ($p > 0.05$). However, in the group in which the MCV was higher than 92.4, the mortality was significantly increased when 30 days mortality rates compared (OR:6.1 %95CI:1.32-28.8 $p = 0.02$). On the other hand, there was no correlation detected between MCV values and APACHE2, SOFA scores, periods for hospitalization in the intensive care unit, periods for the patients attached to mechanical ventilator. It was also detected that no significant differences observed on MCV values between the group diseased with COPD and the group not diseased ($P > 0.05$).

CONCLUSION: In literature, there have been reports on MCV suggesting that it could increase independently from hypoxemia on the patients suffering from COPD and may also be correlated with bad clinical results from macrocytosis in smokers. The mechanism here has been proposed that an acute erythropoietic stress could lead a release of big red cells from bone marrow. If this is the case, our results can speculate that MCV is a powerful and an independent indicator of mortality in intensive care unit patients. Best to our knowledge, this is the first study on the issue ever done. And at the end, this study should be supported by new studies done with different and higher numbers of patients.

P028

Biomarkers

THE LEVELS OF THIOL IN THE PATIENTS WHO HAVE ACUTE CORONARY SYNDROMES WITHOUT PERSISTANT ST SEGMENT ELEVATION

F. Tanrıverdi (1), H. Sahin Kavaklı (2), G. Kurtoglu Celik (2), F. Icme (2), A. Sener (2), O. Karakayalı (3), S. Vural (4)

1. Emergency department, Necip Fazil Kahramanmaraş City Hospital, Kahramanmaraş, Turkey
2. Emergency department, Atatürk Training and Research Hospital, Ankara, Turkey
3. Emergency department, Teaching and Research Hospital in Kocaeli Derince, Kocaeli, Turkey
4. Emergency department, Bartın State Hospital, Bartın, Turkey

Corresponding author: Melle Kurtoglu Celik Gulhan (kurtoglugulhan@yahoo.com)

Key-words: oxidative stress ; antioxidant ; total thiol level

Aim: The aim of this study that we have done at Ankara Atatürk Training and Research Hospital's emergency department was to investigate the levels of thiol and the correlation between this parameter and CKMB and troponin I in the patients who have acute coronary syndromes without persistent ST segment elevation. **Materials and method:** This study was performed with 55 patients who have acute coronary syndromes with persistent ST elevation and 50 volunteers who work at the emergency department of Ankara Atatürk Training And Research Hospital. Total thiol levels of patient group were measured at the time of arrival. Routine diagnostic tests for patients who required cardiac markers, electrocardiogram (EKG) was requested. The total thiol levels were measured in voluntary group. Data were analyzed with the SPSS 15.0 package program. Demographic characteristics, distribution of symptoms and laboratory results were inspected.

Results: The mean values of total thiol group of patients were significantly lower than the control group ($p < 0.01$). The thiol levels of the patients who has NSTEMI was significantly lower than the thiol levels of the patients who has USAP. There was a significantly negative correlation between the thiol, CKMB and troponin I levels of the patient group.

Conclusions: Oxidative stress plays a role in the pathophysiology of acute coronary syndromes without persistent ST segment elevation. Decreased levels of antioxidants had been observed in these patients.

P029

Biomarkers

HOW ACCURATE IS A POC BLOOD GAS ANALYZER?

D Desruelles (1), M Sabbe (1), L van Gennep (2)

1. Dept of Emergency Medicine, University Hospitals, Leuven, Belgium
2. Medical Sciences, University of Groningen, Groningen, Netherlands

Corresponding author: Mr Sabbe Marc (lea.vanroelen@uzleuven.be)

Key-words: point of care ; blood gases ; pre-hospital care

Introduction: Beside in-hospital use, pre-hospital use of a portable blood gas analyzer could be useful during interhospital transport or MICU interventions. The main question is how accurate are such devices?

Methods: Convenience samples of blood gases were taken in the observational unit of the ED and were analyzed on the standard blood gas analyzer and a POC analyzer (epoc, Alere). Correlation was calculated by using Pearson correlation on SPSS software.

Results: 97 samples were taken. 11 samples could not be measured on the POC analyzer due to 3 analyzer fault reports and 8 problems with the smartcard. 86 samples could be analyzed on both machines. For all parameters, Pearson correlation varied between 0.905 and 0.98, indicating that comparable results with no clinical differences were obtained. Hemoglobin and pH values, although not clinically relevant, were the parameters with the largest difference.

Conclusions: The POC blood gas analyzer compared with our standard analyzer demonstrated a strong correlation and thus is reliable and accurate. These results indicate that pre-hospital use becomes an option.

P030

Biomarkers

EVALUATION OF RELATIONSHIP BETWEEN SERUM SURFACTANT PROTEIN D AND CLINICAL SCORING IN PULMONARY EMBOLISM

C Katı (1), H Alaçam (2), L Duran (1), A Güzel (3), HU Akdemir (1), B Şişman (4), C Şahin (5), Y Yavuz (1), N Altıntaş (3)

1. Emergency Department, Ondokuz Mayıs University Medical Faculty Hospital, Samsun, Turkey
2. Biochemistry Department, Ondokuz Mayıs University Medical Faculty Hospital, Samsun, Turkey
3. Chest Disease Department, Ondokuz Mayıs University Medical Faculty Hospital, Samsun, Turkey
4. Emergency Service, Sinop Atatürk State Hospital, Sinop, Turkey
5. Emergency Service, Samsun Training and Research Hospital, Samsun, Turkey

Corresponding author: Mr Akdemir Hızır Ufuk (hufukakdemir@hotmail.com)

Key-words: Pulmoner Embolism ; Surfactant Protein D ; Clinical Scoring Systems

Objective: Surfactant Protein D (SP-D) is a protein secreted from Type-II apical cells and alveolar macrophages in the lung tissue. Most of studies have shown that increased levels of serum SP-D were related with lung injury. The purpose of this study was to investigate the relationship between the clinical severity of pulmonary embolism and serum SP-D protein.

Material and Methods: This study included total 60 patients that 40 patients were patients who admitted to 19 Mayıs University Hospital within one year and had diagnosis of pulmonary embolism and 38 patients were in control group. Clinical findings, concomitant diseases, risk factors, serum SP-D levels, imaging studies, Wells and Genava scores and prognosis in 40 patient diagnosed with PE were evaluated prospectively.

Results: The mean age of patients was 58.1 ± 16.1 . The most common complaints were dyspnea (80.0 %) and back pain (42.5 %) respectively. There was history of surgical or immobilization operation within last four weeks in 18 patients (45.0 %) and there was no risk factors in 16 patients (40.0 %) diagnosed with pulmonary embolism. The rate of deep vein thrombosis (DVT) in patients was 50.0 %. Only 3 patients (7.5 %) had a history of prior DVT and PE, however in 3 patient cases (7.5 %), there was diagnosis of malignancy. The electrocardiogram showed a sinus tachycardia in 35 patients (87.5 %) and S1Q3T3 in 21 (52.5 %). According to Genava scoring, 6 cases (15.0 %) were in low risk, 19 cases (47.5 %) were in moderate risk and 15 (37.5 %) were in high risk group. According to Wells scoring, 3 cases (7.5 %) were in low risk, 21 cases (52.5 %) were in moderate risk and 16 (40.0 %) were in high risk group. Value of serum SP-D in patient group (127.49 ± 86.22) was higher than control group (92.73 ± 19.38), ($p > 0.05$). However, the serum SP-D levels in patients who had massive PE (158.56 ± 99.29) were higher than control (92.73 ± 19.38) and nonmassive groups (96.44 ± 58.04). There was no

clinically significant relationship between Genova and Wells scores and serum SP-D ($p>0.05$). 34 patients (85.0 %) were treated with low-molecular-weight heparin and 2 patients (5.0 %) were treated with streptokinase and 4 patients were treated with tPA (10.0 %). It was found that the mortality rate was 12.5 %.

Conclusions: We concluded that the level of serum SP-D used for determining the clinical severity in patients diagnosed PE, may not increase in patients early treated if lung injury do not develop and so we think that this point is important for clinical use. The high level of se-rum SP-D which is the most important in submassive PE can be considered as an indicator.

P031

Biomarkers

LIPOPROTEIN-ASSOCIATED PHOSPHOLIPASE-A2 ACTIVITY AND ITS DIAGNOSTIC POTENTIAL EARLY AFTER ACUTE CORONARY SYNDROME AND ACUTE ISCHEMIC STROKE

S Kocak (1), B Ertekin (2), AS Girgisin (1), ZD Dundar (3), M Ergin (1), I Mehmetoglu (4), S Bodur (5), B Cander (1)

1. Emergency Department, Necmettin Erbakan University Meram Faculty of Medicine, Konya, Turkey
2. Emergency Department, Beyhekim State Hospital, Konya, Turkey
3. Emergency Department, Konya Training and Research Hospital, Konya, Turkey
4. Biochemistry Department, Necmettin Erbakan University Meram Faculty of Medicine, Konya, Turkey
5. Public Health Department, Necmettin Erbakan University Meram Faculty of Medicine, Konya, Turkey

Corresponding author: Mr Kocak Sedat (skocak@konya.edu.tr)

Key-words: Lipoprotein-associated phospholipase-A2 ; acute coronary syndrome ; acute ischemic stroke, biomarker

Objective: Only a few studies have examined the Lp-PLA2 levels following acute cardiovascular events. The present study examined the Lp-PLA2 level at the time patients presented to the emergency room with acute coronary syndrome (ACS) or acute ischemic stroke (AIS), as well as its diagnostic value.

Methods: The study included consecutive ACS and AIS patients that presented to our emergency room. Blood samples were obtained immediately following diagnosis in the ACS and AIS groups. Plasma Lp-PLA2 enzyme activity was measured with ELISA method. The diagnostic value of Lp-PLA2 was determined based on receiver operating characteristic curves, sensitivity, specificity, predictive values, likelihood ratios and accuracy rates.

Results: In all, 34 ACS and 32 AIS patients were included in the study, and the control group included 35 patients. Lp-PLA2 enzyme activity was significantly lower in the ACS and AIS groups than in the control group (26.7 ± 13.8 , 31.4 ± 13.6 , and 41.4 ± 8.1 nmol•min⁻¹•mL⁻¹, respectively; $p<0.0001$ and $p=0.022$, respectively). In the ACS group the area under the curve (AUC) was 0.825 (95%CI: 0.722-0.929), sensitivity was 71% for an optimal Lp-PLA2 cut-off value of 31.4 nmol•min⁻¹•mL⁻¹, and specificity was 91%, whereas in the AIS group the AUC was 0.768 (95%CI: 0.652-0.884), sensitivity was 75% for an optimal Lp-PLA2 cut-off value of 38.1 nmol•min⁻¹•mL⁻¹, and specificity was 74%.

Conclusion: Lp-PLA2 enzyme activity was significantly lower during the early stage of both ACS and AIS. The obtained statistic data suggest that low Lp-PLA2 enzyme activity can be used for diagnostic purposes.

P032

Biomarkers

LEVELS OF SERUM PENTRAXIN-3 ARE INCREASED IN SUBARACHNOID HEMORRHAGE

C Katı (1), T Yardan (1), H Alaçam (2), L Duran (1), HU Akdemir (1), K Aydın (3), M Yılman (4), Y Yavuz (1), C Çokluk (3)

1. Emergency Department, Ondokuz Mayıs University Medical Faculty Hospital, Samsun, Turkey
2. Biochemistry Department, Ondokuz Mayıs University Medical Faculty Hospital, Samsun, Turkey
3. Neurosurgery Department, Ondokuz Mayıs University Medical Faculty Hospital, Samsun, Turkey
4. Emergency Service, Samsun Gazi State Hospital, Samsun, Turkey

Corresponding author: Mr Akdemir Hızır Ufuk (hufukakdemir@hotmail.com)

Key-words: Pentraxin 3 ; Subarachnoid hemorrhage ; Clinical severity

Objective: Subarachnoid hemorrhage (SAH) is a vascular disease of brain which results with brain damage and has high morbidity and mortality. Admissions of patients with SAH take an important place within admissions to emergency departments. Early diagnosis, identification of clinical severity and appropriate treatment modification of this disease are vital. Although there were several studies in the literature, there was no early indicator routinely used for this disease. It has found that there was a key role of Pentraxin 3 (PTX-3) in local inflammation. It is a prognostic and diagnostic protein in ischemic conditions and septic patients and at the same time in vascular diseases and injuries of different organs. Plasma levels of PTX-3 in health people are very low (<2 ng/ml), but it may increase dramatically in inflammatory conditions. However it may generate centerly in presence of a proinflammatory signaling. There are a few studies investigating the relationship between PTX-3 and SAH in the literature. Our aim in this study is to investigate whether there is a relationship between serum levels of PTX-3 and Hunt-Hess and Fisher scores, Glasgow Coma Scale (GCS) and Glasgow Outcome Scale (GOS).

Material and Methods: This study included patients who admitted to Emergency Department of Ondokuz Mayıs University Hospital between March 2011 and October 2011. 40 individuals in patient group and 37 individuals in control group, a total of 77 cases are included and they are studied prospectively. 40 patients diagnosed with SAH are assessed clinically and with radiological imaging. PTX-3 levels in blood samples from patients on admission were determined. Level of consciousness on admission to emergency department (3-8= Group 1; 9-13= Group 2; 14-15=Group 3) were evaluated by Glasgow Coma Scale (GCS). Hunt-Hess Scale (1-3= mild group; 4-5=severe group) was performed according to the patient's initial examination. Fisher scoring was evaluated according to the first cranial computed tomography (CT). Data about duration of hospitalization are recorded from patient hospital records and neurological assessment at discharge was performed with Glasgow Outcome Scale (GOS). The relationship between PTX-3 and all these parameters are measured. SPSS 15.0 (Statistical Package for Social Sciences) computer program was used for all patient data. For statistical analysis, two independent sample t test and Mann-Whitney U test was used for two-group comparisons; one-way analysis of variance was used for three or more groups; Kruskal Wallis and Spearman's correlation were used for data do not show a normal distribution.

Results: 40% of patients with SAH (16/40) were male, 60% were female (24/40). average age of SAH group was 51.94 years (52.39 in men and 51.31 in women). There was a significant difference in PTX-3 levels of patient group compared with control group ($p=0.0001$). Levels of PTX-3 in all individuals of control group were

at normal values (<2 ng/ml). When the relationship between PTX-3 and GCS subgroup values of SAH group was assessed; a significant difference was found between group 1 and group 3 ($p=0.048$). When the relationship between PTX-3 and Hunt-Hess scale of SAH group was assessed; there was no difference between mild group (1-3) and severe group (4-5) ($p=0.111$). According to the relationship between PTX-3 and Fisher scale of SAH group; there was no correlation ($p=0.125$). But in comparison between group II and group IV; there was a significant difference according to PTX-3 (0.026). When the relationship between PTX-3 and GOS subgroup values of SAH group was assessed; a significant difference was found between group 1 and group 5 ($p=0.042$). There was no significant difference between other groups. We found a positive correlation according to the relationship between PTX-3 and duration of hospitalization ($r=0.366$, $p=0.026$).

Conclusions: Levels of serum Pentraxin-3 are increased in subarachnoid hemorrhage. We aimed to point to clinical use of PTX-3 in determining clinical severity of patients diagnosed with SAH because it may be increased in early period (at first 24 hours). There was a relationship between PTX-3 and clinical severity of patients with SAH. So it may be used as a new tool for determining of prognosis and clinical follow up of these patients.

P033

Biomarkers

IS MEAN PLATELET VOLUME AN ACTIVITY MARKER IN PATIENTS WITH FAMILIAL MEDITERRANEAN FEVER?

MM Celik (1), A Karakus (2), S Arica (3), Y Celik (4), R Gunesacar (5), S Motor (6), N USTUN (7), U Kalyoncu (8)

1. Department of Internal Medicine, Mustafa Kemal University, Faculty of Medicine, Antakya-Hatay, Turkey
2. Department of Emergency Medicine, Mustafa Kemal University, Faculty of Medicine, Antakya-Hatay, Turkey
3. Department of Family Medicine, Mustafa Kemal University, Faculty of Medicine, Antakya-Hatay, Turkey
4. Department of Biostatistics, Dicle University, Faculty of Medicine, Diyarbakir, Turkey
5. Department of Medical Biology and Genetics, Kahramanmaraş Sutcu Imam University, Faculty of Medicine,, Kahramanmaraş, Turkey
6. Department of Biochemistry, Mustafa Kemal University, Faculty of Medicine, Antakya-Hatay, TURKEY, Turkey
7. Department of Physical Therapy and Rehabilitation, Mustafa Kemal University, Faculty of Medicine,, Antakya-Hatay, Turkey
8. Department of Rheumatology, Antakya State Hospital,, Antakya-Hatay, Turkey

Corresponding author: Mr Celik Muhammet Murat (dr.muratcelik@yahoo.com)

Key-words: Familial Mediterranean Fever ; MPV ; Atherosclerosis

Background: The aim of this study is to investigate the correlation between mean platelet volume (MPV) and the clinical disease activity indices of Familial Mediterranean Fever (FMF).

Methods: Files of the 90 cases diagnosed with FMF were screened considering Tel- Hashomer Clinical Criteria. Forty-eight patients referred with attack (group 1), 42 patients presented in the remission (group 2) and 66 healthy persons as the controls (group 3) were included to the study. Demographic characteristics, white blood cell count (WBC), erythrocyte sedimentation rate (ESR), C-reactive protein (CRP), platelet count, and MPV levels of the patients evaluated were recorded using the computerized patient database.

Results: In this study, average of the CRP, MPV and PLT values in group 1 and group 2 were found significantly higher than in group 3 ($p<0.001$). A positive correlation was defined between MPV and PLT values, CRP values and disease severity scores, and between CRP and MPV values in the group 1 and group 2. MPV and PLT values were positively correlated with the disease severity score in the patients in group 1.

P034

Biomarkers

DIAGNOSTIC VALUE OF SERUM ISCHEMIA-MODIFIED ALBUMIN IN SPECIFIC AND NON-SPECIFIC ABDOMINAL PAIN

E Erdemir (1), S Girisgin (1), S Kocak (1), M Ergin (1), B Cander (1), ZD Dundar (2), H Cicekler (3)

1. Emergency Medicine Department, Necmettin Erbakan University Meram Faculty of Medicine, Konya, Turkey
2. Emergency Department, Konya Training and Research Hospital, Konya, Turkey
3. Biochemistry Department, Zonguldak Atatürk State Hospital, Zonguldak, Turkey

Corresponding author: Mme Dundar Zerrin Defne (zerdef@hotmail.com)

Key-words: abdominal pain ; ischemia modified albumin ; renal colic

OBJECTIVE: Our study was designed to evaluate diagnostic value of ischemic modified albumin for patients admitted to emergency service due to non-specific abdominal pain, renal colic and acute appendicitis and in which cause of abdominal pain it plays more important role.

MATERIAL – METHOD: The study was conducted at Necmettin Erbakan University Meram Faculty of Medicine Emergency Department. The patients who were >18 year and admitted due to specific (renal colic) or non-specific abdominal pain were included serially for study groups. The patients were divided into four groups; renal colic (RC), acute appendicitis (AA), non-specific abdominal pain (NSAP) and control group. The study was between 1st February 2011 and 207 patients had been included and 30 of them were in control group. The blood samples taken from patients were tested by spectrometric method for IMA. IMA levels of all groups were compared with each other and correlation of IMA level with that of WBC count and MDA level were also evaluated.

RESULTS: RC group had 73 (41.2%) patients while NSAP group with 68 (38.4%) and AA group with 36 (20.4%). In NSAP group, there was mid-grade correlation between IMA and duration of pain ($p=0.001$). The mean value of IMA was 0.539 ± 0.133 ABSU for NSAP group; 0.530 ± 0.119 ABSU for RC group; 0.550 ± 0.170 for AA group. When IMA level of NSAP and control groups, control group had (0.595 ± 0.069 ABSU) higher level than that of NSAP which was statistically important ($p=0.007$). When IMA level of RC and control groups, control group had higher level than that of RC which was statistically important ($p=0.001$). When IMA level of AA and control groups, control group had higher level than that of AA which wasn't statistically important ($p=0.151$). There was no statistically important correlation between IMA level versus WBC count and IMA versus MDA levels.

CONCLUSION: According to our findings, it can be said that testing serum IMA levels in case of abdominal pain is not appropriate for a diagnostic parameter.

P035

Biomarkers

DIAGNOSTIC VALUE OF ISCHEMIA MODIFIED ALBUMIN FOR DETECTING CEREBRAL DAMAGE DUE TO CARBON MONOXIDE EXPOSURE

M. Daş (1), Y. Cevik (2), O. Erel (3)

1. Emergency Department, Bayburt State Hospital, Bayburt, Turkey
2. Emergency Department, Etlik İhtisas Training and Research Hospital, Ankara, Turkey
3. Department of Biochemistry, Ankara Atatürk Training and Research Hospital, Ankara, Turkey

Corresponding author: Mr Cevik Yunsur (yunsurcevick@yahoo.com)

Key-words: Carbon monoxide ; Emergency department ; Ischemia modified albumin

Objective: To determine the serum ischemia modified albumin (IMA) levels in patients with carbonmonoxide poisoning at the time of 0-1-3 and 6. hour of admission to emergency department, we identified S100B and neuron specific enolase (NSE) levels during the 0. hour in the blood as a indicator of the brain injury caused by carbon monoxide poisoning and analysed the correlation of these with IMA.

Material and Methods: One hundred patients diagnosed with carbonmonoxide poisoning in Ankara Atatürk Treaning and Research Hospital Emergency Depatment and 50 volunteers were included to study. IMA levels of the study group were measured during the 0, 1, 3 and 6. hour and also NSE and S100B levels with the blood samples were taken in the 0. hour period. IMA, NSE and S100B levels screened in the control group. All data were analysed with SPSS 17.0. Demographic features and the laboratory results were expressed with mean \pm standart deviation. Mann Whitney U, Freidman and Pearson tests were used for the relationship between IMA, NSE and S100B.

Results : NSE, S100B levels in 0 . hours and IMA levels in 0, 1 and 3. hour of study group were detected significantly higher than control group ($p<0.001$, $p=0.01$, $p<0.001$, $p<0.001$ and $p<0.001$). no statistical differences were found between IMA levels of the study and control groups in the 6. hour ($p=0.128$). A positive correlation between 0. Hour IMA, S100B and NSE elevations were detected and that was statistically significant ($r=0.636$, $p<0.001$ and $r=0.274$, $p<0.001$). Patient with a Glasgow coma score below 15 had a significantly higher IMA, S100B and NSE levels at the time of admission (0.hour levels) than the patient who had a Glasgow coma score 15 and the control group. IMA level decreases were more prominent in cases of carbon monoxide poisoning treated with HBO than cases treated with normobaric (NBO) administration.

Conclusion: Elevation in IMA levels can be a useful indicator for brain injury in patient who are exposed to carbon monoxide. We think that IMA levels are more useful than COHb for identifying severity of carbon monoxide poisoning and even better for detecting HBO therapy indications

During last years, trials have reported that the level of ischemic modified albumin (IMA) was increased when acute ischemic events took place. In case of abdominal pain, trials related with diagnostic values of IMA are limited to patients with mesenteric ischemia. There is no trials working on IMA and other reasons of acute abdomen and abdominal pain.

Today's, the free radicals are claimed to have important roles in pathogenesis of many diseases. The process in which free radicals are connected covalently to membrane receptors changes ratio of poly – unsaturated fatty acid/proteins and initiates lipid peroxidation. So that resultant lipid peroxides are easily broken down into MDA reactive carbon compounds which can be measured with tiobarbituric acid.

METHOD: The study included 68 patients (37 female and 31 male; mean age 46 year old) with non-specific abdominal pain and 33 (20 female and 13 male; mean age 54) patients with acute cholecystitis. There was a significant statistical difference between two groups in terms of serum MDA levels. Acute cholecystitis group had lower level of MDA. In subgroup analysis, there was a positive correlation between white blood cell count, MDA level and IMA level in acute cholecystitis group. There was no significant change in level of IMA.

CONCLUSION: Whereas low MDA levels were determined in acute cholecystitis, further trials are required.

P037

Biomarkers

LACTATE DEHYDROGENASE NEW INDEPENDENT PREDICTOR OF MORTALITY IN ACUTE PULMONARY EMBOLISM

I.C. Roca (1), D. Cimpoesu (2), M. Roca (3), M.D. Datcu (4)

1. Emergency Department, St. Spiridon Hospital, Iasi, Romania
2. Emergency Department, St. Spiridon Hospital, Iasi, Romania
3. Pneumology, Pneumology Hospital, Iasi, Romania
4. Cardiology, St. Spiridon Hospital, Iasi, Romania

Corresponding author: Mme Roca Iulia-cristina (iuliaroca@yahoo.com)

Key-words: Pulmonary embolism ; Lactate dehydrogenase ; Mortality

Acute pulmonary embolism (APE) is a life threatening disease and one of the main causes of in-hospital mortality. The plasmatic level of lactate dehydrogenase (LDH), which is widely available in clinical practice, is a potentially useful biomarker in APE, indicator of pathological conditions, such as cell damage or inflammation. **Aim:** The purpose of this study was to determine the relationship between increase value of serum LDH and in-hospital mortality in patients with APE.. **Methods:** We conducted a prospective, cohort study, between 1 January 2004 and 31 December 2009. The patients with APE, admitted in the 1st Medical Cardiology Clinic, in "St Spiridon" University Hospital, Iasi were included. The blood samples for LDH were collected. Data analysis used Chi-square test or the independent samples t-test for patients groups comparisons, to test the statistical significance of differences (p value < 0.05 considered significant). **Results:** During the study period, we enrolled 326 patients with APE. Mean age of the patients was 62.3 years (range 16 - 95 years), 197 (60%) were females, 30 (9%) were in shock at admission. The cases were classified in: high-risk APE 89 patients (27%), intermediary-risk APE 40 patients (12%) and low-risk APE 197 subjects (61%). Fifty seven patients died during hospital stay (17%). Multivariable analysis showed that increase LDH was an independent mortality predictor for in-hospital mortality ($p<0.05$). **Conclusion:** Increase in serum LDH is an independent predictor for in-hospital mortality in APE.

P036

Biomarkers

HOW MDA AND IMA WORK TO DIAGNOSE ACUTE CHOLECYSTITIS?

AS Girisgin (1), E Erdemir (2), M Ergin (3), B Ertekin (4), S Kocak (1), M Gul (1), B Cander (1), E Dogan (5)

1. Emergency Medicine, NEU Meram Medical School, KONYA, Turkey
2. Emergency Medicine, Kahramanmaraş State Hospital, Kahramanmaraş, Turkey
3. Emergency department, NEU Meram Medical School, KONYA, Turkey
4. Emergency Medicine, Beyhekim State Hospital, KONYA, Turkey
5. Emergency Medicine, Antalya State Hospital, Antalya, Turkey

Corresponding author: Mr Girisgin A. Sadik (sgirisgin@yahoo.com)

Key-words: Acute cholecystitis ; MDA ; IMA

BACKGRUOND: Acute cholecystitis is a clinical picture in which the stone located at Hartmann pouch of gall bladder cause obstruction at the neck region of gall bladder and cystic channel. When the bile is over saturated with cholesterol, cholesterol stones are formed. The direct pressure of stones on mucosal layer results in ischemia, necrosis and ulceration. In result, inflammation takes place here. If necrosis progresses, there will be pericholecystitis and abscess formation, perforation, fistulization and bile peritonitis.

P038

Biomarkers

EFFECTS OF CARDIAC BIOMARKERS LEVELS ON MORTALITY IN SEPSIS

M Gul (1), A Harmankaya (1), H Akilli (2), B Cander (1), AS Girisgin (1), S Kocak (1), M Ergin (1), A Dur (3)

1. Emergency Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey
2. Cardiology Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey
3. Emergency Department, Bezmi Alem Foundation University Medicine Faculty, Istanbul, Turkey

Corresponding author: Mr Ergin Mehmet (drmehtemertgin@gmail.com)

Key-words: Sepsis ; Creatinine kinase ; Troponin-I

BACKGROUND: Sepsis is a life-threatening disease with high mortality and morbidity. Inflammatory response is early phase reaction in the pathophysiology of sepsis. The effective rapid manner in diagnosis and starting treatment are important in the early hours of septic patients.

MATERIAL - METHOD: This prospective study included patients with >18 year old who were diagnosed as sepsis at Emergency Service or Intensive Care Unit of Necmettin Erbakan University Meram Medicine Faculty Hospital between 1 August 2011– 30 May 2012. Patients were grouped according to Sepsis Guideline-2008. Patients were grouped in two which were sepsis (n=24) and severity sepsis-septic shock (n=31) in terms of severity of disease. There were also three subgroups in terms of mortality and morbidity: group 1 (n=11) including patients who had died during the first 3 days after admission; group 2 (n=16) with ones who died between the 4th and 28th day and the group 3 (n=28) with ones who live more than 28 days. CK-MB and Troponin-I levels in blood were measured and recorded at the time of presentation and 72 hours later.

RESULTS: In our study, 55 patients were included who has not cardiac failure in story and their median age was 72 years old (min – max 21-96). There were 26 (47%) women. Patients with sepsis, CK-MB and Troponin-I values were mentioned as median values. In the study, we made a comparison between sepsis patients and severe sepsis-septic shock patients in terms of CK-MB and Troponin-I levels. Also comparison between survival and non-survival group in terms of CK-MB and Troponin-I levels was performed. When CK-MB levels didn't diminish, it was found that CK-MB were closely associated with mortality in all sepsis groups. In the same way, when Troponin-I levels didn't diminish, it was found that were Troponin-I closely associated with mortality in all sepsis groups.

CONCLUSION: CK-MB and Troponin-I levels had an important role in diagnosis, treatment follow up and prediction of mortality. However, there is need for further advanced research

P039

Cardiovascular

TREATMENT OF ABDOMINAL AORTIC ANEURYSM AND COMMON ILIAC ANEURYSM WITH A RIGHT COMMON ILIAC ARTERIOVENOUS FISTULA

Y. Minagawa (1), O. Shimooki (2)

1. Kuji Hospital, Critical care center, Kuji, Japan
2. Kuji Hospital, Surgery, Kuji, Japan

Corresponding author: Mr Minagawa Yukihiro (yukihiro-minakawa@pref.iwate.jp)

Key-words: Aortic Aneurysm ; Iliac Aneurysm ; Arteriovenous Fistula

We report our experience of a case of abdominal aortic aneurysm and common iliac aneurysm that ruptured into the right common iliac vein and formed an arteriovenous fistula. The patient was a 70-year-old man who visited the urology department of our hospital with fatigability and edema of the scrotum and both legs. The patient was referred to our department following sensation of a pulsatile mass on abdominal palpation. A thrill was palpated in the right lower abdomen, and CT revealed an abdominal aortic aneurysm and right common iliac aneurysm, while ultrasonography showed a right common iliac arteriovenous fistula. Intraoperative findings included a fistula in the posterior wall of the right common iliac aneurysm. Venous bleeding was controlled with an aortic occlusion balloon. The fistula was closed from the aneurysm lumen and replaced with an artificial Y-shaped vascular graft (Hemashield® 16 mm× 8 mm) below the abdominal aorta. Fatigability and edema of the scrotum and both legs improved postoperatively, and the patient was transferred to another doctor on day 42.

P040

Cardiovascular

THE EFFICACY OF THE NOVEL HEART ATTACK CENTRE EXTENSION PATHWAY

D Perera, B Hoonjan, K Krishnathasan, M Selvanyagam, H Neugebauer

Emergency Department, Queens Hospital, Barking Havering and Redbridge NHS Trust, London, United Kingdom

Corresponding author: Mr Hoonjan Bhupinder (pinderhoonjan@hotmail.com)

Key-words: Acute Coronary Syndrome ; Angiography ; Percutaneous Coronary Intervention

Introduction:

The Heart Attack Centre Extension (HACX) pathway was introduced to provide a direct transfer for high risk non-ST elevation myocardial infarction (NSTEMI) patients from the emergency department (ED) of a District General Hospital in London, to a tertiary intervention centre. Consequently, patients would have earlier access to coronary angiography within the recommended European Society of Cardiology guidelines of 72 hours, and subsequent procedures such as percutaneous coronary intervention (PCI), coronary artery bypass grafting (CABG) or non-surgical management can be performed much earlier. There is no research on the effectiveness of this novel HACX pathway and how it compares to patients who have been transferred via the normal inter-hospital (IHT) pathway.

Method:

Over three months, 33 patients transferred via the HACX pathway and 37 patients transferred via the IHT pathway were followed up. All patients who presented to the ED with Acute Coronary Syndrome symptoms, relevant ECG changes (dynamic ST depression >1mm in two or more contiguous leads, or a pathological T wave Inversion in V1 – V4 suggesting a left anterior descending T-wave syndrome, or dynamic T wave Inversion > 2mm in two or more contiguous leads), a Global Registry of Acute Coronary Events (GRACE) score >88 and troponin I levels >0.1ng/ml, were discussed with the cardiology team at the tertiary centre prior to their transfer.

Time taken until angiography was performed in each patient, patient suitability for angiography, post-angiography procedures,

and 3-month mortality outcomes were analysed. Data was obtained from the hospital's patient administration system.

Results:

Mean time to angiography for HAXC patients was 1.75 days and for IHT patients, 5.5 days. Of the 33 patients (mean age 61 +/- 15.2 SD) transferred via HAXC, 30 patients (91%) were appropriately identified for an angiogram. Seventeen patients (52%) required PCI, 5 patients (15%) required CABG, 4 patients (12%) non-surgical intervention, and 4 patients (12%) required no treatment.

In the IHT group (mean age 71 +/- 12.6 SD), 17 patients (46%) required PCI, 6 patients (16%) required CABG, 8 patients (22%) required non-surgical management whilst 6 patients (16%) required no treatment.

At 3 month follow-up, 32 patients (97%) in the HAXC cohort and 36 patients (97%) in the IHT cohort were alive.

Conclusion:

HAXC is an effective pathway that accurately identifies and rapidly transfers appropriate NSTEMI patients requiring early coronary revascularisation. However, there was no additional mortality benefit at 3 month follow-up. Further studies with a larger patient cohort and longer follow-up periods are required to consolidate the benefits of the HAXC programme and consider whether this programme should be implemented nationwide and even internationally.

P041

Cardiovascular

CASE-REPORT, ETIOLOGY AND TREATMENT OF AN ACQUIRED LONG-QT SYNDROME

PJ Van Asbroeck (1), W Huybrechts (2)

1. Emergency Department, Sint-Augustinus ziekenhuis, Wilrijk, Belgium
2. Cardiology, Sint-Augustinus ziekenhuis, Wilrijk, Belgium

Corresponding author: Mr Van Asbroeck Pieter Jan (pjvanasbroeck@gmail.com)

Key-words: Acquired long-QT syndrome ; Torsades de pointes ; HERG-gene coded IKr channel

Acquired long-QT syndrome is an iatrogenic disorder, usually induced by drugs, which possibly causes life-threatening arrhythmias. We present a case-report and comment on etiology and treatment.

A 65-year old man was brought to our emergency department by ambulance after having 2 short-lasting episodes of loss of consciousness and apnea observed by family members. Our prehospital physician-based crew was summoned to the patient's home. At arrival of the team the patient was awake but pale. During transport the patient started vomiting where after he lost consciousness. ECG-scope showed torsades de pointes. After an immediate precordial thump the patient regained consciousness after restoration of sinus rhythm. Two grams of MgSO₄ was administered intravenously.

The patient's medical history showed a double-lung transplantation and chronic renal insufficiency treated with peritoneal dialysis since a few months, while on the waiting list for a kidney transplantation. One month before the described arrhythmic event, escitalopram was started because of a depressive mental state.

Following the lung transplantation the patient was put on a range of drugs such as tacrolimus, omeprazole (and escitalopram). In the postoperative phase, sotalol was started for the treatment of atrial fibrillation. A trial to replace sotalol with bisoprolol was reverted by the general practitioner due to aspecific complaints and the patient was put back on sotalol after the escitalopram-therapy had been initiated.

Sotalol is a class III antiarrhythmic drug which blocks the HERG-gene coded IKr channel. The adjuvant betalytic effect causes a lower potassium efflux with repolarization, leading to lower extracellular potassium concentration, enhancing the IKr blocking effect. Tacrolimus also, although less potent than sotalol, blocks the IKr channel but is also a strong cytochrome P450 inhibitor.

As both sotalol and tacrolimus block the IKr channel, escitalopram adds to this inhibition, when administered in high dose. Since the main metabolism of escitalopram depends on CYP2C19, which is potentially blocked by the co-administered omeprazole, its metabolism has to go through an escape route depending on the cytochrome P450 pathway, which in our patient was inhibited by tacrolimus.

Due to the co-administration of omeprazole and tacrolimus, the low dose escitalopram, accumulated, leading to a third potent IKr blocking cause. Blocking this delayed rectifier potassium current, leads to prolongation of the myocyte action potential resulting in prolongation of the QT-interval.

The prolongation of the cellular action potential, causes early after depolarizations, triggering ectopic beats (R-on-T phenomenon) and initiating torsades de pointes.

The acute management of the repeated torsades in our patient was done by temporary cardiac pacing (right ventricle) at a lower rate limit of 80 beats per minute.

A few days after discontinuation of sotalol and escitalopram, the QT-time on the ECG returned to normal and new arrhythmias were not seen anymore.

Several risk factors can contribute to acquired long QT - induced torsades e.g. female sex, bradycardia, hypokalemia, hypomagnesaemia, recent conversion from atrial fibrillation especially with QT-prolonging drugs, high QT-prolonging drug concentrations and/or rapid intravenous infusion of these drugs, subclinical congenital LQTS (1).

Association of different potential QT-prolonging drugs should be avoided. Specific attention has to be made to those drugs which only act as potent QT-prolonging substances when their normal metabolism routes are inhibited by other, unsuspecting and non-QT prolonging drugs.

(1) Kannankeril et al ; Pharmacol Rev 62:760-781, 2010

P042

Cardiovascular

LIMITED BEDSIDE ECHOCARDIOGRAPHY FOR DIAGNOSIS OF DIASTOLIC HEART FAILURE.

E.E. Unluer (1), S. Bayata (2), N. Postacı (2), M. Yeşil (2), O. Yavaş (1), P.H. Kara (1), N. Vandenberg (1), S. Akay (1)

1. Emergency Department, Izmir Katip Çelebi University, Atatürk Research and Training Hospital, Izmir, Turkey
2. Cardiology Department, Izmir Katip Çelebi University, Atatürk Research and Training Hospital, Izmir, Turkey

Corresponding author: Melle Kara Pinar Hanife (hpinkara@hotmail.com)

Key-words: Bedside echocardiography ; diastolic heart failure ; emergency department

Introduction: The identification of diastolic heart failure (DHF) is important for determining the prognosis of congestive heart failure patients. This study attempted to determine the accuracy of emergency physicians who performed bedside echocardiography (BECH) in patients with diastolic dysfunction.

Methods: Three attending emergency physicians underwent 3 h of didactic and 3 h of hands-on training taught by a cardiology specialist for the echocardiographic diagnostic criteria of DHF. Between February and April 2010, the emergency physicians performed BECH for patients presenting with dyspnoea, and

echocardiographic views were recorded. Our gold standard for the diagnosis of diastolic dysfunction was the cardiologists' echocardiography report. Results were compared with χ^2 testing. Results: Of the 69 enrolled patients, 51 were diagnosed as having diastolic dysfunction by emergency physicians. The sensitivity of BECH was 89% (77-95) and specificity was 80% (51-95) with 95% CI. The accuracy of the emergency physicians' echocardiographic diagnosis was 87%.

Conclusion: BECH performed by emergency physicians may serve as an objective, rapid, non-invasive tool in the assessment of patients presenting with dyspnoea in ED.

P043

Cardiovascular

INTEGRATED HEALTH CENTRES (ICS): INITIAL APPROACH TO MULTIFOCAL ATRIAL TACHYCARDIA MANAGEMENT

L. Manclús Montoya (2), S. Navarro Gutierrez (2), A. Lluch Sastriques (1), S. Castells Juan (2), O. Martinez Ferris (2), M. Roig Durá (2), J.L. Ruiz Lopez (2)

1. Emergency Department, Hospital Universitario La Fe, Valencia, Spain

2. Emergency Department, Hospital Universitario de La Ribera, Alzira, Alzira, Valencia, Spain

Corresponding author: Mr Navarro Gutierrez Sergio (sergionavarrog@hotmail.com)

Key-words: Integrated Health Centres ; multifocal atrial tachycardia ; out of hospital management

Problems associated to overcrowded emergency departments continue to be a major health problem in Spain. Different governments and health authorities have experienced a prior step to hospital Emergency Departments (ED) with the development of Integrated Health Centres (IHC). These IHC are reducing our hospitals overcrowded ED frequentation improving the assistance in both steps. Patients with mild problems could be treated in these IHC with a accurate and reliable doctor teams with lab and radiology support. Patients do not have to be transported to a hospital far away from their villages or neighbourhoods due to problems that could be solved by IHC doctors, avoiding ambulance transportation and reducing the delay in the assistance to acute and major health pathologies at the hospital EDs. Acute hearth pathologies are mainly first treated by our IHC doctors due to the fact that the IHC are located downtown, the possibility of quick initial evaluation and lab and radiology test availability. An important amount of patients, complain of cardio respiratory problems and improving antiarrhythmic treatment is one of our goals considering that we do not have cardiology nor intensive care support on these centres and patients with acute heart diseases should be transferred to our Hospital, miles away from these IHC. We present here how an important amount of patients with heart rhythm diseases are first evaluated at our IHC.

We present the case of a 65-year-old woman with past medical record of unregistered self-limited episodes of palpitations during the last months. Nor dyspnoea neither chest pain were reported. Physical exam revealed no alterations but tachyarrhythmia. EKG revealed multifocal atrial tachycardia (MAT) with heart rate around 130. Blood test were normal except free T4 of 2.5 ng/dL (0.9 - 1.7 ng/dL) and TSH < 0,005 (0,27 - 0,5 mU/ml)

After administracion of intravenous diltiazem and control of heart rate, our patient was discharged with recommendation of treatment with 100 mg of Aspirin, tiamazol and propranolol. One week later when evaluated by Endocrinology, sinus rhythm was reported.

MAT is most commonly described in people over 50 years old and often seen in people with hypoxemia.

After ruling out the most common causes of MAT, the blood tests led to the suspected diagnosis of MAT secondary to hyperthyroidism.

Treatment of TAM is based on control of desencadenate factors correction such as hypoxia and electrolyte alterations. In absence of hemodynamic instability, control of the ventricular rate was the goal as well as treatment of hyperthyroidism.

P044

Cardiovascular

THE ROLE OF OXIDATIVE STRESS IN THE INITIAL EVALUATION OF NON-ST ELEVATION ACUTE CORONARY SYNDROME AND ITS RELATION WITH INFLAMMATION PARAMETERS

MT Gokdemir (1), H Kaya (1), O Sogut (1), Z Kaya (2), A Taskin (3), L Albayrak (4)

1. Emergency Department, Harran University, School of Medicine, Sanliurfa, Turkey

2. Cardiology Department, Harran University, School of Medicine, Sanliurfa, Turkey

3. Biochemistry Department, Harran University, School of Medicine, Sanliurfa, Turkey

4. Emergency department, Harran University, School of Medicine, Sanliurfa, Turkey

Corresponding author: Mr Gokdemir Mehmet Tahir (tahirgokdemir@mynet.com)

Key-words: Oxidative stress, Non ST Elevation Myocardial Infarction, ; Inflammation parameters, ; Emergency Department.

Objective: Oxidative stres (OS) is the unifying mechanism for many CVD risk factors, which additionally supports its central role in CVD. OS is defined as a balance between the formation and elimination of free radicals. Any increase in the rate of free radical formation, or decrease in their elimination, can disrupt this balance, resulting in OS. Superoxide and other reactive oxygen species (ROS) are increased in arteries in several major cardiovascular diseases. Inflammation and oxidative stres (OS) are critical factors in the pathophysiology of atherosclerosis and its thrombotic complications. We aimed to assess the role of OS in the early evaluation of initial acute Non ST elevated Myocardial Infarction (NSTEMI) and its relation with inflammation parameters.

Methods: Eighty-seven consecutive subjects were recruited prospectively. Of eighty-seven patients in the study, 47 (54 %) had NSTEMI (study group) and 40 (46 %) had unstable angina pectoris (USAP, control group). All calculations were performed using the SPSS 11,5 software package. Categorical variables were performed using the chi-square test or Fischer's exact test. Comparisons between groups were carried out using Student's t-test or the Mann-Whitney U-test. Findings were considered statistically significant at the 0.05 level.

Results: Plasma TOS and OSI levels were significantly higher ($P < 0.001$ for both comparisons), in patients with NSTEMI compared with USAP subjects. In addition, WBC and hs-CRP levels were significantly higher in patients with NSTEMI compared with USAP subjects (respectively; $p < 0.001$, $p = 0.02$). Age, WBC and LDL-C showed positive correlations with TOS level (Pearson correlation coefficient: $r = 0.290$, $P = 0.006$; $r = 0.431$, $P < 0.001$; 0.219 , $p = 0.042$ respectively) ,and also age showed positive correlation with OSI (Pearson correlation coefficient; $r = 0.246$; $p = 0.021$). But the value of the troponin I and CK-MB at emergency department admission were not significant difference between the two groups. ($P = 0.297$, $P = 0.522$ for both comparisons).

Conclusion: OS may lead to endotelial damages, including plaque formation and rupture. TOS, OSI, WBC and CRP levels are significantly higher in NSTEMI subjects, when compared to USAP subjects. These data suggest that inflammatory processes and oxidative stres together play a role in the pathogenesis of acute NSTEMI. It is therefore important to identify reliable biomarkers

allowing us to monitor OS status. These also may lead to improved understanding of acute NSTEMI pathogenesis and development of new therapeutic strategies.

P045

Cardiovascular

MORTAL DIAGNOSIS IN THE EMERGENCY DEPARTMENT: RUPTURE OF ARCUS AORTA ANEURYSM WITH NON-SPECIFIC SYMPTOM

B. Karakus (1), A. Ipekci (2), E. Cevik (3), Y. Celik (1), T. Ocak (4)

1. Emergency department, Istanbul Bagcilar Training and Research Hospital, Istanbul, Turkey
2. Emergency department, Istanbul Okmeydanı Training and Research Hospital, Istanbul, Turkey
3. Emergency department, Ankara Gulhane Military Medical Academy, Ankara, Turkey
4. Emergency department, Bolu Abant İzzet Baysal University, Bolu, Turkey

Corresponding author: Melle Karakus Banu (banukarakus@yahoo.com)

Key-words: aorta aneurysm ; mortal diagnosis ; emergency department

Introduction: Chest pain and syncope complaints are common cause of admission to the emergency department. Aortic dissection and rupture of aortic aneurysm must be considered in differential diagnosis and must be diagnosed and treated early. Aim of this case presentation was emphasize systemic examination of the patients admitted with syncope.

Case: 77 years old women was admitted to the emergency department with chest pain, black colored defecation and syncope. There was no speciality in personel and family history. Blood pressure was 90/60 mmHg and heart rate was 121 beats/min. There was no difference on right and left arm blood pressure. Ampulla was empty on rectal examination. Systemic examination was normal. Sinus tachycardia was present on ECG. Opacity which is deviated trachea to the right, matched arcus aorta region and about 6-7 cm size was present on chest X-ray. Irregularity in the aortic wall at the level of arcus aorta and milimetric sacculations were determined on diagnostic CT angiography. CT angiography have been reported as at this level, lesion area was measured 68x60 mm size at the widest dimension (partially thrombosed aortic aneurysm rupture?, hematoma area after aneurysm rupture?). Laboratory results was normal. Patient was hospitalized to the cardiovascular surgery clinic with diagnosis of aort aneurysm. Melena, hypotension were developed and hemoglobin values were dropped at patients follow up. Patient was not able to stable and accepted as an exitus at fourth day of hospitalization despite blood transfusion.

Discussion-Conclusion: Aortic aneurysm is usually seen in population which is over 60 years old, however it is seen more frequent in male and over 70 years old. Thoracic aortic aneurysm constitutes less part of aortic aneurysms and diagnosed by chance with based on impression symptoms. Diagnosis could be done USG, CT and MRI. Rupture of aneurysm is usually fatal. In our case, patient was admitted with syncope and symptoms of gastrointestinal bleeding were in the foreground. A routine chest X-ray taken in patients with the suspected diagnosis and the definitive diagnosis was made by CT angiography.

As a result, when patients with chest pain and syncope were evaluated in the emergency department, all urgent diagnosis should be considered and these high mortality diagnosis could be excluded.

P046

Cardiovascular

ATTENTION! ANEMIA

B. Karakus (1), M. Yigit (2), A. Ipekci (3), E. Cevik (4), O. Uzun (1)

1. Emergency department, Istanbul Bagcilar Training and Research Hospital, Istanbul, Turkey
2. Emergency department, Kirsehir Ahi Evran University Training and Research Hospital, Kirsehir, Turkey
3. Emergency department, Istanbul Okmeydanı Training and Research Hospital, Istanbul, Turkey
4. Emergency department, Ankara Gulhane Military Medical Academy, Ankara, Turkey

Corresponding author: Melle Karakus Banu (banukarakus@yahoo.com)

Key-words: anemia ; Osler-Weber-Rendu Syndrome ; emergency department

Introduction: There is an indication for emergency transfusion in a number of patients admitted to emergency department with nontraumatic hemorrhage. Blood transfusions are usually performed in emergency departments to these patients to prevent them from complications of anemia and to stabilize them. Aim of this case is review the decision of transfusion in emergency department with the patient who was not transfused immediately and had acute myocardial infarction at the basis of anemia.

Case: 51-years-old male patients was admitted to the emergency department with complaints of epistaxis and chest pain. He had a diagnosis of Osler-Weber-Rendu Syndrome (Hereditary Hemorrhagic Telangiectasia) in history. He was admitted to the another hospital 10 days ago with complaint of fatigue and 3 unite erythrocyte suspensions were given because hemoglobin (Hb) value was 3.9 gr/dL and hematocrit (Hct) value was 14.4. Vital sign was stabile. Scleras was pale and heart rhythm was normal on physical examination. Nasal packing was placed because of continuing active epistaxis. Hb, Htc, RBC, WBC and Platelet values were respectively 2.4 gr/dL, 9.3, 1.04, 31,09 and 408.000. Erythrocyte suspensions were ordered to give the patient. There was no cross-match compatible erythrocyte suspension in blood bank therefore we were begun searching erythrocyte suspension for the patient. While there was non-specific ST-segment changes on first ECG, ST-segment elevation on precordial leads and ST-segment depression on inferior derivations was determined during follow-up. Patient was accepted as a ST-segment elevated acute myocardial infarction on the basis of anemia and admitted to coronary intensive care unit. Thrombolytic therapy were not applied because of melena and abundant epistaxis during follow-up. 10 unite erythrocyte suspensions were given. Coronary angiography were performed 1 week after coronary intensive care unit admission. 70-80% stenosis was determined after d2 branch of LAD and interventional procedure was not performed. Patients medical treatment was arranged and patient was discharged.

Discussion-Conclusion: Osler-Weber-Rendu Syndrome is autosomal dominant which is showed itself with recurrent epistaxis and gastrointestinal bleeding due to mucutaneous-gastrointestinal telangiectatic. In our case, patient was admitted with profound anemia due to epistaxis and gastrointestinal bleeding and transfusion was considered. Emergent blood transfusion is performed to the patient with acute blood loss and profound anemia which diminishes oxygen transport. Symptom of heart failure could be deepening with profound anemia according to underlying diseases. Myocardial ischemia and infarction may be seen in patients with coronary artery disease. In our case stenosis of LAD was present and cardiac perfusion was diminished because of profound anemia therefore patient had acute myocardial infarction. Decision of blood transfusion should be considered early and started immediately in patients admitted to emergency

department who is elderly and with comorbid disease before complications were developed.

P047

Cardiovascular

SHOULD CAPTOPRIL BE GIVEN VIA SUBLINGUAL ROUTE IN HYPERTENSIVE PATIENTS?

E Karakilic (1), F Buyukcam (2), S Gedik (3), G Kocalar (1), E Atalar (4)

1. Emergency Department, Ankara Numune Training & Research Hospital, Ankara, Turkey
2. Emergency Department, Ankara Diskapi Yildirim Beyazit Training & Research Hospital, Ankara, Turkey
3. Cardiovascular Surgery, Ankara Numune Training & Research Hospital, Ankara, Turkey
4. Cardiology Department, Hacettepe University, School of Medicine, Ankara, Turkey

Corresponding author: Mr Karakilic Evvah (evvahka@gmail.com)

Key-words: Hypertension ; Captopril ; Sublingual

Introduction: Hypertensive crisis is a condition characterized by rapid and inappropriate symptomatic elevation of blood pressure that is commonly seen in emergency departments. Elevated blood pressure with end organ damage is called as hypertensive emergency and without end organ damage it is called as hypertensive urgency. End organ damage is frequently seen in cardiovascular, renal and central nervous system. The Joint National Committee recommends reducing the blood pressure in hypertensive urgency and emergency conditions to prevent the end organ damage. However some of the studies suggested rapid and effective oral or sublingual agents, the recent studies showed that the rapid and excess reduction of the blood pressure is risk. Oral or sublingual captopril is commonly used in the emergency departments. The unpleasant taste of the sublingual drugs causes uncomfortable condition to the patient. Studies showing no difference between oral and sublingual captopril has been ignored so far. Herein we compared the oral and sublingual captopril efficiency in the hypertensive urgencies.

Material and Methods: In this retrospective observational study, patients admitted with hypertensive urgency to Diskapi Yildirim Beyazit and Ankara Numune Training and Research Hospital in 2011 whose blood pressure were recorded at 0-5-15-30-45-60 minutes were included the study. The reductions of the blood pressure of oral and sublingual captopril groups were compared.

Results: There were 28 patients at oral and 43 at sublingual captopril group. The blood pressure at admission, 0-5-15-30-45 and 60th minutes of therapy didn't show any difference ($p>0.05$).

Conclusion: In case of hypertensive urgency to take control of the blood pressure within 24-48 hours is recommended. Although studies in the literature showing the superiority of the use of sublingual captopril, some studies showing no difference between oral and sublingual captopril were ignored so far. There isn't any difference between oral and sublingual captopril efficiency to take control of the blood pressure. For a more comfortable treatment oral captopril is a more convenient choice in the hypertensive urgencies.

P048

Cardiovascular

ICTAL ASYSTOLE CAUSED SYNCOPE CONFIRMED BY EEG IN EMERGENCY DEPARTMENT. CASE REPORT

I Szabo (1), K Fule (2), L Zag (1), Zs Erdelyi (1), I Kondakor (2)

1. Emergency Department, County Hospital, Kecskemet, Hungary
2. Neurology Department, County Hospital, Kecskemet, Hungary

Corresponding author: Mr Szabo Istvan (szaboii@freemail.hu)

Key-words: Syncope ; Ictal Asystole ; EEG

Background: Syncope is a transient loss of consciousness (T-LOC) due to transient global cerebral hypoperfusion characterized by rapid onset, short duration and complete spontaneous recovery. Recurrent syncope is more common than epilepsy and accounts for 3% of emergency department (ED) visits. The differential diagnosis between syncope and seizure in patients with T-LOC sometimes can be very difficult.

Objectives: EEG monitoring was introduced in our ED after general neurological examination in case of patients whose symptoms or signs suggested epilepsy. It can help establish the diagnosis or even change the management.

Method: 25 yr-old man presented to our ED with a T-LOC lasted for a few minutes. In his past medical history there is recurrent loss of consciousness.

Abdominal pain, dizziness and vertigo introduced the syncope and bilateral limb shaking was observed which raised the suspicion of partial seizure.

The initial evaluation consisted of a careful past medical history, physical examination including blood pressure measurement in supine and standing position, ECG and blood tests. Carotid sinus compression was also performed. Every test was normal.

After the neurological examination an urgent EEG was performed during ED staying.

Results: During the EEG first there was a tachycardic period followed by a gradual bradycardia which was associated with a psychomotoric agitation. In the next 30 seconds there were 3 asystolic periods (4100ms, 6400ms and 4200ms) on the ECG followed by a diffuse slowing on the EEG. There was a partial consciousness observed in this period. After that the heart rate was normalized, the patient recovered quickly. Because of asystolic periods, the patient was referred to the Cardiology Unit for further investigations.

Conclusions: EEG monitoring can be a really useful diagnostic tool in case of an unexplained loss of consciousness in the Emergency Department and it can also help to establish the diagnosis in such a unique situation when the T-LOC is caused by an Ictal Asystole.

P049

Cardiovascular

RAPID NON-INVASIVE EVALUATION OF THROMBOLYTIC THERAPY OF ST ELEVATION AMI IN EMERGENCY DEPARTMENT

M Botea (1), C Cristorean (1), A Maghiar (1), I Magyar (2), C Pantis (3)

1. Emergency Department, Emergency Clinical County Hospital Oradea, Oradea, Romania
2. Department of Pharmacology, Faculty of Medicine and Pharmacy, University of Oradea, Oradea, Romania
3. ICU Department, Emergency Clinical County Hospital Oradea, Oradea, Romania

Corresponding author: Mr Botea Mihai (drmbot78@yahoo.com)

Key-words: STEMI ; thrombolysis ; non-invasive

Introduction. Acute myocardial infarction (AMI) represents a serious problem in current medical practice, for many reasons,

such as: increase in incidence, especially in those under 45 years, mortality is high (50 % in the first month and half of them in the first 2 hours) in the absence of prompt and appropriate treatment; however monitoring costs and long-term treatment are high. The U.S.A. recorded 1.5 million annual new cases of AMI and in Romania about 150 000. AMI mortality was 98 per 100.000 people doubled than the year 1988. Mortality, especially in the presence of cardiogenic shock is extremely high despite treatment becoming more aggressive.

Purpose and hypothesis work. In this study the authors try to demonstrate that, using three non-invasive markers [Troponin I (TnI), CK-MB and ECG ST elevation], can be evaluated the efficiency of thrombolysis in patients with ST elevation MI (STEMI) presenting in the emergency department (ED).

Materials and methods. 30 patients with STEMI admitted ED were studied successively during 01.09.2011-29.02.2012. All received thrombolytic therapy with tenecteplase (TNK) dose of 0.5 mg / kg, iv bolus. In each patient, were determined values of CK-MB, TnI and ECG during hospital admission - before thrombolysis, immediately after thrombolysis and after 24 hours. CK-MB and TnI were determined using a device called Pathfast. Obviously, other parameters were determined in all these patients.

Results and discussions. There were registered 24 male patients (80%) and 6 female (20%). Most patients belonged to the age group 51-60 years and 71-80 years, about 30% for each. Those under 50 years occurred in 20% (6 patients). Notable complications: cardiogenic shock in 3 patients (10%). Most common location of STEMI was inferior location (53.33%, respectively, 16 patients). Initiating thrombolysis was made in most patients 2-4 hours after arrival in the ED (43.33%, respectively, 13 patients), after about 4 hours (33.33%, respectively 10 patients) and in between 1 – 2 hour (16.67%, respectively, 5 patients). Thrombolysis was performed in less than 60 min in only 2 patients. Evolution of the 3 markers studied were as follows: mean TnI at admission was 0.584 ± 0.167 (VN < 0.02 ng / ml) and 0.226 ± 0.108 after thrombolysis, with a standard error (SE) of 2.14. In fact, elevated TnI at admission correlates with the onset of STEMI, less than 3 hours after arrival in the ED. Mean CK-MB at admission were 21.18 ± 8.09 (VN = 0.34 to 4.99 ng / ml) and 13.85 ± 8.10 after thrombolysis with an ES of 0.91. ST elevation on admission was 4.10 ± 1.61 . Average (mm) and 2.60 ± 1.27 after thrombolysis with an ES of 0.93%. There is a significant resolution of ST segment elevation after thrombolysis. No bleeding complications were recorded such as cerebral hemorrhage and no deaths were noted in the group of patients that were evaluated. The statistical data was processed with χ^2 test.

Conclusions. In many cases, there is no possibility of performing coronary artery bypass or percutaneous transluminal angioplasty with stent implantation, the ED can assess the effectiveness of thrombolysis using these three non-invasive markers, relatively easy to obtain, in any hospital with a emergency profile. Data shows the non-invasive measurement of the effectiveness of thrombolysis, and the importance of early initiation of this therapy as the patient arrives in the ED.

P050

Cardiovascular

ACUTE RESPIRATORY DISTRESS REVEALED CONGENITALLY CORRECTED TRANSPOSITION OF THE GREAT ARTERIES IN ADULTHOOD

H EZZOUINE, A BENSLAMA, B CHARRA, S MOTAOUAKKIL

Medical intensive care unit, university teaching hospital Ibn Rushd, CASABLANCA, Morocco

Corresponding author: Mme Ezzouine Hanane (ezzouinehanane@yahoo.fr)

Key-words: acute respiratory distress ; congenitally corrected transposition of the great arteries ; adulthood

Congenitally corrected transposition of the great vessels is a rare congenital heart defect associated with multiple cardiac morphological abnormalities and conduction defects.

This disorder is reported in 0.5% of patients with congenital heart disease, and the literature reports fewer than 1000 cases. Most pediatric cardiologists have seen multiple cases of congenitally corrected transposition of the great vessels; however, the true prevalence of the malformation is not known. We report the case of 40 years old patient who had congenitally corrected transposition of the great arteries revealed in adulthood by acute respiratory distress.

Case Report

A patient 40 years old, No pathological history known admitted at the ICU for acute respiratory distress. At his admission in the ICU, Patient was unconsciousness. Glasgow scale 13 without deficit signs. His blood pressure was 125/67 mmHg and heart rate to 45 beats / minute. He was polypnea to 34 cycles / minute and saturation arterial oxygen was 75% in ambient air. Laboratory tests in blood were normal. Arterial blood gases confirmed an acute lung injury. Chest radiography No parenchymal signs of pulmonary hypertension. Electrocardiogram Atrioventricular block of 3rd degree. Trans-thoracic echocardiography A situs solitus with dual atrioventricular discordance (L. transposition of great vessels). Therapeutic care Oxygenation, NIV (poorly tolerated), Intubation and ventilation. Evolution was extubation and the establishment of a pacemaker

Discussion/Conclusion :

congenitally corrected transposition of the great arteries is rare. its evolution may be silent and eventually revealed in adulthood by atrio-ventricular block 3rd degree. Acute respiratory distress can extremely reveal this malformation as in the case reported So, in extremis ACUTE RESPIRATORY DISTRESS + BAV 3rd DEGREE. ECHOCARDIOGRAPHY is the main exam. It will confirm congenitally corrected transposition of the great arteries

P051

Cardiovascular

THE ASSOCIATED WITH TROPONIN RED CELL DISTRIBUTION WIDTH IN PATIENT WITH ACUTE CORONARY SYNDROMES

C SEN TANRIKULU, S KARAMAN

Emergency Department, Erzurum Area Education and Research Hospital, Erzurum, Turkey

Corresponding author: Mme Sen Tanrikulu Ceren (cerensen81@hotmail.com)

Key-words: Coronary syndrome ; RDW ; Troponin

Aim: The red cell distribution width (RDW), a recently described novel risk marker has been shown to be predictive of morbidity and mortality in variety of cardiovascular settings, including heart failure, stable-unstable angina, and acute myocardial infarction. RDW is a numerical measure of the variability in size of circulating

erythrocytes and this parameter is routinely reported as part of the complete blood count. In our study, we investigated the associated with cardiac markers of RDW in patient with acute coronary syndromes.

Material Method: 264 patients were included to the study, comprising of 222 patients with acute coronary syndromes (ACS) and 42 patients with heart failure. Control group consisted of 112 healthy individuals. Coronary angiography was performed to all patients in the ACS group and they were divided to 2 groups according to results of coronary angiography: critical vascular occlusion (major vessels) (159 patients), and non-critical vascular occlusion (minor vessels) (63 patients). A various parameters such as RDW and troponin are analyzed at blood samples were taken from all patients. The groups are compared according to RDW and troponin. The ACS group in terms of troponin and RDW levels its clinical and angiographic characteristics.

Findings: Mean age of study group was 63 ± 14 , heart failure group was 72 ± 10 and control group was 58 ± 18 . There was statistically significant difference between ACS group and the others groups according to levels of RDW and troponin levels ($p < 0.001$ for all). There was statistically significant difference between control group and the heart failure group according to levels of RDW ($p < 0.001$ for all) and RDW levels were higher to the heart failure group than control group. In clinical classification, there was significant difference between akut MI and stabil angina group and unstabil angina group according to troponin levels ($p < 0.05$). There was significant difference between unstabil angina group and non-cardiac chest pain group according to RDW levels ($p < 0.05$). There was significant difference between akut MI group and non-cardiac chest pain group according to troponin levels ($p < 0.05$). In angiographic evaluation, there was no significant difference between groups according to RDW levels. There was significant difference between groups according to troponin levels ($p < 0.05$).

Conclusion: We detected that RDW were increased in patients presenting with acute coronary syndrome and heart failure, but we saw no difference between the subtypes of acute coronary syndrome. As RDW is widely available to clinicians as a part of the complete blood count, and therefore incurs no additional costs, it might be considered with other conventional cardiac markers for the evaluation of ACS patients admitted to emergency departments. Nonetheless, conflicting results of other studies make this issue controversial, which warrants performing of more comprehensive studies in future.

P052

Cardiovascular

THE ASSOCIATED OF MEAN PLATELET VOLUME WITH THE CLINICAL AND ANGIOGRAPHIC PRESENTATION OF ACUTE CORONARY SYNDROMES

C SEN TANRIKULU, E ACAR, S KARAMAN

Emergency Department, Erzurum Area Education and Research Hospital, Erzurum, Turkey

Corresponding author: Mme Sen Tanrikulu Ceren (cerensen81@hotmail.com)

Key-words: Angiography ; Coronary syndrome ; MPV

Aim: Description of risk factors in coronary heart disease has a very important place in the prevention of acute coronary syndromes as well as in predicting the prognosis. Activated platelets play an important role in the pathogenesis of acute coronary syndromes. Platelets are heterogeneous with respect to their size, density, and reactivity. It was proposed that large platelets are more active hemostatically, and platelet size has been found to be increased in patients with acute coronary syndromes. It is well established that

mean platelet volume (MPV) levels increase in acute coronary syndromes. In our study, we investigated the relationship between MPV and coronary heart disease.

Material Method: 330 patients were included to the study, comprising of 22 patients with stable angina pectoris, 81 patients with unstable angina pectoris, 171 patients with acute myocardial infarction, 14 patients with non-cardiac angina pectoris, and 42 patients with heart failure. Control group consisted of 112 healthy individuals. Coronary angiography was performed to 247 patients and they were divided to 3 groups according to results of coronary angiography: normal (25 patients), critical vascular occlusion (major vessels) (159 patients), and non-critical vascular occlusion (minor vessels) (63 patients). A various parameters such as MPV, creatine kinase, creatine kinase-MB, troponin, and myoglobin are analyzed at blood samples were taken from all patients. The groups are compared in terms of these parameters according to its clinical and angiographic characteristics.

Findings: Mean age of study group was 63.93 ± 14.18 and control group was 58.64 ± 18.8 . MPV levels were higher in study group than control group and there was statistically significant difference according to levels of MPV ($p < 0.05$). In addition, there was statistically significant difference according to levels creatine kinase, creatine kinase-MB, troponin, and myoglobin ($p < 0.05$ for myoglobin, $p < 0.001$ for others). There was no significant difference according to levels of platelet ($p = 0.94$). In clinical evaluation, there was significant difference according to MPV levels between the heart failure group and other groups and MPV levels were higher in heart failure group ($p < 0.05$). There was no significant difference according to platelets levels. In angiographic evaluation, there was no significant difference according to MPV and platelets levels between the groups ($p = 0.605$ for MPV, $p = 0.335$ for platelet).

Conclusion: In conclusion, we detected that mean platelet volumes were increased in patients presenting with acute coronary syndrome, but we saw no difference between the subtypes of acute coronary syndrome such as stable angina pectoris unstable angina pectoris acute myocardial infarction. Based on these findings, we have concluded that larger platelet volumes may constitute a high risk for acute coronary syndrome. For this purpose, we think that MPV measurement, which is a non-invasive, cheap and easy-to-perform method, may be an important tool for the follow-up of these patients. Nonetheless, conflicting results of other studies make this issue controversial, which warrants performing of more comprehensive studies in future.

P053

Cardiovascular

THE ROLE SERUME HSP-70 LEVELS AT DIAGNOSIS OF PATIENTS WITH ST ELEVATED MYOCARD INFARCTION

F Yildiz (1), M Yildiz (1), N Ilhan (2), M Gurger (1), B Mutlu (1), E Gul (3), H Gungor (2)

1. Department of Emergency Medicine, Firat University, School of Medicine, Elazığ, Turkey

2. Department of Biochemistry, Firat University, School of Medicine, Elazığ, Turkey

3. Department of Emergency Medicine, Elazığ Training and Research Hospital, Elazığ, Turkey

Corresponding author: Mr Yildiz Mustafa (acilitip@gmail.com)

Key-words: Acute coronary syndrome ; HSP-70 ; STEMI

Acute myocardial infarction with ST elevation (STEMI) is the leading cause of morbidity and mortality all over the world in the first place; despite efforts to take all the protection, it becomes a serious health problem with increased frequency. Therefore, early

diagnosis and risk assessment issues about STEMI is of great importance.

We study, the relationship between the level of HSP70 and cardiac markers. We aimed to determine the disease process within HSP70 changes levels who admitted to our emergency department with STEMI.

Our prospective study presented who were admitted to Firat University Medical School Hospital Emergency Department with the ECG derivation at least 0.1 mV ST segment elevation in 2 consecutive derivation. Fifty patients were included above 40 years of age and control group consisted of 50 people who have no underlying comorbid disease. Blood samples were collected for measurement of serum HSP70 and cardiac marker levels in the patients at admission, and 3 days later blood samples were collected to the patients. The findings level analyzed statistically.

In our study, HSP70 were found to be significantly higher in the third day patients than the level of incidence (761.433-575.905 pg / ml) ($p < 0.05$). HSP70 levels were also higher than control group patients at admission (575.905-381.544), but found no statistically significant ($p > 0.05$).

We found that 3rd day patients with STEMI seeing a high levels of HSP70 in follow-up study. ACS has previously been correlated with HSP70, similar results were obtained. We believe that more research needs to be done on this subject.

P054 Cardiovascular

A PERICARDITIS CASE PRESENTING WITH A MYOCARDIAL INFARCTION PRE-DIAGNOSIS

M Esen (1), H Kadi (2), M Ayan (1), N Basol (1), F Altunkas (2), T Alatl (1)

1. Department of Emergency Medicine, Gaziosmanpasa University, Faculty of Medicine, Tokat, Turkey

2. Department of Cardiology, Gaziosmanpasa University, Faculty of Medicine, Tokat, Turkey

Corresponding author: Mr Ayan Murat (ayan421975@windowslive.com)

Key-words: pericarditis ; myocardial infarction ; electrocardiography

Introduction: Acute pericarditis is an inflammatory response of pericardium to various pathological causes such as infectious agents, uremia, malignancy, surgery, autoimmune diseases and trauma. Infectious and idiopathic factors are shown as the most frequent causes. Different ST and T-wave changes can be seen in patient's electrocardiography (EKG) depending upon the myocardial inflammation or epicardial injury. A case is presented here in which the patient had acute pericarditis with common elevated ST in EKG and was referred to our emergency room with myocardial infarction pre-diagnosis.

Case: A 46-year old female patient was referred to our hospital with myocardial infarction pre-diagnosis to undergo angiography. In EKG of the patient, heart rate was 87 beats per minute. There was elevated downward ST segment and positive T-wave in all derivations and common PR segment depression and ST segment depression in aVR. Cardiology consultation was demanded with acute coronary syndrome and pericarditis pre-diagnoses. Pericardial effusion of 1.7 cm in posterior wall, 0.9 cm in ventricle, 1.9 cm in lateral wall and 0.7 cm in right atrium was detected in patient's echocardiography. Having normal Troponin levels, the patient was admitted to cardiology clinic with a diagnosis of pericarditis for following and treatment purposes.

Discussion: It is believed that EKG changes in acute pericarditis result from myocardial inflammation or epicardial injury.

Echocardiography is necessarily needed to diagnose pericardial effusion and accompanying heart disease or paracardial pathology. **Conclusion:** Since EKG changes in acute pericarditis are similar to the ones in myocardial infarction, differential diagnosis should be necessarily considered. In every patient presented with chest pain and common elevated ST, pericarditis should be considered and a fast diagnosis can be made using non-invasive methods.

P055 Cardiovascular

TREATMENT OF PAROXYSMAL ATRIAL FIBRILLATION IN EMERGENCY DEPARTMENT

S PILIP (1), E GREDOWSKA (1), L BONDARUK (1), A BINKOWSKA (1), D CELINSKI (1), G MICHALAK (2)

1. Medical University of Warsaw, Medical Emergency Department, WARSAW, Poland
2. Medical University of Warsaw, Medical Emergency Department, Warsaw, Poland

Corresponding author: Mr Slawomir Pilip (spilip@wum.edu.pl)

Key-words: Emergency Department ; atrial fibrillation ; FAP

Aim: Patients with cardiac arrhythmias, especially with paroxysmal atrial fibrillation (FAP)

constitute almost half of all patients admitted to Emergency Department (ED). The relationship between the occurrence of FAP and the sex and age of patients was examined. The efficiency of pharmacotherapy was also investigated in correlation with the age and sex of the patients. **Material and methods:** Data were collected for 6 months period of observation and based on the computer database of Bielanski Hospital in Warsaw. Medical case histories of patients were analysed regarding sex, age, the accompanying symptoms (chest pain, dyspnea), pharmacotherapy applied and the efficiency of treatment.

Patients were divided into two groups: up to 65 and over 65 y.o. In the evaluation of effectiveness of pharmacological treatment, the intravenous mono and polytherapy with potassium chloride, magnesium sulphate, metoprolol, amiodaron, propafenon and antazolina was taken into account. Pharmacotherapy was regarded as effective if the sinus rhythm occurred. **Results:** 255 patients were hospitalized with the diagnosis of FAP. In the age group up to 65 y.o, 32 women and 64 men were admitted to ED, which is respectively 21% and 61% of patients. In the age group over 65 y.o. 118 women and 41 men were admitted, which is respectively 79% and 39% of patients. Chest pain or dyspnea was observed in 5% of women and 14% of men up to 65 y.o. and in 23% of women and 10% of

men over 65 y.o. The treatment was effective in 76 men (72% of investigated men), within that number- 68% were men up to 65 y.o., 32% men over 65 years old. Sinus rhythm occurred in 116 women (76% of investigated women), within that number - 67% were up to 65 y.o. and 33% were over 65 y.o. Monotherapy was effective in 9% of women and 8% of men up to 65 y.o. and in 16% of women and 7% of men over 65 y.o. Other patients had to undergo a polytherapy. **Conclusion:** FAP appeared significantly more often in the group of women over 65 y.o., whereas in men more disorders were observed in the group up to 65 y.o. Most patients had to be treated with polytherapy. Monotherapy seems to be the most effective in the group of women over 65 y.o. Also chest pain and dyspnea appeared most often in this group.

P056 Cardiovascular

THE VALUE OF H-FABP IN EARLY DIAGNOSIS OF CARDIAC ETHIOLOGY IN SYNCOPE

M Sönmez, D Öztürk, C Kavalcı, F Yılmaz

Emergency, Numune Training and Research Hospital, Ankara, Turkey

Corresponding author: Mr Kavalcı Cemil (cemkavalci@yahoo.com)

Key-words: emergency ; syncope ; fabp

Introduction and Aim: Syncope is the most common reason for admittance to emergency service (ER). Although various sources report different admission incidences, incidence rates are quite similar. Syncope constitutes 1-3% of all admissions to ER and 2-6% of all hospital admissions.

In this study we tried to determine the value of H-FABP while investigating whether the syncope is of cardiac origin in the patients who were admitted to our emergency service due to syncope or near-syncope.

Method: A total of 100 consecutive patients over the age of 18 who were admitted to the emergency service of Ankara Numune Training and Research Hospital (ANTRH) due to syncope or near-syncope were evaluated in the study. Fingertip blood collected from the patients who were admitted to ER due to syncope or near-syncope within 4 hours was analyzed using H-FABP kit.

Findings: H-FABP test result was positive in 59.1% and negative in 40.9% of the patients who were diagnosed with cardiac syncope. This difference was statistically significant ($p < 0,001$). When compared to the patients with no cardiac-type syncope, positive H-FABP result was 12.64 times higher in patients with cardiac-type syncope. Cardiac syncope was observed in 61.9% of the patients (PPV) whose H-FABP test results were positive. On the other hand, no cardiac syncope was observed in 88.6% of the patients (NPV) whose H-FABP test results were negative. In addition, when compared to H-FABP negative patients, cardiac syncope was 13 times higher in H-FABP positive patients.

Conclusions

It was concluded that H-FABP can be used for predicting short and long term clinical end and it can be used as a parameter of risk scoring systems.

P057

Cardiovascular

BIOLOGICAL, CLINICAL AND PARA CLINICAL CORRELATES OF INTENSITY CHEST PAIN IN DIABETIC PATIENTS VERSUS NON DIABETES IN EMERGENCY ROOM

D Dobrin, M Dumitrache, I Deaconu, D Corneci (1,2), A Golea (3)

Emergency Department, Elias Emergency University Hospital, Bucharest, Romania
2. University of Medicine and Pharmacy "Carol Davila", Bucharest, Romania
3. University of Medicine and Pharmacy "Iuliu Hatieganu", Cluj Napoca, Romania

Corresponding author: Mme Dobrin Diana Stefania (didobrin@yahoo.com)

Key-words: chest pain ; diabetes ; Emergency Department

Background and Objectives: Acute chest pain is an ongoing challenge in ER as intervention must be prompt and based on a series of more comprehensive information. Diabetes is considered a coronary equivalent.

Materials and Methods: A prospective study was performed on a group of 100 patients with chest pain present at ER during February-March 2012. Of these 50 were known to have diabetes (regardless of type, treatment) and 50 without diabetes history. Subjective self-evaluation chest pain intensity was performed and

correlations were made subsequent ECG changes, glycemic response, the cardiac markers, changes in kinetic and ejection fraction (echocardiographic assessment at presentation) and results of coronary angiography in patients hospitalized and received this evaluation.

Results and Discussion: Pain intensity was significantly higher in non-diabetic patients (30% high-intensity non DM group compared with 10% DM group, $p=0,0007$, moderate group nonDM 52% vs 24%, $p=0,0001$ and 18% lower than in group nonDM 66 % in DM group, $p=0,0001$). Diabetes was associated with significant decrease in ejection fraction in group DM so EF $<30\%$ was found in 26% versus 8% in group nonDM ($p=0,0011$). Similar correlations were found for kinetic disorders. ST segment changes occur with predilection to non-diabetic patients, diabetic patients predominate instead of T wave changes or no changes. 42% of diabetic patients group showed T wave changes or sequelae compared with 20% of non-diabetic patient group ($p 0.0012$) and ST segment changes 74% of patients had non-diabetic and 24% of diabetic patients ($p 0.0001$). There were changes in blood glucose in both groups but significant in DM group where hyperglycemia reaction showed 66% from 34% to nonDM, glucose $> 200\text{mg/dl}$ appeared only in group with diabetes at the rate of 23%.

Conclusions: Presentation in the emergency department of a patient with diabetes who have experienced chest pain is challenging, requiring an appropriate triage and clinical assessment and paraclinical especially careful because of lack of symptoms typical consequence of autonomic dysfunction.

Chest pain at diabetes patients may not be present and it can associate minimal ECG modifications, but it may hide a severe cardiovascular disease.

The study was made in the project POSDRU 86-1.2-S-61577.

P060

Cardiovascular

CARDIAC TAMPONADE WITH PRIMARY CERTAIN NON-MALIGNANCY IN CLINIC: CASE REPORT

A Duran (1), T Ocak (1), U Uyeturk (2), A Erdem (3), H Onder (4), MS Maltas (4)

1. Emergency Medicine, Abant İzzet Baysal University, Medical Of Faculty, Bolu, Turkey
2. Internal Medicine, Abant İzzet Baysal University, Medical of Faculty, Bolu, Turkey
3. Cardiology, Abant İzzet Baysal University, Medical of Faculty, Bolu, Turkey
4. Emergency Medicine, Abant İzzet Baysal University, Medical of Faculty, Bolu, Turkey

Corresponding author: Mr Ocak Tarik (drtarik1977@gmail.com)

Key-words: Cardiac Tamponade ; Malignancy ; pericardiosynthesis

INTRODUCTION:

Cardiac tamponade is a major life threatening condition characterized with accumulation of fluid in pericardial cavity which prevents heart contractions. Etiology includes trauma, renal failure, myocardial infarction, cardiovascular surgery, coronary angiography, and malignancies. We present a patient who admitted to our emergency department with cardiac tamponade caused by a malignancy of an unknown primary.

CASE:

A 60-year old male patient applied for altered mental status, speech disorder. He mentioned that the symptoms started 2 hours ago, that he experienced chest and back pain and that he lose consciousness. They increased progressively. TA: right 70/40 mmHg, left 75/40 mmHg, pulse: 115 /minute. . A 0.9% NaCl infusion and a 5 µg/kg/mn dopamine infusion have been started. The ECG was at a normal sinus rhythm. Left jugular venous distension has been observed during examination. No pathology has been observed during neurological examination, GKS: 12 (E3 V4

M5). No pathology has been observed in brain tomography. No pathology has been observed in aortic structures in contrast tomography but a pericardial mai collection has been detected. Pathologic structures with metastatic features have been observed at 8 different positions in the liver and in left kidney. 36 mm and 25 mm mai collections have been observed in right atrium and right ventricle respectively. Approximately 50 cc hemorrhagic mai have been pulled by pericardisynthesis. The cardiac tamponade is suspected to be due to an unknown malignity.

As a result, early intervention in patients with cardiac tamponade is lifesaving cardiac and the following examinations will be important for the determination of the etiology.

P061 Cardiovascular

ASPIRIN RESISTANCE IN PATIENTS PRESENTING TO THE EMERGENCY DEPARTMENT

A. Kose (1), O Koksall (1), E Armagan (1), D Sigirli (2), O Karasu (1), F Ozdemir (1), S Akkose (1)

1. Department of Emergency Medicine, Uludag University, Faculty of Medicine, Bursa, Turkey
2. Department of Biostatistics, Uludag University, Faculty of Medicine, Bursa, Turkey

Corresponding author: Mr Kose Ataman (ataberk76@yahoo.com.tr)

Key-words: aspirin resistance ; renal failure ; Emergency department

Introduction: The effect of aspirin is not the same for all patients and some patients have a resistance to aspirin. There are a few emergency department (ED) studies have prospectively determined the rate of aspirin resistance in patients presenting to the ED and the most of them about special patients group. We also aimed to evaluate the relation between clinical and laboratory parameters with aspirin resistance in patients presenting to the ED
Methods: Using the bed-side point-of-care VerifyNow Aspirin assay (Accumetrics, San Diego, Calif), we sought to determine the rate of aspirin resistance in patients presenting to the ED with any complaint.

Results: A total of 97 patients were included in this study. Aspirin resistance was found in 29 (29.9%). There were not any significant differences in age, sex, drug usage, platelet count, ECG changes, heart rate, systolic, or diastolic blood pressure measures between the aspirin-resistant and aspirin-sensitive presenting to ED patients. In addition, patients' aspirin sensitivity and aspirin resistance did not differ significantly with regard to clinic results and diagnoses in the ED. However, patients with renal failure had significantly more aspirin resistance than other patients ($p=0.007$). Besides, the relationship between aspirin intake < 30 time, pulse pressure and aspirin resistance were found out significant.

Conclusion: To the best of our knowledge, this second current report of aspirin resistance in patients presenting to the ED finds that it is present in 29.9% of patients. In aspirin resistance, renal failure, pulse pressure and aspirin intake time were determined as important factors.

P062 Cardiovascular

BENZATHINE PENICILLIN G INJECTION ASSOCIATED KOUNIS SYNDROME: A CASE REPORT

A Duran (1), T Ocak (1), N Goksugur (2), S Ozturk (3)

1. Emergency Medicine, Abant Izzet Baysal University, Medical Of Faculty, Bolu, Turkey
2. Dermatology, Abant Izzet Baysal University, Medical of Faculty, Bolu, Turkey
3. Cardiology, Abant Izzet Baysal University, Medical of Faculty, Bolu, Turkey

Corresponding author: Mr Ocak Tarik (drtarik1977@gmail.com)

Key-words: Benzathine Penicillin ; Kounis Syndrome ; injection

Abstract: Kounis syndrome (KS) is a potentially life-threatening medical emergency with both severe allergic reaction and acute coronary syndrome (ACS). In this case report, we presented 42 year-old male patient presenting cryptic tonsillitis admitted to our hospital accompanied by angioneurotic edema, chest pain and electrocardiographic variations.

Case Report: A 42 year-old male patient applied to our emergency hospital for injection following his treatment for cryptic tonsillitis diagnosed by a clinician in another clinic he previously applied. The injection procedure has been performed after controlling his sensitivity to a prepartate including benzathine penicilline G. Within few minutes following this injection, the patient developed respiratory distress, facial cyanosis, fatigue, vertigo and balance disorder. In oral examination, and uvula edema has been observed. Chest pain and tightness sensations developed simultaneously in the patient. In the ECG, an ST increase in DII, DIII, AVF derivations and ST underpressure and T negativity in DI, AVL derivations have been observed. the Ejection Fraction was 60%. No pathology has been detected in relation with the coronary structures in the coronary angiography. A Kounis Syndrome with coronary vasospasm triggered by allergic reaction-linked histamin discharge has been supposed. The anti allergic treatment has been pursued for 3 days.

As a result; there is a risk to develop KS against many drugs used daily. Remembering KS will help prevent the omission of heart involvement and the delay of right treatment.

P063 Cardiovascular

MANAGEMENT OF ST SEGMENT ELEVATION MYOCARDIAL INFARCTION IN PREHOSPITAL STAGE

U Cerins (1), D Jakubaneca (1), D Klusa (2), R Krisjane (1), D Mozgis (1), R Pupele (3), D Sergejevs (1)

1. Medical qualification and training center, State Emergency Medical Service of Latvia, Riga, Latvia
2. Unit of organization and development, State Emergency Medical Service of Latvia, Riga, Latvia
3. Department of emergency medicine, State Emergency Medical Service of Latvia, Riga, Latvia

Corresponding author: Mr Mozgis Dzintars (dzintars.mozgis@nmpd.gov.lv)

Key-words: STEMI ; prehospital EMC ; fibrinolysis

Introduction. Cardiovascular diseases currently are the leading cause of death in industrialized countries and have been the cause of deaths in 54% of cases in Latvia during the recent years. The prehospital emergency medical care (EMS) has an essential role in the management of ST elevation myocardial infarction (STEMI). According to Franco-German model of emergency care illness is diagnosed and treatment starts already at this stage. Establishment of unified State Emergency Medical Service of Latvia (SEMS) in 2009 was the general precondition to promote implementation of management algorithm for patients with acute coronary syndrome (ACS) according to the ACS guidelines adapted by Latvian Society of Cardiology. Before 2010 fibrinolysis was not performed in prehospital stage.

Objective. The study summarizes the first results of ACS guideline implementation process in Latvia and evaluates the new perspective for the further improvement of STEMI patient management.

Results. The study is based on SEMS annual data (2011). Medical documentation of 1 462 patients with diagnosed STEMI in prehospital settings was analyzed retrospectively (583 men and 879 women). In case of STEMI, EMC teams used Clopidogrel, opioids, nitrates, aspirin and oxygen, when indicated. 1 427 (97.6%) STEMI patients were delivered to hospital for further treatment. In 240 cases patient transfers between medical facilities were provided. From all 34 (2.4%) patients refused hospitalization - 22 women and 12 men and 32 (2.2%) patients died in prehospital stage, 9 of them during transportation to the hospital. In 34 of cases cardiopulmonary resuscitation was successful. In 94.7% of cases patient was delivered to hospital according with ACS guidelines - in the time interval less than 2 hours from the first medical contact (FMC). The mean time from the FMC to arrival to hospital was 1:22:58. Only 77 (5.3%) patients were delivered to hospital more than two hours after FMC. For 20 (26%) of them fibrinolysis with Tenecteplase was performed by EMC team mean of 2 hours and 24 minutes from onset of the pain. Average length of hospital stay for patients who received prehospital fibrinolytic therapy was 6.13 days. Treatment was not successful in three patients who died later in hospital due to cardiogenic shock and acute heart failure in two cases and due to intracranial hemorrhage in one case. According to international data trained out-of-hospital care providers could identify STEMI with sensitivity of 71% to 97% compared with emergency physicians or cardiologists. Our results showed 78.3% diagnostic accuracy.

Conclusions. The flow analysis of emergency visits gives considerations to decision-makers for more effective planning of prehospital EMC provision for patient with STEMI. Prehospital STEMI diagnostic sensitivity in our study compared with results in other studies is near to average and demonstrates challenges and opportunities for the further improvements in order to reduce hyperdiagnoses. Unified EMC organizational model is essential for implementation and monitoring of clinical pathways, as well as for optimal dislocation of prehospital settings. These data will form the basis for future evaluation of ACS guidelines implementation in Latvia.

P064

Cardiovascular

ANOMALOUS ORIGIN OF CIRCUMFLEX CORONARY ARTERY ARISING FROM PROXIMAL RIGHT CORONARY ARTERY; TWO CASES

A Duran (1), T Memioglu (2), T Ocak (3), S Ozturk (4)

1. Emergency Medicine, Abant Izzet Baysal University, Medical of Faculty, Bolu, Turkey
2. Cardiology Department, Abant Izzet Baysal University Faculty Of Medicine, Bolu, Turkey
3. Emergency department, Abant Izzet Baysal University, Medical of Faculty, Bolu, Turkey
4. Cardiology, Abant Izzet Baysal University, Medical of Faculty, Bolu, Turkey

Corresponding author: Mr Duran Arif (drarifduran@gmail.com)

Key-words: coronary artery ; Anomalous ; Emergency Service

Congenital coronary anomalies can be seen in 1-2%. Herein we report that two patients with coronary artery anomaly, left circumflex coronary artery (LCx) originating from the proximal right coronary artery, who admitted to the emergency room with unstable angina and inferior ST alteration on electrocardiography.

CASE REPORT 1

A 31-years-old man was admitted to the emergency department because of dyspeptic complaints that new onset continuous and

persistent nausea, backache between interscapular area and epigastric pain. Basal ECG features were early repolarisation and 1 mm ST elevation in D2 derivation. Diagnostic coronary angiography was performed from the right brachial approach. The presence of an anomalous of the circumflex coronary artery originates from the right coronary artery proximal segment.

CASE REPORT 2

A 82-year-old man with no prior history of coronary artery disease, was admitted to the emergency department because of chest pain and positive myocardial perfusion scintigraphy. ECG wasn't ST changes. Coronary angiography was performed from the right femoral approach. The presence of an anomalous of the circumflex coronary artery originates from the right coronary artery proximal segment.

Finally, arising from the contralateral coronary artery, navigating between the aorta and the pulmonary artery for patients with uncorrected coronary artery, thought the risk of exercise-related sudden cardiac death, it's wise to avoid violent sports activity and stress. Although medical treatment has been given to both of our patients, definitive treatment options should be considered for patients with coronary anomaly may be different for each patient.

P065

Cardiovascular

RETROSPECTIVE EVALUATION OF THE PATIENTS DIAGNOSED AS ACUTE AORTIC DISSECTION IN THE EMERGENCY ROOM

S Akbulut (1), Y Yavuz (2), HU Akdemir (2), C Katı (2), L Duran (2)

1. Emergency Service, Samsun Training and Research Hospital, Samsun, Turkey
2. Emergency Department, Ondokuz Mayıs University Medical Faculty Hospital, Samsun, Turkey

Corresponding author: Mr Akdemir Hızır Ufuk (hufukakdemir@hotmail.com)

Key-words: Acute aortic dissections ; DeBakey classification ; Emergency room

Objective: Although acute aortic dissections (AAD) are not very common admissions in the emergency rooms, they are hard to diagnose as they have variable clinical findings. Looking from the view of emergency room doctors, this serious and relatively uncommon condition must be recognized and given medical treatment as soon as possible and in selected patients surgical preparations must be made. The purpose of this study is to evaluate the demographic characteristics, clinical findings and diagnostic parameters of the patients with AAD admitted to the emergency department of Ondokuz Mayıs University Medical School and discuss according to the literature.

Materials and methods: In our study; age, sex, clinical presentation, laboratory examinations, ECG records, imaging methods, treatment methods and results of 57 patients diagnosed as AAD between January 2006 and December 2010 in the emergency department of Ondokuz Mayıs University Medical School were recorded in a previously made patient information file keeping personal informations safe. Afterwards, the data obtained were analyzed according to the SPSS (Statistical Package for Social Science) 15.0 program. The results were given as median \pm standart deviation. Two ratio test and Kruskal-Wallis variance analysis were used in the statistical analysis. The value of $p < 0.05$ were accepted as significant.

Results: AAD formed 0.06% of all emergency admissions in the study period. There were 46 male (80.7%) and 11 female (19.3%) patients with a median age of 63 ± 12.0 . The most important predisposing factor in the patients history was hypertension with a rate of 71.9%. The most frequent complaints of presentation of the

patients were chest (47.3%) and back pain (47.3%). A nonspecific ST-T change (56.1%) was determined as the most common ECG change. Only two patients had an elevated ST-T (3.5%). The most common findings on the chest radiograms were mediastinal enlargement (61.4%) followed by abnormal aortic contour (42.1%). 98.2% of the patients were diagnosed with contrast enhanced computed tomography (CT). Of 57 the patients included in our study, 29 of them were grouped as DeBakey type 1 (50.8%), 4 DeBakey type 2 (7.2%), 24 DeBakey type 3 (42.1%) AAD. In total, 43 patients (75%) were recommended surgical treatment. 20 of the patients (35.1%) were referred to another hospital. 14 of the 37 patients (37.8%) followed in our hospital were excised. There were no statistically significant difference in mortality rates according to the sex ($p>0.05$). Also no significant difference were detected between proximal (type 1 and 2) and distal dissections (type 3) in terms of mortality rates ($p>0.05$). The mortality rate of patients with hypertension (HT) history was 33.3% and 50% without HT history. There were no statistically significant difference in the mortality rates of these groups ($p>0.05$).

P066

Cardiovascular

EVALUATION OF THE VALSALVA MANEUVER IN THE DIAGNOSIS OF LEFT VENTRICULAR FAILURE DURING CHRONIC OBSTRUCTIVE PULMONARY DISEASE EXACERBATION

N. Jerbi, W. Boudia, H. Boubaker, MH. Grissa, H. Chouchene, M. Haj Amor, R. Boukef, S. Nouira
Emergency Department, University Hospital of Monastir, Monastir, Tunisia

Corresponding author: Mr Grissa Mohamed Habib (grissa.medhabib@gmail.com)

Key-words: Heart failure ; Valsalva maneuver ; COPD exacerbation

Introduction:

Left ventricular failure (LVF) is a common cause of acute exacerbation chronic obstructive pulmonary disease (AECOPD). However, its role is frequently underestimated with regard to the difficulty of diagnosis especially in the presence of COPD. The Valsalva maneuver (VM) could be useful in this issue.

Study Purpose:

Evaluation of the utility of VM in the diagnosis of LVF during AECOPD. Patients and methods:

Three groups have been included: patients with AECOPD and LVF (LVF+COPD group; $n=20$), patients with AECOPD without LVF (LVF-COPD group; $n=20$) and acute heart failure without COPD (control group; $n=20$). Left cardiac failure was defined on the basis of expert clinical assessment with BNP levels $> 400\text{pg/ml}$ and echocardiography findings when available. VM was performed for all patients during 10 seconds at admission with a parallel monitoring of the plethysmographic arterial oxygen saturation (SpO_2). The minimum amplitude on the maximum amplitude ratio of the SpO_2 signal (plethysmographic pulse amplitude ratio: PARpleth) is calculated using the BIOPAC system. Comparison between groups were done using standard statistical tests.

Results:

Table: Patient's characteristics

	Control $n=21$	AECOPD LVF+ $n=20$	LVF- $n=21$
Age (an)	66 \pm 9	71 \pm 10	69 \pm 8
Sexe (F/H)	6/15	3/17	1/20
PaCO ₂ (kPa)	5.36 \pm 3	7.86 \pm 2	7.27 \pm 2
PaO ₂ /FiO ₂	264 \pm 2	203 \pm 3	280 \pm 2
BNP(pg/ml)	677 \pm 300	463 \pm 300	25.9 \pm 20*†
PARpleth	0.82 \pm 0.09	0.78 \pm 0.1	0.57 \pm 0.1*†

* $P<.001$ LVF-COPD vs control † $p<.001$ LVF-COPD vs LVF+COPD

Conclusion:

The PAR measured noninvasively with SaO₂ signal during the Valsalva maneuver is a helpful method in the diagnosis of LVF during AECOPD.

P067

Cardiovascular

A CASE REPORT OF PREGNANCY CARDIOVERSION

B. Dagli (1), E. Dagtekin (2), M. Kapci (3), I. Ok (1), E. Ozluer (1)

1. Emergency Department, Adnan Menderes University Medical Faculty, Aydin, Turkey
2. Cardiology Department, Adnan Menderes University Medical Faculty, Aydin, Turkey
3. Emergency Department, Isparta State Hospital, Isparta, Turkey

Corresponding author: Mr Coskun Sedat (doktor_sedatcoskun@hotmail.com)

Key-words: Cardioversion ; Tachycardia ; Labetalol

INTRODUCTION: Arrhythmia requiring cardioversion in pregnancy is not frequent. Cardioversion is safety in pregnancy and also cardioversion can be done in cases of tachycardia unresponsive to medical therapy.

Case: A 24-year-old female patient with 30 weeks of pregnancy admitted to the emergency department with complaints of palpitation. She received Elevit treatment during her pregnancy. She does not have any history of allergies. For the first time she has been suffering from palpitations. The patient's arterial blood pressure was 110/40 mm / Hg, pulse 196 / min, respiratory rate 13, 36.5 of body temperature, oxygen saturation was 99%. In physical examination, heart beats were arrhythmic, tachycardic. There were not any additional heart sounds and murmurs. Respiratory system was normal, no rales, no rhonchi and abdominal examination was normal. Atrial fibrillation with rapid ventricular response detected in patient's ECG. Cardiology consultation was requested. 50 mg metoprolol has been recommended for the patient. Metoprolol 50 mg was applied intravenously with blood pressure control. 20 minutes after administration there was no response to therapy an additional 50 mg metoprolol was administered intravenously. Synchronized cardioversion was performed with 100 Joule under sedation when patient failed to respond to repeated bolus administrations.

Conclusion: During pregnancy, cardioversion may be applied in patients intractable to medical therapy. Long-term oral labetalol treatment is convenient.

P068

Cardiovascular

ATRIAL FIBRILLATION IN PATIENTS WITH AN ACUTE CORONARY SYNDROME: HARMLESS OR RISKFACTOR ?

RJ Beukema (1), JM de Vries-van Dijen (2), A Elvan (1)

1. Cardiology, Isala Clinics, Zwolle, Netherlands
2. Emergency Medicine, Isala Clinics, Zwolle, Netherlands

Corresponding author: Mme De Vries- Van Dijen Anne-marie
(annemarietandijen@gmail.com)

Key-words: atrial fibrillation ; acute coronary syndrome ; risk marker for increased morbidity and mortality

Atrial fibrillation in patients with an acute coronary syndrome: harmless or risk factor?

Background

Ventricular dysrhythmias are associated with acute coronary syndrome. Atrial fibrillation on the other hand has a benign image. Atrial fibrillation occurring during an ischemic event has an incidence of 5-22% (compared to 1-2% in general population). Recent literature suggests atrial fibrillation as a risk factor for patients having an acute coronary syndrome however pathophysiological mechanisms are not yet clarified. On a cellular level, ischemia leads to conduction delay and promotes re-entry. In general, time to reperfusion is very important. As soon as reperfusion is facilitated a reduction in the occurrence of atrial fibrillation is observed. Therefore the question arises whether atrial fibrillation can be used as an independent risk factor in identifying high risk patients who are eligible for aggressive treatment.

Objective

To determine if atrial fibrillation can be used as a predictive factor in identifying patients with an acute coronary syndrome.

Search strategy and outcome

A search conducted in May 2012 revealed no publications in the international guideline network. A PubMed search using the terms "atrial fibrillation" AND "acute myocardial infarction" revealed 1093 hits. "Atrial fibrillation" AND "ACS" revealed 88 hits. All abstracts were read and 68 were found to be relevant. Using the filters "human", "English" and "published past 10 years" revealed 5 articles.

Evidence

Beukema et al analyzed ECGs and echocardiographic examinations of 2134 patients before and after primary PCI. Atrial fibrillation was found to be related to older age, Killip Classes >1 and an occluded RCA. Mortality was increased among patients with atrial fibrillation compared to those without. After adjusting for risk factors mentioned, atrial fibrillation after PCI remained statistically significant associated with raised mortality. Jabre et al reviewed 43 studies. They pooled the OR and tried to make a distinction in timeframe. Regardless of time of onset AF is related to a worse prognosis. Mortality increases 40% in atrial fibrillation compared to patients in sinus rhythm. Jons et al analyzed rhythms of 271 post myocardial infarction patients with an implantable cardiac monitor for 2 years. They observed that the risk of new-onset atrial fibrillation is highest during the first two months after myocardial infarction and decreases after one year. The risk of major cardiovascular events was increased in atrial fibrillation events > 30 seconds, episodes shorter than 30 seconds predispose highly to episodes > 30 sec. Almost all events were asymptomatic. Lopes et al analyzed 5745 myocardial infarction patients treated with primary PCI. They evaluated atrial fibrillation prevalence at several times during hospitalization. They conducted their analyses from an existing database of an earlier performed multicenter trial. They used a descriptive statistic method to assess the incidence of timing of atrial fibrillation, describe antithrombotic therapy use and evaluate the association of atrial fibrillation with 90 days of mortality. They concluded that new onset atrial fibrillation occurs almost always within 4 days. Only 27 % of atrial fibrillation patients after acute myocardial infarction received triple therapy and this was paradoxically, reversely related to the CHADS2 score. Overall new onset atrial fibrillation remained independently associated

with higher mortality. Alasady et al conducted a retrospective case control study. They selected 42 cases with atrial fibrillation and acute myocardial infarction. They observed that coronary disease affecting the atrial branches is a predictor of early AF after AMI, regardless whether it was originated in the left or right coronary system.

Conclusion:

These studies show that (mainly new onset) atrial fibrillation is a risk marker and contributes to a higher morbidity and mortality rate. The development of atrial fibrillation seems to be multifactorial and correlates with late or no reperfusion.

Clinical bottomline:

Atrial fibrillation is an independent risk factor in patients with an acute coronary syndrome

Level of recommendation; B

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P069

Cardiovascular

ECHOCARDIOGRAPHY VS BRAIN NATRIURETIC PEPTIDE DOSAGE FOR THE DIAGNOSIS OF DYSPNEA IN EMERGENCY ROOM, A PROSPECTIVE STUDY.

L BEN AMMAR (1), CH HAMOUDA (1), O MATHLOUTHI (1), K MAJED (1), A CHARGUI (1), M BRAMLI (2), N BORSALI-FALFOUL (1)

1. emergency department,, la Rabta hospital, Tunis, Tunisia
2. emergency department,, la Rabta hospital, tunis, Tunisia

Corresponding author: Mme Borsali Falfoul Nebiha (nebiha.borsali@yahoo.fr)

Key-words: dyspnea ; biomarkers ; echocardiography

Acute Dyspnea (AD) is a medical emergency that lies at the crossroads of several specialties whose etiologic diagnosis faces several difficulties. The Brain natriuretic peptide (BNP) is a biological marker of acute heart failure (AHF). It would be interesting to the emergency doctor to have at his disposal such a helpful diagnostic tool that is simple, available and reliable. The aim of our study is twofold: 1) Report our experience on the role of BNP in the etiological diagnosis of AD in the emergency room (ER). 2) Assess the cost-effectiveness ratio of such diagnostic strategy.

Methods

A prospective study conducted in the ER of Rabta university teaching hospital in Tunis, from March 1st to June 20th 2009, involving 30 consecutive patients presenting to the emergency for AD. All patients underwent echocardiography in their acute phase and benefited from the dosage of BNP during the first 4 hours with automated immunoassay using Architect C8200i (Abbott). The echocardiography parameters were collected by a single operator who was unaware of the results of the BNP dosage. Data were entered and analyzed using SPSS version 11.5. We have conducted a descriptive study and an analytical study by calculating the sensitivity (Se) and specificity (Sp) of the test and its positive and negative predictive values. The significance level was set at 0.05. Bibliographic search engines used were:

Pub Med, Cochrane and Scopus.

Results

The mean age of patients was 72.8 years with a sex ratio of 1.5. AD was of orthopnea type in 9 cases and stage III NYHA dyspnea in the

other patients. Clinical and radiological signs of left heart failure were noted in 30% of cases. Ultrasound data have objectified systolic dysfunction in 4 cases, diastolic in 3 cases and systolic plus diastolic in 10 cases. The BNP levels were below 100 pg / ml in 10 cases with pulmonary origin of the AD. A BNP level between 100 and 400 pg / ml noted in 3 cases was related to pulmonary embolism (N = 2), tachyarrhythmia and anemia (n = 1). For BNP levels <200 pg / ml, the diagnosis of AHF was unlikely (Se = 100% and Sp = 92.3%) and for BNP levels > 400 pg / ml, the diagnosis was highly probable (Se and Sp respectively 94% and 99%). In our study, the clinical probability of AHF prior to performing the test was estimated at 53% and estimated at 100% after the BNP assay. The BNP assay has reduced the length of stay in the emergency department 4 to 5 days, a saving of nearly 50% of the cost of care per patient estimated on average at five hundred and sixty Tunisian's dinars per patient (280 € / patient).

Conclusion

The BNP assay, a simple biological tool practiced bedside in the ER has allowed us to confirm the AHF in 100% of cases and especially to reveal heart failure in 25% of patients whose lung origin was raised by the emergency doctor. Given the prognostic value and economic benefit of this test we recommend its use in ER of our country.

P070

Cardiovascular

KOUNIS SYNDROME DUE TO USE OF ANTIBIOTICS

EG ERSUNAN (1), BO BILIR (2), KA KALKAN (1), YS YENIOCAK (3), ZM ZİYAN (4)

1. emergency department, Recep Tayyip Erdogan University, Medical Faculty, rize, Turkey
2. emergency department, Recep Tayyip Erdogan University, Medical Faculty, rize, Turkey
3. Emergency Service, Haseki Training and Research Hospital, Istanbul, Turkey
4. emergency department, Recep Tayyip Erdogan University, Medical Faculty, rize, Turkey

Corresponding author: Mr Ersunan Gökhan (gokhanersunan@gmail.com)

Key-words: kounis syndrome ; chest pain ; adverse effect of drug

Myocardial injury and acute coronary syndrome have been rarely associated with amoxicillin/clavulanic acid intake. The responsible pathogenetic mechanism is described by an amplified mast cell degranulation inducing coronary artery spasm and/or acute myocardial infarction in susceptible individuals which is called Kounis syndrome. 30-year-old male patient was admitted to the emergency department with chest pain. In the detailed medical history, he was used amoxicillin/clavulanic acid due to pharyngitis for two days . The patient's physical examination was normal. The electrocardiogram had revealed ST elevation of 1 mm in DII, DIII and aVF. Emergency service laboratory tests was done at: creatine kinase: 371 U / L, creatine kinase-MB: 31.13 ng / ml, troponin-I 7.261 ng / ml, WBC 5.92 K / uL, hematocrit: 39.2%, hemoglobin : 13.1 g / dL, platelet: 213 K / uL and other parameters were within normal ranges. he was consulted with the cardiologist.Heart catheterization revealed the presence of angiographically normal lesion-free coronary arteries by cardiolog. We report here a case of Kounis syndrome presented with acute coronary syndrome due to amoxicillin/clavulanic acid use.

P071

Cardiovascular

EPIDEMIOLOGY OF CHEST PAIN IN PATIENTS ADMITTED IN THE EMERGENCY DEPARTMENT OBSERVATION AREA AN A PRIVATE HOSPITAL

O.J. Simón, F. Moya, F. Galvan, V. Quero, Y. Sierra, R. Campillo, N. Carrillo

Emergency Department, Hospital Xanit Internacional, Benalmadena, Málaga, Spain

Corresponding author: Mr Simón Padilla Oscar Jerónimo (oscarjsp@hotmail.com)

Key-words: chest pain ; observation area ; private hospital

OBJECTIVE: To determine the prevalence of chest pain in patients admitted to ED observation area of a private hospital, and the characteristics of patients with this presentation and the final diagnosis of the process.

MATERIAL AND METHODS: A descriptive study without therapeutic intervention for 3 months, among patients admitted for chest pain in the observation area of a private hospital (N = 68 of 1739), obtaining data on age, sex, length of stay entered, destination on discharge and final diagnosis after the study of these patients. We obtained data from our internal Medyction program, and processed using Microsoft Excel 2011.

RESULTS: Of the patients admitted for chest pain, the average age of the patients was 60.4 years old, 51.1% were women, average time spent 2.96 hours, the main destinations were home (42.36%) and admission by the Department of Cardiology (25.42%). The most common diagnosis was acute nonspecific(35%), followed by ACS (28%) and pleural pleural effusion(11.6%).

CONCLUSIONS: This study showed that the prevalence of chest pain as main complaint in our hospital is 4%, being the most frequent diagnosis of nonspecific. Most patients are discharged home after being evaluated in the emergency department of our hospital. The average age of patients with this picture is 60.4 years old, being more frequent in women

P072

Cardiovascular

THE 5-YEAR RETROSPECTIVE ANALYSIS OF AORTIC DISSECTIONS IN AN ACADEMIC EMERGENCY DEPARTMENT

M Ergin, MA Onal, S Kocak, H Nak, N Karakus, B Cander

Emergency Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

Corresponding author: Mr Ergin Mehmet (drmehtemetergin@gmail.com)

Key-words: Aortic dissection ; Emergency department ; Hypertension

BACKGROUND: The study was conducted retrospectively to evaluate demographic, clinic and radiologic findings of patients with aortic dissection diagnosed at emergency department. **MATERIAL-METHOD:** This retrospective study was conducted at Necmettin Erbakan University Meram Medicine Faculty Emergency Department. The database system was evaluated to determine patients who had 'Aortic Dissection' diagnosis during last 5 years. So that 17 patients were included in the study. Their demographic data, comorbidities, medical history, presenting symptoms and signs and if performed, serum troponin-I levels, echocardiographic findings, computed tomography angiography reports and results of ED visits and admissions were recorded. **RESULTS:** There were 12 (70.6%) male patients. The mean age was 65.7±9.6 (43-78) years old. The most common comorbid disease was hypertension (n=12; 70.6%). Number of patients smoking was 8 (47.1%). One (5.9%) patient had history of operation aortic dissection and another (5.9%) with valve replacement operation. According to Modified Early Warning Score, there were 12 (70.6%) patients with ≤2 points and 5 (29.4%) patients with ≥3 points. The main complaints were chest pain (n=9; 52.9%) and back pain (n=9; 52.9%). Abdominal

pain (n=6; 35.3%) and weakness of extremities (n=1; 5.9%) were mentioned. There were 7 (41.2%) patients with systolic blood pressure (SBP) >140 mmHg, 6 patients with SBP 90-139 mmHg and 4 patients with SBP <89 mmHg. Most of them (n=11; 64.7%) had pulse rate within 60-99 beats/minute. Physical exam determined pulse deficit (n=5; 29.4%), blood pressure difference between upper extremities (n=3; 17.6%), pulsatile mass (n=2; 11.8%), new cardiac murmur (n=2; 11.8%). There were 6 (29.4%) patients with high troponin-I levels and 3 (17.6%) patients having flap imaging on echocardiography. In terms of computed tomography angiography results, there were 2 (11.8%) patients with aneurism associated with AD. As Stanford classification, 7 (41.2%) patients had type-A, 10 (58.8%) with type-B while there were 7 (41.2%) patients with type-1 and 10 (58.8%) patients with type-3 in respect to De Baakey's classification. Only one (5.9%) patient died at ED. There were 8 (47.1%) patients discharged with medical treatment, 4 patients discharged after successful operation whereas 3 (17.6%) patients died postoperatively and 1 (5.9%) patient died before operation. CONCLUSION: The most important point in diagnosis of AD is to consider it in differential diagnosis. Any delay in diagnosis and/or treatment for AD can cause death.

P073

Cardiovascular

THE EVALUATION OF NURSES' DECISION-MAKING SKILLS TO PATIENTS WHO WERE ADMITTED TO EMERGENCY DEPARTMENT WITH CHEST PAIN

G Yilmaz (1), S Kiyan (1), A Durmaz Akyol (2)

1. Emergency Department, Aegean University, İzmir, Turkey
2. Medical Nursing Department, Nursing Faculty Of Aegean University, İzmir, Turkey

Corresponding author: Mme Yilmaz Gulbin (ygulbin@gmail.com)

Key-words: Non -Traumatic Chest Pain ; Nurse ; Emergency Department

This research was planned as a descriptive and cross-sectional study to determine of the decision -making skills of nurses in the evaluation with non-traumatic chest pain patients to emergency unit.

This study was conducted between January 2009 and May 2009 with randomly selected as the establishment a total of 400 patients in the sample who were admitted to the Emergency Unit at Ege University Medical Faculty Hospital with non-traumatic chest pain, was evaluated randomly selected of 10 nurses training before/after training adequacy of information and knowledge score average of points in the management of nontraumatic chest pain patients.

The sample size was tested with the Power Analysis method and the power of this study were found 100%.

Patients were evaluated by nurses and Emergency Medicine Specialists who were admitted to the emergency unit at Ege University Medical Faculty Hospital with non-traumatic chest pain. In the evaluation process, time of the first application 12-Lead ECG findings, vital findings, characteristic of pain, history of disease, risk probability classification, diagnostic tests, the source of pain and the clinical course of patients with decision-making, as the evaluation parameters were determined. The questionnaire was completed after the completion of patient assessment by a Emergency Medicine Specialist. The decisions entirely given by Emergency Medicine Specialist of clinical assessment, treatment, follow-up and cardiological referral of patients, nurse assessment results are limited forms of work and intervene in the process of patient care was made to any. The decisions of the nurses were compared in two stage(before training and after training). Statistical analysis was done in this direction and Wilcoxon, Mann-Whitney U, Chi-square tests were used. Kappa test performed

between assessments of nurses response and answers of Emergency Medical Specialists.

According to the data obtained from the research statistically significant differences were found increase after training adequacy of information and knowledge score average of points ($p<0.0001$). On the other hand the kappa value of education training from 0.35 to 0.95 on increased and this differences was found statistically significant ($p<0.0001$). There was a positively, a very strong and a significant correlation between physicians and nurses after training in evaluation patients with chest pain.

The results of this study showed that emergency unit nurses can take the role in management of patients with nontraumatic chest pain if the nurses are train about to approach patients with nontraumatic chest pain.

P074

Cardiovascular

DESCRIPTION OF A CLINICAL CASE OF A PATIENT WITH SEIZURES ATTRIBUTED TO AN ALCOHOL WITHDRAWAL SYNDROME BUT CAUSED BY A VENTRICULAR TACHYCARDIA.

G. Iannacaro (1), TH. Kokra (2), P. Pittalis (2), S. Sau (2), A. Vannini (2)

1. Emergency Department, San Francesco Hospital, Nuoro, Italy
2. Emergency department, San Francesco Hospital, Nuoro, Italy

Corresponding author: Mr Pittalis Pietro (pittalis.pietro@alice.it)

Key-words: seizures ; alcohol ; tachycardia

Introduction: seizures are sudden changes in behaviour that can be caused by neurophysiological diseases, cardiovascular disorders, fever, drug overdoses, alcohol addiction or withdrawal. Patients presenting seizures are frequently admitted to the emergency departments for prompt therapy; very important is the first approaching diagnostic method for a correct disease classification and treatment, considering all over mentioned causes.

Aims: in this work we present a case of convulsions in an alcohol addicted patient, mistakenly treated such a neurological disorder basing diagnosis and therapy only on medical history and physical exam without any clinical or laboratory tests.

Case Report: a 49 year-old male was admitted to our emergency department for seizures; on his medical history were mentioned elements of smoking, alcohol addiction, cardiac post ischemic left ventricular disfunction.

On admission patient was conscious, collaborating, with a GCS of 15, but presented dyspnea; blood pressure and heart rate were normal but respiratory rate was elevated (RR 30) and SO₂ was 75%. Oxygen therapy was given with a clear and quick improvement of vital signs.

During first physical evaluation, patient presented loss of consciousness with upper and lower limb tonic clonic movements that were attributed to an alcohol withdrawal syndrome; patient was treated with diazepam 10 mg intravenous with a partial symptoms resolution. An electrocardiogram has been registered that resulted normal. Considered the persistence of clinical signs, patient was immediately hospitalized to a neurology ward were once more presented convulsions and was still treated with diazepam 10 mg intravenous.

Few minutes later another ECG was performed that demonstrated a stable ventricular tachycardia with a pulse. Cardioversion with DC shock was given and cardiac rhythm returned to sinus tachycardia with resolution of neurological symptoms too.

Further cardiology tests have been performed and an ICD was implanted.

Conclusions: Cerebral hypoxia can be one of the causes of convulsions, due to a low perfusion cerebral damage, as it happens when cardiovascular disorders are present. Even when causes can be apparently obvious, physicians and nurses should always remember to approach seizures patient adopting a standard diagnostic method, including electrocardiogram, continuous monitoring of vital signs, arterial blood gas and toxicology tests.-

P075 Cardiovascular

CHEST PAIN RENTABILITY FOR ACS IDENTIFICATION

H Alonso Valle, M Andres Gomez, L Garcia-Castrillo, N Odriozola Romillo, C Sierra Piqueres

Emergency Department, Hospital Marques de Valdecilla, Santander, Spain

Corresponding author: Mr Garcia Castrillo Luis Gerardo (urggrl@humv.es)

Key-words: Chest Pain, ; ACS, ; Triage, Main complain

ACS are classically associated to chest pain, triage in ED facilitates an early activation of ACS protocol using chest pain as trigger, mainly for early 12 lead EKG evaluation and risk stratification. Chest pain is not always present on ACS and this circumstance can delay protocol activation, this aspect has been analyzed in several publications with figures as high as 30% of ACS with no chest pain as main complain.

Objective: To evaluate usefulness of the chief complain in the triage station in suspected ACS.

Design: Using one year demand in adult emergency department of a terciarian University Hospital, with triage done by physicians, and looking to main complains and final admission diagnosis, specifically rentability of chest pain in Isquemic Cardiac(IC) problems identification.

Results: During the study period 110155 adult patients where included in the study. Chest Pain was present in 4740 (4,3/ %) patients. During the study 545 patients where admitted as Isquemic Cardiac(IC)patients. On the group of IC patients 441 has chest pain as main complain (80,9%), and 104 have other main complains listed on Table 1. Odds of the most frequent main complains are reflected on Table 2.

	Nº	%
Change in behaviour	1	0,18
Decrease level of consciousness	1	0,18
Severe respiratory problem	4	0,72
General Malaise	8	1,46
Abdominal Pain	11	2,01
Headache	3	0,55
Extremities pain	5	0,914
Chest Pain	441	80,91
Dyspnea	35	6,42
Fever	1	0,18
Weakness	6	1,10
Other complains	12	2,20
Bradycardia	7	1,28
Syncope	7	1,28
Gastrointestinal Bleeding	1	0,18
Cough	1	0,18
Head Trauma	1	0,18

Table 2.

Main Complain/IC	Odds	95% CI
Chest Pain	10,1	8,1-12,6
Dyspnea	1,1	0,8-1,6
Abdominal pain	0,25	0,13-0,45
Severe respiratory problem	8,9	10-22
Syncope	1,1	0,52-2,3

Discussion: As in other publications only 80% of IC are identify as Chest Pain cases on the first evaluation. While Dyspnea and Syncope don't provide a significant clinical threshold, on the other hand severe respiratory distress is a useful indicator of IC problem.

Limits: Main complain only include one significant element of the multisintomatic patient, son missing IC patients have been classify with other diagnosis. The methodology used in the study did not consider level of risk of ACS.

Conclusion: Chest pain has limitation in triggering ACS protocols, other elements are needed to have a more sensible system.

P076 Cardiovascular

THE ROLE OF ECHOCARDIOGRAPHY IN THE CONSIDERATION OF POSSIBLE ACUTE CORONARY SYNDROME AT THE PATIENTS WHO ENTER THE EMERGENCY DEPARTMENT WITH CHEST PAIN

O Çevrim

Emergency Department, Egean University Medicine Faculty, İzmir, Turkey

Corresponding author: Mr Özçete Enver (eozcete@gmail.com)

Key-words: Acute coronary syndrome ; Acute chest pain ; Echocardiography

OBJECT

In our study, we aimed to determine the sensitivity and specificity of focused echocardiography on left ventricular regional wall motion defect applied by emergency medicine physicians in the emergency room to the patients who enter with chest pain, receiving or the exclusion of the diagnose of a possible acute coronary syndrome.

METHODS

The study conducted between the dates June 1, 2011 - December 31, 2011 at the 42.239 patients entering Ege University Medical Faculty Hospital Emergency Department, which the 62 of them without exclusion criteria, prospectively and based on observations. All patients who dont have no prior history of coronary arter disease included into the study. The patients who need resuscitation on admission and cannot informed consented were excluded from the study. Patient's age, gender, vital and physical examination signs and the first preliminary diagnosis was recorded to a report form by the primary responsible physician. The focused echocardiography performed by the researcher emergency medicine physician who previously trained in ultrasonud and focused echocardiography, above 2 years of seniority and have no clinical information about the patient. All diagnosis and vital signs of the patients who performed by echocardiography were recorded to the case report form. In addition, during the echocardiography, images were recorded to the ultrasound device and transferred to the computer. Without interfering the patients in the functioning of the ED routine, biochemical parameters and blood samples were taken. The patients cardiac ischemia markers were studied at the arrival and the 6th hour of the application. Serial ECG was taken, interpreted and recorded. The recorded images, watched by the cardiologist who have any information about the patients clinical evidence and all comments were recorded. For statistical analysis, chi-square and kappa methods were used for

categorical variables. 95% confidence interval and $p < 0.05$, was considered as significant for statistical analysis.

FINDINGS

Taking into account exclusion criteria and included to the study of 62 patients average age was 49. 46.3% of patients were male. Nine of the patients, technically efficient image cannot be taken and 5 of them who leaved the hospital before 6th hour cardiac markers studied were excluded to the study. The emergency medicine physicians prediction about the patients acute coronary syndrome diagnosis with focused echocardiography, sensitivity is % 54.5 (% 95 CI değeri % 25-%83), specificity is %97 (%95 CI değeri %92- %100) with the comparison of the Troponin values. The emergency medicine physicians prediction about the patients acute coronary syndrome diagnosis was %85 (%95 CI 59- %100), the negative predictive value found %87,8 (%95 CI değeri %77,9-%100). Acute coronary syndrome diagnosed at 2 patient, 46 patient with nonspecific chest pain were evaluated.

RESULT

Although focus echocardiography performed by emergency medicine physicians is not reliable with a positive predictive, reliable with negative predictive and AKS. focus echocardiography is also bedside, non invasive and reliable test for diagnosis of life threatening chest pain.

P077

Cardiovascular

THE VALUE OF CLINICAL AND LABORATORY DIAGNOSTICS FOR CHEST PAIN PATIENTS AT THE EMERGENCY DEPARTMENT

BE Backus (1), R Braam (2), BE Groenemeijer (2), LJ Jellema (3), AJ Six (4), RA Tio (5), H van der Zaag (6), JD van Suijlen (3)

1. Emergency Medicine, Albert Schweitzer Hospital, Dordrecht, Netherlands
2. Cardiology, Gelre Hospital, Apeldoorn, Netherlands
3. Clinical Chemistry, Gelre Hospital, Apeldoorn, Netherlands
4. Cardiology, Hofpoort Hospital, Woerden, Netherlands
5. Cardiology, University Medical Center, Groningen, Netherlands
6. Statistics, Gelre Hospital, Apeldoorn, Netherlands

Corresponding author: Mme Backus Barbura (backus@heartscore.nl)

Key-words: HEART score ; Chest pain ; Troponin

Background:

The focus during the diagnostic process for patients with acute chest pain at the cardiac emergency department (ED) is to discriminate low risk as well as high risk patients for an acute coronary syndrome (ACS). In current practice, patients are assessed by the physician and blood samples are sent to the laboratory to measure the cardiac marker Troponin. In this study the predictive value of the clinical examination is compared with laboratory testing of troponin. Clinical examination and laboratory testing are combined in the recently developed HEART score. The HEART score was therefore also compared with clinical examination and laboratory testing. Furthermore the clinical benefit of the HEART score based on a second troponin measurement (HEART2) was compared with HEART.

Methods:

This study included 720 chest-pain patients who presented at the ED of two hospitals in the Netherlands. The predictive values of clinical presentation, troponin and the HEART score for the occurrence of major adverse coronary events (MACE) within six weeks were assessed. Furthermore, the improvement of HEART with the second troponin measurement was assessed using the net reclassification improvement (NRI).

Results:

A total of 720 patients were included. Ten patients were lost to follow up. 145/710 patients (20.4%) were diagnosed with MACE. C-statistics for the occurrence of MACE were 0.76 for the clinical evaluation, 0.72 for troponin and 0.82 for the HEART score. A second troponin measurement was available in 437 patients (62%). MACE occurred in 129/437 patients (29.5%). The c-statistic for MACE for the second troponin measurement was 0.78 and for HEART2 0.79. The assessment of a second troponin test resulted in an NRI of 8.0% in favor of HEART2.

Conclusion:

To distinguish low- and high-risk patients with chest pain at the ED clinical data obtained by the physician and results from laboratory testing should be used together. Therefore, the HEART score should be used to discriminate patients at risk of a cardiac event from patients who can be safely discharged. In addition, it is shown that a second troponin measurement slightly improves the discriminative ability of the HEART-score.

P078

Cardiovascular

THROMBOLYSIS FAILURE WITH STREPTOKINASE IN ACUTE MYOCARDIAL INFARCTION

NE. Noura, S. Souissi, F. Amira, H. Ghazali, MA. Cherif, N.

Boudrigua, M. Ajmi, N. El Heni, B. Bouhajja

Emergency department, Regional Hospital, Ben Arous, Tunisia

Corresponding author: Mr Souissi Sami (samisouissi@yahoo.fr)

Key-words: myocardial infarction, ; streptokinase, ; thrombolysis failure

Background: The aim of this study is to determine the failure rate of thrombolysis with streptokinase in acute myocardial infarction using electrocardiogram criteria and its association between various independent variables.

Methods: a total of 224 subjects admitted in the emergency room with myocardial infarction who needed thrombolysis were recruited into this prospective observational study. Thrombolytic failure was defined using electrocardiogram criteria of less than 50 percent reduction in ST elevation in the worst infarct lead (90 min after the start of streptokinase infusion). Multivariate analysis was used to identify factors associated with thrombolysis failure.

Results: A total 92 patients (41%) failed thrombolysis. The mean age was 58 +/- 12 years old, the sex ratio was 4.4. The average delay chest pain - emergency admission was 251 ± 183 min. door to needle time was less than 25 min in all cases.

The failure were associated with two variables including history of diabetes mellitus (odds ratio [OR] 1.49, 95% confidence interval [CI] 1.06–2.10; p-value is 0.02), and delay from onset chest pain to emergency admission greater than 180 min (OR 1.88, 95 % CI 1.40–2.53; p-value is 0.0001).

Conclusion: This study showed that streptokinase had a failure rate of 41 percent. History of diabetes mellitus and longer delay from onset chest pain to emergency admission were highly predictive of thrombolytic failure. This group of patients may benefit from other early reperfusion strategy.

P079

Cardiovascular

CARDIAC TROPONIN ASSAYS IN EMERGENCY DEPARTMENT: A RELIABLE MARKER FOR CORONARY ACUTE SYNDROME OR A -GOOD FOR ALL SEASONS- TEST?

A. Bonora (1), G. Taioli (2), E. Sanzone (1), S. Pachera (1), S. Pagano (2), B. Pajusco (1), D. Girelli (2), C. Pistorelli (1).

1. Emergency Department, University Hospital, Verona, Italy

2. Department of Internal Medicine, Emergency Medicine School, University of Verona, Verona, Italy

Corresponding author: Mr Bonora Antonio (antonio.bonora@ospedaleuniverona.it)

Key-words: Cardiac troponin ; Chest pain ; Coronary acute disease

In the patients referring to Emergency Department because of chest pain, cardiac troponin plays a basic role in confirming or excluding a possible coronary acute syndrome (CAD), especially when electrocardiogram (ECG) is not diagnostic.

Nevertheless, in spite of its well known cardiospecificity, troponin levels resulted to be elevated in a number of non ischemic end even not cardiologic clinical conditions. Thus a larger demand for troponin assay in acute setting is expected to lead to unsuitable indications.

We retrospectively observed a series of patients submitted to troponin assay in a three months period, in order to evaluate the propriety of test indications and the patients outcome. We preferred to consider the conventional troponin (cTn), since a larger number of false positive results has to be expected, if the new high sensitivity cardiac troponin (hscTn) was tested. The positivity cut-off was set for values superior to 0.01 ng/ml.

The study population consisted in 1247 patients (622 males, 625 females; mean age 65.3 years) observed from January to March 2010 in the Emergency Department of University Hospital of Verona.

A significant clinical history for ischemic heart disease in 270 (21.6%) and for diabetes in 157 patients (12.5%) was found. Only the 44% of these patients were observed because of chest pain, either typical or atypical, while the remaining 56% presented various and often not specific symptoms. In the latter series the indications to troponin assay were the following: an ischemic equivalent symptom, such as dyspnea or syncope, in 306 cases (24.5%); history of ischemic heart disease or diabetes in 48 cases (3.85); finding of ECG anomalies, in absence of chest pain, in 45 cases (3.6%). Finally, at least in the 24% of the cases the clinical reason for troponin assay still remained unclear.

Troponin values appeared to be significantly elevated in 230 patients (18.4%), but only in 20% of the cases ECG showed ischemic anomalies. Most of these patients (25.2%) were placed over the 75th percentile, for troponin levels > 0.11 ng/ml. Patients suffering from chest pain showed median troponin values higher than the painless ones ($p < 0.02$). Only in 11 case (0.9%) troponin levels turned to be positive on the further control.

As regards the ischemic equivalent symptoms, only dyspnea resulted to be significantly related to troponin elevation (37.5% of the patients with this clinical appearance).

Over the 85% of the patients with higher troponin values were hospitalized, but only 19% of them received a final diagnosis of CAD (STEMI/NSTEMI) or unstable angina, whereas in the 31% of the patients observed because of chest pain a CAD was confirmed.

In conclusion, troponin seems to lack its specificity and its clinical significance, if related to chest pain, in case of larger and inadequate demand for assay. Moreover, this strategy is likely known responsible for a waste of time and resources in acute setting and for a number of unsuitable hospitalization.

P080

Case Presentation

SCORPION STING IN A PREGNANT WOMAN: A CASE REPORT

S. Bozkurt (1), M. Okumus (1), B. Utku (1), DC Arian (2), U. Lok (3)

1. Emergency Department, Kahramanmaraş Sutcuimam University, Medical Faculty, Kahramanmaraş, Turkey

2. Department of Obstetrics and Gynecology, Kahramanmaraş Sutcu Imam University, Faculty of medicine, Kahramanmaraş, Turkey

3. Department of Emergency medicine, Adiyaman University, Faculty of medicine, Adiyaman, Turkey

Corresponding author: Mr Bozkurt Selim (selimbozkurt01@yahoo.com)

Key-words: scorpion sting ; pregnancy ; healthy baby

Scorpion envenomations remain a serious health problem in many parts of the world and generally occurs in the summer months. While there are a number of case reports in the literature regarding scorpion sting, reports of envenomation occurring during pregnancy are rare. We present in this article a rare case of sting by the yellow scorpion, in a pregnant woman. A 27-year-old woman in the 10th week of gestation presented to our emergency service with a history of a scorpion sting. The patient underwent cooling on the sting area and was administered 1 g IV paracetamol. Her gestational follow-up visits remained normal and her pregnancy condition was good, and at 38 gestation weeks she has delivered a healthy baby boy weighing 3100 grams. In this case, antivenom was not used because the patient exhibited no systemic signs of toxicity and did not meet criteria for antivenom administration. The follow-up of maternal and fetal was normal, at the end of the gestation mother gave birth to a healthy baby.

P081

Case Presentation

A SILICOSIS CASE WITH SIMULTANEOUS BILATERAL SPONTANEOUS PNEUMOTHORAX

S. Bozkurt (1), H. Kahraman (2), M. Tokur (3), M. Okumus (1), B. Utku (1), N. Köksal (2)

1. Emergency Department, Kahramanmaraş Sutcuimam University, Medical Faculty, Kahramanmaraş, Turkey

2. Department of Chest diseases, Kahramanmaraş Sutcuimam University, Medical Faculty,, Kahramanmaraş, Turkey

3. Department of Thoracic surgery, Kahramanmaraş Sutcuimam University, Medical Faculty,, Kahramanmaraş, Turkey

Corresponding author: Mr Bozkurt Selim (selimbozkurt01@yahoo.com)

Key-words: dyspnea ; silicosis ; pneumothorax

Objective-aim: Simultaneous bilateral spontaneous pneumothorax is a rare condition and forms only 1.3% of all spontaneous pneumothorax cases. Silicosis with pneumothorax commonly are unilateral, in contrast bilateral pneumothorax is very rare and the literature reported very few cases. We are report a case of bilateral secondary spontaneous pneumothorax (SSP) in a patient of accelerated silicosis.

Case:

A 34-year-old male patient presented to the emergency department with acute dyspnea and chest pain. His vital signs; Pulse oxygen saturation was 83%, respiratory rate was 26 breath/min, heart rate was 110 beats / min, blood pressure was

110/70 mmHg, fever was 36.1 °C. He complained dyspnea for last three years and his occupational history revealed that ten years ago he had been working in sandblasting denims eight hours a day, six days a week for nine months. On physical examination, breath sounds on left was not heard, on right decreased breath sounds and fine crepitations were determined. PA chest radiograph taken in the emergency department, total pneumothorax on the left hemithorax, and partial pneumothorax view of apex of right lung and had reticulonodular images. The patient has received high-flow nasal oxygen. The patient underwent immediately chest tube administration to the left hemithorax. Respiratory distress of the patient was decreased after chest tube administration. Right side left untreated because right pneumothorax was minimal. Left thoracotomy was performed after ten days because during the clinical follow-up left lung did not expand and chest tube administration was applied to the right hemi thorax before operation. The patient was discharged 45 days later with completely improved pneumothorax.

Conclusion: Silicosis patients presenting with acute respiratory distress and pneumothorax in bilateral spontaneous pneumothorax may be kept in mind is to be considered.

P082

Case Presentation

ENDOVASCULAR STENT-GRAFT PLACEMENT FOR THE EMERGENCY TREATMENT OF RUPTURED DESCENDING AORTIC ANEURYSM

A Batur (1), O Koç (1), LG Karabekmez (2)

1. Radiology, Meram Faculty of Medicine, Konya, Turkey
2. Radiology, Bolu İzzet Baysal State Hospital, Bolu, Turkey

Corresponding author: Mr Batur Abdussamet (drsamet56@yahoo.com)

Key-words: ruptured thoracic aortic aneurysm ; ;

Ruptured aortic aneurysm is a condition that requires emergency treatment because of its high mortality ratio. The possibility of aneurysm rupture was reported as 74% and the rupture-related mortality as 69%. Although the general approach to the treatment of the aneurysm rupture is surgery, the thoracic endovascular stent-graft repair (TEVAR) is becoming increasingly common as a less invasive method.

A female patient admitted to the emergency with sudden onset back pain was treated with emergency endovascular stent-graft after CT angiography examination. In posterior-anterior (PA) chest roentgenogram, the left lung area was closed. In computer tomographic angiography (CTA) examination, a multilobulated, short-segment fusiform aneurysm of descending thoracic aorta was found. The left pleural cavity was filled due to bleeding and the lung was found to be completely atelectatic. The patient was taken to the angiography room for emergency endovascular treatment. The aneurysm was treated with endovascular stent-graft following the liberalization of the patient's right femoral artery. Then a catheter was inserted into the pleural space to evacuate the patient's left hemothorax. A postoperative CT scan taken on the third day showed no endoleak, decrease in hemothorax and correspondingly a decrease in atelectasis.

Short duration of hospitalization, less blood loss, less need for blood transfusions, reduced time to extubation, and disuse of aortic clamping provides advantages when it is compared to surgery. The ruptured descending thoracic aortic aneurysms are lesions that require immediate treatment because of high mortality and morbidity. In open surgical operations, mortality rates reach 50%. Endovascular stent-graft treatment reduces operation time,

morbidity and mortality rates. Endovascular stent-graft treatment is performed safely and successfully in the emergency treatment of a ruptured thoracic aortic aneurysm.

P083

Case Presentation

HEPATIC TOXOCARIASIS: A RARE CAUSE OF RIGHT UPPER ABDOMINAL PAIN IN THE EMERGENCY DEPARTMENT

E Akıncı (1), F Coşkun (2), E Atayık (3)

1. Emergency department, Konya Training and Research Hospital, Konya, Turkey
2. Emergency department, Ankara Training and Research Hospital, Ankara, Turkey
3. Department of Allergy and Immunology, Cumhuriyet University School of Medicine, Sivas, Turkey

Corresponding author: Melle Akıncı Emine (emineakinci@yahoo.com)

Key-words: Right upper abdominal pain ; Toxocara canis ; differential diagnosis

Introduction

Toxocara canis and Toxocara cati are among the common helminths that reside in the intestinal tract of cats and dogs. Humans that live in undersanitized parts of the world are at higher risk of contracting toxocariasis (1). Infection develops following ingesting embryonic eggs contained in soil contaminated with dog feces (2). T. canis has been depicted as multiple small, ill-defined, oval or elongated, low-attenuating nodules on portal venous phase images of dynamic CT. Sonography showed multiple small, focal, hypoechoic lesions in the liver parenchyma. We report on a case that presented to our emergency department (ED) with abdominal pain and who was diagnosed with toxocariasis.

Case Report

A 41 year-old female patient, complaining of abdominal pain, presented to the ED of Ankara training and research hospital. The patient stated that she had been experiencing abdominal pain for approximately 1 week. The pain was stated to be intermittent in nature, lasting approximately 4 hours each time, but had become worse that day, prompting a visit to the ED. The patient localized the pain in the right upper quadrant and stated that it became worse with inspiration/expiration efforts and that it responded to non-steroidal anti-inflammatory drugs (NSAID). There were no complaints of nausea, vomiting, diarrhea, constipation or fever. The rest of the patient's history was unremarkable. Physical examination revealed a fully conscious, alert and oriented patient with a Glasgow Coma Scale (GCS) of 15, blood pressure: 110/60 mmHg, pulse: 74 beats/min, respiration: 14/min and temperature: 36.8 °C. The patient had tenderness in the right upper quadrant with no rebound or defense. The rest of the physical exam was normal. Biliary colic was initially considered as the diagnosis. The results of laboratory tests were as follows: Hgb:12.4 g/dl (11.7-15.5); WBC: 8300 10³/μL (5000-10000); eosinophil: 1.1% (0-6%), glucose: 102 mg/dl. AST, ALT, ALP, GGT, amylase and bilirubin levels were all within normal limits. An upper abdominal ultrasonography (USG) was normal. The patient was treated symptomatically and was discharged from the ED. The patient revisited the ED three days later, after the pain increased in intensity. A further physical examination revealed no new signs except for increased tenderness in the right upper quadrant. An upper abdominal tomography was revealed that the right lobe longitudinal dimension of the liver was measured 185 mm, indicating a hepatomegaly. There was also a triangular shaped heterogeneous-hypodense region, extending from the subcapsular region to the parenchyma, in the right posterior superior segment (segment VII) of the liver and a minimal subcapsular collection. (Image 1). The patient was admitted to the general surgery department with an initial diagnosis of infarct and/or abscess.

Since the eosinophil and WBC values were not high, and as there was no high fever, a liver infarct was thought to be a more likely diagnosis. Further laboratory studies were requested to reveal the underlying etiology and the following values were obtained: Fine needle aspiration biopsy proved negative for malignancy. Parasitological examinations using the Western Blotting method were negative for *Fasciola hepatica*, but positive results for toxocariasis. The patient was started on a 10-day albendazole (15mg/kg per oral) therapy before being discharged from the hospital. Subsequent 15-day and 30-day follow ups showed significant improvement in the clinical presentation of the patient and abating of the lesions in the ultrasonographic examinations.

Conclusion

Fasciola hepatica and *Toxocara canis* are rare causes of right upper quadrant abdominal pain. Some clinical features of liver toxocariasis can mimic tumors and infarct. In patients showing multiple small, oval or elongated, ill-defined, hypoechoic nodular lesions in the liver on computed tomography and/or sonography, T. canis should be considered, even in cases without fever and hypereosinophilia.

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P084

Case Presentation

SUBCUTANEOUS EMPHYSEMA DUE TO SELF AIR INJECTION: A CASE REPORT

A. Taheriniya (1), F. Emamian (2), M. Fallahi (2),

1. Emergency medicine, Alborz university of medical sciences, Karaj, Islamic Republic of Iran
2. Emergency department, Kermanshah hospital, Kermanshah, Islamic Republic of Iran

Corresponding author: Melle Taheriniya A. (dr_alitaheri@yahoo.com)

Key-words: subcutaneous emphysema ; air ; self injection

Subcutaneous emphysema is the condition in which air or other gases penetrate into the skin and submucosa, resulting in soft-tissue distention. Subcutaneous emphysema could be happened due to trauma, iatrogenic factors and factitious disease. We present a 20-year-old man, with anti-social personality disorder, admitted to emergency ward with subcutaneous emphysema of the abdominal wall. He inserted an air pump of aquarium into his abdominal skin and injected some air to mutilate himself. At the third day of admission, subcutaneous emphysema of abdominal wall extended upward to the subcutaneous tissue of chest. Abdominal computed tomography (CT) revealed an air infiltration around the abdominal aorta. Finally, after conservative treatment, subcutaneous emphysema resolved in 7days. Then, he was discharged, followed by every day outpatient observation. After full recovery, he was referred for psychiatric consultation. In this case, the extension of subcutaneous emphysema, good response to conservative treatment and a need for psychiatric follow up is considerable.

P085

Case Presentation

LATE PHASE DIAPHRAGMATIC HERNIA: A CASE REPORT

F İçme (1), E Balkan (2), S Becel (3), A Şener (3), GK Çelik (3), A Avci (4)

1. Emergency department, Ankara Atatürk Training and Research Hospital, Ankara, Turkey
2. Thoracic Surgery Department, Ankara Atatürk Training and Research Hospital, Ankara, Turkey
3. Emergency department, Ankara Atatürk Training and Research Hospital, Ankara, Turkey
4. Emergency department, Bakırköy Dr Sadi Konuk Training and Research Hospital, Ankara, Turkey

Corresponding author: Mr İçme Ferhat (ferhaticme@gmail.com)

Key-words: diaphragmatic hernia ; radiological diagnosis ; thoracotomy

Diaphragmatic rupture (DR) is a well known complication of blunt or penetrating injuries that affect the diaphragm, but it may be overlooked easily when it is not taken in to consideration or physical examination findings and radiographs were not evaluated carefully. In this report we present a patient who admitted to ED with shortness of breath lasting for two years and pain at the bottom of the left chest which increased recently, whom we diagnosed with late phase diaphragmatic hernia which we thought to occur due to a traffic accident 10 years ago.

P086

Case Presentation

PANCREATITIS WITH HIGH RISK ECG CHANGES

P.H. Kara, N. Vandenberk, Y.E. Nazlı, E.E. Ünlüer

Emergency Department, Izmir Katip Çelebi University, Atatürk Research and Training Hospital, Izmir, Turkey

Corresponding author: Melle Kara Pinar Hanife (hpinkara@hotmail.com)

Key-words: Pancreatitis ; ECG ; Emergency department

Epigastric pain is a common symptom of emergency room visits. It's important to distinguish it from cardiac symptoms. A 20 years old women presented with epigastric and chest pain. She had epigastric tenderness on physical examination. Her first electrocardiogram (ECG) revealed bradycardia, first degree AV block and ST segment elevation in leads V1-6 and D2, D3, avF. Serial ECGs and cardiac markers were negative for cardiac ischemia but her amilase and lipase levels were high. Abdominal tomography showed evidence of pancreatitis. Transient electrocardiographic changes has been increasingly reported in the literature. We discussed the most frequent ECG changes in acute pancreatitis.

P087

Case Presentation

CERVICO – FACIAL EMPHYSEMA AND PNEUMOMEDIASTINUM AFTER A HIGH SPEED AIR DRILL ENDODONTIC TREATMENT PROCEDURE

P Durukan (1), O Salt (1), S Ozkan (1), B Durukan (2), C Kavalci (3)

1. Erciyes University Faculty of Medicine, Department of Emergency Medicine, Kayseri, Turkey
2. Erciyes University Faculty of Dentistry, Department of Periodontology, Kayseri, Turkey
3. Numune Training and Research Hospital, Emergency Department, Ankara, Turkey

Corresponding author: Mr Durukan Polat (polatdurukan@gmail.com)

Key-words: Emergency Medicine ; Mediastinal Emphysema ; Tooth, Endodontically-Treated

Abstract

Cervicofacial subcutaneous emphysema is defined as the abnormal introduction of air in the subcutaneous tissues of the head and neck. It is mainly caused by trauma, head and neck surgery, general anesthesia, and coughing or habitual performance of Valsalva maneuver.

The occurrence of subcutaneous emphysema after dental treatment is rare, and diffusion of gas into the mediastinum is much rarer, especially when the procedure is a nonsurgical treatment. The most common dental cause of pneumomediastinum is the introduction of air via the air-turbine hand piece during surgical extraction of an impacted tooth.

We report a case of cervical subcutaneous emphysema and pneumomediastinum occurring after an endodontic treatment of right first molar using an air tribune drill.

Case

A 45 years old woman presented to the ED with acute swelling of the right cheek and neck. She did not have any preexisting disease and was good in health. Her symptoms began at a dentist's office following endodontic treatment of the right lower first molar. The referring dentist stated that an air-turbine hand piece without exhaust protection was used to make an access cavity, and a compressed air syringe was used for increasing visibility without rubber dam isolation. Physical examination showed significant soft tissue swelling from the right infraorbital region to the thoracic region. The area was nonerythematous and showed crepitus on palpation, which is a sign of air in soft tissue. Dyspnea was seen. On oral inspection, there was no significant wound or laceration.

The patient's blood pressure was 140/80 mmHg, pulse 88 beats/min, respirations 18/min, temperature 36.8 °C, and oxygen saturation 99% on room air. When we examined her, we could visualize patent airway and appropriate movement of the vocal cords. There was a slight fullness on the right side of the patient's face but no erythema. We noted crepitation on the right side of the patient's neck that extended along the inferior aspect of the sternum and on the superior submental and buccal areas of the jaw. The patient denied any tenderness with palpation of these areas. Her lungs were clear to auscultation, and findings of the rest of the examination were unremarkable. ECG was normal sinus rhythm and there was no abnormal finding by the CBC and biochemical parameters of the blood.

Radiographs of the neck and chest showed emphysema of the subcutaneous tissues of the face, retropharyngeal space, and mediastinum. On CT scans obtained at the suprahoid level, air was observed in the right submandibular space (SMS), the parapharyngeal space (PPS), the carotid space (CS), the retropharyngeal space (RPS), and the cervical subcutaneous tissue. We consulted the patient with chest surgery department and to prevent the emphysema from expanding, the patient was immediately hospitalized for bed rest. After drawing blood for culture, broad spectrum antibiotherapy with metronidazole (20 mg/kg per 24 hours) and ampicillin (30 mg/kg per 24 hours) was introduced. In addition, 100% oxygen was administered to replace the air. She was discharged 3 days after admission when the swelling and crepitus subsided and follow-up x-rays showed little air in the neck and mediastinum. Physical and radiographic examinations that were performed 10 days after discharge revealed complete resolution of the clinical symptoms and radiological findings.

P088

Case Presentation

INTRACRANIAL ANEURYSM, PTOSIS, CRANIAL NERVE PALSY, A SACCULER ANEURYSMATIC PATIENT PRESENTING WITH PTOSIS

S Tezel (1), A Denizbaşı (2), OE Onur (3), S Eroğlu (2), C Özpolat (2), E Salçın (2)

1. Acil Tıp Kliniği, T.C Sağlık Bakanlığı Marmara Üniversitesi Pendik EAH, İstanbul, Turkey
2. Acil Tıp Kliniği, T.C Sağlık Bakanlığı Marmara Üniversitesi Pendik EAH, İstanbul, Turkey
3. Acil Tıp Kliniği, T.C Sağlık Bakanlığı Marmara Üniversitesi Pendik EAH, İstanbul, Turkey

Corresponding author: Melle Tezel Selin (imrosus@gmail.com)

Key-words: intracranial aneurysm ; ptosis ; cranial nerve palsy

Introduction: The emergency department (ED) patient who has a complaint of ptosis requires emergent investigation. Gaze deficits can be attributed to injuries to the central nervous system, cranial nerves or ocular muscles. The emergency investigation must begin with non-contrast computed tomography scan. The noncontrast CT scan usually adequately excludes critical lesions or mass effects. The most common cause of ptosis is cranial nerve palsy. Trauma, vascular disease, account for most cases of 3,4,5,6th nerve palsy, but aneurysm, intracranial tumor and myasthenia have been implicated.

In this report, we presented a patient with saccular aneurysm accompanied with of 3,4,5,6th nerve palsy.

Case: 43 year old patient presents to ED with headache, diplopia, sensory loss in the right side of the face. In her neurologic examination there was ptosis, diplopia, and lateral gaze deficit at the right eye. In the cranial noncontrast CT there was saccular aneurysm(16x20mm)close to right cavernous sinus.

Result: Extraocular muscle function, papillary function are a basic part of the examination with all central nervous system complaints. A detailed neurological examination must be performed to the patients presenting with visual disturbances in the emergency department. Before consulting with ophtalmic surgery department,a non-contrast CT scan must be performed for excluding intracranial space occupying lesions.

P089

Case Presentation

A RARE CASE OF COLONIC PERFORATION

S Akbulut (1), BN Alpman (2), E Şenel (3), FE Topal (4), F Topal (5), S Yılmaz (6)

1. Gastroenterology, Kartal Koşuyolu Specialty Education and Research Hospital, İstanbul, Turkey
2. Pediatrics, Çankırı State Hospital, Çankırı, Turkey
3. Dermatology, Çankırı State Hospital, Çankırı, Turkey
4. Emergency Medicine, Çankırı State Hospital, Çankırı, Turkey
5. Gastroenterology, Çankırı State Hospital, Çankırı, Turkey
6. General Surgery, Çankırı State Hospital, Çankırı, Turkey

Corresponding author: Mr Senel Engin (enginsel@enginsel.com)

Key-words: constipation ; colonic perforation ; case presentation

Summary

Constipation is frequently seen in elderly population. Changes in nutrition habits and medications are used in prevention of constipation. Patients may sometimes use their own ancient methods. We present an 85 year old patient as a rare case who used a garden hose to administer enema and thus had colonic

perforation. The mortality rate of colon perforation is high and surgery is often required.

Case Presentation

An 85-year-old male presented to Emergency Room of our hospital with severe abdominal pain. In his history, he stated that he administered enema with tap water by entering to anal canal with a garden hose for his chronic constipation. Approximately 2 cm.-long perforation area with a blood clot was seen at the beginning of sigmoid colon in the colonoscopy examination. On computerized tomography there were floating fluid areas and free fluid around the spleen. A surgical operation was immediately applied to patient. A 2 cm. long perforation area was found on the place indicated on colonoscopy. Approximately one-liter liquid in serous nature was marked in the abdomen and around the spleen. The abdomen was accepted as dirty because of the tap water history. Colostomy was opened by widening the perforated area. The patient was discharged five days after the operation. His colostomy was closed after six months.

Conclusion

Using tap water for enema is still an ancient method for evacuation in chronic constipated patients in rural parts of Turkey. Application of primitive enema method by the patient and thus presentation of colonic perforation is a rare case. It should be remembered among other etiologies when colon perforation cases are presented to Emergency Room.

P090

Case Presentation

A WILD WOLF ATTACK AND ITS UNFORTUNATE OUTCOME; RABIES AND DEATH

S Türkmen (1), A Sahin (1), M Günaydin (1), Y Karaca (2), O Tatlı (2)

S Türedi (1), A Gündüz (1)

1. Emergency department, Karadeniz Technical University, Trabzon, Turkey

2. Emergency department, Trabzon Research and Training Hospital, Trabzon, Turkey

Corresponding author: Mr Türkmen Süha (drshaturkmen@hotmail.com)

Key-words: Wolf, ; Rabies, ; Wild mammalian attack

Wild animal attacks are potential occurrences in rural areas of Turkey. Wolf attacks, however, are rare this century, as there are many anecdotal reports from previous times. Attacks by wolves are generally directed against animals such as cows and sheep, and for feeding purposes. Wolf attacks on humans are a little known and unexpected phenomenon. A 60-year-old male was brought to the emergency department with facial injuries caused by a wolf emerging from a rural area and leaping at his face as he was sitting in his garden. During the incident, the patient strangled the wolf to death. Despite post-exposure prophylaxis the patient likely died because of rabies.

P091

Case Presentation

RUPTURED ABDOMINAL AORTIC ANEURYSM MASQUERADING AS ISOLATED RIGHT LOWER QUADRANT PAIN: AN UNUSUAL PRESENTATION

E Akıncı (1), NB Akıllı (1), MO Gonen (1), R Köylü (1), E Atayık (2), B Cander (1)

1. Emergency department, Konya Training and Research Hospital, Konya, Turkey

2. Department of Allergy and Immunology, Cumhuriyet University School of Medicine, Sivas, Turkey

Corresponding author: Melle Akıncı Emine (emineakinci@yahoo.com)

Key-words: abdominal aortic aneurysm ; right lower quadrant pain ; unusual presentation

Introduction

Ruptured abdominal aortic aneurysms (rAAAs) are a substantial health care burden in developed countries and are the thirteenth leading cause of death in the United States. Approximately 1 in 25 adults over 65 years of age harbour AAAs. Population-based studies have indicated that the incidence of rAAA has almost tripled in the last 30 years. Misdiagnosis by first-contact practitioners has been shown to be the most significant factor in delay to surgery, with as many as 60% of cases incorrectly diagnosed. This is subsequently reflected in the strikingly high overall mortality rate; up to 85% has been reported in some studies. Numerous investigations have suggested that expeditious diagnosis of an AAA, even if it has ruptured, offers the best hope for patient survival. We present a case has an unusual presentation with ruptured abdominal aortic aneurysm.

Case report

56 years old male patient was admitted to the emergency department with syncope and abdominal pain. A hour before fainted a few minutes with urinary incontinence. He didn't have muscles contraction and interlocking teeth. He didn't have chronic disease like epilepsy and stroke. In medical history, he had hypertension and coronary arter disease. He had coronary by-pass surgery four years ago. Glasgow coma scores was fifteen. Vital signs were heart rate 88, tension 130/80, pulmonary rate 14 . Physical examination, general status open, cooperated and oriented. In abdominal examination, right lower quadrant was sensitivity and rebound evaluated. Other system examinations are natural. He has consulted to the general surgery, and didn't make any surgical intervention like appendectomy etc. In ECG, Sinus rhythm also in anterior derivations R wave loses and V5-V6 derivations T wave negativity seemed. Laboratory results are within normal limits examples of cbc, glucose and cardiac enzyme etc. In radiological imaging brain CT was normal. Contrast abdomen CT was imagined to the patient. The diameter of abdominal aorta was 30 millimeter which is the top of upper limits diaphragm level. The diameter of abdominal aorta was 35 millimeter upper mesenteric artery level, 37 millimeter renal artery level, Which were aneurysmal. Aneurysm diameter of the abdominal aorta Renal artery distal level to the iliac bifurcation level measured as 71 mm at the widest part. At this part the vessel wall was irregular. Acute hemorrhagic areas was seemed Para aortic, right paracolic, right perirenal and right psoas muscle adjacent Which had density average 55 Hounsfield unit. Aneurysm diameter of the right iliac artery was 47 millimeter. Around of this segment at least 15 millimeter thick annular thrombus material was measured. The patient was consulted to cardiovascular surgery. The patient was admitted to the intensive care. Emergency surgical intervention was received to the patient during the operation cardiac arrest and died

Discussion

The classic triad of abdominal or back pain, hypotension and a pulsatile abdominal mass may be absent in more than 60% cases of rAAA. Atypical and insidious clinical presentations of this potentially fatal disease make it challenging to diagnose as it may often mimic renal colic, urinary tract infection, diverticulitis, gastrointestinal perforation and spinal disease. In a stable patient without any truncal pain or collapse, the diagnosis of aneurysmal rupture is not usually suspected. Internal iliac aneurysms are known to present with right lower quadrant pain or hip pain. Our patient has AAA to the level of the renal artery distal to the iliac bifurcation and measured as 71 mm in diameter at the widest part. In addition Right common iliac artery diameter is 47 mm and aneurysmatic dilated. Paraaortic, right paracolic, right perirenal

and right psoas muscle adjacent to the hypodense areas consistent with the average 55 HU density were recorded in acute hemorrhage in the CT scan. Bleeding at this level may be caused by in the right lower quadrant pain.

Conclusion

Ruptured AAA is an important diagnostic challenge to emergency physicians and is often misdiagnosed because of its nonspecific presentations. Acute right lower quadrant pain that mimicks acute appendicitis in the elderly can very rarely be the result of an AAA. This case highlights the need for heightened awareness among emergency physicians to this timesensitive diagnosis

P092

Case Presentation

IDIOPATHIC SPONTANEOUS RETROPERITONEAL HEMATOMA

N Kiknadze, G Gotsadze

Emergency Medicine, Kipshidze's Central University Hospital, Tbilisi, Georgia

Corresponding author: Mme Kiknadze Natalia (kiknato@yahoo.com)

Key-words: Spontaneous Retroperitoneal Hematoma ; Idiopathic ; Diagnostic and therapeutic challenge

Introduction

Spontaneous retroperitoneal bleeding is a rare but potentially life threatening condition. It can cause significant morbidity and mortality and represents a diagnostic and therapeutic challenge. Spontaneous retroperitoneal bleeding can be caused by a variety of factors, the most common causes are renal and adrenal tumors, anti-coagulants, vascular disorders, autoimmune diseases, but in rare cases bleeding site and etiology remains unknown.

Only a few cases of Idiopathic retroperitoneal hematoma have been reported. Even advanced diagnostic methods such as contrast-enhanced CT and MRI imaging have sometimes failed to demonstrate the origin and cause of bleeding. This makes treatment of this condition very challenging. We report a case of non-traumatic idiopathic spontaneous retroperitoneal haemorrhage.

Case Presentation

46- year- old Caucasian male, with no history of trauma, history of Arterial Hypertension, DM type 2, treated glomerulonephritis 8 years ago, no current medication was presented to the ED with acute right flank pain. On admission VS were normal and physical exam was unremarkable with exception of positive right costo-vertebral sign. Initial lab tests, including coagulation tests, and US did not show any abnormality. Contrast-enhanced CT scan demonstrated large right-sided retroperitoneal hematoma and free fluid in the abdomen but did not reveal any mass, abnormality or site of bleeding. The patients VS and Hb was monitored closely whilst analgesia, IV fluids administered. Shortly after becoming hemodynamically unstable, anaemic and also demonstrating signs of the continuous bleeding the patient was transferred to OR for urgent explorative laparotomy. Intra-operative inspection showed extensive retroperitoneal hematoma but did not reveal bleeding site or any obvious pathology. Bleeding was controlled with packing. After 5 days re-laparotomy was performed, packing was removed. The patient recovered without complications.

Discussion

Spontaneous retroperitoneal haemorrhage (SRH) is also known as Wunderlich syndrome. Although SRH is commonly presented with acute flank pain symptoms of internal bleeding and tenderness to palpation, the most common signs and symptoms described are abdominal pain (67%), haematuria (40%) and shock (26.5%).

From diagnostic modalities ultrasonography is less sensitive than CT scan in detecting hematomas and underlying pathology. A contrast-enhanced CT scan is regarded as the most sensitive diagnostic method in revealing the origin and cause of retroperitoneal bleeding. In our case a CT scan did not demonstrate any abnormality except extensive right side retroperitoneal hematoma and free fluid in the abdomen. The same findings were confirmed during the intra operational inspection of the retroperitoneal space and abdomen. Magnetic resonance images play a more useful role in making the diagnosis of hematoma than CT by distinguishing between a collection of fluid such as blood or neoplasm, such as pheochromocytoma or carcinoma. However with an unstable patient performing an MRI scan is complicated.

Angiography may have both a diagnostic and a therapeutic role in patients with retroperitoneal haemorrhage. Apart from delineating any ruptured vessels it allows selective arterial embolization during the same procedure. This approach obviates the need for invasive surgery and should always be considered as an option. Surgical exploration is reserved for patients with uncontrolled bleeding or when diagnostic methods cannot detect origin and site of bleeding. At the time of exploration a thorough examination of the visceral arteries and solid organs should be performed. Often the site of haemorrhage cannot be localized at time of surgery despite thorough exploration

Conclusion

Idiopathic SRH is a very rare condition but represents a diagnostic and therapeutic challenge. The most advanced and informative diagnostic methods such as contrast-enhanced CT scan sometimes cannot demonstrate the bleeding site. This makes it impossible to use less invasive interventions such as selective angiography and embolization of the bleeding vessel. Angiography with embolization is considered the best option for bleeding control. In cases of idiopathic SRH; if a patient demonstrates signs of continuous bleeding, hemodynamical instability and bleeding site and cause remains unknown explorative laparotomy with packing for bleeding control can be one of the options.

P093

Case Presentation

AN UNUSUAL TREATMENT METHOD OF HAEMORRHOIDS: TEA GLASS

P Durukan (1), S Ozkan (1), O Salt (1), U Ocak (1), M Akyuz (2), T Ozturk (1), H Uzer (2)

1. Erciyes University Faculty of Medicine, Department of Emergency Medicine, Kayseri, Turkey

2. Erciyes University Faculty of Medicine, Department of General Surgery, Kayseri, Turkey

Corresponding author: Mr Durukan Polat (polatdurukan@gmail.com)

Key-words: Hemorrhoids ; Foreign body ; Rectum

Abstract

There are some medical and surgical treatment methods of hemorrhoids. We want to present a case who tried to treat his hemorrhoids with warmed tea glass.

Case

A 57 years old male admitted to the Emergency Department with complaints of rectal pain and bleeding. He stated that the pain was continuous and bleeding began two hours before admission. In the history of the patient he had hemorrhoids for 5 years and his general surgeon advised him to sit on warmed tea glass to treat his hemorrhoids. He says he did it periodically. At last time while he was sitting on the tea glass, it was accidentally inserted in the

rectum. And he tried to remove it out but he could not. And the glass was broken. And then rectal bleeding began.

The patient's vital signs were normal. The patient was awake, alert and oriented. His physical and neurological examination was normal. His abdominal examination revealed tenderness in lower quadrants. A digital rectal examination was performed and there was a foreign body in rectum. After that we have performed a plain abdominal radiograph that showed a radio-opaque foreign body. Then we have performed an abdominal computerized tomography to define nature and position of foreign body. At the 3D reconstruction there was a broken the glass in rectum. We have consulted the patient with general surgery department for surgical removal. It was removed with speculum and retractor. The patient was discharged after 48 hour observation. There was no postoperative complication.

P094 Case Presentation

BARIUM MEAL INDUCES ILEUS: A CASE REPORT

A. Taheriniya (1), M. Fallahi (2), F. Emamian (2)

1. Emergency medicine, Alborz university of medical sciences, Karaj, Islamic Republic of Iran

2. Emergency department, Kermanshah hospital, Kermanshah, Islamic Republic of Iran

Corresponding author: Melle Taheriniya A. (dr_alitaheri@yahoo.com)

Key-words: barium meal ; fecal impaction ; ileus

Obstruction of small and large intestines is a serious and life-threatening condition that requires prompt attention for clinicians. It is also a rare complication of gastrointestinal assessment with barium meal. We present a 76-year-old man who was admitted with an acute generalized colicky abdominal pain which was appeared two weeks after the barium meal observation. Over the last two weeks, he had no defecation but gas passing was normal. On physical examination, the vital sign was normal, he had mild diffuse abdominal tenderness with no distention or peritoneal signs and a firm immovable mass of stool was found on digital rectal exam. A plain abdominal radiography revealed residual barium accumulation on fecal impaction in transverse colon and rectum. Causes of acute abdominal pain were ruled out. At first, the patient received conservative treatment. There was no response to medical therapy or enema but digital fragmentation and mechanical removal of fecal impaction relieved patient complaint successfully. The patient was discharged, 8 hours later. We encouraged him to come back for his follow up. This simple procedure seems an easy way to apply in clinic and diminished the need for further surgical interventions and produced a favorable outcome in this case.

P095 Case Presentation

CHILAIIDITI SYNDROME: WHY IS CLINICAL FINDINGS MORE IMPORTANT IN ED.

MH Kuşaslan (1), B uyanık (2), E uygungül (2)

1. radiology department, iğdır state hospital, iğdır, Turkey

2. emergency department, iğdır state hospital, iğdır, Turkey

Corresponding author: Mr Uygungül Evren (drevadr@hotmail.com)

Key-words: Chilaiditi ; large intestine ; pneumoperitoneum

Chilaiditi syndrome is a rare condition when pain occurs due to transposition of a loop of large intestine (usually transverse colon) in between the diaphragm and the liver, visible on plain abdominal X-ray or chest X-ray.

Normally this causes no symptoms, and this is called Chilaiditi's sign. The sign can be permanently present, or sporadically. This anatomical variant is sometimes mistaken for the more serious condition of having air under the diaphragm (pneumoperitoneum) which is usually an indication of bowel perforation. This may lead to unnecessary surgical interventions.

therefore, clinical findings should always be first examine in ED instead of laboratory and radiology

P096 Case Presentation

TREATMENT OF A QUETIAPINE AND ESCITALOPRAM OVERDOSE WITH INTRALIPID EMULSION

a ali demir, ck cemil kavalcı, c elif çelikel, e engin deniz arslan, f fevzi yılmaz, me muhammed evvah karakılıç

emergency department, ankara numune eğitim ve araştırma hastanesi, ankara, Turkey

Corresponding author: Mme Çelikel Elif (drelifkaya@gmail.com)

Key-words: suicide ; multidrug ; lipid

Intravenous lipid emulsion (ILE) was administered beyond standard management of toxicity. We report a case of a 29-years-old female patient with attempted suicide by oral ingestion of potentially fatal overdose of multidrug including quetiapine. Rapid improvement was observed in patient's status and did not need any additional treatment during observation. Also; no adverse effect of lipid administration was observed.

In future ILE treatment seems to be the cornerstone of the management of the lipophilic drug toxicity

P097 Case Presentation

POLYARTERITIS NODOSA: AN UNUSUAL CAUSE OF LIFE-THREATENING INTRA-ABDOMINAL BLEEDING

BC van der Matten, AA Zandbergen, JG Jonkman, F Croon-de Boer, A Dees

Internal Medicine, Ikazia Hospital, Rotterdam, Netherlands

Corresponding author: Melle Van Der Matten Beatrice (b.vandermatten@gmail.com)

Key-words: Polyarteritis nodosa ; Intra-abdominal bleeding ; Vasculitis

Severe gastro-intestinal arterial bleeding is a life-threatening condition, warranting immediate causal therapy. Polyarteritis nodosa is rare vasculitis effecting the medium-sized arteries. We here present a patient with a severe gastro-intestinal arterial bleeding as presenting symptom of polyarteritis nodosa.

A 74-year-old woman was presented at the emergency department because of loss of consciousness. Medical history included atrium fibrillation for which she used acenocoumerol. She had complained of progressive abdominal pain since a week. There was no chest pain. She had no signs of diarrhea, clear blood loss or melena. On admission a pale but hemodynamically stable woman was seen. Her respiratory rate was 16/minute with a saturation of 98% while breathing room air. Vital sings included a blood pressure of 170/60 mmHg with a pulse rate of 90/min. Her consciousness was normal

at time of examination. Auscultation of the heart and lungs revealed no abnormalities. Her abdomen, however, was diffuse tender with normal peristalsis. No abnormal masses were palpable. On her forehead a small erythematous skin lesion was observed. Initial laboratory findings revealed a normocytic anemia (Hb 4.9 mmol/L), which had been 9.2 mmol/L recently tested by her GP. Her glucose level, kidney function and electrolytes were normal but the liver enzyme tests were slightly elevated. Abdominal pain and anemia without evident signs of blood loss raised the suspicion of intra-abdominal bleeding. The CT scan of the abdomen showed intra-abdominal bleeding of the splenic artery originating from an aneurysm as well as splenic infarction and an origostenosis of the renal arteries. Angiography showed multiple aneurysms as well as typical narrowing and irregularity of the abdominal arteries, highly suggestive of vasculitis. The bleeding site at the lienalis artery was confirmed and subsequently embolized using coiling. Afterwards treatment with prednisolon 60mg combined with cyclofosamide 100mg was initiated.

The further course was uneventful. In the workup of the disease all viral and auto immune serological tests remained negative. The chest x-ray showed no abnormalities. A PET-scan was performed and showed normal activity, although this was done after a few days of corticosteroids treatment. The biopsy of the erythematous lesion showed a leucocytoclastic vasculitis. During neurological examination no signs of neuropathies were seen. Retrospectively, she had suffered from fatigue for several weeks, it was unclear if she had lost weight. According to the ACR criteria, polyarteritis nodosa was diagnosed.

Polyarteritis nodosa (PAN) is a rare vasculitis affecting the small and middle sized arteries, with an incidence rate between 4.4-9.7/million per year. It most commonly affects patients in the sixth decade, men are 1.5 times more affected than woman. Although PAN is associated with Hepatitis B virus infection, most cases are idiopathic.

Common symptoms include general fatigue, weight loss, fever, typically appearing gradually over period of several weeks or months. Although all organs can be involved the kidneys, skin, joints, muscles, nerves, and gastrointestinal tract are most frequently affected. An initial presentation with an intra-abdominal bleeding is very rare.

A characteristic radiological image with stenoses, luminal irregularities and aneurysms of the arteries is highly suggestive of PAN. If possible, the diagnosis is confirmed by biopsy. The American College of Rheumatology (ACR) has established criteria which can be useful to differentiate polyarteritis nodosa from other vasculitis.

PAN is highly lethal if untreated with a 5-year survival rate of 10%, while treatment with corticosteroids and cyclophosphamide increases the 5-year survival rate to 82%. It is very important to recognize PAN in time to start early treatment. HBV-negative PAN indicates therapy with prednisone and cyclophosphamide. The optimal duration of treatment is currently unknown, most studies recommend one year of treatment.

In summary, a spontaneous rupture of the splenic artery due to polyarteritis nodosa is extremely rare. In case of an intra-abdominal arterial bleeding of unknown origin polyarteritis nodosa should be kept in mind as a treatable cause. Untreated it has a high mortality rate which makes adequate diagnostics and subsequent treatment by the use of an endovascular intervention necessary.

P098

Case Presentation

THERAPEUTIC HYPOTHERMIA COMPLICATED BY SPONTANEOUS BRAIN STEM HEMORRHAGE

JS Oh (1), SW Kim (2), BH So (3)

1. Emergency department, Uijeongbu St. Mary's Hospital, Uijeongbu-si, Korea, (South) Republic of
2. Emergency department, Bucheon St. Mary's Hospital, Bucheon-si, Korea, (South) Republic of
3. Emergency department, St. Vincent Hospital, Suwon-si, Korea, (South) Republic of

Corresponding author: Mr Oh Joo Suk (ohjoosuk@gmail.com)

Key-words: Hypothermia ; Coagulopathy ; Brain stem hemorrhage

Therapeutic hypothermia (TH) is now regarded as a promising treatment for post-cardiac arrest syndrome. Although there are possible deleterious effects on coagulation, a study showed that TH is not necessarily associated with an increased risk of bleeding. To date, no clinical study has reported serious hemorrhage. Herein, we report a case of spontaneous brain stem hemorrhage as a complication of TH.

A 62-year old man suffering from chronic renal failure developed dyspnea. Upon arrival to the local hospital's emergency department, his cardiac rhythm was asystole, and resuscitation was continued for an hour. After restoration of spontaneous circulation, the patient was transferred to our facility. The results of initial laboratory tests showed significant metabolic derangements, but coagulation tests, such as platelet count, INR, and aPTT, were all within the normal limits. Computed tomography of the brain showed no hemorrhage. Hypothermia was induced by external cooling method, and the patient's core temperature was maintained at 33°C for 24 hours. During the maintenance phase, epistaxis occurred. Follow-up coagulation tests, which were performed at 37°C, revealed a mildly decreased platelet count (111x10⁹/L) and increased INR (1.23) and aPTT (40.7 seconds). Unexpectedly, the fibrinogen level was slightly high (459.4 mg/dL), while the levels of D-dimer (above 2000 μ g/L) and FDPs (41.3 μ g/ml) were markedly increased. On the fourth day, sensory evoked potential (SEP) and diffusion-weighted magnetic resonance imaging (MRI) of the brain were performed. SEP showed a bilateral somatosensory pathway conduction defect. MRI revealed diffuse anoxic injury with brain stem hemorrhage. The patient died of multiorgan failure.

The benefit of TH seems to outweigh the risk of bleeding complication. However, we have presented a case of serious bleeding complication during TH. This is in accordance with study of Reed et al., which showed that clotting studies performed at 37°C may not confirm hypothermic coagulopathy. FDPs and D-dimer were markedly increased, which implicates the activation of fibrinolysis as part of the hypothermic coagulopathy. Further studies are required to explain the high fibrinogen concentrations. Severe bleeding complications should be taken into account when implementing TH, and little confidence should be placed in coagulation studies conducted at 37°C.

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P099

Case Presentation

HYPOTHYROIDISM IS ONE OF MORE POSSIBLE RISK FACTORS ASSOCIATED WITH STATIN INDUCED MYOPATHY

JM de Vries-van Dijen (1), SH Diepeveen (2)

1. Emergency Medicine, Isala Clinics, Zwolle, Netherlands
2. Internal Medicine, Isala Clinics, Zwolle, Netherlands

Corresponding author: Mme De Vries- Van Dijen Anne-marie (annemarietandijen@gmail.com)

Key-words: statin induced myopathy ; hypothyroidism ; risk factors

Introduction

Statins (HMG co-A reductase inhibitors) are widely prescribed lipid lowering drugs and most powerful in lowering total LDL-cholesterol. Myopathy is a side effect of statins that in clinical practice is more relevant than originally reported. Statin induced myopathy (SIM) occurs in several degrees, varying from mild complaints to severe rhabdomyolysis. In most patient SIM disappears after discontinuation of the statin. In some patients however, symptoms may even increase after stopping the statin. In these cases other causes of myopathy should be evaluated.

Case report

A 49 year old male was referred to the Emergency Department (ED) by his general practitioner (GP) because of severe, progressive muscle pain and weakness. He consulted his GP already a week earlier and the simvastatin that he used since 2006, was stopped under suspicion of SIM. The CK level at that moment was 1100 U/L. At referral to the ED, the CK was increased to 1230 U/L. Besides the muscle problems, his history revealed also a bloating appearance and weight gain with a diminishing tolerance on exercise. Physical examination showed no abnormalities except a pasty edema on both legs. Laboratory findings showed FT4 2.3 picomol/L and TSH level of 122 mU/L. We concluded that the patient had a SIM exacerbated by an unperceived hypothyroidism.

Discussion

The mechanism of SIM is not fully understood but the use of certain drugs or co-existence of several clinical conditions is associated with an increased incidence of SIM.

Using drugs that are metabolized by the cytochrome P 450-CYP 3A4 enzyme system raise statin plasma levels and in this way induces SIM. Other risk factors are frailty, low body mass index, decreased hepatic and renal function, hypothyroidism, concomitant neuromuscular disease and vitamin D deficiency.

Conclusion

Myopathy is a multifactorial determined side-effect of statins. In patients with SIM co-medication should be evaluated, thyroid, renal and hepatic function and vitamin D should be measured. When muscle complaints persist after discontinuation, concomitant disease like neuromuscular disease should be evaluated

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P100

Case Presentation

GANGRENE BAD DREAM

FJ Ancelet (1), L Moreno-Walton (2)

1. Emergency Department, Louisiana State University Health Sciences Center, New Orleans, United States

2. Emergency Medicine & Research Genetics, Louisiana State University Health Sciences Center, New Orleans, United States

Corresponding author: Mme Moreno-walton Lisa (DoctorMoreno@gmail.com)

Key-words: Gangrene ; Wound ; Infection

Chief Complaint: "They sent me here to see the orthopedic doctor."

HPI: 51-year-old male presented to a sister facility for evaluation of a foot wound. He has a history of poorly controlled DM II complicated by serial foot ulcers and infections. Presently, he attends Wound Clinic 3 times a week for a persistent ulcer on the heel of his left foot. After an initial successful response to therapy, he has noted poor progress over the last 3 weeks. Increased pain over the past 2 days prompted a visit to his local ED. The physicians were concerned for osteomyelitis of the left calcaneus with fracture, and arranged transfer for Orthopedics evaluation and possible bone biopsy.

Physical Examination:

Vital Signs: BP 152/96, P 110, RR 20, T 97.9

Obese male, non-toxic appearing, in NAD

Left foot- non-healing ulcer at ventral surface of hind foot, with scant purulent discharge and eschar amid some granulation tissue, erythema and tenderness, boggy texture extending to mid-foot.

Labs:

WBC-14,000 with 13% Bands

Lactate 1.2

ESR- 123 mm/hr

CRP-32.82 mg/dl

The attached x-rays were obtained.

Questions:

1. What is the diagnosis?

2. What is the optimal treatment?

3. What are the risk factors for this complication?

Answers:

1. Gas gangrene/Necrotizing soft tissue infection
2. Surgical debridement without delay, antibiotics to cover hospital acquired organisms as well as anaerobes.
3. Diabetes, chronic non healing wound, contaminated penetrating injuries, immune-compromised states.

Discussion:

Necrotizing soft tissue infection is a diagnosis that portends significant morbidity and mortality. These infections are subdivided into categories which include Necrotizing Cellulitis (Clostridial, Non-clostridial, Meleney's Synergistic Gangrene, and Synergistic Necrotizing Cellulitis) and Necrotizing Fasciitis (NF) Types I and II. Type I NF is typically seen in diabetic patients and patients with peripheral vascular disease (PVD). Its origin is polymicrobial. Type II NF is mono-microbial, and is caused by community acquired GAS or MRSA. The hallmark of the necrotizing infections is rapid progression, fulminant tissue destruction, systemic toxicity, and high mortality. A high index of suspicion is required, since early in the clinical course findings may be as subtle as pain out of proportion to physical findings or failure to respond to typical interventions. Antibiotic therapy remains important in early management, but more important is early surgical consultation. Mortality with antibiotics alone approaches 100%. Our patient experienced a prolonged hospital course, despite diagnosis within 10 minutes of arrival and surgical debridement within the hour. During his 40-day hospital stay, he repeatedly required ICU monitoring, had several operations for debridement of his LLE and was eventually discharged on hemodialysis with an AKA. He is currently undergoing intensive rehabilitation at another facility.

Pearls:

1. Transfers for subspecialty evaluation are prone to anchoring bias. It is essential to thoroughly evaluate each patient presenting to the ED.
2. Necrotizing soft tissue infections carry high morbidity and mortality. Early surgical debridement and directed antibiotic coverage are essential in management.
3. Always systematically evaluate radiographs in order to minimize missed findings.

P101

Case Presentation

YOU HIT THE RUSTY NAIL RIGHT ON THE HEAD!

FJ Ancelet (1),
RS Stafford (2), S Hardy (2), L Moreno-Walton (3)

1. Emergency Department, Louisiana State University Health Sciences Center, New Orleans, United States
2. Emergency Medicine, Louisiana State University Health Sciences Center, New Orleans, United States
3. Emergency Medicine & Research Genetics, Louisiana State University Health Sciences Center, New Orleans, United States

Corresponding author: Mme Moreno-walton Lisa (DoctorMoreno@gmail.com)

Key-words: Infection ; Medical error- anchoring ; Injury

Chief Complaint: "I poked my head on a nail."

History of Present Illness: 65 year old male electrical contractor hit his head on a rusty nail 4 days ago. Two days later, severe pain and erythema developed, involving the eye. Symptoms have not improved, and he is worried because his tetanus immunization is not up to date.

Physical Exam:

Vital Signs: BP 152/94, P 70, RR 18, T 95.9, O2 97%

HEENT: Visual acuity 20/20 OD and 20/40 OS

PERRL, EOMI, Fundoscopic exam was normal, no photophobia.

Facial skin: see photos

Slit lamp exam was well tolerated; no fluorescein uptake, no cell and flare.

Examination of the tympanic membranes and nares was within normal limits.

QUESTIONS:

1. What is the diagnosis?
2. What is the optimal treatment for this patient?
3. What complications should the physician be aware of?

ANSWERS:

1. Herpes zoster
2. Acyclovir, tetanus toxoid booster, pain management
3. Corneal involvement, Ramsay Hunt syndrome, delayed neuropathy

DISCUSSION:

Herpes zoster (shingles) is a condition commonly encountered by ED providers and is caused by a reactivation of latent varicella zoster virus (VZV) infection. There is a lifetime incidence of shingles in nearly 20% of the population, with a 4% incidence of recurrence in those who have a first episode. It occurs more commonly in the elderly and immune-compromised. Common complications include post herpetic neuralgia (PHN) and bacterial co-infection. Common practice includes treatment with oral antivirals and corticosteroids, as well as local wound care and analgesia. A review of the literature reveals that for uncomplicated zoster, corticosteroids and antivirals are of limited benefit and administration should be considered on a case-by-case basis. More exotic presentations include Ramsay-Hunt syndrome, in which the geniculate ganglion is involved resulting in lesions in the external auditory canal and paralysis of the seventh cranial nerve (CN VII) innervated musculature. Cranial nerve V may also be the site of reactivation, resulting in typical dermatomal distribution of the lesions. Hutchinson sign represents disease involving the nasociliary branch (CN V1) and is defined as lesions on the tip of the nose. It is important to recognize this presentation, as it identifies the risk of zoster involving the ipsilateral cornea, a vision threatening condition that mandates a prompt and thorough eye examination and evaluation by an ophthalmologist. If corneal lesions are identified, intravenous (IV) Acyclovir (30 mg/kg IV divided TID), topical steroids and cycloplegics should be considered.

Our patient was treated with an initial dose of Acyclovir (10mg/kg) IV and an IV opiate analgesic while awaiting specialist evaluation. On evaluation by the Ophthalmology house officer, he was found to have a possible punctate lesion of the cornea. Follow up within 24 hours was arranged and the patient was sent home on Acyclovir 800mg po, 5 times per day; topical and oral steroids; and oral opiate analgesic with local wound care instructions.

CLINICAL PEARLS:

1. Do not become anchored to the diagnosis that the patient gives you. Our patient believed his symptoms were due to trauma from the rusty nail, but this was a coincidental occurrence.
2. Shingles anywhere on the face should prompt a thorough evaluation of the eyes, nose and ears.

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P102

Case Presentation

SIGMOID VOLVULUS IN A PATIENT WITH A HISTORY OF CHRONIC PANCREATITIS

L Moreno-Walton (1), S Zainey (2)

1. Emergency Medicine & Research Genetics, Louisiana State University Health Sciences Center, New Orleans, United States
2. Emergency Medicine, Louisiana State University Health Sciences Center, New Orleans, United States

Corresponding author: Mme Moreno-walton Lisa (DoctorMoreno@gmail.com)

Key-words: Volvulus ; pancreatitis ; abdominal pain

Case Presentation: A young male presented to the ED with a chief complaint of intermittent epigastric pain for the five days, since he "started drinking again." He had mild nausea; no vomiting, diarrhea, hematemesis, hematochezia, melena, fever, or chills; and was tolerating PO at home. His last bowel movement was yesterday. He had been seen at a few other EDs this week for the same complaint. PMH : Multiple episodes of pancreatitis. Denies hepatitis. No prior surgeries. Social history: Remote heavy alcohol use; quit and recently resumed. Exam: VS – T 98.8 P 60 RR 12 BP 130/85 PO2 98% RA . General – AOX3, no acute distress; HEENT – EOMI, PERRL, MMM, no scleral icterus noted; CV – RRR, No mgr; Lungs– CTA bilaterally; Abdomen – Soft, non-distended, mild epigastric tenderness on deep palpation, no rebound/guarding. Negative Murphy's sign; Rectal – no masses, normal prostate, guaiac negative; Ext – No cyanosis, clubbing or edema, 2+ distal pulses; Neuro – no focal deficits noted. Lab values were within normal limits. Upon decision to discharge with follow up, we reassessed the patient. After hydration and medication, he had developed worsened abdominal pain. On exam, there was diffuse tenderness of the abdomen, with rigidity. A KUB was obtained (KUB with multiple dilated loops of bowel will be shown), which prompted CT of the abdomen (CT with sigmoid volvulus will be shown).

Discussion: Abdominal pain is one of the most frequently seen chief complaints in the ED, and a large portion of our patients are discharged without knowing the certain etiology of their pain. Often, the physical exam will be non-specific, but reassessing the patient can provide clues to the diagnosis. In cases of appendicitis, migratory pain may signal the need for further workup even after labs are normal. In this case, our patient initially had a normal abdominal exam. Later during the night, the exam changed and prompted the radiologic studies which revealed his sigmoid volvulus. Had a reassessment not been performed, the diagnosis would not have been made, and the patient might have been discharged and had a poor outcome. Frequently, patients' complaints are attributed to chronic diseases which acutely exacerbate and physicians commit the common cognitive errors of anchoring and premature closure. Focusing on the chronic diagnosis, we ignore the signs and symptoms that signal that another disease process is occurring. Patients with chronic pancreatitis can easily present with other intra-abdominal diseases such as appendicitis, diverticulitis, peptic ulcer disease, or sigmoid volvulus. It is important that we not remain focused on one diagnosis, but rather consider a broad differential in all patients. On his multiple previous ED visits, the etiology of our patient's abdominal pain was attributed to chronic pancreatitis. Most likely, he had been torsing and detorsing his sigmoid colon over the entire time.

Clinical Pearls:

Risk factors for sigmoid volvulus include excessive use of laxatives, tranquilizers, anti-cholinergics, ganglionic blocking agents, and medications used to treat Parkinson's disease. In patients who present with abdominal pain, take a careful medication history. Younger patients who present with sigmoid volvulus often present in an atypical fashion. Frequently, they will make multiple visits to the ED for the same complaint and be discharged without a clear diagnosis, as happened with our patient. In younger patients who present frequently for abdominal pain over a short period of time, this is an important diagnosis to consider; and serial abdominal exams may be helpful in delineating etiology.

P103

Case Presentation

B-CELL LYMPHOMA PRESENTING AS AN INFECTED SCALP LESION

L Moreno-Walton (1), J Sanders (2)

1. Emergency Medicine & Research Genetics, Louisiana State University Health Sciences Center, New Orleans, United States
2. Emergency Department, Louisiana State University Health Sciences Center, New Orleans, United States

Corresponding author: Mme Moreno-walton Lisa (DoctorMoreno@gmail.com)

Key-words: Lymphoma ; Skin lesion ; Infection

Case Presentation: A middle aged African American male presented to the ED with a chief complaint of purulent discharge from a scalp mass for approximately one week. The mass was tender, and sometimes painful, and had been present for a few months. He had been seen previously at several Eds, clinics, and urgent care centers, and had been diagnosed with lipoma, cyst, abscess and cellulitis. He had been given a Dermatology Clinic appointment, but due to long waiting list at the clinic, he was not due to be seen for a few more months. In the interim, he had been placed on oral antibiotics for cellulitis with abscess. Despite compliance with his antibiotics, the lesion continued to produce a foul smelling purulent discharge, and so the patient came to the ED. He denied headaches, fevers, symptoms of URI, and had no visual or auditory changes. He denied rashes or lesions anywhere else on the body. PMH was significant for hypertension, and social history was significant for occasional tobacco and social alcohol. He was on no new medications. In the ED, he was noted to be febrile. The physical examination was completely within normal limits, with the exception of a nearly circumferential, boggy mass forming a crown around the patient's head. There were areas of erythema and tenderness and some areas from which a foul discharge could be expressed. The ED attending favored infected karion as the diagnosis, and Dermatology was consulted. The white count came back elevated, and the patient was admitted for failure of PO antibiotics, and to facilitate a biopsy, which subsequently came back as follicle cell B-cell lymphoma. (histology image will be provided.)

Discussion: This is the second most common form of extranodal lymphoma, comprising 20-25% of all cutaneous lymphomas. The tumor type and extent of cutaneous involvement are two most relevant prognostic factors. The lesion usually begins as a hyper-reactive inflammatory process which can be initiated by immunodeficiency; an oncogenic virus such as EBV, Human Herpes Virus 8, kaposi's associated HSV or Hep C; or an oncogenic bacteria (H. Pylori in MALT, Borrelia burgdorferi in cutaneous BCL). This cancer is seen in 0.03 per 100,000 cases in the US, and has a 5year survival >90%, except if it is a diffuse BCL (20-25%). There is no racial predisposition,, but it is predominantly diagnosed in

elderly women. First line treatment involves the use of antibiotics, excision and radiation. Aggressive therapy is reserved for diffuse large B-cell and/or extra cutaneous spread.

Clinical Pearls:

As in all of medicine, skin lesions are not always what they appear to be.

Take a careful history, and pay close attention if patients have been seen by multiple physicians, are compliant with their therapies, and are not getting well.

In all public hospital systems, resources are often inadequate to the needs of many of our patients. We must be advocates for our patients, accelerating consultations and clinic appointments, and sometimes even admitting them in order to insure that a diagnosis is made and appropriate treatment can be rendered.

P104

Case Presentation

RECOGNIZING THE CAUSES OF MEDICAL ERRORS IN A CASE OF HYPERTENSIVE EMERGENCY.

R Klammer (1), H Murphy-Lavoie (1), PM DeBlieux (1), L Moreno-Walton (2)

1. Emergency Medicine, Louisiana State University Health Sciences Center, New Orleans, United States
2. Emergency Medicine & Research Genetics, Louisiana State University Health Sciences Center, New Orleans, United States

Corresponding author: Mme Moreno-walton Lisa (DoctorMoreno@gmail.com)

Key-words: Medical errors ; Hypertension ; Altered Mental Status

Introduction: Hypertensive emergency is a condition in which severely high blood pressure may lead to irreversible end-organ damage. The success of treatment depends upon lowering blood pressure substantially, but not abruptly. Medication errors are the result of communication, cognition, and systems management issues.

Case Presentation: A 52 year old male was referred to the ED from clinic for evaluation of "hypertensive urgency," with a clinic BP reading of 240/160 and a chief complaint of headache. Medications: Amlodipine, Furosemide, Coreg (non-compliant for 6 days), and Lisinopril (compliant). On arrival to ED, BP was 216/156 and 219/153 bilaterally, with MAP of 176 @ 15:27 hours. Physical exam was WNL. UA was significant for protein=100, large occult blood and RBC > 100. ECG showed no changes from previous. Home medications were restarted. One dose of Hydralazine 10 mg IV and two doses of 20 mg IV were administered, with a decrease of MAP from 176 to 148. Hydralazine was given per Medication Administration Record (MAR), "given-per-protocol," with no physician orders. At 18:43 hours, patient reported tightness in his chest and lightheadedness. A repeat ECG found ST depression and T-wave inversion in the inferior leads. Cardiology was consulted and ACS orders started. At 19:40 hours, he displayed mental status changes. BP was 136/78. CT of the brain found hypo-attenuation of the left caudate nucleus, suggestive of acute/sub-acute infarct. Neurology was consulted and recommended CTA of head/ neck, IV fluids, and vasopressors to maintain permissive hypertension. CTA demonstrated chronic micro-vascular changes and indeterminate age lacunar type infarcts, which Neurology read as old, concluding that mental status changes were due to cerebral hypo-perfusion secondary to rapid decrease in blood pressure. The mental status changes resolved after fluid resuscitation. After an unremarkable admission, the patient was discharged on hospital day 3.

Discussion: Issues in communication, cognition, and systems management should be recognized and corrected. In this case, errors in communication were due to 2 physicians giving verbal orders without documentation on the order sheet or discussion between themselves or the nursing staff regarding blood pressure goals. Cognitive errors are also recognized in this case: Triage Cueing and Diagnosis Momentum (patient was sent from clinic for "hypertensive urgency" and the ED focus became lowering blood pressure); Commission Bias (Emergency Physicians tend to focus on "doing" rather than "waiting"), Outcome Bias (focusing on blood pressure reduction while failing to account for the adverse effects) and Ego Bias (confidence placed in discharging the patient rather than admitting). System management issues were seen when nurses administered multiple doses of Hydralazine in response to MAR and physician verbal orders. Medication errors have serious impact on patient outcomes. To prevent them, health care professionals must recognize why these errors occur.

Conclusion: Communication was the main issue that impacted the hospital course and outcome for this patient; specifically between

interns and faculty, and between physicians and nursing staff. With no documentation of a blood pressure goal or maximum MAP reduction, issues regarding cognition, knowledge base, physician personality, and systems management must also be recognized and addressed.

P105

Case Presentation

LESIONAL HYPERPIGMENTATION IN A PATIENT WITH HANSEN'S DISEASE (HD) TREATED WITH MINOCYCLINE

P Muaigonda (1), R Breaux (2), H Ragland (1), L Moreno-Walton (3)

1. Dermatology, Tulane University School of Medicine, New Orleans, United States
2. Emergency Medicine, Louisiana State University Health Sciences Center, New Orleans, United States
3. Emergency Medicine & Research Genetics, Louisiana State University Health Sciences Center, New Orleans, United States

Corresponding author: Mme Moreno-walton Lisa (DoctorMoreno@gmail.com)

Key-words: Adverse Drug Reaction ; Leprosy ; Hyperpigmentation lesion

Introduction: HD, also known as leprosy, is an uncommon acid fast bacterial infection that can be treated with readily available drugs. The patient described below illustrates a typical case with regard to acquisition, and progression, and treatment of HD, complicated by an unusual side effect of a recognized treatment.

Case Presentation: A 63 year-old Caucasian male presented to the emergency room with erythematous, non-pruritic plaques on both legs. Physical exam found a stocking pattern of numbness that extended from his feet to his ankle, and skin condition was described as maculopapular on both arms, the right flank, trunk and both thighs. Initially diagnosed with allergic dermatitis and was referred to outpatient clinic. After a series of topical treatments that yielded no results, he was referred to the infectious disease department. Two biopsies were taken from his legs which revealed a mononuclear inflammatory infiltrate. Stains for acid-fast bacilli, periodic acid schiff stain, and gram stain were negative. A fungal culture showed no growth after thirty days, and a concentrated acid-fast bacilli culture showed no growth after sixty days. ANA panel, RPR, rheumatoid factor and sedimentation rate were WNL. (4 photographs of the skin lesions will be provided.)

His skin condition was reevaluated in July 2008 in the dermatology clinic. He presented with numerous annular erythematous plaques with a central clearing. At that time, his social history included a long career as a trapper in the south Louisiana marshland. No one else at home had a similar outbreak. Four biopsies from his abdomen were taken which revealed Lepromatous Leprosy. First line therapy with dapsone was not administered because the patient was uncomfortable with this treatment, and so minocycline and rifampicin started.

Three months later, he presented with patches of blue-black pigmentation limited to his lepromatous lesions. He reported no other associated dermatological symptoms. His only complaint with minocycline therapy was a mild gastrointestinal disturbance that began at the induction of treatment and resolved within a few weeks. Multiple lesional biopsies were taken and found to be consistent with type II minocycline-induced hyperpigmentation, showing collections of macrophages in a band-like perivascular distribution with further studies indicating iron and melanin present in the macrophages and no evidence of residual *Mycobacterium leprae* organisms.

Discussion & Conclusion: Hansen's disease is a chronic granulomatous disease with insidious onset, caused by the acid-fast bacillus *Mycobacterium leprae*. It is an obligate intracellular

parasite that has a slow generation time that has no known artificial growth medium. The bacterium grows well in live animals, particularly armadillos due to their low core body temperature. The host's immune system, specifically the cell-mediated response, is a fundamental element in determining the severity of HD and its prognosis.

Standard therapy regimens depend upon presentation, paucibacillary or multibacillary leprosy, and include combination regimens of dapsone, rifampin, or clofazimine. Minocycline is an accepted alternative treatment for patients unable to tolerate dapsone. Treatment with minocycline seems to have adequately treated our patient's infection, based on his clinical condition and histologic findings. He exhibited pigmentation of his skin lesions as a side effect of minocycline therapy. The lesions clinically demonstrated a Type I reaction: blue-black pigment limited to sites of inflammation. However, his histochemical studies revealed a Type II morphology with both iron and melanin deposits present in the pigmented areas. Our patient elected to continue with minocycline therapy in spite of the hyperpigmentation and reported no short- or long-term adverse effects related to the hyperpigmentation.

P106

Case Presentation

APPENDICITIS OF THE THIGH?? AN UNUSUAL DIAGNOSIS MADE BY ULTRASOUND

R Breaux (1), C Butts (1), M Landry (1), L Moreno-Walton (2)

1. Emergency Medicine, Louisiana State University Health Sciences Center, New Orleans, United States

2. Emergency Medicine & Research Genetics, Louisiana State University Health Sciences Center, New Orleans, United States

Corresponding author: Mme Moreno-walton Lisa (DoctorMoreno@gmail.com)

Key-words: Ultrasound ; extremity pain ; appendicitis- unusual presentation

Case Presentation:

A 59 year-old female presented to the emergency department complaining of right thigh pain that began the morning of presentation. She reported the pain woke her from sleep, was sharp in nature and prevented her from ambulating. She denied any recent trauma. She denied fevers, chills, nausea, vomiting, redness or warmth to the extremity and had no other complaints at the time of presentation. On examination, her vital signs were BP 125/91, P 125, RR 18, T 99.5. Her chest exam was within normal limits, and her abdomen was non-distended, soft, and non-tender with normo-active bowel sounds. Extremity exam was normal for upper extremities and left lower extremity. The right leg had no deformity and no crepitus, but was tender to palpation at the mid-posterior thigh. The patient had severe pain with movement at hip and knee. Pulses were 2+ and equal, and there were no positive skin findings. On neurological exam, her strength was 5/5 throughout, sensation intact to light touch, gait not tested. Labs were significant. CBC demonstrated a white blood cell count of 20,700 with bandemia 14%. Lactate was 1.8, and on the CMP: potassium 3.1, Chloride 93, Albumin 2.6. CPK was 69; D-dimer 764. Chest x-ray showed flattened diaphragms consistent with COPD, otherwise normal. EKG showed sinus tachycardia. A bedside ultrasound of the painful and tender thigh was performed by the ED physicians, which demonstrated free air in the subcutaneous tissue. (US images will be shown.) This prompted us to obtain a CT of the abdomen, pelvis and thigh, which demonstrated a ruptured retrocecal appendix which had progressed to an abscess tracking down into the thigh.

Discussion:

Typically, appendicitis presents as umbilical pain, which migrates to the right lower quadrant, and is accompanied by fever, nausea, vomiting, and anorexia. Up to a third of cases present atypically, usually due to anatomical variation in the location of the appendix. Retrocecal appendicitis is more likely to progress to rupture, leading to complications such as retroperitoneal abscess, which may progress to involve the perinephric space, psoas, and thigh muscles. A patient with retrocecal appendicitis may present with flank or groin pain. Less than half of these patients will present with abdominal pain or symptoms classically associated with acute appendicitis. To diagnose these patients quickly and accurately, there must be a high degree of suspicion in the face of signs of sepsis and flank, groin, or extremity pain.

Clinical Pearls:

Ultrasound is rapid, inexpensive, non-invasive, not painful to the patient, and is a clinical competency possessed by all residency trained emergency physicians and a tool immediately available in every academic Emergency Department.

In patients who present with pain, reach for the ultrasound machine. You will almost always get additional information that will guide your diagnostic decision making. You may not need to order any other tests after you do an ultrasound! And if you order other imaging, your clinical question will be clear and focussed.

Beware- appendicitis often presents in an atypical fashion.

P107

Case Presentation

DRES SYNDROME PRESENTING AS A CHIEF COMPLAINT OF WEAK AND DIZZY

C Doan (1), E McVey (2), H Murphy-Lavoie (2), L Moreno-Walton (3)

1. Emergency & Internal Medicine, Louisiana State University Health Sciences Center, New Orleans, United States

2. Emergency Medicine, Louisiana State University Health Sciences Center, New Orleans, United States

3. Emergency Medicine & Research Genetics, Louisiana State University Health Sciences Center, New Orleans, United States

Corresponding author: Mme Moreno-walton Lisa (DoctorMoreno@gmail.com)

Key-words: DRES syndrome ; complications of chemotherapy ; dermatological manifestations of disease

CC:

"Our sister is confused today, and has been weak and dizzy for a week."

HPI:

58 yo woman; s/p craniotomy and L occipital lobe resection 14 months ago for stage IV glioblastoma multiforme with subjective fevers at home. Denies headache. Currently on Temozolomide(dose unknown), Keflex 500mg po q 12 hours; Dexamethasone 4 mg 1 tablet po q6 hours; Dilantin 100 mg 1 tab po q 8 hour; Lortab 5/500 mg 1 tab po q 6-8 hours as needed for pain; Nexium 20 mg 1 tab po daily for 21 days; Zofran 4 mg 1 tab po q4 hours as needed for nausea and vomiting. There are no known drug allergies.

PE:

Vital Signs: Blood Pressure - 116/79 Heart Rate - 117 Respiratory Rate - 21 Temperature - 102 F Pulse Ox - 100% on room air.

General: Well developed, well-nourished female who is slow to respond to verbal stimulation; noted to stutter and repeat herself. She does not seem to understand her medical history nor can she answer questions in detail regarding her current condition. When questioned about the rash depicted in the images, she admits it is new, but does not seem concerned.

HEENT: Chelosis and stomatitis

Neck: No cervical lymphadenopathy.

Cardiovascular: Tachycardic with regular rhythm. No murmurs, rubs or gallops.

Pulmonary: Lungs clear to auscultation bilaterally.

Abdomen: Soft, non-tender, non-distended, normo-active bowel sounds.

Genitourinary: Labia majora show desquamating rash.

Rectal: Perianal involvement of rash, showing evidence of fissuring.

Extremities: Rash with palmar and plantar involvement.

Pertinent Labs: WBC:16.3 Hgb:11.8 HCT:33.2 Plt:251 PT: 27.6 PTT: 36.7 INR: 2.3 AST:190 ALT:276 AlkP:455 Tbili:12 Ca:7.4 Mg: PO4: Alb:2.3 NH3: 58 AbsBand: 1.96 AbsMono:1.96 AbsEos:4.4

Question:

1. Describe the rash in the picture.

2. Suggest a differential diagnosis for the rash.

Answer(s):

1. This is a diffuse desquamating red rash with mucous membrane, palmar and plantar, and perineal involvement. The right areola is nearly completely desquamated. There is apparent cheilosis and stomatitis. In this case, the skin was also warm to the touch.

2. The differential diagnosis includes:

- Toxic epidermal necrolysis

- DRESS syndrome (Drug Rash with Eosinophilia and Systemic Symptoms)

- Staphylococcal scalded skin syndrome

- Stevens-Johnson syndrome

Discussion

DRESS syndrome is characterized by the presence of at least three of the following findings: fever, exanthema, eosinophilia, atypical circulating lymphocytes, lymphadenopathy, and visceral involvement (hepatitis, pneumonitis, nephritis, myocarditis). Acutely it should be distinguished from other exanthema based upon its internal organ, most commonly hepatic, involvement. This rare idiosyncratic reaction occurs between 2–86 days (mean 35 days) after starting aromatic anticonvulsants such as phenytoin, phenobarbital, and carbamazepines.

Treatment involves stopping the offending drug immediately. Administration of systemic corticosteroids rapidly improves symptoms and laboratory measurements, but its impact on the long term disease course is not known. Patients with DRESS syndrome will need to be admitted to the intensive care unit for supportive care. These patients are often treated similarly to burn patients due to the desquamation of skin thus all efforts must be made to minimize secondary infections. DRESS is a potentially life-threatening reaction with the mortality rate estimated at near 10%. In other cases, recovery is usually total but rash and hepatitis can persist for weeks to months even with proper diagnosis and treatment.

Take Home Points

- While it is important to listen to the patient, the important symptom is sometimes not the symptom the patient or her family is concerned about.

- Sometimes, the questions that make for a good history are generated by doing a good physical exam.

- Patients on chemotherapy often present with complicated symptom complexes that turn out to represent an unusual diagnosis. Recognize the signs of a sick patient, and consult (in this case, dermatology and ICU) early. You do not have to have a definitive diagnosis to admit the patient.

P108

Case Presentation

A PEDIATRIC CASE OF MYOCARDITIS PRESENTING AS AN UPPER RESPIRATORY INFECTION

L Moreno-Walton (1), LE Mutter (2)

1. Emergency Medicine & Research Genetics, Louisiana State University Health Sciences Center, New Orleans, United States

2. Emergency Medicine, Chabert Medical Center, Houma, United States

Corresponding author: Mme Moreno-walton Lisa (DoctorMoreno@gmail.com)

Key-words: Pediatrics ; Myocarditis ; Ultrasound

CC:

"The urgent care center sent us here after my boy's chest x-ray showed a big heart."

HPI:

A 12 yo male presented to the pediatric ED with a one week history of rhinorrhea and cough. Aunt noted tachypnea at rest, and he admitted to 2 days of intermittent shortness of breath. The child also complained of mild diffuse abdominal pain, nausea, loose stools, and decreased appetite. He denied any earache, sore throat, fever, headache, or chest pain.

PE:

Vitals signs were significant for a pulse of 111 and a respiratory rate of 28.

Neck: JVD was present.

Heart: tachycardia, and muffled heart tones. II/VI holosystolic murmur at the apex. No friction rub.

Lungs: clear to auscultation bilaterally. He was tachypneic.

Abdomen: soft, non-tender, and non-distended.

Labs:

Day #1:

CBC, differential and BMP were normal. LFTs were remarkable for an elevated AST of 42.

Troponin was high at 0.31 ng/ml. CPK and CK-MB were normal.

Day #2-5:

ESR -9, CRP -1.4. TSH - 2.358, FT4 - 1.23. Blood bacterial and fungal cultures no growth x 3 days. Sputum culture: few colonies of MSSA. ASO titer negative. HIV 1 & 2 antibody negative. Parvovirus B19 PCR and mycoplasma screen negative. Pericardial fluid- serosanguinous. WBC 25., RBC 2,920, Seg 1, Lymph - 21, Mono/Macrophages 78. Glucose 111, LDH 307, protein 4.9. Serum protein 8.1.

Imaging:

Chest x-ray showed cardiomegaly and will be shown.

EKG was obtained and will be shown.

A bedside US was done and will be shown.

Pulse doppler of mitral inflow showed decreased filling of left ventricular flow during inspiration. This essentially implied pulsus paradoxus.

Question:

1. What EKG finding is most suggestive of the pericardial effusion seen on bedside ultrasound?

2. What finding on the bedside ultrasound shown most strongly suggests early tamponade physiology?

Answer(s):

1. Reduced QRS complex voltage is often seen in patients with pericardial effusion or cardiomyopathy. Although not present here, ST segment and T wave abnormalities, in addition to arrhythmias, are common.

2. Diastolic collapse of right ventricle and right atrium.

Discussion:

Viruses are the most common cause of myocarditis, including coxsackievirus, adenovirus, parvovirus B19, influenza, and HHV6.

There is direct invasion of virus with subsequent destruction of cardiac tissue by host cellular immune components.

Neonates with myocarditis present with fever, poor feeding, diaphoresis, and apnea. Older children complain of shortness of breath, nausea, or decreased appetite. Fever, sinus tachycardia, and arrhythmias are common. Chest x-ray shows cardiomegaly. Echocardiogram shows poor ventricular function, pericardial effusion, and mitral regurgitation. Troponin and AST are characteristically elevated. Myocardial biopsy can confirm myocarditis. PCR on myocardial tissue identifies specific viral RNA or DNA. Pericardiocentesis can be diagnostic and therapeutic in patients with pericardial effusion and tamponade.

Treatment is supportive with use of dopamine, epinephrine, and milrinone. Some studies show a survival benefit in children treated with intravenous immune globulin. Extracorporeal membrane oxygenation and left ventricular assist devices are used as a bridge to transplantation.

Take Home Points

- Have a high index of suspicion for myocarditis in neonates with feed intolerance and older children with shortness of breath, nausea, or decreased appetite.
- Initial ED work-up should include CXR, EKG, cardiac markers, LFTs, and a bedside ultrasound.
- Obtain expert consultation from a pediatric cardiologist once the diagnosis of myocarditis with associated cardiomyopathy is made. These children need medical optimization, a complete infectious workup, and often require ongoing hemodynamic support.

P109

Case Presentation

A CASE OF INTUSSUSCEPTION IN AN INFANT PRESENTING WITH VOMITING

L Moreno-Walton (1), LE Mutter (2)

1. Emergency Medicine & Research Genetics, Louisiana State University Health Sciences Center, New Orleans, United States
2. Emergency Medicine, Chabert Medical Center, Houma, United States

Corresponding author: Mme Moreno-walton Lisa (DoctorMoreno@gmail.com)

Key-words: Pediatrics ; Intussusception ; Ultrasound

CC:

"My infant has had multiple episodes of vomiting beginning 5 hours ago."

HPI:

13 month male with projectile, non-bilious, non-bloody emesis, straining with each episode, followed by pallor and listlessness before the cycle repeated itself. Mother noted that he would flex his knees while crying. PMH: Was started on Omnicef 3 days ago for otitis media. Parents noted red stools soon after Omnicef was started.

PE:

Vitals signs were significant for tachycardia and hypertension. No fever.

Exam was notable for sunken eyes, marked pallor, and capillary refill > 2 seconds.

No signs or symptoms of URI.

Abdomen was slightly distended, but no mass was palpable.

Rectal exam was positive for gross blood which was confirmed by heme-occult.

Labs:

WBC of 24.8.

BUN of 27 and creatinine of 0.38 after volume resuscitation with 20 ml/kg of normal saline.

Imaging:

Flat and upright of the abdomen at transferring facility showed a normal bowel gas pattern. Ultrasound image with target sign will be shown. Post reduction CT scan will be shown.

Question:

1. What is the name of the ultrasound finding depicted in our patient's bedside study?
2. What is the treatment modality of choice for our patient's condition assuming the absence of free air on plain film or peritonitis on exam? This treatment can also be diagnostic. The second image shows our patient's post-reduction study.

Answer(s):

1. Target sign

2. Air contrast enema

Discussion

The diagnosis of intussusception requires a high index of suspicion. Patients typically present in infancy with intermittent episodes of severe colicky abdominal pain. They may appear playful between episodes, but gradually become anorectic and lethargic if not treated. Vomiting can occur, and becomes bile stained as the condition progresses. Approximately 60% of children will pass "currant jelly stool" containing blood and mucus.

Infants who present with suspected intussusception should receive 20 ml/kg of normal saline. A CBC, BMP, and cross match should be ordered. Imaging studies may include abdominal x-ray and a bedside ultrasound or barium enema. Plain radiographs may show a normal bowel gas pattern or signs of intestinal obstruction. Screening ultrasound has a sensitivity of 98-100%, increasing the yield of diagnostic/therapeutic enemas. Air insufflation enema is successful at reducing intussusception in 70-90% of cases.

Take Home Points

• Bedside ultrasound is highly sensitive for the diagnosis of intussusception and can reduce unnecessary radiation exposure in children with negative ultrasound exams. The classical finding is a target sign, in which loops of ileum are seen within loops of bowel on transverse view.

• Air contrast enema has a 70-90% success rate if done within the first 48 hours, and an approximate 50% success rate if done after 48 hours.

P110

Case Presentation

ACUTE PANCREATITIS E STAGE, POST-PREGNANCY (ABOUT TWO CASES)

H EZZOUINE, A BENSLAMA, B CHARRA, S MOTAOUAKKIL

Medical intensive care unit, university teaching hospital Ibn Rushd, CASABLANCA, Morocco

Corresponding author: Mme Ezzouine Hanane (ezzouinehanane@yahoo.fr)

Key-words: acute pancreatitis ; post-pregnancy ; favourable evolution

INTRODUCTION:

Puerperal acute pancreatitis is a rare disease . diagnosis can be masked by non specific gastrointestinal symptoms. The therapeutic management should be systematic and multidisciplinary. We report the cases of two parturients who experienced acute pancreatitis point E in post-pregnancy and had a favourable outcome.

CASES REPORTS:

CASE 1: A 34 year old woman in labor, the third act and the third lens and had cholecystectomy four years ago and who gave birth three months earlier, was admitted to the ICU for hemodynamic instability and obtundation. delivery is being held vaginally without complications. Physical examination on admission found no temperature, patient unconsciousness , the Glasgow Scale is 14/15

without deficit. She is hemodynamically unstable and has dyspnea. The abdomen is soft and sensitive defenseless. The lipasemia is 176 IU / L. Pass liver or kidney dysfunction. Procalcitonin is negative. Chest radiography and ultrasound abdomen and pelvis are normal. Abdominopelvic CT finds acute pancreatitis E stage. The therapeutic management has been a fluid therapy, non invasive ventilation, a resting the digestive tract; inhibitors of proton pump and analgesia. The outcome was favourable

CASE 2: A patient aged 25, joined unipare gesture without medical history, which submitted two months after delivery of epigastric pain intensity increasing. The patient was also conscious, hemodynamically stable ,no dyspnea. Abdomen ultrasound revealed a slight dilatation of the bile ducts without calculation . lipasemia is 286 IU / l and the abdominal CT scan revealed a stage E pancreatitis Balthazar. The evolution was favourable after laying to rest the digestive tract and analgesic treatment. lipasemia control at day 4 of symptoms was 175 IU / l.

CONCLUSION: Acute pancreatitis post-pregnancy is rare. prognosis depends on early diagnosis and an appropriate treatment and monitoring in intensive care unit.

P111

Case Presentation

ACUTE PANCREATITIS COMPLICATED ON SEPTIC SHOCK : A RARE REVELATION OF SYSTEMIC LUPUS ERYTHEMATOSUS

H EZZOUINE, A BENSLAMA, B CHARRA, S MOTAOUAKKIL

Medical intensive care unit, university teaching hospital Ibn Rushd, CASABLANCA, Morocco

Corresponding author: Mme Ezzouine Hanane (ezzouinehanane@yahoo.fr)

Key-words: acute pancreatitis ; systemic lupus erythematosus ; septic shock

Introduction:

Systemic lupus erythematosus is an autoimmune disease with a great clinical polymorphism. Acute pancreatitis is rare and an expression may be revealed at a severe stage including a state of septic shock. We report the case of a 47 years old patient with newly diagnosed lupus erythematosus and fortuitous, admitted in intensive care in a state of septic shock and acute pancreatitis revealing a stage E of Balthazar.

case report:

A 47-year-old patient was admitted to the internal medicine department for a balance of inflammatory arthralgia, asthenia with the notion of photosensitivity and malar erythema. The diagnosis of SLE was selected on the criteria of malar rash, photosensitivity, nose sores and a non-deforming polyarthritis, lymphopenia 560/mm³, proteinuria at 1.11 g/24 hours, anti-DNA antibodies and positive antinuclear 1280 speckled type .biological assessment also found a normochromic normocytic without other fluid and electrolyte disturbances or renal or liver function. No treatment of SLE was not yet established.

The evolution was marked by sudden onset of diffuse abdominal pain and vomiting of food moving with fever aggravated by hemodynamic instability what motivated her ICU admission. The examination revealed a conscious patient in Glasgow 15, polypnéique at 30 cycles / minute, hemodynamically unstable blood pressure is 70/35 mmHg and heart rate is 118 beats / minute. She has fever to 39 °C.

The therapeutic management was initial fluid resuscitation. Monitoring of fluid resuscitation was done through an invasive blood pressure and echocardiography and antibiotic therapy is initiated in probabilistic wide emergency based piperacillin-tazobactam with introduction of vasoactive drugs (noradrenalin).

Laboratory tests found the blood count a normocytic normochromic anemia, platelets 104 000/mm³. Polynucléaires to 2170/mm³ neutrophils and lymphocytes to 460/mm³. l blood urea to 14.5 mmol / l and creatinin to 203 micromol / l. The Procalcitonin was 1.86 ng / l and lipase to 2460 IU / l. The bacteriological evaluation (blood cultures, urine culture study) has no anomalies. The chest radiograph is normal. CT scan found a swollen pancreas, heterogeneous. The contours are irregular with loss of lobulation surrounded by fluid flows and peri-pancreatic and retro-infiltrated appearance of the fat and peritoneal effusion in diffuse medium abundance.

The evolution was marked by an essentially clinical worsening hemodynamics with refractory septic shock despite institution of corticosteroid later. The patient dies in an array of multiple organ failure.

Discussion:

Systemic lupus erythematosus is an autoimmune disease which may be systemic involvement of multiple organs. Acute pancreatitis is a rare form of expression of the disease. Its pathogenesis is multifactorial and its evolution is described rarely fatal. However, decompensation of pancreatitis and a delayed diagnosis are significant prognostic factors. In our patient, the clinical picture of ICU admission in septic shock

in acute pancreatitis is an unusual early complication of SLE. Several factors interfere with ischemic phenomena induced by lupus vasculitis and thrombotic microangiopathy .

Conclusion:

Acute pancreatitis is a serious complication of lupus. Early diagnosis and treatment in intensive care setting could through hemodynamic monitoring improve prognosis.

P112

Case Presentation

RUPTURE OF OVARIAN CYST AND ANTICOAGULANT TREATMENT

C. BOERIU, B. DOROFTEA, D. IOVANICI, P. POPESCU

Emergency department, Mures County Emergency Hospital, TARGU MURES, Romania

Corresponding author: Mme Iovanici Dina (dinaiovanici@yahoo.com)

Key-words: RUPTURE OF OVARIAN CYST ; ANTICOAGULANT TREATMENT ; ANEMIC SYNDROM

Sintrom, acenocoumarol ,belongs to the group of medications called anticoagulants. It is used to treat and prevent blood clot formation in the veins (it does not dissolve blood clots). It is used to treat atrial fibrillation that is associated with blood clots, transient ischemic attacks (mini-strokes) and deep venous thrombosis. Using this medication implies monthly INR determination with the readjustment of doses, in order to avoid ineffective anticoagulation or overdosing, which could lead to fatal hemorrhaging. An ovarian cyst is a fluid-filled sac in an ovary. They can develop from the neonatal period to post-menopause. Most ovarian cysts occur during hormonally active periods of development and they could spontaneously reabsorb or resolve with minimal treatment. Worldwide, about 7% of women have an ovarian cyst at some point in their lives. Approximately 3% of ovarian cysts are complicated by rupture and hemorrhage. This presentation is about a 52 year old patient with a medical history of Arterial Hypertension, Ischemic cardiomyopathy, Left ventricular dysfunction NYHA II, aortocoronary bypass, Right Carotid artery stenosis, left carotid artery plasty, Internal Jugular Vein Thrombosis, type II Diabetes Mellitus, Diabetic nephropathy, Anemic syndrome (Hemoglobin=9,4 g/dL ; hematocrit=29,9 % ; white blood cells =3,4x10⁹/L). Her usual medication included

Lantus, Carvedilol, Prestarium, Asperter, Sintrom, Detralex, Omeprazol. The patient was admitted to the Emergency department for abdominal pain which appeared a few days before and 3 episodes of faintness on the day of admission. The particularity of this case is the treatment with Sintrom (acenocoumarol) associated with the pre-existing anemic syndrome and the rupture of the ovarian cyst with haemoperitoneum.

P113

Case Presentation

AN ATYPICAL PRESENTATION OF AORTIC DISSECTION

ML Moors, K Rappard

Emergency department, Radboud Hospital, Nijmegen, Netherlands

Corresponding author: Melle Rappard Karin (karinrappard@hotmail.com)

Key-words: aortic dissection ; signs and symptoms ; diagnostic tests

Introduction

Acute aortic dissection exhibits a great variety in clinical presentation. Therefore it is a diagnosis that is easily missed, with lethal consequences.

Case description

A 57-year-old Turkish woman was brought to the emergency department (ED) with acute onset of dizziness, vomiting, a headache and reduced responsiveness. There were no other complaints. Her previous medical history was unremarkable. She did not use any medication, nor did she smoke.

Physical examination revealed a patient with a changing consciousness, no signs of tachydyspnoe and an oxygen saturation of 95% with four liters of oxygen. Blood pressure was 60/40 mmHg, bilaterally with a regular pulse of 50 beats per minute. There were normal bilateral pulsations of the arteria femoralis and warm peripheral extremities. Neurological examination revealed no abnormalities. Temperature was 35.1°Celsius. Examination of heart and lungs were normal.

The differential diagnosis included subarachnoid hemorrhage, acute coronary syndrome, sepsis, hypovolemia due to gastroenteritis, intoxication, pulmonary embolism, aortic dissection and sinus thrombosis. These diagnoses were ruled out by combining the findings on physical examinations with the results of the diagnostic tests (ECG, chest x-ray, laboratory results, lumbar puncture, brain computed tomography (CT)) which showed no abnormalities.

Treatment was started with a normal Saline fluid bolus and voluvyte which did not affected the blood pressure and urine production. A new ECG revealed downslope ST depression in the infero-lateral leads, with normal troponines and no chest pain. The patient became more agitated, dyspnoeic and saturation dropped despite 15 liters of oxygen given by a non rebreathing mask. The chest X-ray was repeated and showed massive pulmonary edema. A rapid sequence intubation followed and inotropic therapy was started. A contrast-enhanced CT scan of the chest and abdomen was performed. This showed a dissection of the ascending aorta and beyond (type A).

Unfortunately the patient could not be operated due to her bad clinical condition and died a few hours later.

Discussion

A typical presentation of a patient with type A dissection is a patient with a prior history of hypertension (70%)^{1,4} and complaints of midsternal chest pain (90%).^{2,3,5} Approximately 10% of patients do not complain of pain, and this usually occurs in those with syncope, neurologic symptoms, or heart failure.^{1,3,4,5} Physical findings of aortic dissection vary widely. Type A dissection presents more often with a normal tension or hypotension, in

contrast of type B which most often presents with a hypertension.^{1,5} Other physical findings such as pulse deficit, aortic insufficiency and neurologic manifestations are present in less than 40% of patients.^{1,4,5}

The standard initial diagnostic studies, including chest x-ray and ECG, are not diagnostic. In 62.6% of type A dissection there is a widened mediastinum seen on chest X-ray⁴ however in 12-15% the chest X-ray is normal.^{1,3,5} The ECG is normal in 30% of patients.^{1,3,4} Non-specific changes that can be seen are ST-segment or T wave changes (42%) and left ventricular hypertrophy (25%).^{1,3,4}

The diagnostic tests with a high sensitivity and specificity are contrast enhanced tomography (CT), magnetic resonance imaging (MRI) and transesophageal echocardiography (TEE).^{1,2,5}

Due to nonspecific clinical presentation, aortic dissection has been described to be missed during initial evaluation in 38% of patients. By 28% of them the diagnosis was established by postmortem examination.³

Conclusion

Always keep in mind the possibility of an acute aortic dissection, especially when there is no good other explanation for symptoms like chest pain, syncope, hypotension or neurological abnormalities.

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P114

Case Presentation

CENTRAL RETINA EMBOLISM

MD Ferre Calabuig

Emergency, Hospital de Manises, Valencia, Spain

Corresponding author: Mme Ferre Calabuig Maria Dolores (mdferre@gmail.com)

Key-words: CENTRAL RETINA EMBOLISM ; afferent pupilar defect ; stenosis in carotid artery

A man of 67 year old was admitted to the hospital because vision lost in right eye with pain in back eye. In physical examination the patient has afferent pupilar defect in right eye (right mydriasis) direct photomotor reflected with agreed reflected .In back eye we see a retinal center artery superior temporal branch with calcific embolism and blood current fragmentation without cherry red image . In eco Doppler 30 % stenosis in right carotid artery. The most important is to begin with early treatment before 90 minutes.This treatment consist in eye massage, pentoxiphiline, acetoxamida, and low mass heparine.

If you have a lost vision with mydriasis without pain you should suspect central retina embolism because carotid artery stenosis or cardiac valve stenosis

P115

Case Presentation

A RARE CAUSE OF ACUTE ABDOMEN : SPLENIC INFARCTION DUE TO ATRIAL FIBRILLATION AND CARDIAC THROMBOEMBOLISM

H Kaya, MT Gokdemir O Sogut, L Albayrak, F Gungormez
Emergency Department, Harran University Hospital, Sanliurfa, Turkey

Corresponding author: Mr Kaya Halil (drhalilkaya@gmail.com)

Key-words: atrial fibrillation ; splenic infarct ; thromboembolism

INTRODUCTION

Splenic infarction is common manifestation of cardiac thromboembolism and also one of a rare cause of acute abdomen. The most common onset symptom is left-upper quadrant abdominal pain. Clinicians should readily recognize the clinical manifestations of splenic infarctions in patients with atrial fibrillation. Abdominal computerized tomography can confirm the diagnosis.

CASE REPORT

A 73 years old women was admitted to our emergency department (ED) with upper left quadrant abdominal pain and heart palpitation for six hours. Laboratory findings showed elevated white blood cell and platelet counts, increased C-reactive protein and lactate dehydrogenase. Other blood tests were normal. Both ultrasonographic and tomographic scans showed a large hypodense area of the spleen. The patients electrocardiography (ECG) showed atrial fibrillation. Patient was hospitalized and received intravenous antibiotic therapy, hydration, analgesics, and anticoagulation which led to significant clinical improvement with discharge 10 days after admission. In present case the management was conservative, because of the patient was hemodynamically stable and antibiotic therapy could control the sepsis. Moreover, advanced age and poor cardiac and respiratory conditions contraindicated surgery. After ten days hospitalized patient were discharged from surgical department with full recovery.

DISCUSSION

Atrial fibrillation is the most common sustained arrhythmia encountered in clinical practice and a recognized risk factor for the development of peripheral embolism. The diagnosis of splenic infarction is based both on clinical presentation and imaging studies. Angio-computed tomography is the diagnostic procedure of choice. Ultrasonography and conventional radiology are useful in the differential diagnosis with other abdominal and thoracic diseases. Contrast CT scan is currently the best noninvasive test available to diagnose splenic infarctions. It has the advantages of showing the infarction in the spleen and other target organs and the extent of the thrombosis and can also reveal the source of the infarction. Computed tomography is an important diagnostic tool and should be considered in every patient with unexplained abdominal pain, especially left upper quadrant pain.

CONCLUSION

In present case splenic infarction was probably due to a thromboembolic event secondary to atrial fibrillation. In accordance with the literature, we suggest initial conservative therapy. The management was conservative, because the patient was hemodynamically stable and antibiotic therapy could control the sepsis. Surgery is indicated only in the presence of complications. Clinicians should readily recognize the clinical manifestations of splenic and renal infarctions in patients with atrial fibrillation. Abdominal computerized tomography can confirm the diagnosis.

P116

Case Presentation

FATAL PULMONARY FAT EMBOLISM AFTER FEMUR FRACTURE TREATED BY LOCAL BONESETTERS

H Kaya, MT Gokdemir, O Sogut, L Albayrak, F Gungormez
Emergency Department, Harran University, Sanliurfa, Turkey

Corresponding author: Mr Kaya Halil (drhalilkaya@gmail.com)

Key-words: fat embolism ; femur fracture ; local bonesetters

Fat embolism refers to the presence of fat droplets within the peripheral and lung microcirculation with or without clinical sequelae. A 32 years old women was admitted to emergency department (ED) with dyspnea, tachypnea and loss of consciousness. Patients history revealed that two weeks ago her left femur shaft was broken and treated with local bonesetters. The patients who treated by bonesetters have highly increased risk of developing fat embolisms. Clinical image of fat embolism syndrome results from lung and systemic microembolism which leads to activation of inflammatory and thrombogenic cascades. As a result, FES can be considered as a variant of adult respiratory distress syndrome (ARDS), although variant, with a good support for intensive care, the prognosis is very good. The early detection and appropriate treatment are very important.

P117

Case Presentation

AN UNUSUAL CAUSE OF FACTITIOUS ARTHRITIS

A Aygün (1), OC Gonenc (1), Y Karaca (2), O Tatlı (2), S Türkmen (3)

1. Department of Emergency Medicine, Karadeniz Technical University, Faculty of Medicine, Trabzon, Turkey
2. Emergency department, Trabzon Research and Training Hospital, Trabzon, Turkey
3. Emergency department, Karadeniz Technical University, Trabzon, Turkey

Corresponding author: Mr Türkmen Süha (drsuhaturkmen@hotmail.com)

Key-words: Clinical toxicology ; Inflammation ; Natural toxins/toxinology

Septic arthritis and toxic synovitis are clinical conditions that can develop in association with various causes and involve symptoms such as pain, swelling, redness, sensitivity and restricted movement in the joint. A 42-year-old male presented to the emergency department with severe joint pain and nausea after injecting a 1 cc mixture of turpentine oil, eucalyptus oil, mint oil and thyme oil he purchased from an alternative medicine store into his right knee with a syringe because of chronic knee pain. Ballottement and sensitivity were present at physical examination. Knee puncture yielded 60 cc of cloudy fluid. There was no growth in the material obtained. Improvement was observed following subsequent arthroscopic washing of the joint space and IV antibiotherapy, and the patient was discharged on day 21 of hospitalization with oral antibiotic and analgesic therapy. Intra-articular injection of foreign bodies into the knee joint space for therapeutic purposes, as in this case report, is a very rare occurrence, but may lead to potentially complicated arthritis.

P118 Case Presentation

TRAUMA-ASSOCIATED BLEEDING FROM THE BILATERAL INTERNAL ILIAC ARTERIES RESOLVED WITH ANGIOGRAPHIC EMBOLIZATION

E Ayan (1), A Aygün (2), H Dinc (1), Y Karaca (3), S Türkmen (4)

1. Department of Radiology, Karadeniz Technical University, Faculty of Medicine, Trabzon, Turkey
2. Department of Emergency Medicine, Karadeniz Technical University, Faculty of Medicine, Trabzon, Turkey
3. Emergency department, Trabzon Research and Training Hospital, Trabzon, Turkey
4. Emergency department, Karadeniz Technical University, Trabzon, Turkey

Corresponding author: Mr Türkmen Süha (drshaturkmen@hotmail.com)

Key-words: Trauma ; hemorrhage ; embolization

Pelvic fractures are traumas with high mortality. The management of major pelvic injuries is still one of the most important problems in modern trauma care. A 39-year-old male patient was brought to the emergency department after a 500-kg load fell on him. His general condition was average and vital findings were unstable. Pelvic tomography revealed fractures in the bone structures, thickening secondary to hematoma in both iliopsoas muscles and hemorrhage-related active extravasation in the left internal iliac trace. The patient's hemodynamics worsened despite fluid and blood replacement, and angiographic embolization was performed. Bilateral embolization of the iliac artery was performed. Control angiography revealed that full embolization had been established. The patient was sent for monitoring in intensive care, but was lost on the third day of monitoring due to acute kidney failure, disseminated intravascular coagulation and multi-organ failure. Angiographic embolization is a technique that yields successful results in term of hemorrhage control in pelvic trauma, but that can also involve complications such as ischemia and necrosis.

P119 Case Presentation

NON ST ELEVATION MYOCARDIAL INFARCTION AFTER ALLERGIC REACTION;TYPE II KOUNIS SYNDROM

H arinc (1), AO baktir (2), MA cumaoglu (3), Y kilavuz (1), H saglam (1), B sarli (2)

1. cardiology department, kayseri education and research hospital, kayseri, Turkey
2. cardiology, kayseri education and research hospital, kayseri, Turkey
3. emergency department, kayseri education and research hospital, kayseri, Turkey

Corresponding author: Mr Baktir Ahmet Oguz (a.oguz.baktir@tkd.org.tr)

Key-words: kounis syndrome ; allergic angina ; ALLERGIC MYOCARDIAL INFARCTION

Present case report represents a 70 years old female with the diagnose of non ST elevation myocardial infarction(NSTEMI). NSTEMI ocurred after allergic reaction due to metimazol sodium and aggravated by ampicillin/sulbactam. This type of myocardial infaarction is called as Kounis Syndrome which includes three types. Type I variant includes patients with normal coronary arteries. Type II variant includes patients with underlying atheromatous disease and type III includes stent thrombosis as a result of hypersensitivity to drug eluting stents which was described recently. Patient treated by stenting of three stenosis on two coronary arteries and the final diagnose was type II Kounis Syndrome.

P120 Case Presentation

DRUG ADVERS EFFECT IN THE EMERGENCY DEPARTMENT; ESOPHAGITIS

B. Karakus (1), E. Cevik (2), A. Ipekci (3), M. Yigit (4)

1. Emergency department, Istanbul Bagcilar Training and Research Hospital, Istanbul, Turkey
2. Emergency department, Ankara Gulhane Military Medical Academy, Ankara, Turkey
3. Emergency department, Istanbul Okmeydani Training and Research Hospital, Istanbul, Turkey
4. Emergency department, Kirsehir Ahi Evran University Training and Research Hospital, Kirsehir, Turkey

Corresponding author: Melle Karakus Banu (banukarakus@yahoo.com)

Key-words: esophagitis ; drug advers effec ; emergency department

Introduction: Numerous drug use history is available in some patients admitted to emergency department with various symptoms and some part of complaints are related to these drugs. Especially doxycycline and derivatives may create symptom related to irritation. Our goal in presenting this case to remember esophagitis which ocurred after the use of doxycycline.

Case: 36 years old female was admitted to emegency department with pain during swallow. She hasd therapeutic curettage history 1 week ago and doxycycline was precribed. Her complaint was started after doxycycline use and she was stopped it 2 days ago. Tenderness of epigastric area on physical examination was present. Other system examinations were normal. Proton pump inhibitor treatment was started. 20 mm segment ulcer was seen in 30 cm of esophagus on endoscopy which was performed two days after emergency department admission. Patient was accepted as drug induced esophagitis according to clinical finding and history. Patient was followed clinically.

Discussion: History of drug use should be questioned in patients admitted to emergency department with complaints such as odynophagia, dysphagia, heartburn and chest pain and drug induced esophagitis should be considered. Tetracycline, dxcycline, potassium chloride, alendronate, quinidine, non-steroidal anti-inflammatory drugs are among the most frequent accused agents. A definitive diagnosis can be confirmed with esophago gastro duodenoscopy. In our case, complaints were ocurred after doxycycline use and ulcerated lesion was seen in endoscopy. Rarely, in case of deep ulcers severe complications such as mediastinit and bleeding can be seen. Simple precautions such as the use of PPI, taking drugs with plenty of waters, and getting away from factor are listed for treatment. These advers effects and precautions must beexplained to the patients who prescribed with these drugs in the emergency department and patients admitted to emergency depatments after the use of these drugs should be evaluated in terms of compications.

P121 Case Presentation

THE HYPOKALEMIA EVENT COMING WITH FAST PROGRESSING LOSS OF STRENGTH

S Karaman (1), MK. Erkuran (2), E. Kadioğlu (3), C Şen Tanrikulu (1)

1. Emergency Department, Erzurum District Training and Research Hospital, Erzurum, Turkey
2. Emergency Department, Şanlıurfa Training and Research Hospital, Şanlıurfa, Turkey
3. Emergency Department, Kütahya Evliya Çelebi Training and Research Hospital, Kütahya, Turkey

Corresponding author: Mr Karaman Serhat (drserhatkaraman@hotmail.com)

Key-words: paralysis ; hypokalemia ; potassium replacement

Hypokalemia episodically emerges with the decrease in the level of paralysis. The weakness on the lower extremity develops before the upper extremity. The most important clinical indication in the hypokalemic paralysis is weakness. Hypokalemic period paralysis is accompanied by hypokalemia and with the potassium application, the weakness improves. The serum potassium is low during the attacks. In between attacks, both the serum potassium level and the neurological examination of the patient are completely normal.

A 31 years old male patient, the weakness in both arms and legs was brought to the emergency department. He had gastroenteritis and it took two days to recover. A slow loss of strength started in both lower extremity distal and it spread to the proximal. Within days a loss of strength improved in upper extremity. The feature was seen neither at the family history nor at his self history. His general condition was good, conscious, cooperative, oriented. At the extremity examination, his right upper extremity proximal was 2/5, distal was -4/5, his left upper extremity proximal was 2/5 distal was -4/5, right lower extremity proximal was 3/5, distal was 4/5, left lower extremity proximal was 3/5 distal was 4/5. At the first glance, it was thought to be guillian-bare syndrome. On the verification which the patient left at the emergency department, potassium was evaluated 1.6. The patients loss of strength who was applied potassium replacement, was observed to decline. The patient was hospitalized considering hypokalemic periodical paralysis. His potassium level increased to 4.1 with the potassium replacement. The motor deficits completely recovered with potassium replacement. On the patient's verification for etiology, renal artery doppler examinations, abdominal ultrasound, thyroid ultrasound was normal. Neurological examination of the patient was completely recovered and he was discharged increasing his oral intake.

Gastroenteritis which the patient was exposed to, led up to secondary hypokalemic periodic paralysis. With the help of potassium replacement a dramatically increase was observed in the loss of muscle strength of the patient. At the emergency room applications with progressive loss of muscle strength, it should be remembered that hypokalemic periodic paralysis can be among those the definite diagnosis.

P122 Case Presentation

CASE SERIES ON TETRODOTOXIN POISONING AFTER CONSUMPTION OF HORSESHOE CRAB IN NORTH BORNEO

PK Cheah (1), N Chew (1), FT Hiew (1), DF Ongkili (1), V Sivanasan (2)

1. Emergency and Trauma Department, Queen Elizabeth Hospital, Kota Kinabalu, Sabah, Malaysia

2. Emergency Department, Hospital Kota Marudu, Kota Marudu, Sabah, Malaysia

Corresponding author: Mr Cheah Phee Kheng (pkheng1@yahoo.com)

Key-words: Horseshoe Crab ; Carcinoscopus rotundicauda ; Tetrodotoxin Poisoning

Horseshoe crab or "belangkas" as it is called in Malay, is a primitive marine invertebrate related to spiders and scorpions that usually inhabits shallow coastlines including estuaries and mangrove areas. Their eggs are considered an exotic delicacy in certain areas in Southeast Asia. Out of the 3 species found in Southeast Asian waters, Carcinoscopus rotundicauda is found to be toxic to humans, and is responsible for the seemingly seasonal tetrodotoxin

(TTX) poisoning caused by eating the animal's eggs. This neurotoxin causes various manifestations that can range from mild or moderate sensorimotor deficits to life-threatening cardiac and respiratory failure. To illustrate this, we report a case series on TTX poisoning after consumption of horseshoe crabs in the northern district of Kota Marudu in Sabah from June to August 2011. A 2½-year-old child and a 61-year-old man were the two fatalities reported, and a 58-year-old gentleman required ICU care. Nevertheless, most patients survived the poisoning without intensive care. In view of these differences of outcomes, we attempted to look into the environmental and geographical features that might influence the toxicity of horseshoe crabs in our locality. We also investigated how the animal was handled and prepared for consumption and correlated the findings to the outcome of our patients.

P123 Case Presentation

CARDIAC CONTUSION AFTER SEVERE TRAUMA: CASE REPORTS

dr ucar karabulut

Emergency, Baskent University Konya Hospital, konya, Turkey

Corresponding author: Mme Ucar Karabulut Keziban (dr_kezi@hotmail.com)

Key-words: Cardiac contusion ; blunt chest trauma ; monitor

Abstract

Tracking and monitoring of patients with blunt chest trauma, especially blunt trauma is very important. As well as all kinds of trauma, cardiac contusion in isolated chest trauma may develop acute coronary syndromes should be noted that with stress. In this study we followed the general body trauma and emergency intensive care unit and to discuss two cases in monitoring ST elevation.

Introduction

The number of blunt traumas is increasing in the world due to the increase in road accidents. Cardiac contusion is usually caused by blunt chest trauma and therefore, is frequently suspected in patients involved in car or motorcycle accidents. It is the leading and the most neglected cause of mortality after trauma (1).

The prevalence of cardiac contusion which occurs following blunt chest trauma due to road accident, sports injury, compression, etc., varies between 7% to 71% (2,3).

Retrospective studies have shown dissections in coronary angiograms and circulation defects in LAD on thoracic computerized tomography scans (CT) (4). Cardiac herniation with pericardial rupture is a very fatal complication, which has been reported in the literature (5).

In this paper, we have reported two cases which had no cardiac symptoms in the early period following blunt chest trauma, and which presented with signs after some hours.

Case report 1:

A 52-year-old male patient was brought to the Emergency Department after a road accident. His medical history was unremarkable, except for being a smoker for 25 years, 1 packet/day. The physical examination revealed: good general condition, conscious, blood pressure: 130/90 mmHg, heart rate: 95/minutes, ecchymosis and edema in the left palpebra, a 3 cm cut over the left eyebrow and tenderness with palpation on the whole anterior chest wall. Other systems were unremarkable. Bi-directional X-Rays of the head and the cervical vertebral column, in addition to posteroanterior chest X-Rays were performed, which revealed fractures in the left third, fourth and fifth ribs. Abdominal

ultrasound showed no pathology. ECG was unremarkable. The patient was observed with the diagnosis of general body trauma at the Emergency Department Observation Room. At the fourth hour of observation, he had a sudden decrease in blood pressure. He was transferred to the Intensive Care Unit. The blood pressure was 80/50 mmHg. Rapid saline infusion was commenced. The new ECG revealed ST elevations in D2, D3 and aVF (inferior derivations). A blood sample was obtained to study cardiac enzyme levels.

The patient's condition underwent the consultation of the Cardiology Department. Bed-side echocardiography revealed inferior wall and right ventricular dysfunction and aortic insufficiency of grade II. Coronary angiography was planned and the patient was hospitalized at the Cardiology Clinic. Coronary angiography revealed no pathology in the coronary arteries. The patient completely recovered on day three after trauma. ECG and cardiac enzymes were normal. The patient was discharged with relief from the hospital.

Case report 2:

A 48-years-old female patient presented to the ED after having suffered a fall from a grapevine tree of approximately two meters height. Her medical history revealed hypertension with irregular use of medication. The findings of physical examination at the time of admission were as follows: General condition was moderate; she was conscious, blood pressure: 180/90 mmHg, heart rate: 90/minute, a scalp laceration of approximately 10 cm on the occipital area, tenderness increasing with palpation and breathing all over the anterior chest wall. Other system findings were normal. A sternum fracture was seen on direct radiograms. Abdominal ultrasound was normal. The patient who had severe pain in the anterior chest wall underwent a thoracic CT, which revealed no pathology. ECG was normal. The patient was transferred to the Intensive Care Unit for monitoring. She was given oxygen. In the new ECG at the 70th minute, there were ST elevations in the inferior derivations (D2, D3 and aVF).

The patient's condition underwent a consultation of the Cardiology Department. Bed-side echocardiography was normal. She was administered Coraspin 100 mg, hydration and nitroglycerine. Coronary angiography was performed due to continuing chest pain. All coronary vessels were seen to be normal. Her complaints regressed during the follow-up. Her condition was considered to be related to cardiac contusion due to trauma and stress. As her general condition was good, she was discharged from the hospital 72 hours after trauma.

Discussion and Conclusion

It has been suggested that severe traumas are associated with neurohormonal, hemodynamic and clotting changes. These changes may cause cracking in weak atheromatous plaques, thrombocyte activation and vasoconstriction in coronary vessels. Cardiac contusion due to blunt chest trauma is a life-threatening complication because of the late onset of clinical findings and difficulty in diagnosis (6,7).

Many diagnostic methods such as ECG, biochemical cardiac markers, transthoracic and transoesophageal echocardiography, and radionuclide imaging studies with multi-detector CT are frequently used in the diagnosis. However, it is reported that none is adequate alone in the diagnosis and the definitive diagnosis can only be made by histological examination of the heart (8). Utilizing a non-invasive method, transthoracic echocardiography, which is moderately sensitive in the diagnosis of cardiac contusion, may detect valvular dysfunction, right and left ventricular enlargement, intracardiac thrombus, pericardial effusion and dyskinetic movements in cases of severe contusion. ECG changes in blunt chest trauma are usually considered to be related to other causes, and cases of mild cardiac contusion cannot be diagnosed. ECG changes generally occur within the first hours after trauma. It has been reported that although ECG and echocardiography findings

may be normal in the early periods, fatal cardiac arrhythmias may occur after 48 hours (9,10,11).

In our cases, although the findings of physical examination and ECG at the time of first admission were normal, changes occurred during the follow-up.

In conclusion, in spite of the normal ECG findings and stable clinical condition on admission in patients with blunt chest trauma, cardiac contusion may develop and may cause life-threatening cardiac arrhythmias; thus, such patients should be continuously monitored with ECG. Follow-up and monitoring is vital in patients with blunt traumas, especially in blunt chest traumas. Cardiac contusion may occur in isolated chest traumas; however, it should be remembered that acute coronary syndrome may develop along with stress in any kind of trauma. We believe that every patient with blunt thoracic trauma should be monitored for at least 24 hours.

P124

Case Presentation

A RARE CASE REPORT OF INTRAVENOUS INSECTICIDE: 'CYPERMETHIN'

M Ergin, MA Onal, H Nak, AS Girisgin, S Kocak, B Cander, M Gul, B Babagil

Emergency Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

Corresponding author: Mr Ergin Mehmet (drmehtemtergin@gmail.com)

Key-words: Cypermethin ; Insecticides ; Intoxication

INTRODUCTION: Cypermethrin acts as a stomach and contact insecticide. It has wide uses in cotton, cereals, vegetables and fruit, for food storage, in public health and in animal husbandry. Its structure is based on pyrethrum, a natural insecticide which is contained in chrysanthemum flowers. **CASES:** We reported 40-year old women presenting with suicide attempt by application of cypermethin 8 cc intravenously herself. She had tachycardia, tachypnea, confusion, rals in both lungs and swelling of left arm, forearm and hand. Laboratory results reported high level of kreatinin, urea, creatinine kinase, myoglobin, liver function tests, coagulation tests and procalcitonin. Patient had conservative treatment including hydration, alkalization of urine and dialysis. Patient was discharged 8 days after her admission. **DISCUSSION:** Cypermethrin is classified by the World Health Organization (WHO) as 'moderately hazardous' (Class II). It mainly interacts with the sodium channels in nerve cells through which sodium enters the cell in order to transmit a nerve signal. They occur among farmers, mostly after misuse. Recently, poisonings have as well been reported after indoor use of pyrethroids in Germany among pest controllers and private users. Symptoms of poisoning include abnormal facial sensations, dizziness, headache, nausea, anorexia and fatigue, vomiting and increased stomach secretion. Cypermethrin is also a skin and eye irritant. Normally, symptoms should disappear after some days but severely exposed patients additionally may suffer from muscular twitching, comate and convulsive attacks. In such cases, symptoms may persist for some weeks. Our report was the first exposure to intravenous cypermethin by intentional intake.

P125

Case Presentation

TURNIQUET SYNDROME: TWO CASE REPORTS

M Ergin, MR Ozer, S Kocak, AS Girisgin, B Cander, M Gul

Emergency Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

Corresponding author: Mr Ergin Mehmet (drmehtergerin@gmail.com)

Key-words: Turniquet syndrome ; Hair ; Toe

INTRODUCTION: Hair/yarn tourniquet syndrome is a rare clinical title. Other than fingers of hand and foot, genital organs are susceptible for such kind of injury. The first report in the literature was 4 week-baby who had hair entanglement around his penis at 1832. **CASES:** We had two patients who were 4 year old girl with swelling at her 4th finger of right foot and 2-month baby with swelling at 3rd and 4th finger of right foot. Both families reported their children as restless. Both children had a constrictive band at level of proximal interphalangeal joint and associated erythema and serious swelling distally. The tip of band was kept with portequ and was rotated around finger(s) and removed. Both foreign objects were hair. **DISCUSSION:** The time interval between entanglement and removal is critical. The presentation can be changed from simple edema to ulceration, necrosis and amputation of distal part of organ. Physicians should think tourniquet syndrome for restless children without any clear reason.

P126

Case Presentation

INTENTIONAL WARFARINE OVERDOSE AND HUMAN PROTHROMBIN COMPLEX CONCENTRATES: CASE REPORT

M Ergin, S Kocak, K Yavuz, MA Onal, MR Ozer, B Cander

Emergency Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

Corresponding author: Mr Ergin Mehmet (drmehtergerin@gmail.com)

Key-words: Prothrombin complex concentrates ; Warfarine ; Intentional overdose

INTRODUCTION. Warfarin toxicity is common and usually results from dose changes or drug interactions. In a report about adverse drug events treated in hospital emergency departments of USA, warfarin and insulins were associated most of adverse drug events in all age groups. There are few reported cases of intentional overdose. **CASE:** 31 year old boy with a history of ingesting 35 tablets of warfarin 5 mg 1.5 hour before his arrival. He had no specific symptoms. His vital signs were normal. Gastric lavage and then 50 mg activated charcoal PO were administered. Treatment of human prothrombin complex concentrates (PCCs) with 4-factor of 1500 IU and 10 mg Vitamin K1 were administered intravenously. Vitamin K1 10 mg/day treatment was administered intravenously between admission and 4th day. There had not been any hemorrhagic nor thrombotic complication. There was a maximal INR value of 2.63 at 3rd day and then decreased gradually to normal value at 5th day. **DISCUSSION:** Reversion of the anticoagulant effect of vitamin K antagonists (VKAs) in cases of symptomatic overdose, active bleeding episodes, or need for emergency surgery is the most important indication for PCCs and this effect of PCCs appears to be more complete and rapid than that caused by administration of fresh frozen plasma. In the literature, PCCs also were used in case of acute warfarin ingestions without any hemorrhagic nor thrombotic complication.

P127

Case Presentation

A RARE ETIOLOGY OF DYSNEA: METHEMOGLOBINEMIA

M Ergin, MR Ozer, MA Onal, O Karaoglan, S Kocak, B Cander

Emergency Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

Corresponding author: Mr Ergin Mehmet (drmehtergerin@gmail.com)

Key-words: Methemoglobinemia ; Dyspnea ; Methylene blue

BACKGROUND: Congenital methemoglobinemia is characterized by diminished enzymatic reduction of methemoglobin (metHb) back to functional hemoglobin. Affected patients appear cyanotic but are generally asymptomatic. Acquired methemoglobinemia typically results from ingestion of specific drugs or agents that cause an increase in the production of metHb. It can be a fatal disease. **CASE:** 33 year old women who had a diagnosis of methemoglobinemia presented with complaining of increment in dyspnea and hanging his color of upper and lower extremities. During first evaluation, she had blood pressure of 90/60mmHg, pulse saturation of 70% and her physical exam revealed tachypnea, cyanotic extremities and koilonychias. Arterial blood gases analysis showed a level of metHb of 16.6%. Except her high level of white blood cell count, complete blood count and biomarkers including levels of troponin I, creatinine kinase-MB and D-dimer were in normal range. Due to existence of hypoxia and high level of pulmonary artery pressure on echocardiography pulmonary angiography computed tomography demonstrating no embolus was requested in order to exclude pulmonary thromboembolism. She had treatment with methylene blue, antibiotic and oxygen support with intranasal cannula. After methylene blue treatment, her level of metHb was 8.7%, 9.4%, 9% and 10.1% on daily control. Her complaining had been decreasing during follow-up. **CONCLUSION:** Most individuals with congenital, chronically elevated metHb concentrations are asymptomatic even with metHb levels as high as 40 percent of total hemoglobin. All patients with hereditary methemoglobinemia should avoid exposure to aniline derivatives, nitrates, and other agents that may, even in normal individuals, induce methemoglobinemia. Urgent treatment with oxygen and methylene blue (1-2 mg/kg IV over 5 minutes) is indicated for patients with symptomatic hypoxia (dysrhythmias, angina, respiratory distress, seizures, or coma) and metHb levels greater than 30%.

P128

Case Presentation

A RARE CASE OF COLORECTAL INJURY WITH COMPRESSED AIR

M Ergin, MR Ozer, S Kocak, N Karakus, B Babagil, B Cander

Emergency Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

Corresponding author: Mr Ergin Mehmet (drmehtergerin@gmail.com)

Key-words: Colorectal injury ; Compressed air ; Pneumoperitoneum

INTRODUCTION: Colorectal injuries from implement on solid objects are infrequent but not rare. In the same category are injuries caused by non solid objects. Barotrauma from compressed air and liquid is less frequently encountered. **CASE:** 36 year – old

men admitted to ED due to his abdominal pain and distension after using air hose to dust off their clothing. His vital signs were in normal range and physical exam was normal except abdominal distension and signs of peritoneal inflammation. His chest and abdomen—X ray showed huge amount of pneumoperitoneum. His intraoperative findings were free intraperitoneal air without free fluid and bowel contents, dilated colonic segments, multiple serosa injuries in all segments of colon but especially sigmoid colon and cecum. There was neither perforation finding in the colon nor any other abdominal organ injury. His follow-up period was completed without any complication and he was discharged 5th day after operation. **DISCUSSION:** Case analyses of pressured-air injuries often reveal a misguided coworkers and unwise behavior. Those cases not involving misbehavior usually occurred when employees used an air hose to dust off their clothing. It is important to realize that this injury can occur without inserting air hose into anus. The rupture usually occurs in a longitudinal direction along the muscle fibers with full thickness perforation or with stripping of the serosa and muscularis. The most common injury location is the anti-mesenteric surface of the sigmoid colon. Some patients may withhold information, trying to protect the guilty party or due to embarrassment. Tension pneumoperitoneum is a characteristic presentation.

P129 Case Presentation

A RARE CAUSE OF FEVER IN THE EMERGENCY DEPARTMENT: ANHIDROTIC ECTODERMAL DYSPLASIA

O Bilir (1), G Ersunan (1), A Kalkan (1), S Yeniocak (2)

1. Emergency Medicine, Recep Tayyip Erdoğan University Medical School, Rize, Turkey
2. Emergency Medicine, Haseki Education and Research Hospital, Istanbul, Turkey

Corresponding author: Mr Asim Kalkan (drasimkalkan@hotmail.com)

Key-words: hyperthermia ; anhidrotic ectodermal dysplasia ; emergency department

Ectodermal dysplasia is a rare disease that present with: hypotrichosis, hypodontia, and typically absence of eccrine sweating. It consists of two basic forms; anhidrotic and hidrotic. In anhidrotic ectodermal dysplasia, the body's thermoregulatory mechanism is impaired due to lack of sweat glands. These patients may therefore present to the emergency department with hyperthermia. This report describes a patient with anhidrotic ectodermal dysplasia brought to the emergency department in an unconscious state and with a fever of 41°C. This rare disease should be kept in mind in patients presented to ED with an unconscious state due to hyperthermia. Typical clinical appearance is a useful clue for the diagnosis. Proper antipyretic therapy is sufficient for the treatment.

P130 Case Presentation

CARBON MONOXIDE POISONING; SAME TIME, SAME PLACE, DIFFERENT OUTCOMES

MH Abdullah (1), MY Arifin (2), PK Cheah (2), N Chew (2)

1. Hyperbaric Medicine Unit, Sepanggar Naval Base, Kota Kinabalu, Sabah, Malaysia
2. Emergency and Trauma Department, Queen Elizabeth Hospital, Kota Kinabalu, Sabah, Malaysia

Corresponding author: Mr Cheah Phee Kheng (pkheng1@yahoo.com)

Key-words: Carbon Monoxide Poisoning ; Hyperbaric Oxygen Therapy ; Status Epilepticus

There have been numerous reports documenting the differences in outcomes after carbon monoxide poisoning between men and women. There are also reports mentioning the differences in presentation and outcome of poisoning in adults and children. We report two unfortunate construction workers who had carbon monoxide poisoning while they watched television. They used a petrol generator to power their television during a power outage, and the generator was placed in the same confined room. All windows were closed due to the heavy rain and strong winds outside. Both patients were found motionless the next morning in front of the TV. The two patients, aged 16 and 22 years old presented to ED with almost similar complaints but had a very differing hospital course. The 16 year old had status epilepticus needing intubation and ICU admission while the other was well throughout his stay. Both patients underwent two courses of hyperbaric oxygen therapy using the 18-60-30 Royal Navy table. The 16 year old was placed in the multi-man hyperbaric chamber while still intubated. Both patients were discharged without any neurological deficits.

P131 Case Presentation

UNUSUAL PRESENTATION OF OCCIPITAL CONDYLE FRACTURE: CONTRALATERAL HYPOGLOSSAL NERVE PALSY

MF Inci (1), CF Demir (2), F Ozkan (1), S Bozkurt (3), M Yildiz (4)

1. Radiology, Kahramanmaraş Sutcu Imam University Faculty of Medicine, Kahramanmaraş, Turkey
2. Neurology, Firat University School of Medicine, Elazığ, Turkey
3. Emergency Medicine, Kahramanmaraş Sütçü İmam University School of Medicine, Kahramanmaraş, Turkey
4. Emergency Medicine, Firat University School of Medicine, Elazığ, Turkey

Corresponding author: Mr Ozkan Fuat (drfozkan@yahoo.com)

Key-words: hypoglossal nerve ; occipital condyle ; computed tomography

Occipital condyle fracture is an important and rarely defined condition which is associated with severe craniocerebral trauma. Occipital condyle fractures can easily be missed because the clinical manifestation is highly variable and the results of physical examination are usually nonspecific. The diagnosis of occipital condyle fractures to be based on suspicion, especially in patients with cervical pain and normal plain radiographs. The only reliable diagnostic tool is Computed Tomographic scan of the cranio-cervical junction.

In this study we report a very rare case of hypoglossal nerve palsy appeared in the opposite side of the occipital condyle fracture in the late post-traumatic period and review the literature about current diagnostic and treatment approaches for this injury.

P132 Case Presentation

INCIDENTAL ASYMPTOMATIC DANDY-WALKER SYNDROME IN AN ADULT

I ARZIMAN (1), T TÜRE (1), YE EYİ (2), M DURUSU (1), AO YILDIRIM (1)

1. EMERGENCY DEPARTMENT, GULHANE MILITARY MEDICAL ACADEMY, ANKARA, Turkey
2. EMERGENCY DEPARTMENT, HAKKARI MILITARY HOSPITAL, HAKKARI, Turkey

Corresponding author: Mr Arziman Ibrahim (ibrahimarz@hotmail.com)

Key-words: Dandy-Walker ; Hydrocephalus ; Head Trauma

INTRODUCTION

Dandy-Walker Syndrome is a rare congenital posterior fossa malformation with mental retardation, seizures, cerebellar ataxia as well as symptoms of hydrocephalus. It is usually diagnosed at birth or in early childhood. It is characterized by a hypoplasia or agenesis of the cerebellum, enlargement of fourth ventricle with a posterior fossa cyst. It is rare to be entirely asymptomatic with this abnormality since birth. We aimed to present an incidental asymptomatic Dandy-Walker Syndrome in an adult.

CASE REPORT

A 20-year-old man admitted ED with the history of syncope after head trauma. In his history, he had ten minutes syncope after a trauma to the nape of the neck by a friend, twenty minutes before admission ED. He had no medical history. His vital signs were normal. Cranium and scalp examination, neurological examination were normal. The biochemical parameters except ALT was normal. (ALT:61 U/L – normal:10-40U/L) ECG was normal. The computed brain tomography showed cystic dilatation of fourth ventricle with hypoplasia of cerebellum, and enlarged posterior fossa, with no dilatation of lateral and third ventricle. Asymptomatic Dandy-Walker Malformation was diagnosed. He was referred to neurosurgery clinic for regular follow-up and discharged.

CONCLUSION

Asymptomatic Dandy-Walker Malformation can be found incidentally with unrelated issues. This patient may retain asymptomatic throughout his life with a mechanism which let him to live his life normally till date. But a regular follow-up is needed, these cases may become symptomatic later in life.

P133

Case Presentation

A RARE CAUSE OF TONSILLOPHARYNGITIS: TULAREMIA

I ARZIMAN (1), T TÜRE (1), M DURUSU (1), D ARSLAN (1), YE EYI (2)

1. EMERGENCY DEPARTMENT, GULHANE MILITARY MEDICAL ACADEMY, ANKARA, Turkey
2. EMERGENCY DEPARTMENT, HAKKARI MILITARY HOSPITAL, HAKKARI, Turkey

Corresponding author: Mr Arziman Ibrahim (ibrahimarz@hotmail.com)

Key-words: Tonsillopharyngitis ; Tularemia ; Francisella tularensis

INTRODUCTION:

Tularemia is a zoonosis which is caused by Francisella tularensis. Glandular, ulceroglandular, oculoglandular, oropharyngeal, typhoidal and pneumonia are the clinical presentations of tularemia. The ulceroglandular tularemia is the most common form. The oropharyngeal tularemia is less frequent form that can be easily interfered with streptococcal angina, infectious mononucleosis, tuberculosis and lymphoma.

We wanted to present a tularemia patient who was diagnosed tonsillopharyngitis and treated with intramuscular penicillin for ten days and had no cure in this period.

CASE REPORT:

A 71 year old woman was admitted to ED for penicillin injection. In this time, she complaint to the doctor that she has been diagnosed as tonsillopharyngitis and has been having penicillin injections for ten days, but her fever and complaints were still continuing.

At physical examination, exudative and membranous pharyngitis with cervical adenopathy (2x3cm) was observed. Her vital signs were normal. Her biochemical parameters were normal.

In detailed questioning, she told that she was living in a small town and she was drinking well water as her family members. She told that her family members were having also sore throat but did not go to the doctor.

We were suspicious about tularemia, and we changed the treatment. We started streptomycin instead of penicillin.

We called the other family members (five people) and examined them, all their serology was positive, tularemia was diagnosed for the whole family. The serology was negative in only our patient but they were all cured.

CONCLUSION:

All the ED physicians must be aware of this insidious illness and tularemia should be considered in the differential diagnosis of patients presenting with tonsillopharyngitis and cervical adenopathy who do not respond to classical penicillin treatment.

P134

Case Presentation

CONTACT DERMATITIS CAUSED BY A NURSING UNDERPAD: CASE REPORT

M ULUBAY (1), S ARDIC (2), I ARZIMAN (2), A DEMIR (2), YE EYI (3)

1. GYNECOLOGY AND OBSTETRICS, BEYTEPE MILITARY HOSPITAL, ANKARA, Turkey
2. EMERGENCY DEPARTMENT, GULHANE MILITARY MEDICAL ACADEMY, ANKARA, Turkey
3. EMERGENCY DEPARTMENT, HAKKARI MILITARY HOSPITAL, HAKKARI, Turkey

Corresponding author: Mr Arziman Ibrahim (ibrahimarz@hotmail.com)

Key-words: Contact Dermatitis ; Nursing Underpad ; Erythematous lesion

Introduction

Contact dermatitis is a common inflammatory skin condition characterized by erythematous and pruritic skin lesions that occur after contact with a foreign substance. There are two forms of contact dermatitis: irritant and allergic. We aimed to share a rare cause of contact dermatitis - a nursing underpad which is very rare in the literature.

Case Report

50 year old female patient with myoma uteri and subtotal uterine prolapse, was admitted to hospital with complaints of abnormal uterine bleeding. The patient had two vaginal births. The patient had no medical illness and prescription. She has no allergic history. The patient underwent abdominal hysterectomy. Postoperative second day, red-colored, macular lesions appeared on the patient's saddle. Nursing underpad is considered to be the reason of these lesions. Patient was taking cefazolin sodium 1 gr i.v twice a day and diclofenac sodium 75 mg im twice a day. By using mometazon furoat micronoz pomade, fading and decreasing in lesions were observed after 48 hours. The patient was discharged with healing.

Conclusion

Nursing underpad is a material which is often used in post operational situations and intensive care units in hospitals. Nursing underpad is also used for caring of bedridden patients. The physicians and the nurses must be aware of the unexpected conditions after the operations. A close nursing to the post operational patients is substantial.

P135

Case Presentation

CPR ON THE BEACH: ENCOUNTERS WITH THE "JELLIES" IN NORTH BORNEO

PK Cheah (1), FT Hiew (1), DF Ongkili (1), WK Tay (2)

1. Emergency and Trauma Department, Queen Elizabeth Hospital, Kota Kinabalu, Sabah, Malaysia
2. Emergency Department, Hospital Beluran, Beluran, Sabah, Malaysia

Corresponding author: Mr Cheah Phee Kheng (pkheng1@yahoo.com)

Key-words: Jellyfish ; Marine envenomation ; bystander CPR

Jellyfish envenomation is the commonest marine fauna envenomation. The highly venomous box jellyfish lurks in the waters of Borneo, and is responsible for the majority of cases encountered by the local hospitals. Though most patients present with dermatological manifestations of the envenomation without significant systemic involvement, numerous deaths have been reported worldwide. We report an incident of jellyfish envenomation involving 6 tourists while swimming in waist-deep waters off the coast of Kota Kinabalu. Among the victims, an 8 year old boy required bystander CPR at the scene. He developed status epilepticus after ROSC and had to be intubated on arrival to Emergency Department. We will compare these cases and explore the likely factors that influenced the severity of the envenomation on our patients, as well as review and identify the first aid and preventive measures for jellyfish stings. We will also emphasise on the importance of high-quality CPR, and the need of the public, especially lifeguards to equip themselves with such skill to ensure resuscitation is started as early as possible in the event of cardiac arrest.

P136 Case Presentation

LATE PNEUMOTHORAX REVELATION COMPLICATING PRIOR INSTALLATION OF A VENTRICULO-PERITONEAL SHUNT.

H EZZOUINE, B CHARRA, A BENSLAMA, S MOTAOUAKKIL
Medical intensive care unit, university teaching hospital Ibn Rushd, CASABLANCA, Morocco

Corresponding author: Mme Ezzouine Hanane (ezzouinehanane@yahoo.fr)

Key-words: pneumothorax ; ventriculo-peritoneal shunt ; late revelation

Surgery for ventriculo-peritoneal shunt is the most common treatment for hydrocephalus. This neurosurgical procedure can have complications, however, mainly infectious or mechanic. Occurrence of pneumothorax complicating placement of a ventriculoperitoneal shunt is rarely reported. The particularity of our observation is a late revelation in the 10th day after the laying of the ventriculo-peritoneal anterior pneumothorax.

Case report:

patient aged 22, admitted to the ICU for respiratory distress. In his medical history, a pineal tumor with hydrocephalus for which a ventriculo-peritoneal shunt was performed 10 days auparavant. L intervention took place without incident with the notion of improvement in neurological status and without respiratory symptoms. The evolution was marked by respiratory distress at the 10th postoperative day. Clinical examination revealed a patient unconsciousness. he was polypnea, respiratory rate 30 cycles / minute and his arterial oxygen saturation to 93% ambient area. His hemodynamic status was stable, blood pressure 135/45 mmHg and heart rate to 100 beats / min. The rest of the examination revealed a discrete subcutaneous emphysema cervicothoracic. Chest radiography revealed no effusion of gas or parenchymatous damage. The chest CT scan found a right anterior pneumothorax ipsilateral to the ventriculo-peritoneal shunt. The blood test is without faults. The therapeutic management was oxygen therapy, a right chest tube, intravenous hydration. Evolution was marked by significant clinical improvement with a chest tube removal on day 4 post-chest

drainage.

Discussion :

The occurrence of pneumothorax is a rare complication of installing a ventriculo-peritoneal shunt. Risks induced by gaseous effusion is its suffusion subcutaneously with subcutaneous emphysema may spread to the neck and follow tunneled path of valve. Air can also enter the subdural space favored by lower intracranial pressure. Thoracic gas effusions are rare but fatal complication of installing valve ventriculoperitoneal shunt. This is an invasive procedure that requires close monitoring as well as neurological breathing in an early diagnosis and treatment of complications.

Conclusion:

A ventriculoperitoneal shunt is an invasive procedure that has common complications and known mechanical and infectious. The occurrence of pneumothorax is a rare complication but one should think before any immediate or delayed respiratory distress early < 10 days and complete by a chest CT scan to visualize a possible gas effusion earlier

P137 Case Presentation

ELDERLY MAN WITH ABDOMINAL PAIN: THE BOMB FALLING INTO THE EMERGENCY DEPARTMENT

S OZDINC

Emergency Department, Afyon Kocatepe University Medical Faculty, Afyonkarahisar, Turkey

Corresponding author: Melle Ozdinc Serife (drseri03@hotmail.com)

Key-words: elderly patient ; abdominal pain ; multiorgan infarcts

Introduction: Abdominal pain comprises approximately 10% of the emergency complaints. Some of the patients with abdominal pain are elderly in whom it may be challenging for the physician to evaluate the patient thoroughly because of difficulties in obtaining a proper history, differences in pain perception, nonspecific physical examination and laboratory findings as well as some mortal clinical entities mimicking other simple diseases.

Case Report: A 74-year-old male patient was referred to the emergency department by internal medicine out-patient clinic to which he had admitted with abdominal pain. The limited history obtained from his relatives revealed that he had had abdominal pain for approximately one week and it was accompanied by nausea and vomiting. He had had hypertension, insulin-dependent diabetes mellitus, chronic obstructive lung disease for which he hadn't been taking the prescribed medications appropriately. Physical examination revealed that Glasgow Coma Scale score was 15, blood pressure was 90/50 mmHg, regular pulse rate was 110 per minute. The patient was tachypneic with symmetric and equally contributing hemithoraces on auscultation with some scattered rhonchi. Abdominal examination revealed diffuse tenderness but no rebound or defence. No lateralising neurologic finding was noted. Two large-bore intravenous accesses were established immediately while monitoring the patient. Hydration was started and nasal O2 (2lt/min) was applied. Blood glucose was 135 mg/dl by fingertip testing. Blood samples were obtained. ECG demonstrated ST elevations in the anterior and inferior derivations, findings suggesting aneurysm. Nasogastric and urinary catheterizations were applied; there was no urinary output while 200 cc gastric content was derived. The patient had a pulmonary arrest while on monitoring afterwards he was intubated and connected to a portable mechanical ventilator. With the presumptive diagnosis of mesenteric ischemia, a hemodialysis catheter was applied to the patient via femoral vein and contrast-enhanced abdominal CT examination was performed which

revealed diffuse liver hypoperfusion, multifocal splenic and renal infarcts as well as embolic occlusions in the celiac truncus and superior mesenteric artery (SMA). There were gastric and small bowel dilatations suggesting subileus and also pneumatosis intestinalis in the distal ileal segments. The patient was consulted to the internal medicine clinic for acute renal failure and to the general surgery clinic for multiorgan infarcts as a result of which he was transferred to the general surgery clinic for emergent exploration. During surgery, it was found out that small bowels, the proximal colonic segments upto the splenic flexure, spleen and liver were rendered ischemic by hypoperfusion. Embolectomy to the celiac truncus and SMA was tried, but unfortunately the patient did not benefit from this. The infarcted small bowel and right hemicolon were resected. On deterioration of the patient during surgery, the operation was ended to perform a possible "second-look" operation if needed. The patient was followed in intensive care unit postoperatively and died in the eighteenth hour.

Conclusion: If an elderly patient applies to the emergency department with the complaint of abdominal pain, vascular diseases with high mortality, especially mesenteric and/or parenchymatous organ ischemia, should be kept in mind in the differential diagnosis in order to immediately and appropriately evaluate the patient leading to proper diagnosis and treatment.

P138 Case Presentation

A RARE CAUSE OF EPILEPTIC SEIZURES: CATAMENIAL EPILEPSY

H Gonullu (1), S Karadas (1), A Milanlioğlu (2), M Sahin (3)

1. Emergency Medicine, Yuzuncu Yil University, School of Medicine, Van, Turkey
2. Neurology, Yuzuncu Yil University, School of Medicine, Van, Turkey
3. Department of Emergency Medicine, Yuzuncu Yil University, School of Medicine, Van, Turkey

Corresponding author: Mme Gonullu Hayriye (drhayriyegonullu@gmail.com)

Key-words: Seizures ; Epilepsy ; menstrual cycle

Introduction: Catamenial epilepsy (CE) is described as the emergence of epileptic seizures during menstrual cycle or just at the outset of it or having more frequent epileptic attacks during this period (1). A patient diagnosed with epilepsy and thought to have CE after further evaluation was presented in this study.

Case: Generalized tonic-clonic contractions were present in a 41-year-old female patient who was brought to emergency department with seizure complaint. The case whose vital signs were normal. 20 mg diazepam and following that 18 mg/kg epanutin infusion were applied. The patient whose seizure was in progress was regarded as status epilepticus. She was attached to the mechanical ventilator (MV) after having sedatized with phenobarbital infusion. It was discovered from her history that she was followed with Multiple Sclerosis (MS) diagnosis and was in a remission period and her seizures began 1-2 days before her menstruation cycle. Hemogram, biochemical and hormonal workups of the patient (cortisol, estradiol, FSH, LH, progesterone and prolactin) were determined as normal. In brain tomography, there was meningioma in left temporal and in EEG, focal epileptic activity was present in the right hemisphere. After having patient's seizure condition under control, she left MV. The patient who was thought to have CE was started acetazolamide, medroxy progesterone acetate treatment. In a 3-year follow-up period, the control EEG of the patient whose seizures were on the decline and vanished completely there after was normal. The case had enough diagnoses to form seizure activity such as MS and meningioma,

however, she was diagnosed with CE since her seizures began just prior to menstrual cycle and she had a response to CE treatment.

Conclusion: CE must be taken into consideration if anamnesis also supports the condition of

the patients whose diagnoses will lead to EN such as MS and meningioma.

Reference

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P139 Case Presentation

COLON PSEUDO-OBSTRUCTION : CASE REPORT

R Dursun (1), H Gonullu (2), S Karadas (2), N Kurt (2)

1. Emergency Service, Yuzuncu Yil University, School of Medicine, Van, Turkey
2. Emergency Medicine, Yuzuncu Yil University, School of Medicine, Van, Turkey

Corresponding author: Mme Gonullu Hayriye (drhayriyegonullu@gmail.com)

Key-words: hypotatsemia ; Pseudo-Obstruction ; Emergency Department

Introduction: Intestinal obstruction is divided into two parts as mechanical and paralytic. While intra-abdominal adhesions, hernias and tumors are factors for mechanical obstruction, intra-abdominal infections, low level of potassium in blood, mesentery blood vessel diseases lead to paralytic ileus.

Case: A 72-year-old female patient who used coumadin, diuretic, digoxin, calcium channel blocker (CaCB) owing to previous cerebrovascular accident history (CVA), heart failure, chronic atrial fibrillation and was immobile for one year applied to emergency department with constipation complaint. Her TA: 150/90 mmHg, pulse: 92/minute, respiratory rate: 20/minute, fever: 37. It was found out in her examination that her general condition was moderate, there was right hemiparesis, heart was arrhythmic, intestine sounds were hypoactive and there was tenderness in her abdomen. Rectum was empty during her rectal examination. Other system examinations were normal. There was no property other than K+: 2.6 in her lab parameters. Her intestines were highly dilated and their walls were edematous in her abdomen graph and computed abdomen tomography. She was hospitalized in general surgery with mechanical intestine obstruction diagnosis. Following her electrolyte replacement, her clinical symptoms and radiological findings were normal. It was thought that she had colon pseudo-obstruction depending on hypotatsemia.

Conclusion: It should be remembered that colon pseudo-obstruction can be available in patients at emergency department who are thought to have intestinal obstruction and underlying causes should be analyzed.

P140 Case Presentation

DIAGNOSIS IN YOUNG ADULT WITH GASTROINTESTINAL BLEEDING: GLUTEN-SENSITIVE ENTEROPATHY

AC Dulger (1), H Gonullu (2), S Karadas (2), N Kurt (2)

1. Internal Medicine, Yuzuncu Yil University, School of Medicine,, Van, Turkey
2. Emergency Medicine, Yuzuncu Yil University, School of Medicine, Van, Turkey

Corresponding author: Mme Gonullu Hayriye (drhayriyegonullu@gmail.com)

Key-words: Young adult ; Gastrointestinal Bleeding ; Emergency department

Introduction: Gluten-sensitive enteropathy (GSE) is an autoimmune disorder leading to villous atrophy at different levels and chronic malabsorption in genetically susceptible individuals. Although it is known to be a difficult disorder to diagnose, it usually presents itself with disorders other than bowel problems such as osteoporosis, infertility, neurological issues and anemia related to lack of iron and folate or it can also reveals itself with atypic gastrointestinal system evidence (1,2). Endoscopic abnormalities can support the diagnosis particularly in adults who are suspected for GSE possessing atypic presentation (3).

Case Report: A male patient aged 17 referred to emergency room of the hospital for two times with bleeding out of the mouth in 10 days. In his anamnesis, it was found out that he had a recurrent stomachache, gastroendoscopy was carried out for three times in the last 5 years, he received a medical treatment with chronic gastritis diagnosis and he was hospitalized with GIS bleeding a week ago and a new gastroendoscopy was performed. When he was admitted to the emergency room, it was realized that the patient had melena and abundant bleeding due to nasogastric sound. His tension arterial was 100/60 mmHg, pulse was 105/minute and other system examinations were natural. In laboratory tests, his hemoglobin value was 8.5 g/dl, Htc was 25%, and his other biochemical parameters and bleeding profile were determined within normal limits. Erythrocyte suspension and proton-pump inhibitor IV infusion were started for the patient whose active bleeding was continuing and HGB was low. Forrest IIa was noticed in the gastroendoscopy which was carried out in an urgent way. Bleeding was stopped by conferring sclerosant agent. Biopsy samples were derived from antrum and duodenum. Biopsy result was reported as chronic gastritis and intraepithelial lymphocyte increase, crypt hyperplasia, gluten enteropathy having villus atrophy (Marsh type 3b).

Discussion and Conclusion: In GSE, though it can often be seen with chronic gastritis, it is also cited that it gives rise to acute erosive gastritis, as well (4). It has been reported that lymphocytic gastritis seen with GSE and characterized by intraepithelial lymphocyte increase is a rare cause for upper gastrointestinal bleeding(5). In this case report, it was emphasized that GSE led to chronic gastritis and intraepithelial lymphocyte increase which was the reason for gastrointestinal system bleedings

various neurotransmitters, an action that likely underlies its antidepressant activity.

A 21-year-old female patient without any systemic disease was admitted to our Emergency Department (ED) with overdose of *Hypericum perforatum*. It was learned that she had ingested 90 tablets of 300 mg *Hypericum perforatum* for suicide attempt. She was brought to our ED 50 minutes after ingestion. She was fully cooperative and oriented. Blood pressure measured in our ED was 130/80 mmHg, pulse rate 115 pulse/min, respiration rate 16 breaths/min, temperature 36°C and oxygen saturation 98%. ECG demonstrated sinus tachycardia, with a rate between 100 and 115 beats/min. The neurological and gastrointestinal examination was unremarkable. An orogastric tube was inserted for the aspiration of gastric contents and activated charcoal (1 gr/kg) was administered via the tube. Complete blood count, glucose, electrolyte levels, renal function tests and the blood gas values were within normal ranges however liver function tests such as coagulation parameters were measured respectively in borderline high levels (Table-1). The patient was followed up in the observation room in the ED for about 24 hours. Supportive treatment (1000 cc 0.9% NaCl intravenous infusion) was applied. On the second day she was discharged and invoked to follow-up control. Two days after discharge her examination was normal and laboratory tests were in normal ranges.

Hypericum perforatum has been intensively studied on isolated tissue samples, using animal models and through human clinical trials. The effectiveness of *Hypericum perforatum* as an antidepressant is particularly well studied, and the underlying mechanisms are well understood. *Hypericum perforatum* preparations have relatively few adverse effects when taken alone at the recommended dosages. Its adverse effects are; phototoxicity, central nervous system depression, polyneuropathy, allergic reactions, hypertension and diarrhea. Toxic dose is unknown and observation is recommended. However, numerous interactions with other medications have been reported. Recent research shows these interactions result from the ability of *Hypericum perforatum* constituents to induce intestinal or hepatic enzymes that either remove drugs from the body or metabolize them to inactive forms.

Because of the fact that in our patient at high doses of *Hypericum perforatum* there were none of these adverse effects, but in the literature even at lower doses toxicity and adverse effects had been seen, it suggests that the adverse effects of *Hypericum perforatum* are dose-independent.

As in all herbal remedies, any individual is advised to consult his or her physician before taking *Hypericum perforatum* to confirm that the herb is the most efficacious remedy.

P141 Case Presentation

HYPERICUM PERFORATUM OVERDOSE AS A SUICIDE ATTEMPT

OD Cakir (1), SE Cevik (2), O Guneyisel (3)

1. Emergency Medicine Clinic, Umranıye Education and Research Hospital, Istanbul, Turkey
2. Department of Emergency Medicine, Beykoz State Hospital, Istanbul, Turkey
3. Emergency Medicine Clinic, Dr Lutfi Kırdar Kartal Education and Research Hospital, Istanbul, Turkey

Corresponding author: Mme Eren Çevik Sebnem (erenseb@yahoo.com)

Key-words: St. John's wort ; *Hypericum perforatum* ; overdose

Hypericum perforatum (St. John's wort), is a perennial herb from the family Hypericaceae. Extracts of the medicinal plant *Hypericum perforatum* are used for the treatment of mild to moderate depression, anxiety, insomnia, irritability, neurosis, migraines, dyspepsia, gastritis, inflammatory bowel disease, and sciatica. The herb is available in tablet, capsule, or tea form as well as a cream, oil, or liquid tincture. Hyperforin, a constituent of *Hypericum perforatum*, is known to modulate the release and re-uptake of

P142 Case Presentation

CASTLEMAN'S DISEASE

Y TANRIKULU (1), C SEN TANRIKULU (2), S KARAMAN (2)

1. General Surgery Department, Erzurum Area Education and Research Hospital, Erzurum, Turkey
2. Emergency Department, Erzurum Area Education and Research Hospital, Erzurum, Turkey

Corresponding author: Mme Sen Tanrikulu Ceren (cerensen81@hotmail.com)

Key-words: Castleman's disease ; lymph node ; surgery

Aim : Castleman's disease is a histopathological diagnosis and this disease was first described by Castleman in 1954. It is a rare lymphoproliferative disorder of unknown etiology. Although the disease appears most commonly in the mediastinal lymph nodes, it

can be occur in cervical, retroperitoneal, axillary and other lymph nodes. There is no gender predominance. The disease often occurs in young adults. In this case, we presented an axillary mass diagnosed as hyaline vascular type of Castleman's disease.

Case: A 19-year old man referred to our department with pain and swelling in the left axillar region. He was a musician and he had been playing guitar for a years. He stated that the mass was appeared suddenly 5 daysago. On physical examination, a 4x4 cm painful mass was palpated in the left axillar region. The dimension of the mass was not decreased despite 7-day oral antibiotherapy. On the magnetic resonance imaging, a 4x4 cm mass was detected isointense on T1- and T2-weighted and the mass was homogenously colored with contrast. After hematology consultation, the patient was operated. On histopathological examination, hyaline-vascularized type of Castleman's disease was diagnosed. The patient was asymptomatic at follow-up for 2 months.

Conclusion: Castleman's disease with histopathological examination and this disease had been first described by Castleman in 1954. It is a rare lymphoproliferative disorder of unknown etiology exactly. Although the disease most commonly appears in the mediastinal lymph nodes, it can be occur in cervical, retroperitoneal, axillary and other regions lymph nodes. There is no gender predominance and often occurs in young adults. Two histological variants as hyaline-vascular and plasma cell type have been described. Clinically it is also divided in two types: a localized type, which is usually asymptomatic and presented as a mass or swelling. Systemic (multicentric) type is characterized nonspecific symptoms such as fever, anaemia, generalized lymphadenopathy and hepatosplenomegaly. Complete surgical excision is curative for localized form. Although systemic type is usually treated with radiation therapy, corticosteroids and chemotherapy, there is no certain treatment.

P143

Case Presentation

CHILIADITI SYNDROME ASSOCIATED WITH PEPTIC ULCER PERFORATION

Y TANRIKULU (1), C SEN TANRIKULU (2), E ACAR (2), S KARAMAN (2)

1. General Surgery Department, Erzurum Area Education and Research Hospital, Erzurum, Turkey
2. Emergency Department, Erzurum Area Education and Research Hospital, Erzurum, Turkey

Corresponding author: Mme Sen Tanrikulu Ceren (cerensen81@hotmail.com)

Key-words: Abdominal pain ; Chilaiiditi syndrome ; Colon

Aim: Chilaiiditi syndrome is a rare syndrome Which is the interposition of colon and/or small intestine in hepatodiaphragmatic area. Generally it may be asymptomatic, but sometimes, it may present with abdominal pain, nausea, vomiting, constipation and respiratory distress. The incidence in general population is between 0.025-0.28%. It is diagnosed by X-ray roentgenograms or computed tomography. We presented a 62-year-old man admitted to our hospital with acute abdominal pain, and operated for Chilaiiditi syndrome associated with peptic ulcer perforation.

Case: 62-year-old man with chronic constipation, chest and abdominal pain was admitted to our emergency. Physical examination revealed acute abdominal symptoms such as tenderness on palpation, defense and rebound. Elevation of right hemidiaphragm and subdiaphragmatic free air were noticed on chest x-ray. Computed tomography depicted colonic haustrations

between right hemidiaphragm and liver. Therefore the patient diagnosed as Chilaiiditi syndrome radiologically. Laparotomy was performed because the patient had findings of acute abdomen. Prepyloric peptic ulcer perforation was detected. Colonic segments positioned in hepatodiaphragmatic area were released from adhesions, repositioned in the abdomen, and loose diaphragm was plicated. Postoperative period was uneventful and the patient was discharged 6 days after the operation.

Conclusion: Although Chilaiiditi syndrome is rare, it should be kept in mind that this syndrome might require surgical intervention for colonic volvulus, bowel obstruction or ischemia, and persistent pain or it could be associated with other acute abdominal conditions such as peptic ulcer perforation which was detected in the present case report. Patients with Chilaiiditi syndrome diagnosed radiologically and with acute abdominal findings should be treated surgically.

P144

Case Presentation

MAJOR MESENTERIC INJURY AFTER BLUNT ABDOMINAL TRAUMA

C SEN TANRIKULU (1), Y TANRIKULU (2), E ACAR (1), S KARAMAN (1)

1. Emergency Department, Erzurum Area Education and Research Hospital, Erzurum, Turkey
2. General Surgery Department, Erzurum Area Education and Research Hospital, Erzurum, Turkey

Corresponding author: Mme Sen Tanrikulu Ceren (cerensen81@hotmail.com)

Key-words: Blunt abdominal trauma ; laparotomy ; mesenteric injury

Aim: Trauma is the most common cause of death in the age group of adult. Abdomen is the third most frequently injured region with injuries requiring surgery in civilian trauma victims. The presence of blunt abdominal trauma along with other injuries poses a difficulty in diagnosis and accounts for higher mortality and morbidity. The most common causes of blunt abdominal trauma are road traffic accidents followed by pedestrian accidents, blows and falls. In this case, we presented a patient with subtotal mesenteric injuries that occurred after the traffic accident.

Case Report: 46 year-old a female was seen in the emergency room after a traffic accident. The patient's vital signs were stable. There was that signs of tenderness and rigidity at the physical examination. The hemoglobin levels is normal, and there was minimal abdominal fluid in the ultrasonographic evaluation. Abdominal organ injury was not detected at the tomography of abdominal. At the control evaluation after observed, there was not change of abdominal physical examination signs and rigidity of abdominal persisted. There was not significant decrease in hemoglobin values. The patient is underwent surgery after diagnostic peritoneal lavage. Midline incision was made. There were about 300 cc of hemorrhagic fluid in the abdomen observations. Solid organs and intestines were normal. Approximately 120 cm. segment of small bowel was devascularize due to mesenteric injury. The segment of small bowel was resected and anastomosed. The patient was discharged the postoperative 8th days.

Conclusion: Diagnosis of the small bowel injuries due to blunt trauma is difficult. The various diagnostic methods have evolved to assist the surgeon in the identification of abdominal injuries. The specific tests selected are based on the clinical stability of the patient, the ability to obtain a reliable physical examination and the provider's access to a particular modality. It is important to emphasize that diagnostic peritoneal lavage, ultrasonography, and

tomography should not be seen as competitive or alternative diagnostic methods. If these techniques are applied in a complementary rather than an exclusionary way, patients can be evaluated rapidly and safely and non-therapeutic laparotomies can be avoided.

P145

Case Presentation

MASSIVE SUBCUTANEOUS EMPHYSEMA AFTER COUGHING

C SEN TANRIKULU, S KARAMAN

Emergency Department, Erzurum Area Education and Research Hospital, Erzurum, Turkey

Corresponding author: Mme Sen Tanrikulu Ceren (cerensen81@hotmail.com)

Key-words: Chest tube ; Emphysema ; Thorax

Aim: Subcutaneous emphysema can develop spontaneously, traumatically or iatrogenically. Postoperative complications of thoracic surgery has still high rate of mortality and morbidities and subcutaneous emphysema is one of the most common complications after thoracic surgery. In its treatment, either no surgical intervention may be followed or initiatives in removal of the hypodermic aberrant air such as tube thoracostomy, massage of the tissue, inserting cutaneous intracath, wrapping the chest wall with elastic bandage, fasciotomy, mediastinotomy. We described the case of an adult who admitted to the hospital because of sudden occurrence of chest pain, dyspnea and massive subcutaneous emphysema 8 days after thoracotomy.

Case Report: A 56-year-old male patient admitted to the emergency department with complaints of swollen face, neck and thorax after postoperative coughing. The patient had surgery for pulmonary mass one week ago and was discharged. On physical examination, there was massive subcutaneous emphysema and the patient's lung sounds are quite reduced. There was crepitation under the skin. On chest x-ray there was hyperinflation on the right lung side and on computed tomography there was massive subcutaneous emphysema through bilateral chest wall under the skin. Chest tube was inserted and the patient was followed clinically.

Conclusion: This report describes the sudden development of airway compromise caused by rapidly progressing subcutaneous emphysema after postoperative coughing. The differential diagnosis includes alveolar rupture, spontaneous rupture of the esophagus, and trauma to the hypopharynx, trachea, or esophagus. In its treatment, either no surgical intervention may be followed or initiatives in removal of the hypodermic aberrant air such as tube thoracostomy, massage of the tissue, inserting cutaneous intracath, wrapping the chest wall with elastic bandage, fasciotomy, mediastinotomy. We treated the patient by inserting a chest tube.

P146

Case Presentation

INGESTION OF MULTIPLE MAGNET BALLS FOR SUICIDE

C. SEN TANRIKULU (1), Y. TANRIKULU (2), H. SAHIN (1), S. KARAMAN (1)

1. Emergency Department, Erzurum Area Education and Research Hospital, Erzurum, Turkey
2. General Surgery Department, Erzurum Area Education and Research Hospital, Erzurum, Turkey

Corresponding author: Mme Sen Tanrikulu Ceren (cerensen81@hotmail.com)

Key-words: Foreign body ; Magnet ; Metal

Aim: Foreign body ingestion is common but ingestion of multiple magnet balls is rare. Foreign body ingestion is relatively common in pediatric population but it can be seen in adults with psychiatric disorders. Foreign bodies passed into the stomach can usually be observed for development of symptoms, because 80% of them would be spontaneously passed. However popular toy magnetic construction sets have resulted in numerous reports in the literature of serious complications including death following ingestion of multiple magnet balls and ingestion of these balls may require an aggressive approach. We report a case of a 17-year-old male who presented to our emergency department with abdominal pain after suicidal ingestion of multiple magnet balls 40 days ago.

Case Report: A 17-year-old male was submitted to the emergency department due to dermal slashes done by himself on his wrist. On clinical examination, it was detected that the slashes were superficial and he had abdominal tenderness. It was learned that he swallowed a large number of stress magnet balls 40 days ago, he did not talk about this with his family because of fear and slashed his wrist for suicide. Abdominal radiography showed the presence of multiple magnet balls combined together in the left upper quadrant. The patient was operated. The magnet balls were localized in stomach and transpyloric migration did not occur. Magnet balls were removed from the stomach by gastrotomy. The patient's postoperative hospital course was unremarkable, and he was discharged on the 6th postoperative day.

Conclusion: Foreign bodies in the alimentary tract of patients are commonly managed by pediatricians and surgeons. Most foreign bodies pass readily into the stomach and pass the remainder of the gastrointestinal tract without difficulty. A single magnet may be discharged with intestinal peristalsis, but multiple magnet balls may stick together and cause significant gastrointestinal complications. If the patient has a history of multiple magnet ingestion, follow-up with daily abdominal X-rays should be carried out, and if magnet balls seem to cluster together or if acute abdominal signs develop, surgical exploration should be considered.

P147

Case Presentation

ACUTE ANEMIA WITH ISCHEMIC HEART DISTRESS IN A ORTHOPEDIC PATIENT: AN UNUSUAL BLEEDING SITE.

L Carenzo (1), R Marino (2), R Petrino (2)

1. CRIMEDIM Research Center in Emergency and Disaster Medicine, Università del Piemonte Orientale A. Avogadro, Novara, Italy
2. Emergency Department, St. Andrea Hospital, Vercelli, Italy

Corresponding author: Mr Carenzo Luca (carenzo@med.unipmn.it)

Key-words: acute anemia ; kidney cyst ; unstable angina

We describe an unusual case of acute anemia in a patient presenting to the emergency department with a marked drop in hemoglobin level and multiple episodes of chest and abdominal pain. A 71-year-old man was admitted to the emergency department from the physical medicine clinic where he was undergoing a rehabilitation program after a total hip replacement. On a routine complete blood count the patient resulted unexpectedly anemic (Hemoglobin 6.8 g/dL) and was then referred to our center for further evaluation. During the interview he reported an occasional dull colicky pain to the lower right

abdominal quadrant, which started three days before. The latest episode of pain happened the night before the ED admission. He also reported an episode of chest pain occurring during the previous night. At the time of the examination he did not present with thoracic or abdominal pain, nor he reported any trauma. The EKG was also normal. His past medical history included previous ischemic heart disease with aorto-coronary bypass and bilateral total hip replacement. His current therapy included beta-blockade, ACE inhibitor, statin, aspirin, mononitrate isorbide and enoxaparin once a day. His blood pressure was 120/60 mmHg, pulse 75 beats/minute and core temperature 36.4°C. Thoracic and abdominal examination were unremarkable. We then performed an emergency department bedside abdominal ultrasound. The US demonstrated a roughly spherical mass located between the right kidney and the liver, measuring about 9 centimeters of diameter, well separated from the surrounding parenchyma, characterized by a non-homogeneous hyperechogenic pattern. There was no dilation of the renal pelvis. The remaining of the exam was normal. Right after the ultrasound the patient experience a chest pain episode, an urgent EKG showed a subendocardial antero-lateral ischemia, which resolved with the administration of nitrates.

Abdominal computer tomography was then performed which better characterized the mass as a 10 centimeters diameter hemorrhagic cystic lesion. The contrast-enhanced phase did not show any active bleeding. Only when informed about the diagnosis, the patient remembered a previous finding of multiple, asymptomatic kidney cysts in a US performed three years before. The family was later able to provide the result of that US, which showed a 5.9 cm right kidney cysts in the exact same position of the hemorrhagic one we had diagnosed. The patient then started blood transfusion and was admitted to the urology department for elective surgical evaluation of the lesion.

In this case it is possible to conduct all the events to a single cause, which is the bleeding complication of the previously asymptomatic cyst. The patient's reoccurring episodes of abdominal pain were most probably caused by the mass effect of the lesion in the abdomen. At the same time the anemia was caused by the intracystic loss of blood, probably supported by the addition of anticoagulant therapy for thromboprophylaxis and by the chronic antiplatelets therapy he was currently taking. The bleeding also caused, in a chronic ischemic heart disease patient, multiple episodes of angina caused by the reduced level of blood hemoglobin. Easy and fast access to non-invasive ultrasound equipment allowed us to correctly address the patient to the CT scan and thus to complete the diagnosis before the hospital admission. Among the complications of a hemorrhagic cyst other than anemia, there is the possible rupture with retroperitoneal hemorrhage. Shock and death from hemorrhagic cysts rupture have been described. The easiest and initial imaging technique should be ultrasound, which can easily be performed bedside and in the emergency department during the diagnostic process. Definitive diagnosis is done with abdominal CT scan, which is considered the best imaging test for diagnosing and establishing the cause of spontaneous peri and pararenal haemorrhage.

With the recent advances in CT technology and interventional radiology, it is possible to manage these cases conservatively with blood transfusion or arterial embolization. In our case the repetitive angina episodes were secondary to blood loss and were indeed permanently solved with the normalization of the hemoglobin with blood transfusions, without any further need for cardiology work-up.

P148

Case Presentation

A RARE COMPLICATION OF LUNG CANCER: METASTAZ OF ONE VERTEBRA

S OZDINC

Emergency Department, Afyon Kocatepe University Medical Faculty, Afyonkarahisar, Turkey

Corresponding author: Melle Ozdinc Serife (drseri03@hotmail.com)

Key-words: lung cancer ; metastaz ; vertebra

Introduction: Secondary oncologic emergency depend upon to treatment of malignity or self of malignity are common cases to admit from emergency services. There will be serious problems that threat the life of the patients if true diagnosis can not be achieved and on time. The spinal cord compression is one of these complications and can be treat effectively. This can be seen 1.5% of the patients whom have malignity. %95 of it depends to invading the vertebrae. Usually the metastasis occurs at the thoracic vertebrae. One vertebra invasion is rare but multiple bone invasion are seen frequently. The metastasis of the bone is depend up to lung and breast cancer. Patients' survey generally asemptomatic. The causes of the patients to admit the emergency services are pain, local mass, paraplegy.

Case Report: 61 years old man was bring to emergency service with the complaint of legs powerless. While he tried to go the outside of the city for getting the tests of malignity he couldn't walk in three hours period. Squamous cell lung cancer and liver metastasis took place at his personel history. At physical exam of the patient he was cooperated, orientated, concious and his general condition was good. Vital findings were stable. At the norological examination; light reflex +/+, pupils were isocoric, there's no facial asymmetry. Cerebellar tests were succesfull. There's no neck stiffness. The muscle power of the legs were 1/5. The power of the muscle of the upper extremity were 5/5. The sense lost was obtained at the thoracic 2 level. At the lower space of this level all of the reflexes were lost (anal etc). There were no findings of examination of the other systems. The laboratory findings were normal. At the MRI of the thoracal region a compression fracture at T2 level and narrow spinal canal was seen. There was a mass that lying to right pedicul of the T2 and spinal canal and it showed an invasion to the right half of the T2 corpus. The patient was admitted to neurosurgery department for emergent decompression. At the operation the mass was excised totally , decompression and posterior pedicular fixation were applied. After the operation the patient could move his legs and the power of the muscle were obtained as 3/5.

Conclusion: Oncologic patients frequently admit to emergency services. A part of these patients can be feel better with symptomatic treatment. A lower part of these patients have high risk and this group must be diagnosed early and treat immediately.

P149

Case Presentation

A CASE WITH SPONTANEOUS PNEUMOTHORAX, PNEUMOMEDIASTINUM AND SUBCUTANEOUS EMPHYSEMA FOLLOWING COUGHING

N ALAGÖZ (1), H BEYDİLLİ (2), N ÇULLU (3), M DEVEER (4)

1. eyes diseases department, Muğla Sıtkı Koçman university education and research hospital, muğla, Turkey

2. Emergency Department, Muğla Sıtkı Koçman University Medical School, MUĞLA, Turkey

3. Radiology department, Muğla Sıtkı Koçman University Medical School, MUĞLA, Turkey
4. Radiology Department, Muğla Sıtkı Koçman University Medical School, MUĞLA, Turkey

Corresponding author: Mr Beydilli Halil (hbeydilli@hotmail.com)

Key-words: Emergency department ; chest pain ; spontaneous pneumothorax, spontaneous pneumomediastinum

Abnormal collection of air in the pleural space without any trauma history is named as spontaneous pneumothorax, while air located in the mediastinum is named as pneumomediastinum. The pneumothorax is primary if any pulmonary disease is not present and it is secondary if it occurs as a result of pulmonary pathologies like chronic obstructive pulmonary disease. Here we report a case with primary spontaneous pneumothorax, extensive pneumomediastinum and subcutaneous emphysema following coughing. A 17 year-old male patient presented to the emergency room with complains of chest pain of 2 days duration, minimal degree of shortness of breath and swelling located on the neck which occurred following a coughing episode. Physical examination revealed crepitation on the swelling of the neck and diminished breath sounds on auscultation. Upon this a chest X-ray and a thorax CT were requested. On chest X-ray subcutaneous air was noted both on the neck and on the chest wall bilaterally, besides an evident pneumomediastinum and pneumothorax. Although an extensive pneumomediastinum and subcutaneous emphysema were present, the pneumothorax was minimal (and the patient did not develop tachypnea, tachycardia or decrease in systemic blood pressure), therefore the patient received only medical treatment and any surgical intervention was not required. The patient was externalized upon clinical improvement and regression of the radiological signs. Here, we report a case with spontaneous pneumothorax, pneumomediastinum and subcutaneous emphysema occurring following a coughing episode and want to emphasize on the clinical diagnosis of pneumothorax and pneumomediastinum presenting with shortness of breath and chest pain without a history of trauma.

P150 Case Presentation

ISOLATED PANCREAS INJURY BY BLUNT TRAUMA

N ALAGÖZ (1), H BEYDİLLİ (2), N ÇULLU (3), M DEVEER (4)

1. eyes diseases department, Muğla Sıtkı Koçman university education and research hospital, muğla, Turkey
2. Emergency Department, Muğla Sıtkı Koçman University Medical School, MUĞLA, Turkey
3. Radiology department, Muğla Sıtkı Koçman University Medical School, MUĞLA, Turkey
4. Radiology Department, Muğla Sıtkı Koçman University Medical School, MUĞLA, Turkey

Corresponding author: Mr Beydilli Halil (hbeydilli@hotmail.com)

Key-words: blunt trauma ; emergency ; isolated pancreas injury

Injury to the pancreas by a blunt trauma is very rare and accounts for less than 2% of all abdominal injuries. Early diagnosis and grading of the pancreas injury is important for (preventing) complications and mortality. Computerized tomography (CT) is the major imaging method in the diagnosis of abdominal visceral injuries. Here we present a case with isolated pancreas injury that is a very rare entity (that is encountered – seen very rarely) A 5 year-old boy (girl) presented to the emergency room with a history of blunt abdominal trauma induced by a marble stone. The Hb was 11.1 g/dl, Hct 33.5 while all biochemical parameters were within normal limits except Amilase that was raised to 1453 U/L (normal limits 60-180 U/L).

An injury to pancreas was suspected and an ultrasonography examination performed which revealed free fluid in the pelvis and in the perihepatic and peripancreatic region. On CT in addition to abdominal free fluid a laceration line extending from front to back of the corpus (body) of pancreas was present. An immediate surgery was undertaken and a subtotal pancreatectomy along the laceration line involving also the major pancreatic duct was performed.

In this case we want to emphasize on the proper evaluation of pancreas injuries with clinical, laboratory and CT imaging signs interpreted all together and carefully.

P151 Case Presentation

ISOLATED NOMINAL APHASIA: TWO CASE REPORTS

S Avcı (1), M Bircan (2), UY Cavus (1), E Sönmez (3), S Yıldırım (1)

1. Emergency department, Dışkapı Yıldırım Beyazıt Training and Research Hospital, Ankara, Turkey
2. Emergency department, Adnan Menderes University Practice and Research Hospital, Aydın, Turkey
3. Emergency department, Bezmialem Vakıf Gureba University School of Medicine, Istanbul, Turkey

Corresponding author: Mr Cavus Umut (acildrumut@yahoo.com)

Key-words: isolated ; nominal ; aphasia

INTRODUCTION

Anomic aphasia or anomia is a type of aphasia characterized by problems at recalling words or names. Anomia is caused by damage to various parts of the parietal lobe or the temporal lobe of the brain. These damages can be seen because of trauma, stroke, or tumor. Although motor deficiency, cranial nerve involvement, loss of sensation etc. are traditional symptoms of stroke, isolated speech disorder may occur rarely. This type of phenomenon can be quite complex, and usually involves a breakdown in one or more pathways between various regions in the brain. Herein we reported two cases admitted to the emergency department suffering from isolated anomic aphasia.

CASE 1

A 25 year old male patient presented to the Emergency Department with complaining that he couldn't remember his wife's name and the other materials.. Neurologic assessment was found to be normal, except for nominal aphasia that couldn't recognize the pencil, key, glasses et al. Cerebral Computed Tomography scanning was reported left temporoparietal parenchymal hematoma with vasogenic edema and central heterogeneous density. Also cerebral Magnetic Resonance Imaging (MRI) was reported intratumoral hemorrhage in left temporoparietal lobe. Therefore the patient was underwent a neurosurgical operation. Presence of tumor was confirmed during surgery. No complications were observed after surgery. Nominal aphasia recovered and later discharged.

CASE 2

A 62 year old female patient presented to the Emergency Department with complaining that she couldn't remember her children's names. When she woke up in the morning was looking around nonsense. During the inspection, she knew the relatives but simply (she) couldn't remember their names. Assessment of the patient's vital findings and general physical examination was found to be normal. Neurologic assessment was found to be normal except for nominal aphasia. Diffusion MRI scanning was reported that areas of restricted diffusion in left temporoparietal lobe. The patient was admitted to the neurology department and was given

antiaggregant treatment. After treatment his symptoms resolved completely. The patient was discharged with clopidogrel 1x75 mg.

DISCUSSION

Although the main causes of anomic aphasia are not specifically known, many researchers have found contributing factors to anomic aphasia. It is known that people with damage to the left hemisphere of the brain are more likely to have anomic aphasia. Although many experts have believed that damage to Broca's area or Wernicke's area are the main causes of anomia, current studies have shown that damage in the left parietal lobe is the epicenter of anomic aphasia. New data has shown that although the arcuate fasciculus's main function does not include connecting Wernicke's area and Broca's area, damage to this tract cause speech problems because the speech comprehension and speech production areas are connected by this tract. In our cases presented isolated nominal aphasia and diagnosed left temporoparietal damage due to intracerebral tumor and infarct.

CONCLUSION:

It should not be forgotten that the isolated nominal aphasia could easily confuse by the physician in emergency conditions and this could be the only symptom of important diseases. Therefore, in the emergency department, motor, sense, balance and the cranial nerve examination should be performed and as well as in naming objects evaluated during the neurological examination.

P152

Case Presentation

A CASE OF BILATERAL LOWER EXTREMITY ARTERIAL THROMBOEMBOLISM MIMICKING CONVERSION DISORDER

S Avcı (1), M Aydın (1), MN Aytekin (2), M Bircan (3), UY Cavus (1), C Civelek (4)

1. Emergency department, Dışkapı Yıldırım Beyazıt Training and Research Hospital, Ankara, Turkey
2. Department of Orthopedics and Traumatology, Atatürk Training and Research Hospital, Ankara, Turkey
3. Emergency department, Adnan Menderes University Practice and Research Hospital, Aydın, Turkey
4. Emergency department, Bezmialem Vakıf Gureba University School of Medicine, Istanbul, Turkey

Corresponding author: Mr Cavus Umut (acildrumut@yahoo.com)

Key-words: Bilateral ; Thromboembolism ; Conversion

INTRODUCTION

Acute limb ischemia secondary to thromboembolism although not often seen in Emergency Department in order to save the extremity with a true medical emergency requiring immediate therapy. Although epidemiological studies are insufficient, the incidence of acute peripheral arterial occlusion (APAO) is 14/100.000. Cases are seldom bilateral (6%). This disease may cause life-threatening complications beside loss of extremity. In literature, it is reported 10-25% mortality and 20% amputation rate. The most common cause of peripheral arterial embolism are heart diseases with the rate of 80-90%. It is indicated that ischemic complications are more often seen in the cases delayed more than 8 hours. The case was presented here for anamnesis of conversion disorder and bilateral thromboembolism.

CASE REPORT

A female patient aged 42 presented to Emergency Department complaining with an approximate 10 hours of ongoing sciatic nerve tracing , right buttock pain radiating to leg and nausea. The patient was assaulted and also hit in the lower limb by her husband. Patient was calm while alone despite agitated nearby relatives. Besides it was recognized that she usually appealed to Emergency

Department with this kind of right sciatic nerve pain and crying spells. In addition to sciatic nerve pain aggravated with assault conversion disorder was thought as pre-diagnosis. Physical examination revealed no pathological findings. Bilateral lower extremity peripheral arterial pulses were palpable in the initial evaluation. Polar, pallor, motor-sensory loss, swelling, deformity, redness and tenderness were not observed. Normal sinus rhythm was available in ECG. Blood tests were normal.

After about one hour the right leg was cold and pulses were unable to feel. In the left lower extremity non of coldness, pallor and pain was observed and peripheral arterial pulses were weak. Thereupon pelvic arteriography in the diagnosis of bilateral acute arterial embolism, the distal part of the right common iliac artery, internal and external iliac arteries and superficial femoral arteries were filling defects consistent with thromboembolism. Following, the patient was operated for embolectomy and she was discharged post-operative on the 10th day.

DISCUSSION

Conversion disorders, usually following severe stress, manifest itself as various and non-specific symptoms such as paralysis, aphonia, dyskinesia, presyncope, pseudo seizures. Thus, mimicking many organic pathologies. It is reported in literature that a significant number of patients (2-50%) misdiagnosed with conversion had, in fact, organic pathologies. Our case, diagnosed with APAO, had a story of Emergency Department presence with complaints such as agitation, crying, being beaten, a post-assault increase in the patient's pre-existing sciatic pain Therefore, conversion disorder was the first thing to consider in differential diagnosis.

"6P" findings (pallor, pulseless, perishing cold, pain, paraesthesia, paralysis) has a significant role in APAO. Findings in the cases presented in literature included sudden severe pain in the leg, numbness, coldness, paleness, and pulselessness. However, contrary to the literature, the main APAO symptoms and findings were not present when the patient presented to the Emergency Department in our case.

Peripheral nerves and skeletal muscles are the tissues most sensitive to ischemia. Irreversible changes take place as a result of 6 hours exposure to anoxia in room temperature. In cases when the length of time from the beginning of the complaints is less than 12 hours, the extremity conservation rate is 93% and death rate is 19%. In cases when the length of time is more than 12 hours, extremity conservation rate diminished to 78% and death rate escalates to 30%. In our case, it raised suspicion of the anamnesis obtained because the initial treatment revealed no APAO findings although it was reported that 10 hours had passed since the symptoms started. In the treatment repeated after 1 hour, the typical findings were observed to have developed.

CONCLUSION

Conversion disorder and acute arterial emboli can be confronted in different patterns. This APAO case proved us that anamnesis can be misleading and manipulating to evaluate patients. In differential diagnosis, physical examination should be done carefully without the influence of history.

P153

Case Presentation

PSYCHOGENIC POLYDIPSIA WITH HYPONATREMIA: A CASE REPORT

M Aydın, UY Cavus, S Genç, R Sarıkaya, AS Yaman, S Yıldırım
Emergency department, Dışkapı Yıldırım Beyazıt Training and Research Hospital, Ankara, Turkey

Corresponding author: Mr Cavus Umut (acildrumut@yahoo.com)

Key-words: Psychogenic ; Polydipsia ; Hyponatremia

INTRODUCTION:

Although polydipsia is a rare condition that characterized by too much water ingestion without the physiological stimulus, It is common in schizophrenia patients that for a long time hospitalized and treated.

While in true diabetes insipidus the polyuria is due to a defective secretion of antidiuretic hormone (ADH), in psychogenic polydipsia (PPD) there is a disturbance in thirst control not caused by impairment of production or release of ADH. Up to coma and death may lead to serious complications, such as hyponatremia, polydipsia and hyponatremia is accordingly important to realize. The differential diagnosis of psychogenic polydipsia and other important test of the water restriction test.

In this case report, we presented a patient who is chronic schizophrenia in hyponatremia due to after the polydipsia.

CASE REPORT:

62-year-old male patient was admitted for with sudden onset of nausea, vomiting twice and shortness of breath. In the patient's history, 22 years follow-up was learned that due to the treatment of schizophrenia and hypertension. The patient was consuming about 10 L of water four days. The patient who drinks more than 10 liters of water a day for 4 days; polydipsia can cause diabetes mellitus, diabetes insipidus, the tumor and had no history of any drug use.

On physical examination, his blood pressure, temperature and respiratory rate were 150/90 mm Hg, 36.5 °C and 14 breaths/min, respectively. His laboratory findings were as follows; hemoglobin: 15.2 g/dl, leukocytes: 15 300 cells/mm³; Hct: 46.1 %; platelets: 323 000 per mm³. At that time, the serum electrolytes were as follows: sodium 115 mmol/L, potassium 4.1 mmol/L, chloride 92 mmol/L. Renal, liver screening tests and cardiac enzymes (creatinine phosphokinase and troponin I) were normal.

The patient's vomits were connected to hyponatremia. Hyponatremia due to psychogenic polydipsia was diagnosed and treatment started. Treatment was initiated with normal saline at a rate of 2000 cc/day, while oral fluids were restricted to 1 liter a day. After 3 days of treatment his symptoms showed significant improvement. The patient's symptoms recovered, the third day of laboratory values looked sodium 134 mmol / L, potassium 4.2 mmol / L, chloride: 101 mmol / L. The patient was discharged recommend to contact the psychiatry.

DISCUSSION:

Compulsive water drinking behaviors of psychiatric patients are approximately 80% of the schizophrenic. In addition, other psychotic conditions, personality disorders, autism, mental retardation, and have also been described in cases of dementia. Even people who had no previous psychiatric illness in a significant PPD may occur. In this case was schizophrenia therapy for 22 years. Although a well-defined table clearly understood pathophysiology. The situation is probably complex and multifactorial. Inappropriate ADH secretion is accompanied by many patients with PPD. This may be due to the use of psychiatric drugs. Some publications psychiatric disease itself is said to be the main cause responsible for the increased dopaminergic activity in polydipsia. In addition, dopamine hypersensitivity as tardive dyskinesia has been reported to be effective in the table. Non-genetic familial factors may also have the effect of the development of PPD. Those with a history of their family, for any reason, polydipsia PPD through imitation and identification mechanisms are more common. Furthermore secreted during stress, atrial natriuretic peptide (ANP) inhibits the secretion of vasopressin in intrahypotalamic. In addition to control by serotonin ANP stimulation of serotonin in the absence of removal of the inhibitory effect on dipsogenic polypeptide angiotensin-2 therefore is caused polydipsia.

Fluid restriction is sufficient in most cases the treatment of water intoxication. Fluid restriction was sufficient to have offered our

patients. In severe cases, however, hypertonic saline solution is recommended to provide an emergency.

CONCLUSION:

Polyuria, polydipsia and hyponatremia in patients with psychiatric disorders which can cause morbidity and mortality in severe clinical manifestations such as encephalopathy may occur. Therefore, psychiatric emergency department patients with primary disease symptoms questioned polydipsia and electrolyte imbalances should be ruled out before connecting.

P154

Case Presentation

STRYCNINE POISONING - CASE PRESENTATION

C. BOERIU, B. DOROFTEA, D. IOVANICI, P. POPESCU

Emergency department, Mures County Emergency Hospital, TARGU MURES, Romania

Corresponding author: Mme Iovanici Dina (dinaiovanici@yahoo.com)

Key-words: Strychnine poisoning ; tonic seizures ; Death by asphyxia

Strychnine is an alkaloid obtained from the seeds of Strychnos or Loganiaceae. It's present in crystal form, insoluble in water, soluble in alcohol, colorless, odorless, with bitter taste. Strychnine is a tetanizing toxin. It causes increased excitability of the nerve centers in the spinal cord which results in a loss of normal inhibition, leading to all the muscles contracting simultaneously. The symptoms usually appear within 30-60 min after exposure. The initial symptoms are tiredness , twitching of the muscles, agitation, and hyperreflexia, convulsions. These convulsions can begin after any minor stimulus and last from 30 seconds to 2 minutes. The convulsions are clonic initially, but are immediately followed by tonic contractions similar to convulsions due to tetanus. The patient remains conscious and has intense pain. Hyperexcitability recurs suddenly after 10 to 15 minutes. Repeated convulsions (1 to 10) are common before recovery or death. Complications are lactic acidosis, rhabdomyolysis and acute renal failure. Respiratory muscles(the diaphragm, thoracic muscles)are also affected. Death is usually caused by asphyxia. If the patient survives 6 to 12 hours the prognosis is good. The lethal dose for adults is 60-100 mg, one pill containing 0,05-0,1 g strychnine. This presentation is about a 24 year old patient who ingested 4-5 pills that contain Strychnine with alcohol, for recreational purpose. On arrival at the hospital he presented muscle pain, cramps and he was agitated (GCS=15).When passed from the ambulance stretcher to the consultation bed he developed the first tonic convulsion. He was given 5 mg Diazepam, the seizure stoping in less than a minute. After 15 minutes he developed the second seizure (to verbal stimulus). During his stay at the Emergency Ward he developed 4 tonic seizures. He was sedated with Diazepam to control the seizure and the agitation. He was admitted to the ICU where he was sedated for 24 hours, without developing any complications. 4 days after admission he was discharged.

P155

Case Presentation

WORMY EAR: A CASE OF A MYIASIS

M Bircan (1), C Candirli (2), UY Cavus (3), C Civelek (4), E Sönmez (4), AS Yaman (3)

1. Emergency department, Adnan Menderes University Practice and Research Hospital, Aydın, Turkey

2. Department of Oral and Maxillofacial Surgery, Karadeniz Technical University, Faculty of Dentistry, Trabzon, Turkey

3. Emergency department, Dışkapı Yıldırım Beyazıt Training and Research Hospital, Ankara, Turkey
4. Emergency department, Bezmialem Vakıf Gureba University School of Medicine, Istanbul, Turkey

Corresponding author: Mr Cavus Umut (acildrumut@yahoo.com)

Key-words: Myiasis ; Wormy ; Ear

INTRODUCTION

Myiasis is infestation of live humans and vertebrate animals with dipterous larvae which, at least for a certain period, feed on the host's dead or living tissue, liquid substances, or ingested food. It is a worldwide infestation with seasonal variation. Higher incidences occur in the tropics and subtropics of Africa and America. The disease-producing flies prefer a warm and humid environment; thus, myiasis is restricted to the summer months in temperate zones, while occurring year-round in the tropics. *Wohlfahrtia magnifica* in the family Sarcophagidae is predominant agents of myiasis in the human beings.

Adult female flies leave their larvae, especially of humans and animals, abrasions and cuts, eye, ear, nose and, the spaces organs such as anus. The larvae develop in organs in which a short time. Myiasis, the development of symptoms occurs in different organs. Aural myiasis has a wide clinical spectrum, from maggots in the ear to otalgia, otorrhea, perforation of the eardrum, bleeding, itching, tinnitus, furuncle of the external ear and restlessness. We report the larval infestation of *Wohlfahrtia magnifica* in behind the right ear of a 51-year-old male.

CASE REPORT

51-year-old male who got open wound behind the ear for one month, was admitted to our emergency department. Examination revealed live maggots on the ear. The maggots were approximately 8-10 millimeters long. No other pathological findings were observed upon physical examination of the man.

51-year-old male patient with a small ulcer in his right ear began about a month ago. The lesion has started to grow more slowly. The patient's lesion was consulted our clinic with right ear turned into open sores about the size of 10x6 cm. In his examination in the right ear over the open wound covered with granulation tissue that had plenty of moving live larvae. Morphological examination of the larvae revealed that they were *Wohlfahrtia magnifica*. Normal external auditory canal and middle ear were found to be evaluated under a microscope. The wound appearance and the specimens taken from tissue were suspected malignancy. The patient's ear was amputated with a 2 cm surgical margin of safety. Squamous cell carcinoma was diagnosed due to histopathological examination of specimens.

DISCUSSION

Myiasis caused by *Wohlfahrtia magnifica*, generally in humans has been reported. These are ophthalmomyiasis, orotracheal myiasis, external genital myiasis, vulvar myiasis, otomyiasis, mastoidectomy cavity and cutaneous myiasis.

Wohlfahrtia magnifica larvae infest the ear, eye and nose, damaging living tissues. It is found in southeastern Europe, southern and Asiatic Russia and the Mediterranean basin. The infestation is most often subcutaneous and produces a furunculoid or boil-like lesion; but it is also known to occur in wounds and certain body cavities. Myiasis associated with personal hygiene. Aural manifestations have been reported in neglected chronic lesions of patients with poor personal hygiene, children and mentally retarded adults. Our patient was a 51-year-old male and mentally retarded adult. He had open wound behind the ear for a long time.

The most common sign and symptoms of aural myiasis are maggots in the EAC, aural malodorous otorrhea (purulent secretion in the EAC), perforation of the tympanic membrane, bleeding, hearing impairment, otalgia and pruritus. There were foul-smelling, and

purulent secretion in the right ear of our patient, but the tympanic membrane was intact.

Although myiasis is a self-limiting disease (maggots leave their host when they are fully mature) if it is not complicated, it can be associated with severe and sometimes fatal complications. Therapy of aural myiasis consists of removing the maggots, local disinfection, and antibiotic treatment for secondary infections. Orbital, ear and nasal myiasis can cause extensive necrosis and tissue destruction and require immediate removal of the infestation. Complications such as lesions of the tympanic membrane, involvement of the middle ear or destruction of the petrous bone require established surgical interventions. In our case, the right ear amputation was due to the malignancy and necrosis.

CONCLUSION

Systemic examination of the patients, especially those who are neglected and have poor hygiene, should be carefully considered in all chronic wounds evaluated in detail and myiasis diagnosis must be always kept in mind.

P156

Case Presentation

RECTUS SHEATH HEMATOMA: A RARE CAUSE OF ABDOMINAL PAIN

MK Bayram (1), UY Cavus (1), K DibeK (1), B Erdem (2), S Genç (1), S Yıldırım (1)

1. Emergency department, Dışkapı Yıldırım Beyazıt Training and Research Hospital, Ankara, Turkey

2. Neurology department, Dışkapı Yıldırım Beyazıt Training and Research Hospital, Ankara, Turkey

Corresponding author: Mr Cavus Umut (acildrumut@yahoo.com)

Key-words: Rectus sheath ; Hematoma ; Abdominal pain

INTRODUCTION

Bleeding is one of the major complication of receiving anticoagulant therapy. In the use of low molecular weight heparins (LMWH), one of the advantages is ease of use. If LMWH is applied intramuscular (im) unintentionally, it may cause hematomas in the applicated area. Rectus sheath hematoma (RSH) is an uncommon cause of abdominal pains. It usually occurs spontaneously or after trauma. RSH is usually formed in infraumbilical of abdominal wall. It can be misdiagnosed as an intraabdominal tumor or collection secondary to an infection. It is likely to be misdiagnosed in emergency conditions. Sometimes patients take the diagnosis of acute abdominal pain and can be an emergency laparotomy. Especially when abdominal pain accures or an abdominal mass founds in patients with bleeding diathesis or anticoagulant drug use, hematoma should be considered in diagnosed. In this article, we presented a case of RSH detected after im LMWH application.

CASE

57-year-old woman applied our emergency service with hemiparesis on the right side and unconscious state. On neurological evaluation, her eyes were deviated to the left side, and there was slight right-sided hemiparesis. The cranial computed tomography (CT) revealed parietotemporoccipital infarct on the left side. Her laboratory findings were as follows; haemoglobin: 9.5 g/dl, platelets: 218 000 per mm³. The patient was given enoxaparin sodium (120 mg/day total, twice a day subcutaneously), ramipril + hydrochlorothiazide (5 mg + 12.5 mg/day, orally). The patient was admitted to the neurology department. She began to improve also neurologically on the 5th day of admission, her eyes were open, and she looked conscious. She was able to obey orders and

complained of constant severe lower abdominal pain. In physical examination prevalent sensibility and prevalent muscular defense was detected, a mass detected in the left lower quadrant of the abdomen. During the follow-up haemoglobins are decreasing. Ultrasonography (USG) revealed a hypoechoic well defined 20 cm×13 cm mass extending to the midline in the left lower quadrant of the abdomen. A lower abdominal CT scan obtained on the same day of USG demonstrated mass which were '30×14×73' mm, of heterogeneous density, well defined, containing fluid levels, compressing and impressing upon the intestine inferolaterally, located in the rectus sheath. Understood, enoxaparin was made into the rectus muscle. RSH was diagnosed. In treatment we made bed rest, analgesic and cold applications. It is detected that hematoma was completely resolved spontaneously.

DISCUSSION

The main complication of anticoagulant therapy is bleeding. The risk of hemorrhage, is correlated with the patient, as well as the intensity and duration of LMWH and acetylsalicylic acid treatment. Application errors, such as the present case, constitutes an additional risk of bleeding and may sometimes lead to serious morbidity. RSH is important for may lead to misdiagnosis and unnecessary negative laparotomy, although it is rare and usually resolves spontaneously. In the etiology, severe coughing, hyperextension exercises, blunt or penetrating abdominal trauma, especially secondary spontaneous bleeding in bleeding diathesis patients are considered. In our case, have an increased tendency to bleeding due to treatment with enoxaparin and made mistakenly injected into the rectus muscle causes RSH. Sometimes, RSH cases can be taken to an emergency laparotomy for diagnosis and treatment of acute abdominal pain. Unlike patients with surgical acute abdomen, these patients' condition is less severe. In diagnosing, questioning the patient's history, use of drugs worth and physical examination be done carefully. USG may be useful in the diagnosis of RSH, but CT is useful for hematoma's size, location and bleeding sites of hematoma. Under observing, patients with symptoms for emerging signs should be considered of the differential diagnosis and treatments in addition to the underlying disease especially interventional procedures and complications of medication. In patients with bleeding tendency, newly symptoms should be evaluated primarily bleeding, in follow-up hemoglobin decreasing should be considered of hematoma. In our case, RSH appeared with abdominal pain and fall of hemoglobin who has been taking and made mistake in treatment.

As a result with this case we wanted to emphasize the importance of managing the anticoagulant therapy and their complications.

P157

Case Presentation

EPILEPTIC SEIZURE IN CARBAMAZEPINE INTOXICATION: A CASE REPORT

M Bircan (1), UY Cavus (2), R Sarıkaya (2), AS Yaman (2), S Yıldırım (2)

1. Emergency department, Adnan Menderes University Practice and Research Hospital, Aydın, Turkey

2. Emergency department, Dışkapı Yıldırım Beyazıt Training and Research Hospital, Ankara, Turkey

Corresponding author: Mr Cavus Umut (acildrumut@yahoo.com)

Key-words: Epileptic seizure ; Carbamazepin ; Intoxication

INTRODUCTION

Carbamazepine is a commonly used antiepileptic agent. Normal dosage of carbamazepine is twice daily 200-400 mg (maximal therapeutic dosage 2000 mg day⁻¹). There is no specific antidote

for the treatment of carbamazepine intoxication and supportive therapy is generally recommended. Carbamazepine is not removed through conventional hemodialysis as it highly bound to proteins. Charcoal hemoperfusion has been reported as the standard effective treatment method. Herein we present the patient who was epileptic seizure related to overdosage of carbamazepine.

CASE REPORT

A 30-year-old male (80 kg) was admitted to the emergency service with the neurological complaints that are double vision (diplopia), dysarthria, tremor, ataxia and headache. His medical story was learned that he ingested overdosage carbamazepine (10 tablets of 400 mg; Tegretol CR 400™) within one hour for suicide. No other drugs were ingested, which was confirmed by general toxicology screening. On admission the patient was conscious with a blood pressure of 140/85 and a pulse of 95. He was treated with gastric lavage and 50 g activated charcoal twice with an interval of 8 h. Also the sodium serum concentration, as well as other electrolytes, arterial blood gases and kidney, and liver functions remained normal. The first serum level of carbamazepine was assayed 22.9 µg/ml (Normal range: 4-12 µg/ml). No ECG changes or arrhythmias occurred and he remained haemodynamically and respiratory stable. He was generalized tonic-clonic seizures during 5-minute in the emergency room. Seizure was stopped after the 5 mg intravenous diazepam was performed. All other reasons were ruled out which may cause epileptic seizure by computed brain tomography and biochemical tests. The patient was hospitalized in intensive care unit followed by 9 days. No additional problem occurred. Carbamazepine level of 6.2 µg/ml was, upon recovery of neurological symptoms was treated conservatively with recommendations of psychiatry. The patient was discharged on the ninth day of hospitalization.

DISCUSSION

Carbamazepine reduces the propagation of abnormal impulses in the brain by blocking sodium channels, thereby inhibiting the generation of repetitive action potentials in the epileptic focus. Carbamazepine is absorbed slowly and distributed erratically following oral administration. It enters the brain rapidly because of its high lipid solubility. Carbamazepine levels greater than 85 mg/L were associated with severe toxicity. Following oral intake rapidly through the central nervous system. Soaring on the therapeutic dose range increased symptoms and clinical findings observed distortions. 40 picograms/liter concentrations of drugs on the fatal course. In our case, 50 mg/kg carbamazepine was detected in post-epileptic seizures is rarely seen.

Montgomery et al found that the reason for ingestion was correlated significantly with outcome. Far more exposures to the drug are unintentional (57.2%) than intentional (37.6%). A small number of people experienced the effects of toxicity secondary to adverse reactions rather than deliberate use poisonings (4%). Montgomery et al reports that severity of symptoms at the time of initial contact with the poison control center correlates with outcome severity for children and adults. However, the amount of time between ingestion and poison control center contact did not alter the correlation between initial severity of symptoms and final outcome severity.

Symptoms of acute carbamazepine poisoning is dose-dependent manner. Carbamazepine poisoning (over 50 mg/kg doses) findings such as central nervous system depression (loss of consciousness, coma, seizures) and cardiotoxicity (minor changes in the EKG) can be seen. There is no specific antidote for the treatment of carbamazepine intoxication and supportive therapy is generally recommended, as we did. Of the exposures to carbamazepine reported to the American Association of Poison Control Centers in 2008, 389 resulted in no significant outcome and 69 had a significant consequence. No deaths were reported

CONCLUSION

In this report we want to emphasize: Carbamazepine poisoning which can lead to complications of vital importance; worth thinking patients receiving this drug should be followed closely

P158

Case Presentation

NEURORADIOLOGIC FINDINGS IN DENGUE ENCEPHALITIS

SE Cevik (1), M Ozhabes (2), OD Cakir (3), O Guneyssel (4)

1. Department of Emergency Medicine, Beykoz State Hospital, Istanbul, Turkey
2. Department of Radiology, Beykoz State Hospital, Istanbul, Turkey
3. Emergency Medicine Clinic, Umraniye Education and Research Hospital, Istanbul, Turkey
4. Emergency Medicine Clinic, Dr Lutfi Kirdar Kartal Education and Research Hospital, Istanbul, Turkey

Corresponding author: Mme Eren Çevik Sebnem (erenseb@yahoo.com)

Key-words: Dengue ; encephalitis ; neuroradiologic findings

Viral encephalitis is one of the infectious disease emergencies that can cause significant patient morbidity and mortality. Dengue is a mosquito-borne viral infection. It is a flavivirus infection which causes flu-like illness, and occasionally develops into a potentially lethal complication called severe dengue. Dengue is found in Eastern Mediterranean Region including our country, Africa, India, Far East countries and also in Hawaii, Caribbean Islands, partially in southern states of USA and Australia. Dengue virus is although considered as a non-neurotropic virus but recently various neurological manifestations including encephalitis, myelitis, peripheral neuropathy and myositis have been reported.

A 61 year old male patient without any systemic disease known was admitted to our Emergency Department (ED) with aphasia. Glasgow Coma Scale was 11(E4V1M6). He was brought to our ED about four hours after the development of symptoms. It was learned that he had had a 5 days history of flu-like illness. Blood pressure measured in our ED was 90/60 mmHg, pulse rate 73 pulse/min, respiration rate 16 breaths/min, temperature 37.9°C and oxygen saturation 98%. ECG demonstrated normal sinus rhythm. On neurologic exam, right hemiparesis and deviation of eyes to left side were demonstrated. The other system examinations were normal. Complete blood count, biochemistry, coagulation tests and urinalysis were also in normal ranges. Sedimentation was 22mm/hour and CRP was 1.16mg/L. He underwent non-contrast computed tomographic (CT) scan, non-contrast magnetic resonance imaging (MRI) and diffusion MRI. CT scan showed low density signals in left thalamus, and MRI showed T2 prolongation, expansion and edema in bilateral thalami. MRI also revealed signal changes in bilateral lentiform, caudate nuclei and putamen which were more pronounced on the left and hyperintense signal changes on T2 weighted and FLAIR sequence in periventricular deep white matter, centra semiovalia and corona radiata. Diffusion MRI also showed signal changes in bilateral thalami. According to the neuroradiologic findings eastern equine encephalitis, extrapontine myelinolysis and metabolic causes were thought in the differential diagnosis. The patient was referred to a neurologist and infectious disease specialist. After the consultations, patient was referred to another infectious diseases clinic in an advanced medical centre for further care. It was learned that in the clinic lumbar puncture (LP) and cerebrospinal fluid (CSF) culture were performed. LP had revealed clear CSF, pandy (++) , 10 leucocytes (90% PNL), 106mg/dl protein, 74mg/dl glucose and blood glucose was 129mg/dl simultaneously. CSF culture was sterile. Antiviral therapy (aciclovir) and antibiotherapy (ampicillin) had been initiated. And patient maternal sample was sent to Refik Saydam Public Health Centre. The final diagnosis was Dengue virus.

Viral encephalitis is one of the infectious disease emergencies that can cause significant patient morbidity and mortality. Clinical suspicion of a central nervous system infection begins with patient history. Our patient had had a 5 days history of flu-like illness. Physical examination is an important next step in the evaluation of the patients. In our patient right hemiparesis and deviation of eyes to left side were demonstrated. Although no specific treatment is available for Dengue, rapid diagnosis is important for the institution of public health controls. Because of that neuroradiologic imaging is useful. In our patient MRI showed T2 prolongation, expansion and edema in bilateral thalami, signal changes in bilateral lentiform, caudate nuclei and putamen and also in periventricular deep white matter, centra semiovalia and corona radiata.

Dengue virus has been regarded as a non-neurotropic virus. However there are reports describing neurological involvement in dengue virus infection. The neurological spectrum of dengue patients has been limited because of small number of case reports, paucity of imaging and neurophysiological studies. In this case we report clinical, radiological and neurological findings in a patient admitted to an ED of a secondary care hospital, so as to learn about the neurological spectrum of dengue virus encephalitis.

P159

Case Presentation

A VERY RARE CAUSE OF ACUTE ABDOMEN: GOSSYPIBOMA

MF Inci (1), F Ozkan (1), M Okumus (2), A Koylu (1), MH Sucakli (3), M Yuksel (1)

1. Radiology, Kahramanmaraş Sutcu Imam University Faculty of Medicine, Kahramanmaraş, Turkey
2. Emergency Medicine, Kahramanmaraş Sutcu Imam University Faculty of Medicine, Kahramanmaraş, Turkey
3. Family Medicine, Kahramanmaraş Sutcu Imam University Faculty of Medicine, Kahramanmaraş, Turkey

Corresponding author: Mr Ozkan Fuat (drfozkan@yahoo.com)

Key-words: Gossypiboma ; Computed tomography ; Acute Abdomen

Introduction: Gossypiboma is a term used to describe a retained surgical swab in the body after a surgical procedure. Gossypiboma is a rare surgical complication, but it may lead to peritonitis, acute abdominal pain, intraperitoneal abscess, bowel obstruction, or perforation. It could be a diagnostic dilemma with associated medico-legal implications, and is usually detected during the first few days after surgery; however, it may remain undetected for many years. Radiological imaging modalities, particularly computed tomography, are very valuable in diagnosis of gossypiboma

Case report: 37-year-old male patient was admitted to emergency service with gradually increased right upper quadrant tenderness, abdominal pain, fever and fatigue which started a few days ago. He stated that he underwent right nephrectomy at another center six months ago. His physical examination revealed rebound and localized tenderness in right upper quadrant and subfebril fever. Laboratory results were unremarkable except for mild leukocytosis and neutrophilia. Abdominal x-ray showed round radiopacity include linear folded radiopaque appearance measured as 7x6 cm with smooth margins in the right upper quadrant. Subsequent, intravenous contrast enhanced abdominal computed tomography was performed and hypodense lesion measured as 64x83x77 mm with regular borders contained folded hyperdensity linear foreign body with enhancing wall in the subhepatic area.

According to clinical and radiological findings of patient, preliminary diagnosis was made as Gossypiboma with abscess formation. The result of pathological examination of patient after

surgical operation confirmed the preliminary diagnosis of Gossypiboma with abscess formation.

Conclusion: The diagnosis of gossypiboma is difficult because its symptoms and radiological findings are not specific, it is seen rarely and may not be considered although a detailed anamnesis was obtained.

In this case, we aimed to emphasize that gossypiboma should be considered in patients who have atypical abdominal pain and intraabdominal abscess symptoms particularly in patients had abdominal operation, even the time elapsed from surgery is long.

P160

Case Presentation

CRICOPHARENGEAL ACHALASIA DUE TO ACUTE INTRAKRANIAL EVENT

R Altun (1), E Aytemiz (2), AC Dülger (3), R Dursun (4), H Gönüllü (5), S Karadas (5)

1. gastroenterology departmant, Van Region Training and Research Hospital, van, Turkey
2. Internal medicine, Yüzüncü Yıl University, van, Turkey
3. gastroenterology departmant, Yüzüncü Yıl University, van, Turkey
4. emergency department, Van Region Training and Research Hospital, van, Turkey
5. emergency department, Yüzüncü Yıl University, van, Turkey

Corresponding author: Mr Dursun Recep (drrecep@dursun@hotmail.com)

Key-words: esophageal sphincter ; dysphagia ; Flexible endoscopy

INTRODUCTION

Cricopharyngeal achalasia is persistent spasm or failure of relaxation of the upper esophageal sphincter. It is classified as primary if the abnormality is confined to the cricopharyngeus muscle without neurologic or systemic cause, and secondary if produced by another disease process. Former is subdivided into idiopathic and intrinsic myopathies (eg, polymyositis, inclusion body myositis, muscular dystrophy, and hypothyroidism). Latter includes amyotrophic lateral sclerosis, polio, oculopharyngeal dysphagia, stroke, and peripheral nerve disorders such as myasthenia gravis and diabetic neuropathy. Flexible endoscopy usually shows cricopharyngeal bar, which results from failure of the cricopharyngeus to relax but normal forward movement of the larynx on swallowing. Barium swallow shows a characteristic prominent projection on the posterior wall of the pharynx at the level of the lower part of the cricoid cartilage. Cricopharyngeal myotomy, calcium channel blockers, local injection of botulinum toxin and surgical myotomy are used for management of the disease.

CASE

A 77-year-old-man admitted to emergency unit due to acute dysphagia. He was taking antihypertensive drugs. Both of physical examination revealed no abnormality. Upper gastrointestinal endoscopy showed cricopharyngeal bar and large polypoid mass in the duodenal bulb. CT of brain also revealed wide lakunar infarctions. Nifedipine 20 mg twice daily and low molecular weight heparin were prescribed.

DISCUSSION

Oropharyngeal dysphagia is a transfer dysphagia and consists of a wide spectrum disorders affecting the oropharynx, larynx, and upper esophageal sphincter (UES). It mostly due to central nervous system (CNS) diseases. Oropharyngeal dysphagia may herald acute neurologic disorders as presented in the current case.

P161

Case Presentation

MASKED CLINICAL PICTURES (MACROSCOPIC HEMATURIA AND TOXIC HEPATITIS) DEPENDING ON ST. JOHN'S WORT POISONING: TWO CASE REPORTS

S Avcı (1), UY Cavus (1), FO Cavus (2), K Dibek (1), R Sarıkaya (1), S Yıldırım (1)

1. Emergency department, Dışkapı Yıldırım Beyazıt Training and Research Hospital, Ankara, Turkey
2. Department of family medicine, Dışkapı Yıldırım Beyazıt Training and Research Hospital, Ankara, Turkey

Corresponding author: Mr Cavus Umut (acildrumut@yahoo.com)

Key-words: St. John's Wort ; Hematuria ; Toxic hepatitis

INTRODUCTION

Herbal treatment is used commonly as an alternative genre towards medical treatment in the majority of diseases. Hypericum perforatum is a wild herb grown in Turkey and Europe. It is known as St. John's Wort (SJW) among the folk. SJW is used as in treatment of depression, parasitic diseases, ulcer and also as an analgesic, tranquilizer and wound reparative. Main side effects of SJW are symptoms and they are like; nausea, diarrhea, insomnia, anxiety, fatigue, dryness of mouth, dizziness, headache, allergic skin reactions and paresthesia. Moreover toxic hepatitis cases had been reported due to SJW. Researches are not adequate about SJW whose side effects are not limited by these symptoms. Yet we have not observed any hematuria case due to SJW usage. To emphasize the importance of subject, we presented macroscopic hematuria and toxic hepatitis emerging by the utilization of SJW.

CASE 1

A male patient aged 29, admitted to Emergency Department (ED) as he was complaining about his eye turning to yellow and having headaches. The patient explained that he had been drinking a couple of boiled SJW, one spoon of each time and continued and for three days due to complaint of dyspepsia. There was no important indication in his medical back ground. His sclera and skin was icteric. Tenderness in right upper quadrant determined but hepatosplenomegaly was not detected. Alanine aminotransferase (ALT) 201 u/l, aspartate aminotransferase (AST) 201 u/l, gamma-glutamyl transferase (GGT) 510 u/l, total bilirubin 8,6 mg/dl, direct bilirubin 5,4 mg/dl were in laboratory examinations. No findings revealed as dilatation, mass and gall stone in hepatobiliary ultrasonography. He was hospitalized by the diagnosis of acute hepatitis. Intravenous (i.v.) fluid was given to the patient whose consume of SJW was stopped. Additional tests were performed to find hepatitis etiology. Viral hepatitis, TORCH, syphilis, autoimmune hepatitis tests were negative. The pathology of patient was thought to be occurred by means of SJW. On the 7th day of treatment ALT, AST, GGT total bilirubin, direct bilirubin, improved to respectively 31, 146, 261 u/l and 1.4, 0.9 mg/dl. The cured patient discharged with the advice of refraining from SJW.

CASE 2

A female patient aged 33 presented to ED complaining about bloody urine. There was no important indication in her medical back ground. Menstrual bleeding stopped five days ago. She drank a cup of boiled SJW for her anxiety. She said that the color of urine was red after severe groin pain. The physical examination was normal except from macroscopic hematuria. The laboratory analysis was normal except from exceeding erythrocyte in urinalysis. I.v. fluid was given to the patient whose consume of SJW was stopped. No pathology detected which can cause hematuria that urine tract stone, cystitis, tumor etc. Therefore this condition

was thought by the effect of SJW. The cured patient discharged with the advice of refraining from SJW.

DISCUSSION

SJW contains biological active ingredients which conjoin neurotransmitters and prevents re-uptake some of them. In randomised controlled trials about SJW which was commonly preferred for its antidepressant and anxiolytic characteristics, it was proved that SJW is superior to placebo but less effective than tricyclic antidepressants. Viruses, autoimmune diseases, toxins and drugs can cause acute hepatitis. Most of the herbal-oriented materials carries hepatotoxic potential. Toxic hepatitis composes 1% of chronic hepatitis and cirrhosis, 10% of acute hepatitis and 10-20% of fulminant hepatitis. The symptoms of toxic hepatitis may appear hours, days or months after the exposure to factors. In treatment primarily the exposure to SJW should be avoided. Hematuria is a common symptom in ED. Urinary tract calculi, tumors, iatrogenic injury, trauma, hemoragic cystitis and bleeding diathesis may cause hematuria. There was no pathology in our second patient that may cause hematuria. This condition intensified our opinion about hematuria that emerged due to SJW.

CONCLUSION

Herbal originated material usage must be questioned in patients who was admitted to ED with different symptoms.

P162

Case Presentation

A RARE CAUSE OF ACUTE LEFT FLANK PAIN: ENDOMETRIOSIS

F Ozkan (1), MF Inci (1), S Resim (2), E Efe (2), S Bozkurt (3)

1. Radiology, Kahramanmaraş Sutcu Imam University Faculty of Medicine, Kahramanmaraş, Turkey
2. Urology, Kahramanmaraş Sutcu Imam University Faculty of Medicine, Kahramanmaraş, Turkey
3. Emergency Medicine, Kahramanmaraş Sütçü İmam University School of Medicine, Kahramanmaraş, Turkey

Corresponding author: Mr Ozkan Fuat (drfozkan@yahoo.com)

Key-words: Endometriosis ; flank pain ; computed tomography

Pelvic endometriosis can rarely involve the urinary tract and involvement of ureter is very rare. Although ureteral endometriosis presents with non-specific symptomatology, patients may present with evident symptoms such as acute left flank pain due to hydronephrosis as seen in our case.

29-year-old female patient who presented with acute left flank pain to the emergency room. On physical examination, her left kidney was found to be enlarged. She had one child and her menstrual cycles were normal, regular and lasting for 3-5 days. An ultrasonography showed grossly hydronephrotic left kidney with left hydroureterosis. In addition, ultrasonography showed mild hyperintense solid lesion containing millimetric cystic components, measured as 46x24 mm which extending to the lumen of the bladder in the left ureterovesical junction. Abnormal Doppler flow was not detected in the lesion. In contrast enhanced computed tomography, lesion showed no evident contrast enhancement. In cystoscopy, lesion surrounding the left ureteric orifice was resected and pathological diagnosis was consistent with endometriosis.

Endometriosis is a common disorder affecting 5-10% of women of reproductive age. It is a biologically benign, even though aggressive, which can exceptionally involve the urinary tract and the ureter in particular. Ureteral involvement occurs rarely and accounts for only 0.1-0.4% of cases. The clinical characteristics of involvement of the ureters by endometriosis are not so clear. Although ureteral endometriosis leads to variable degree of ureteral obstruction, preoperative diagnosis often may be difficult

and delayed because of non-specific presentation. About 25% patients develop irreversible renal damage because of the delay in diagnosis. Thus, it is suggested that imaging of the urinary tract. In conclusion, involvement of ureters by pelvic endometriosis is uncommon but should be suspected in a pre-menopausal woman with distal ureteral obstruction and also should be kept in mind that it may be presented with acute left flank pain.

P163

Case Presentation

BRANCH RETINAL VEIN OCCLUSION ASSOCIATED WITH TAMOXIFEN USE: A CASE REPORT

A Karatas (1), E Kaya (2), M Kaya (3), AC Kilic (3), SA Kose (1), HI Onder (3), A Saritas (4), M Tunc (3)

1. Obstetrics and Gynecology, Duzce University Medical Faculty, Duzce, Turkey
2. Pharmacology, Duzce University School of Medicine, Duzce, Turkey
3. Ophthalmology, Duzce University Medical Faculty, Duzce, Turkey
4. Emergency department, Duzce University School of Medicine, Duzce, Turkey

Corresponding author: Mr Saritas Ayhan (a_saritas@hotmail.com)

Key-words: Breast cancer ; branch retinal vein occlusion ; tamoxifen therapy

Tamoxifen is a selective estrogen receptor modulator widely used in the treatment of hormone-responsive breast cancer. Tamoxifen-induced ocular complications are very rare. A post-menopausal woman with the carcinoma of left breast, had presented with sudden loss of vision. The patient had been on tamoxifen therapy 20 mg daily for the last 3 years. Fundus examination showed left branch retinal vein occlusion. Fluorescein angiography and optical coherence tomography confirmed the diagnosis. Tamoxifen therapy was discontinued. Although branch retinal vein occlusion is rare, careful evaluation of patients with visual symptoms on tamoxifen therapy is required.

P164

Case Presentation

SPONTANEOUS HEMOPNEUMOTHORAX MIMICKING CONVERSION DISORDERS: A CASE REPORT

M Aydın (1), UY Cavus (1), E Hasbek (1), F Kirar (2), DB Koroğlu (1)

1. Emergency department, Dışkapı Yıldırım Beyazıt Training and Research Hospital, Ankara, Turkey
2. Emergency department, Dr. Lütfi Kırdar Kartal Education and Research Hospital, İstanbul, Turkey

Corresponding author: Mr Cavus Umut (acildrumut@yahoo.com)

Key-words: Spontaneous hemopneumothorax ; Mimicking ; Conversion

INTRODUCTION:

Spontaneous hemopneumothorax (SHP) may be mistaken with conversion disorders (CD) for presentation of clinical symptoms is observed rarely. The coexistence of air and blood in the pleural cavity is called SHP that's not associated with trauma. Most of the patients with SHP are adolescent males. SHP is usually seen with chest pain, dyspnea in the clinical symptoms, however may be presented with rare and nonspecific symptoms as presyncope and feeling faint that's a very difficult condition for differential diagnosis of SHP with CD. We reported the patient who was frequently admitted to the emergency department with feeling faint and presyncope complaints, with delayed SHP diagnosis cause of mimicking CD.

CASE REPORT:

A 23 year-old male patient admitted to the emergency department with the complaint of presyncope and feeling faint. In patient's background information, patient specified that, he has applied to the emergency service with feeling faint and presyncope complaints frequently and he has been using antidepressant for the last month. Patient vitals were the following: temperature 36.6 °C, pulse 72 /min, blood pressure 120/70 mmHg, respiration count 14 /min. In his physical examination, respiratory sound of left lung inferior zone had decreased. Laboratory results: WBC 14.280 /μL, HGB 10.3 g/dl. Posteroanterior lung X ray showed massive hemopneumothorax on the left side. Emergency thoracotomy was planned after the patient was diagnosed as having haemopneumothorax with thorax CT. 3000 cc hemoragic fluid was deflated in the operation. Two arterial collaterals were observed to extend from subclavian artery to the left upper lobe apical bulla. It was assumed that bleeding originated from there. Intraoperative bleeding control was made. No postoperative complication has happened so the patient was discharged with full recovery.

DISCUSSION:

We presented a SHP patients that was misdiagnosed as CD. The atypical presentation of clinical symptoms and manifestation of psychiatric symptoms misled the physicians, and they diagnosed psychiatric disorders. SHP is approximately observed young male who are 20-40 year-old age group. SHP is an infrequently clinical entity that was initially described by Laennec, in 1828. In the pleural cavity, presence of more than 400 mL of blood with spontaneous pneumothorax is defined as SHP that's appeared in the patient with spontaneous pneumothorax at the rate of 1% to 12%. Three mechanisms that torn pleural adhesion and congenital aberrant vessels between the parietal and visceral pleurae, and rupture of the vascularized bullae and underlying lung parenchyme are accused of bleeding in SHP. The clinical features of SHP is frequently presented with chest pain and dyspnoea in addition, hypotension may occurred in association with the severity of bleeding. Symptoms as dizziness, syncope, and blurred vision are seen during the change in blood pressure cause of bleeding in the pleural cavity and this symptoms are mimicked clinic presentation of psychiatric disorders especially CD. In our patient, although he is frequently admitted with feeling faint and presyncope, they misdiagnosed as CD without carefully evaluated. In our evaluation, hemodynamic status of patient was stable however 3000 cc hemoragic fluid is evacuated. CD is frequently presented neurological symptoms as decrease of coordination or balance, paralysis, difficulty swallowing, inability to speak, vision problems, deafness, seizures or convulsions. In the reported case of literature, CD is approximately mimicked neurological disorders but simulation symptoms of SHP is not reported as interesting. In our patient, posteroanterior chest X ray is observed massive hemopneumothorax on the left side. The treatment of SHP is included tube thoracostomy, management of hypovolemia and surgery for treatment of the bleeding source with thoracotomy or video-assisted thoracoscopic surgery (VATS). In this patient, we treated with thoracotomy.

CONCLUSION:

CD can mimic many disease therefore the differential diagnosis of CD may be difficult. We should diagnosed CD after careful evaluation for differential diagnosis and should redolent of mimicking symptoms of SHP.

P165

Case Presentation

AN UNUSUAL MATERIAL OF CHEMICAL BURN: RANUNCULUS ARVENSIS

O Damar, HM Durgun, E Ozcete, A Ozhasenekler, Y Zengin
Emergency Department, University of Dicle, Medical School, Diyarbakir, Turkey

Corresponding author: Mr Ozhasenekler Ayhan (drhasenek@hotmail.com)

Key-words: Ranunculus arvensis ; knee pain ; burn

Objective: We aimed to report a case of burn due to improper public use of Ranunculus arvensis, known as butter flower.

Introduction: Ranunculus arvensis, a member of the Ranunculaceae family, is a wild herb traditionally used for rheumatoid arthritis and psoriasis in China and Far East. Also grown in our country in Mediterranean and Southeastern Anatolia regions in high-altitude and fertile soils, it is pulped and wrapped around the painful joint by elderly. Since it's poisonous, it causes burns at the joint when used as fresh. In this paper, an elderly female was reported, who used this herb by wrapping it around her leg for a painful knee and presented with a burn at the knee region.

Keywords: Ranunculus arvensis, knee pain, burn

Case report: A 75-year-old female presented to emergency department with a wound in her right knee. Her history was remarkable for long-standing knee pain with an unsuccessful trial of medical therapy. She told that she pulped butter flower (Ranunculus arvensis) and wrapped it around her right knee, kept her knee closed for two days during when she had a burning sensation and numbness in her knee, and noticed a wound after she opened the wound. She had a history of cardiac valve replacement. On physical examination, she had a good general status, was conscious and had vesiculo-bullous lesions of semicircular shape sharply demarcated from the healthy skin, resembling 2nd degree burn scar, in her right knee. Other systems were normal. Her vital signs were as follows: blood pressure: 120/80 mmHg, pulse rate: 64 bpm, respiratory rate: 18/min, and body temperature: 36.5°C. Laboratory examinations were in normal limits. Her wound was accepted a burn and debrided. Tetanus toxoid was administered and twice daily dressings with serum physiologic-soaked, silver sulphadiazine-coated drapes. No infection developed. She was discharged after recovery of her wounds was observed.

Discussion: Members of Ranunculaceae family are traditionally used in different geographic areas for treatment of hemorrhoids, burns, abscess drainage, bullous lesions, lacerations and abrasions. It has been reported that species of Ranunculaceae family contain saponin, hederoganine and oleanolic acid glycosides containing protoanemonin which burns skin and irritates membranes at the lower layer of skin. It has been reported that the irritating effect of protoanemonin is higher when the herb is fresh, decreasing when the herb is dried. Protoanemonin is a volatile and highly irritating agent increasing free oxygen radicals by inhibiting DNA polymerase. It causes swelling of skin when used topically; it leads to formation of bullae and subepidermal dehiscence. Care of these wounds resulting from these events may be carried out in a similar way as burn care.

Conclusion: Many adverse effects develop due to herbs improperly used by people since ancient times. Used for treatment of various body aches, pulps of these herbs may cause chemical burns.

P166

Case Presentation

EXOTIC WOMEN WITH ABDOMINAL COMPLAINTS AND IRON DEFICIENCY ANEMIA: DON'T FORGET PICA.

N Dhooghe (1), B Gypen (1), L Hendrickx (2), L Mortelmans (3), J Valk (2)

1. General Surgery Department, ZNA Stuivenberg, Antwerp, Belgium
2. General Surgery, ZNA Stuivenberg, Antwerp, Belgium
3. Emergency department, ZNA Stuivenberg, Antwerp, Belgium

Corresponding author: Mr Dhooghe Nicolas (ndhooghe@gmail.com)

Key-words: Abdominal Pain ; Pica Syndrome ; Iron Deficiency Anemia

Pica, the compulsive ingestion of nonnutritive substances, is a poorly understood phenomenon and its etiology remains uncertain. Different hypotheses have been proposed: hunger, micronutrient deficiency and protection from toxins and pathogens. The current view is that the cause is multi-factorial, based on age, gender, geographic location, culture, nutritional deficiency, stress and mental development.

The association of pica with iron deficiency anemia (IDA) is widely recognized and has been reported in patients after gastric bypass surgery, where iron intake and absorption is reduced and IDA is not uncommon. Most common ingested substances are ice (pagophagia) and clay (geophagia). Treatment by iron supplementation causes rapid relief of the cravings. Most physicians are unaware of the pica symptoms in cases of IDA.

We report three cases of IDA with pica, presenting themselves at the ED with abdominal complaints. Two had a history of roux-en-y gastric bypass surgery. All cases had IDA due to heavy menstrual blood loss and ate clay, causing abdominal pain, nausea and constipation. In all cases the pica was initially overlooked and presence of clay on CT scan went unnoticed in two of them. One was diagnosed with acute appendicitis and had an appendectomy, although retrospectively, the ingestion of large amounts of clay, associated to IDA caused by heavy menstrual blood loss, was more likely to be the cause of disease. The abdominal discomfort disappeared after rectal irrigation and stool softeners. Treatment of the IDA cause and iron supplementation showed immediate relief of the pica cravings in all cases, within days. All patients were of foreign origin, where clay eating is a culturally accepted behavior.

It is our belief that the rise in gastric bypass procedures performed will lead to more patients with pica associated to IDA. Patients with high risk for presence of pica are women of exotic origin, especially Africa, with heavy menstrual blood loss and after gastric bypass. Pica is not without risk as it can cause abdominal pain, obstruction and even perforation leading to death. Discovery of pica is rewarding for the patient and the physician, as it can prevent significant health risks, interference with the absorption of micronutrients, avoid unnecessary surgery and relieve the patient of the strong cravings. Its presence should therefore not be overlooked and sought after in high risk patients with abdominal complaints and IDA. The presence of clay can be seen on radiology of the abdomen and should not be mistaken for contrast.

P167

Case Presentation

HEMOPTYSIS AS AN UNUSUAL SYMPTOM OF AORTIC DISSECTION

S Akay (1), H Akay (1), F Büyükcamlar (2), A Ceylan (2), AB Erdem (2), U Kaya (2)

1. Department of Emergency Medicine, İzmir Training & Research Hospital, İzmir, Turkey
2. Department of Emergency Medicine, Diskapi Yıldırım Beyazıt Training&Research Hospital, Ankara, Turkey

Corresponding author: Mr Büyükcamlar Fatih (fatihbuyukcam@gmail.com)

Key-words: hemoptysis ; aortic dissection ; alveolar hemorrhage

Introduction

Aortic dissection (AD), the most common catastrophe of aorta, is a disease with a high mortality rate. Although chest pain is the most common complaint, clinical presentations include thoracic insufficiencies, coronary involvement with acute myocardial infarction and rupture with cardiac tamponade. In case of rupture, patients present with severe chest pain, piercing, which has abrupt onset and irradiates mainly to the back.

Unusual presentations include retropharyngeal hematoma, hemothorax and massive hemoptysis secondary to aorto-bronchial fistula, with an incidence of less than 10% [1]. In this case, we report hemoptysis as a rare symptom of AD.

Case report

A 66-year-old woman admitted to emergency department (ED) with a complaint of epigastric pain. She described her pain as a dull ache, which radiates to right upper quadrant intermittently. Her medical history included uncontrolled hypertension and ischemic cerebrovascular disease. Upon admission, her vital signs were within normal range. Physical examination revealed epigastric tenderness without acute abdominal signs, while the remaining was normal. The electrocardiogram was normal. Anteroposterior chest radiography appeared normal with normal mediastinal width. Laboratory tests showed, hemoglobin 9.7 mg/dL, leukocytes 13.600/mm³, platelet 146.000/μL, creatinine 1.87 mg/dL and urea 78 mg/dL while the remaining was normal. Abdominal ultrasonography showed hydrotic gallbladder with increased wall thickness and pericholecystic fluid but failed to show gall bladder stone. Patient was diagnosed with acalculous cholecystitis. She was followed in emergency department observation unit with intravenous fluids, antibiotics and cessation of oral intake. During 14th hour of admission, she experienced massive hemoptysis and started complaining from tearing chest pain in the retrosternal area and the right hemithorax. She was hypertensive with blood pressure of 174/99 mmHg and her heart rate was 129/min. There wasn't a blood pressure difference between two arms and distal pulses were bilaterally intact. Thoracic AD was suspected and transthoracic echocardiography was performed, which revealed left ventricular hypertrophy, pericardial effusion with dissection flap at ascending aorta. Pre and postcontrast thoracic computed tomography showed AD with flap in the ascending and arcus aorta with pericardial fluid, bilateral pleural effusion and intraalveolar blood. Patient was diagnosed with AD and operated by cardiovascular surgery. Aortopulmonary fistula wasn't noticed intraoperatively. Hemoptysis resolved following surgery. She was discharged after nine days.

Discussion

AD is a true vascular emergency with in-hospital mortality rate of 1% per hour. Patients typically present with tearing chest pain with an abrupt onset. Patients can be hypertensive during presentation, pulse deficit and blood pressure difference defined as greater than 20 mmHg can be observed.

Hemoptysis is an unusual presentation of AD [2-3]. It may be due to aortopulmonary fistulas and alveolar hemorrhage [3]. Aortopulmonary fistulas can be diagnosed with aortography, echocardiography and during surgery [4]. In our case, aortography wasn't performed and echocardiography failed to show aortopulmonary fistulas, also intraoperatively aortopulmonary fistulas weren't noticed. Bronchoscopy is a technique to diagnose the etiology of hemoptysis but it wasn't performed due to the instability of patient. During follow-up, hemoptysis didn't relapse for nine days. We presume that the origin of hemoptysis was alveolar.

In conclusion; all hemoptysis patients must be evaluated carefully and effort for accurate diagnosis should be made. In case of hemoptysis and chest pain; diagnostic procedures must be done from non-invasive and safe methods to invasive methods. It must be kept in mind that hemoptysis can be an accompanying symptom of AD and emergency physicians must bring AD to mind.

P168

Case Presentation

DIARRHEA RELATED SEVERE HYPOKALEMIA INDUCED VENTRICULAR FIBRILLATION IN A HEALTHY ELDERLY PATIENT

MA Afacan, F Büyükcamlar, A Ceylan, AB Erdem

Department of Emergency Medicine, Diskapi Yıldırım Beyazıt Training&Research Hospital, Ankara, Turkey

Corresponding author: Mr Büyükcamlar Fatih (fatihbuyukcam@gmail.com)

Key-words: diarrhea; hypokalemia; ventricular fibrillation

Introduction: Diarrheal diseases remain a significant cause of morbidity and mortality in the elderly population (1). Abnormalities in water homeostasis and decreased thirst perception put elderly patients at higher risk for dehydration, especially in the setting of diarrhea. Herein, we reported a healthy elderly patient experienced with ventricular fibrillation (VF) because of severe hypokalemia due to diarrhea.

Case Report: A 62-year-old female patient was admitted to the emergency department following a syncope attack with duration of 5 minutes with no micturition or defecation. She was suffering from nausea and malaise with a history of diarrhea for only one day. She didn't complain of chest pain, palpitation and dyspnea. She had not experienced any cardiac disease or cerebrovascular disease. On examination, her blood pressure was 80/40 mmHg, heart rate was 65 beats/min. Cardiac auscultations and neurological examination was normal. Electrocardiogram showed flattened T waves and increased U wave prominence, resulting in a long QT(U) syndrome but there wasn't any other significant findings including ST segment changes. On admission, significant laboratory results were as follows; Hgb:8,7g/dL, potassium:2,6 mmol/L, calcium:6,3mg/dL, magnesium:1,93mg/dL (1,6-2,6mg/dL), phosphorus:2,4mg/dL (2,5-4,5mg/dL), Troponin-I:3,22 ng/mL (< 0,04 ng/mL). As initial therapy, 10mEq/h potassium chloride and 100mg/h calcium gluconate infusion concomitant with isotonic fluid replacement was applied. At the second hour of admission her consciousness disappeared; at this time the heart rhythm were ventricular fibrillation. Normal cardiac rhythm was achieved with first defibrillation with 300 J by monophasic defibrillator. Coronary angiography done by reason of myocardial infarction revealed a few plaques on LAD, RCA and CX without any significant narrowing. It was assumed that the entire cause of ventricular fibrillation was hypokalemia. After two day of follow up, hypokalemia and hypocalcemia was corrected and patient was discharged.

Discussion: The most common cause of hypokalemia is increased loss of potassium such as gastrointestinal loss. Kc et al reported that hypokalemia was seen 64.70% of patients presenting with acute gastroenteritis (2). The clinical manifestations of hypokalemia usually start when serum concentrations reach 2,5mEq/L and contribute to the occurrence of VF, especially in patients with structural heart disease (3, 4).

In conclusion, diarrhea related severe hypokalemia may trigger VF even in a healthy elderly patient. So, physicians do not underestimate electrolyte imbalances in elderly patients presenting with syncope.

P169

Case Presentation

CHEST WALL HEMATOMA IN LATE PERIOD SECONDARY TO ORAL ANTICOAGULANT THERAPY

HU Akdemir, C Katı, L Duran, B Güngör, F Çalışkan

Emergency Department, Ondokuz Mayıs University Medical Faculty Hospital, Samsun, Turkey

Corresponding author: Mr Akdemir Hızır Ufuk (hufukakdemir@hotmail.com)

Key-words: Chest; Hematoma; Warfarin

Objective: Use of anticoagulant therapy can cause bleeding. Chest wall hematoma is a rare complication due to warfarin. Traumas may result in a bleeding in patients taking anticoagulant therapy, even if they can not cause a bleeding in normal population. We herein aimed to point to this situation by presenting the case of a 80 years old male which presented to our emergency department due to in-home drop and had no pathological findings associated with acute trauma, but resulted in chest wall hematoma in late period.

Case: 80 years old male patient presented to our emergency department with complaints of pain and swelling in right side of his chest about last two days (Image 1). The patient said that he fell in his house five days ago, later he admitted to hospital and he had no pathological findings after radiological image results. We understood that fresh frozen plasma was given to him due to excessive anticoagulation, hospitalization was recommended but he refused admission to the hospital from hospital records after he left from hospital. From his past medical history, he had coronary bypass surgery, hypertension and diabetes mellitus and his general state was moderate but he had agitation due to pain. On examination, vital signs were blood pressure 100/60 mmHg, heart rate 98 bpm, respiratory rate 22 and temperature 36 oC. There was a swelling, consisted with ecchymotic areas in some places, in anterior chest wall which began under the right clavicle, was expanding to the bottom 5 cm below the nipple and laterally to the posterior axillary line. There was an atrial fibrillation on his ECG and the speed was around 100 beats per minute. Hemoglobin: 6,7 g/dl and INR: 8,6 were measured in his laboratory tests and there were ground glass density and blunting of the right sinus in his radiography. A heterogeneous enhancing lesion (hematoma ?) which was 9x12x20 cm in size with smooth margins in the right hemithorax, with a slight hypodense areas, was seen in thorax computed tomography (CT) (Image 2). Vitamin K and fresh frozen plasma was given intravenously to the patients with a diagnosis of chest wall hematoma due to excessive anticoagulation. The replacement of red blood cells was made due to decreased hemoglobine. After the consultation of thoracic surgery, conservative follow-up was recommended. In the fourth day of the presentation to hospital, patient's hemoglobin, 11,5 g/dl and INR: 1.55 were measured. In his follow-up, chest wall

hematoma was regressed and he was discharged from the hospital with his own request in the tenth day of hospitalization.

Conclusion: The most serious side effect of commonly prescribed warfarin in different indications is bleeding. The bleeding risk is low but when the bleeding develops, it is usually in life threatening level. Traumas may result in a bleeding in patients taking anticoagulant therapy, even if they can not cause a bleeding in healthy individuals. For this reason, emergency doctor always ask the use of anticoagulants in patients with trauma, if there is any use; he should be awake about bleeding complications and should take necessary prevention in early period.

P170

Case Presentation

SPONTANEOUS PNEUMOMEDIASTINUM: COEXISTENCE OF SHORTNESS OF BREATH AND DYSPHONIA

HU Akdemir (1), B Türköz (1), L Duran (1), C Katı (1), S Kayhan (2), F Çalışkan (1)

1. Emergency Department, Ondokuz Mayıs University Medical Faculty Hospital, Samsun, Turkey
2. Chest Diseases Department, Ondokuz Mayıs University Medical Faculty Hospital, Samsun, Turkey

Corresponding author: Mr Akdemir Hızır Ufuk (hufukakdemir@hotmail.com)

Key-words: Spontaneous Pneumomediastinum ; Dyspnea ; Dysphonia

Objective: Pneumomediastinum(PM) is an extremely rare clinical presentation that is defined presence of air in the mediastinum. The most common symptom is pain; dyspnea, dysphagia, dysphonia and sensation of the food's being stuck in the esophagus can also be seen. Presenting this patient case which admitted to our emergency department with complaints of dispnea and dysphonia and diagnosis after our evaluation was spontaneous pneumomediastinum (SPM), we aimed to point to coexistence of shortness of breath and dysphonia in this rare clinical manifestation.

Case: A 39 years old female patient admitted to our emergency department with complaints of dispnea and dysphonia. She had complaint of dispnea occasionally. She admitted to ED after sensation of discomfort and an increase in shortness of breath. She had also dysphonia. Her medical history was unremarkable except subtotal thyroidectomy (10 years ago). In her pyhsical examination, vital signs were blood pressure 110/80 mmHg, heart rate 88 bpm, respiratory rate 24 and temperature 36 oC. Genaral patient status was moderate, she was conscious but she had agitation. There was some stridor and she had no murmurs, rubs, or gallops. In her pertinent laboratory tests, WBC was 11490/uL and glucose was 149 mg/dL. The patient's arterial blood gas showed a pH of 7.37, a pCO₂ of 31mmHg, a pO₂ of 92mmHg ve an oxygen saturation of 92%. Her ECG showed heart rate 85 beats/min and a normal sinus rhythm. The patient's chest X-ray showed a linear air density in the neighboring area of right lung hilus and it was consistent with PM (Image 1). Neck and chest computed tomography (CT) was applied to the patient who was diagnosed SPM for an advance evaluation. Computed tomography showed free air which extended to the hilum in the mediastinum and neck and around the trachea and esophagus (Image 2-3-4). There was no additional pathological findings except for free air in mediastinum and neck which was showed by CT. After the consultation of thoracic surgery, she was hospitalized for follow-up. In her follow-up, there was no problem and she discharged from the hospital in sixth day of hospitalization with advices. This data was taken from patient's medical records. Conclusion: Pneumomediastinum(PM) is an extremely rare clinical manifestation which is seen especially in young males. Symptoms

usually regress spontaneously. SPM treatment may be conservative or surgical treatment according to the underlying etiology. Patients can admit to emergency deparment with complaints of chest pain, dyspnea, dysphagia, dysphonia and sensation of the food's being stuck in the esophagus. Emergency department physician should think SPM in differential diagnosis in the presence of shortness of breath and dysphonia with irrespective of gender.

P171

Case Presentation

A DIFFERENT REASON FOR LOSS OF CONSCIOUSNESS IN EMERGENCY DEPARTMENT: INGESTION OF HIGH-DOSAGE ENERGY DRINK

HU Akdemir (1), C Katı (1), L Duran (1), C Şahin (2), Y Şahin (1), F Çalışkan (1)

1. Emergency Department, Ondokuz Mayıs University Medical Faculty Hospital, Samsun, Turkey
2. Emergency Service, Samsun Training and Research Hospital, Samsun, Turkey

Corresponding author: Mr Akdemir Hızır Ufuk (hufukakdemir@hotmail.com)

Key-words: Loss of consciousness ; Energy drink ; Emergency department

Objective: Energy drinks contain usually caffeine, taurine, guarana and some amino acids. Energy drinks are consumed frequently and too much and also with other substances because of that they provide to stay awake and a sense of increased resistance in the body. Therefore, an ingestion of high caffeine-containing energy drinks or to consume too much may cause dehydration by increasing urine output, increased heart rate, nervousness and flickering. It may cause seizures and delusions and may also cause changes in mood and behavior. Presenting this patient case who was admitted to our emergency department with altered mental status and had no a definite organic etiological cause after our examination and was follow up due to prediagnosis of intoxication and had a medical history about ingestion of energy drink after recovery of consciousness, we aimed to point out to this manifestation in this article.

Case: After development of altered mental status during his follow up, thirty-seven years old male patient referred to our emergency department from another hospital that he presented with complaints of cold-shills. We learned from relatives of patients that he had only complaints of cold-chills in admission and later he had agitation firstly and somnolence. In physical examination of patient who had no significant past medical history, vital signs were blood pressure 140/80 mmHg, heart rate 110 bpm, respiratory rate 24 and temperature 37.5 oC. His general status was moderate and he was lethargic. When he was awake, he had an agitation. There was no evidence of neck stiffness and sign of lateralization. In his pertinent laboratory tests, WBC was 13050/uL, Hb:12.8 g/dL, AST: 56 U/L and CPK: 3552 U/L. The patient's arterial blood gas showed a pH of 7.4, a pCO₂ of 33.5 mmHg, a pO₂ of 68.2 mmHg, a HCO₃ of 21 mmol/L ve an oxygen saturation of 95%. His ECG showed heart rate 110 beats/min and a sinus tachycardic rhythm. The patient who had no significant features in his chest X-ray and brain computed tomography was consulted with neurology and infectious diseases (Image 1). Lumbar puncture (LP) was performed by a physician from department of infectious diseases to the patient who had no acute neurovascular pathology. In his biochemical examination of cerebrospinal fluid (CSF), glucose was 74 mg/dL and protein was 147 mg/dL. No cells and organisms were detected in direct microscopic examination of CSF. The patient's blood glucose level measured simultaneously was 99 mg /dL. Due to high protein level in CSF, acyclovir therapy was initiated to the patient with prediagnosis of encephalitis by infectious diseases.

Following the first twenty-four hour of admission to the hospital, the patient began to recover consciousness. Electroencephalographic (EEG) and brain magnetic resonance imaging (MRI) (Image 2) was performed. At his follow up, he recovered consciousness completely. Before his complaints started, he said that he drank 5-6 boxes of energy drink because of a claim with his friends. Acyclovir therapy of patient who had a normal MRI and EEG results was stopped after reconsultation of infectious diseases. The patient who had no additional problem at his follow up was discharged in the fourth day of hospitalization. Conclusion: Energy drinks which had an increasing consumption in recent years are consumed by people in every age group, but consumption by young people is more common. Consumption of large amounts of these beverages, along with taking additional medications or substances and consumption by some specific patient groups (elderly, pregnant woman, diabetic and hypertensive patient) may cause cardiovascular and neurological problems. Finally, ingestion of energy drinks or drugs should be considered in young patients who admit to emergency room due to cardiovascular and neurological problems and had no organic etiological causes in examination.

P172

Case Presentation

A RARE CAUSE OF WRIST PAIN; ACUTE LYMPHOBLASTIC LEUKEMIA

O Bilir (1), G Ersunan (1), B Giakoup (2), A Kalkan (1), S Yeniocak (3), Y Yiğit (2)

1. Emergency Medicine, Recep Tayyip Erdoğan University Medical School, Rize, Turkey
2. Emergency Department, Recep Tayyip Erdoğan University Faculty of Medicine, Rize, Turkey
3. Emergency Medicine, Haseki Education and Research Hospital, Istanbul, Turkey

Corresponding author: Mr Asim Kalkan (drasimkalkan@hotmail.com)

Key-words: wrist pain ; acute lymphoblastic leukemia ; chloroma

Joint pains are common appliance reasons to emergency services. They are often related to traumatic injuries but they may due to a much more serious reason such as acute lymphocytic leukemia. Types of leukemia are group of heterogeneous neoplastic diseases forming as the result of malignant transformation of hematopoietic cells. Acute leukemia are a group of diseases characterized by immature myeloid or lymphoid cells from blood, bone marrow and the infiltration of other tissues. The infiltration of this solid tumor forming with accumulation of malignant granulocytes seen in the course of leukemia is called chloroma. Subperiosteal bone tissue are often found in skin, gastrointestinal tract and lymph nodes. The rare chloroma case of a patient coming to the emergency service with wrist pain is presented in this statement and the importance of hemogram assessments in patients who have wrist pain is underlined.

P173

Case Presentation

EMPHYSEMATOUS CYSTITIS AND EMPHYSEMATOUS COLECISTITIS ASSOCIATION

O. Karakayalı (1), G. Kurtoglu Celik (2), I. Ertok (2), G. Gormez (2), MM. Dellul (2), S. Kocaoglu (2)

1. Emergency department, Teaching and Research Hospital in Kocaeli Derince, Kocaeli, Turkey

2. Emergency department, Ataturk Training and Research Hospital, Ankara, Turkey

Corresponding author: Melle Kurtoglu Celik Gulhan (kurtoglugulhan@yahoo.com)

Key-words: Emphysematous cystitis ; gas-forming infections ; diabetes mellitus

INTRODUCTION: Emphysematous cystitis is a rare complication of urinary tract infections and characterized by gas formation in the bladder as a result of bacterial fermentation. Emphysematous colecystitis is a rare form of colecystitis which is usually characterized by the formation of gas within gangrenous gallbladder. In this case we wanted to discuss the case of simultaneous emphysematous cystitis and cholecystitis.

CASE: 77 years old female patient with 2 days of fever, abdominal pain radiating to the back and shoulder and complaints of burning urination admitted to the emergency department. She had have diabetes. Her fever was: 38 °C and other vital signs were normal. On physical examination, her sclera was icteric, she had tenderness, defens and rebound at right upper quadrant and epigastric region and she has costovertebral angle tenderness at both side. Other system examinations were normal. Her laboratory results; WBC:23.000 AST:89 (0-32) ALT:178 T.Bil:6,45(< 0,9) D.Bil:5,49 (< 0,2) GGT:248 (6-42). She had evidence of urinary tract infection on urinalysis and other laboratory results were normal. At her Abdominal USG, air echogenitiy monitored in intrahepatic bile ducts and bladder and common bile duct diameter was increased. Also there were air densities in intrahepatic bile ducts and bladder at her Abdominal CT. Emphysematous cystitis is assessed in accordance with the present image.

Patient admitted to general surgery service. Patient hospitalized in general surgery, in urine and blood cultures E.Coli was isolated and 2 g of Ceftriaxone was given intravenously. ERCP procedure performed for the treatment of patient and discharged with decreased clinical and laboratory findings.

DISCUSSION: The most important triggering factor in gas-forming infections is uncontrolled diabetes, so the differential diagnosis of urinary tract infections, especially in patients with diabetes should be considered gas-forming infections.

The disease is generally diagnosed by direct urinary tract radiography incidentally. Gas placed in bladder wall or lumen. This may be associated with emphysematous urethritis, nephritis, adrenalitis or cholecystitis. CT is available for the demonstration of gas in bladder wall and the location and accumulation of gas.

RESULT: Emphysematous cystitis has a highly variable clinical manifestations and prognosis so it is important to be familiar with radiological findings for early recognition. Appearance of gas in the other parts of the urinary tract and gallbladder can be important to determine the prognosis of the disease

P174

Case Presentation

AN ATYPICAL CASE OF ADULT FOREIGN BODY ASPIRATION

O. Karakayalı (1), S. Becel (2), F. Icme (2), G. Kurtoglu Celik (2), I. San (2), U. Ozkula (2)

1. Emergency department, Teaching and Research Hospital in Kocaeli Derince, Kocaeli, Turkey
2. Emergency department, Ataturk Training and Research Hospital, Ankara, Turkey

Corresponding author: Melle Kurtoglu Celik Gulhan (kurtoglugulhan@yahoo.com)

Key-words: Bulimia nervosa ; foreign body ; General surgery

INTRODUCTION:

Bulimia nervosa episodic is an uncontrollable, compulsive psychogenic disorder and includes eating too much in a short time, then vomiting by stimulating herself, laxative or diuretic use,

fasting or excessive exercise to lose weight. People usually try to induce vomiting with a finger. In this report we present a patient who used a different material and aspired that material as an atypical case.

CASE: A 19-year-old female patient admitted to emergency department because she swallowed the fork she used for vomiting the meal she had eaten. Patient's vital signs were stable on admission, no defense, no rebound but epigastric tenderness was present in physical examination. The image of fork was seen sharp edge upwards between T9-L3 on the direct abdominal radiograph. General surgery clinic performed emergency surgery because endoscopic intervention was at high risk and the foreign body was removed successfully.

DISCUSSION-CONCLUSION: Foreign body aspiration is a serious medical condition that must be diagnosed and intervened immediately. Delayed diagnosis and treatment can cause serious and sometimes fatal complications. Foreign body aspiration is rarely seen in adults, whereas it usually occurs in children and the elderly. Usually there is an underlying psychogenic disorder in adults. Generally, in gastric aspirations clinical follow-up is adequate and there is no need for surgery, in foreign body aspirations especially when there is a risk of perforation emergency surgery or endoscopic intervention is required.

P175

Case Presentation

PAINLESS ACUTE AORTIC DISSECTION

O Güneysel, H Hocagil, S Karacabey, G Simsek

Emergency Medicine Clinic, Dr. Lutfi Kırdar Kartal Education and Research Hospital, Istanbul, Turkey

Corresponding author: Melle Simsek Gozde (gsimsek79@gmail.com)

Key-words: acute dissection ; painless ; atypical symptoms

Introduction: The incidence of aortic dissection ranges from 5 to 30 cases per million people per year, depending on the prevalence of risk factors in the study population. Classical acute aortic dissection has been described as presenting with sudden, severe chest, back, or abdominal pain that is characterised as ripping or tearing in nature. However, several cases presenting with atypical features, often a variety of neurological or cardiac findings. We present a case of painless acute aortic dissection that presented as nonspecific symptoms that bilateral lower extremity weakness, normal neurologic and physical examination.

Case Report: 48 year old male patient came to the emergency room on foot with bilateral lower extremity weakness. Past medical and family history was unremarkable. On physical examination his vital signs were normal and systemic examination was otherwise normal. No motor or sensory deficits were existing on his neurologic examination. The electrocardiogram demonstrated nonspecific ST-T segment changes in V1-V6 leads. Electrolyte levels, renal function tests, transaminases, cardiac enzymes, and complete blood count were in normal ranges. Chest X-ray revealed enlarged mediastinum therefore we decided to perform thorax CT imaging. A follow up CT scan confirmed an aortic dissection from the beginning at the level of the aortic arch, thoracic aorta and abdominal aorta that extended to iliac bifurcation (de Bakey type II) and 1 cm pericardial effusion (Fig A-B-C). After admission to the cardiovascular surgery intensive care unit, he was operated upon successfully and two weeks after operation the patient is discharged.

Discussion: Acute aortic dissection is the most frequently fatal condition in the spectrum of chest pain syndromes. With undelayed diagnosis and optimal medical and surgical therapy,

however, 30-day survival can exceed 90%. While pain is the most common symptom of aortic dissection, more than one-third of patients may develop a myriad of symptoms secondary to the involvement of the organ systems. Aortic dissection cases can visit emergency rooms with atypical neurologic complaints. Achieving a complete history and physical examination is the best way to diagnosis. Clinical suspicion should be supported with diagnostic imaging methods. International Registry of Acute Aortic Dissection (IRAD) study also demonstrated that diagnostic sensitivity is similarly high for all four diagnostic modalities, but currently, the initial imaging modality of choice for acute aortic dissection is CT followed by transesophageal echocardiography (TEE), which were selected for 63% and 32% of patients, respectively. For acute aortic dissection, CT is selected most frequently worldwide as the initial test, followed by TEE.

Conclusion: Acute aortic dissection can present atypically without pain. Atypical symptoms, the diagnosis of aortic dissection can make it difficult for emergency physicians. A detailed history and physical examination and performing CT in the presence of clinical suspicion of vital importance in establishing a diagnosis of this catastrophic emergency which is associated with serious morbidity and mortality.

P176

Case Presentation

COUGH INDUCED RIB FRACTURE AND PNEUMOTHORAX: A RARE CASE

L Duran (1), A Baydın (1), C Şahin (2), Y Şahin (1), C Katı (1), HU Akdemir (1)

1. Emergency Department, Ondokuz Mayıs University Medical Faculty Hospital, Samsun, Turkey

2. Emergency Service, Samsun Training and Research Hospital, Samsun, Turkey

Corresponding author: Mr Akdemir Hızır Ufuk (hufukakdemir@hotmail.com)

Key-words: Cough ; Stinging pain ; Rib fracture

Objective: It was reported that the severe coughing secondary to respiratory tract infection, asthma, or airway irritation was an additional cause of rib fractures without traumatic causes. Sudden onset of severe chest pain is a characteristic feature in these patients. In this case report, we present a case of coughing induced rib fracture and pneumothorax.

Case: A-36-years old woman was referred to our emergency department from an other medical center for evaluation of severe chest pain characterized with sudden onset and began three days ago. She had been cough during fifteen days. It was due to lower respiratory tract infection. About three days ago, the patient's complaint was a stinging pain in the right side of lower chest wall after a suddenly, strongly coughing. She has no past medical problems. A chest X-ray revealed a right tenth rib fracture as similar to fissure and also chest spiral computed tomography (CT) revealed a right tenth rib fracture as similarly as chest x-ray findings and a minimal pneumothorax in right apex of lung (Image 1, 2). Her findings showed that an emergency surgical intervention by thoracic surgery was unnecessary at that moment. She was discharged from our emergency department with medications of analgesic and myorelaxant treatment and a control in a thoracic surgery clinic after ten days was recommended.

Conclusion: Cough induced rib fracture and pneumothorax is a very rare complication. Severe coughing and chest pain with a sudden onset should be considered to cough induced rib fracture and pneumothorax in emergency department. Early diagnosis and treatment may be prevent from this complications.

P177

Case Presentation

MYOCARDIAL INFARCTION PRESENTED WITH CAR ACCIDENT

MA Afacan, F Büyükcamlar, A Ceylan, AB Erdem

Department of Emergency Medicine, Diskapi Yıldırım Beyazıt Training&Research Hospital, Ankara, Turkey

Corresponding author: Mr Büyükcamlar Fatih (fatihbuyukcam@gmail.com)

Key-words: motor vehicle accident ; atrioventricular block ; myocardial infarction

Introduction

Acute myocardial infarction after blunt trauma has been described and specific protocols are there for treatment but there is no specific treatment because of the trauma type variability. In this case report we described a patient presented with acute myocardial infarction after a car accident.

Case Report

A 43-year-old male patient was admitted to the emergency department following a car accident. He was the driver and unconscious, there wasn't anyone together with him that could tell the accident or his medical history. On admission he was in coma, irregular breathing was seen, blood pressure was 90/60 mmHg, pulse rate was 65 beats/min; eye pupils were isochoric with normal light reflexes. Respiratory and cardiovascular system examination was normal, bedside abdominal ultrasonography was normal. Laboratory results were as follows; Hgb:14,6 g/dL, WBC:34000/μL, AST: 116 U/L, ALT:67 U/L, other test results were normal also. He was intubated and monitored. In ten minutes his first evaluation was done and massive fluid repletion therapy was started. Right after his pulse rate was 45 beats/min but normal cardiac rhythm was seen on monitor. 12 lead electrocardiogram was obtained which revealed second degree atrioventricular block (mobitz type II) with ST-elevations on DII-III-aVF-V3-V4, ST depression on DI-aVL derivatives. Single-Chamber temporary cardiac pacemaker was applied, while this process cardiac rhythm turned to ventricular tachycardia, cardioversion was tried and cardiopulmonary resuscitation was applied but it didn't benefit, finally patient died.

Discussion

In the case of acute myocardial infarction after blunt chest trauma; the occlusion of coronary arteries seen frequently at the left descending artery (76%), the right coronary artery (12%) and the circumflex artery (6%) [1]. The cause of the occlusion are shear and deceleration stress. Previous history of coronary artery disease increases the risk [2].

In this case, the real problem is the treatment whether we use the anticoagulants. There isn't any guideline for treatment; every patient should be evaluated case by case. The priority of the problems should be thought, including control of blood loss, hemodynamic stabilization, respiratory stabilization and cardiac stabilization. In our case, the main problem was the second degree atrioventricular block (mobitz type II) with ST-elevations. Single-Chamber temporary cardiac pacemaker was applied but it didn't give benefit so the patient died.

In conclusion, in case of the car accidents, sometimes electrocardiogram so the diagnosis could be delayed. Electrocardiogram should be a part of the first diagnosis of the trauma evaluation, and later on the exact treatment should be planned according to the priorities of the problems.

P178

Case Presentation

ACCIDENTAL VAGINAL INJURY IN THE CHILDHOOD: A CASE REPORT

Y Anci (1), M Emet (2), MT Şener (3)

1. Forensic medicine department, Ataturk University, Faculty of Medicine, Erzurum, Turkey
2. Emergency department, Ataturk University, Faculty of Medicine, Erzurum, Turkey
3. Forensic medicine Department, Ataturk University, Faculty of Medicine, Erzurum, Turkey

Corresponding author: Mr Şener Mustafa Talip (talipsener@gmail.com)

Key-words: Vajinal Injury ; Accidental Injury ; Child Abuse

Introduction: Children with genital injury may attend to emergency department (ED) occasionally. Emergency physicians inform judicial authorities because this complaint may happen due to child abuse or sexual abuse. However, it may be seen as a result of the placement a foreign body in the vagina because of the child's curiosity, or may occur due to an accidental injury such as falling or due to some sporting activities. In our study, we evaluated a child presented to our ED with vaginal bleeding, and then consulted to the forensic medicine department (FMD).

Case: A 5-year-old girl was brought by her parents to the ED with vaginal bleeding. According to the history from her mother, she heard a scream while her daughter was playing with a peer boy. At that time, her daughter was crying and there was no tight on her, however her panty was dressed. She saw blood stain and pencil marks on her panty. The child was crying and afraid. The genitourinary system examination done in the ED revealed leakage of blood from vagina. The urethra was intact and external genital organs were normal. Other system examinations were unremarkable. To rule out sexual abuse, the patient was consulted to the FMD. The history taken in the FMD was same as in the ED. Genital examination revealed that the urethra and hymen were intact, and there were a 2 mm laceration surrounded by hyperemic area between hymen and labium minus at the 5 o'clock position and 3 mm hyperemic area on the hymen at the 5 o'clock position. Vaginal smears were examined microscopically and revealed no sperm, also gram staining was negative. The lesions thought to be compatible with the history, therefore sexual abuse was not considered.

Conclusion: Although there is no history of abuse, sexual abuse should be considered in the differential diagnosis of a child admitted to the ED with genital organ injury. After systemic and genital examination, consultation with forensic medicine physician to exclude the sexual abuse of a child will be appropriate.

P179

Case Presentation

POSITIVE PREGNANCY TEST FROM A MALE PATIENT WITH CHEST PAIN

C. Can (1), C. Girgin (2), U. Gulacti (3)

1. Emergency Department, Minister of Elazığ Education and Research Hospital, Elazığ, Turkey
2. Emergency Department, Minister of Bingöl State Hospital, Bingöl, Turkey
3. Emergency Department, Minister of Harput State Hospital, Elazığ, Turkey

Corresponding author: Mr Can Cagdas (drcagdascan@yahoo.com)

Key-words: β-hCG ; testicular tumor ; emergency department

Introduction: The main complaint of the patient may not be always compatible of the disease. Accurate and comprehensive history, physical examination and practical diagnostic tests will provide a diagnosis. In this case report, we aimed to present that a careful genital examination when combined with specific laboratory tests could reveal important underlying diseases which was not

correlated with the main complaint of the patient who has presented with chest pain. A primary testicular tumor was successfully diagnosed by a positive β -human chorionic gonadotropin (β -hCG) test in a male patient whose extended physical examination has arisen questions about the diagnosis.

Case report: Fifty-year-old male patient was admitted to emergency department because of chest pain. In physical examination, the patient's vital signs within normal limits, his chest pain migrated to line along the left ureter and on the left testis there was a palpable firm, nodular approximately 2x3 cm painless palpable mass. Due to complaints of chest pain and cough, chest X-ray and electrocardiography was requested for the differential diagnosis. Electrocardiography was normal sinus rhythm, no ST-T wave changes. Chest X-ray parenchyma showed widespread nodular density increases. For differential diagnosis non-contrast thoracic CT was performed and mass formations were seen on both sides of the lung parenchyma. Infiltrates in the lung was thought to be the lung metastatic tumor. Because of the painless swelling in the testicle, the primary focus of the tumor was thought testicle. Patient urine β -hCG level was positive and serum β -hCG level of 12.000 mIU/ml were measured. With these findings, the patient was considered a testicular tumor. Patient admitted to urology for further evaluation and treatment.

Conclusion: Emergency department doctors should bear in mind with chest pain patients that there may not be a harmony between the underlying complaint and diagnosis. Physical examination of the patient's should be extended towards the outside the main complaint. Also non-routine tests like urine β -hCG level should be under consideration.

P180

Case Presentation

A CASE PRESENTATION OF CENTRAL PONTINE MYELINOLYSIS: FROM AN UNUSUAL ETIOLOGY TO A COMPLEX CLINICAL PATTERN. CENTRAL PONTINE MYELINOLYSIS, MENINGITIS, PROGRESSIVE PLEGIA.

H Borcea, A Kerezsi, N Romaniuc

Emergency Department, Bihor County Emergency Hospital, Oradea, Romania

Corresponding author: Mme Romaniuc Nicoleta (nico_nicole1980@yahoo.com)

Key-words: Central Pontine Myelinolysis ; Meningitis ; Progressive plegia

Introduction: central pontine myelinolysis is a very specific pathology, specific by topography of a myelinic destruction but also by pathophysiology and clinical evolution. The diagnosis is usually based on a complex analysis of clinical signs in the context of the presence of the risk factors completed with MRI. Despite these diagnostic criteria several disputes have raised regarding the relationship that exists between these risk factors, and their "must to be" presence in the clinical context of the central pontine myelinolysis. Although the hyperosmolar status is one of the lead conditions for the occurrence of that pathology we are going to discuss other pathologies or clinical conditions that may lead to the same result on the pontine area.

Material and method: we are going to present the case of a patient admitted to the emergency department for acute urinary retention. We will discuss several clinical options, diagnostic and treatment challenges faced by the medical team during the management of that case.

Case presentation: a 24 years old male has been admitted to the Bihor County Hospital's Emergency Department for an acute urinary retention that has occurred during the last two hours. This was the only reason for the patient's presence in the emergency

department. That symptom occurred after one week of evolution of a viral respiratory infection incompletely evaluated and treated (mainly by self – medication). From the moment of the Emergency Department referral, the clinical status deteriorates so in 24 hours the patient is stuporous, with difficult respirations (as a consequence of the diaphragm paresis) that need tracheal intubation and mechanical assistance of the respirations, progressive paraparesis associated with paralytic ileus. After 24 hours the patients' clinical status is: unconscious, mechanically assisted ventilation through endo-tracheal tube, hypotone tetraplegia, arrhythmias and hypotension. An initial central nervous inflammatory syndrome was suspected and partially confirmed by the MRI and other paraclinical findings. The mainly supportive rather than etiology related treatment (except the Neisseria – oriented antibiotherapy) was started and conducted. After one month the MRI shows Central Pontine Myelinolysis and also extrapontine myelinolysis areas too with walerian degeneration. The treatment was adapted accordingly and the clinical evolution starts to improve slowly but significantly.

Discussions. Conclusions: using a sequential approach to the clinical management of the case that we are going to present we will discuss the issues that were faced by the medical team. Four major phases were established as significant for the clinical process: the first one was related to the clinical and paraclinical diagnosis of the bacterial meningitis (with Neisseria meningitidis) and the relative comfort offered by that diagnostic level; the second and the third phase were related to the very specific type of evolution of the neurologic signs and the occurrence of the Autonomous Nervous System related signs that raised the possibility of a joint central and peripheral nervous pathology (not related to the initial meningeal hypothesis); the last phase was related to the clinical and paraclinical confirmation of the Central Pontine Myelinolysis that lead the medical team to the complete and final diagnosis but also returned the circle of the clinical judgment to the etiology of this complex association of central and peripheral, infectious and non-infectious nervous pathologies.

Keywords: Central pontine myelinolysis, meningitis, progressive plegia

P181

Case Presentation

A RARE CAUSE OF DYSPNEA IN EMERGENCY DEPARTMENT : NON-TRAUMATIC DIAPHRAGMATIC HERNIA

HU Akdemir (1), S Yürüker (2), C Katı (1), B Güngörer (1), Y Şahin (1), F Çalışkan (1)

1. Emergency Department, Ondokuz Mayıs University Medical Faculty Hospital, Samsun, Turkey

2. General Surgery Department, Ondokuz Mayıs University Medical Faculty Hospital, Samsun, Turkey

Corresponding author: Mr Akdemir Hızır Ufuk (hufukakdemir@hotmail.com)

Key-words: Dyspnea ; Diaphragmatic Hernia ; Emergency Department

Objective: A rare seen diaphragmatic hernia is divided into two groups, congenital and acquired diaohragmatic hernia respectively. Patients usually admit to health centers with complaints of epigastric, back pain, reflux, dyspepsia-like symptoms and also rarely cardiopulmonary symptoms. Presenting this patient case which had a dyspnea after abdominal pain and had a diagnosis of diaphrafmatic hernia according to examination; we aimed to point out that this clinical manifestation should be considered as a differential diagnosis in patients which admit to emergency service with complaint of dyspnea and had a similar physical examination and imaging findings in our article.

Case: A 63 years old female patient admitted to our emergency department with complaints of abdominal pain for three days and dyspnea at admission. She was healthy and there was only cholecystectomy 8 years ago in her medical history. At admission to our emergency department, she had complaints of dyspnea, nausea and vomiting. Her general status was moderate and she was tachypneic, dyspneic, pale and sweaty. Vital signs were blood pressure 130/80 mmHg, heart rate 80 bpm, respiratory rate 24 and temperature 36.7 oC. Breath sounds of right lung were diminished according to auscultation and there was right upper quadrant abdominal tenderness. Her ECG showed heart rate 80 beats/min and a normal sinus rhythm. Her pertinent laboratory showed WBC 9440/uL, Hb:13.9 g/dL, AST: 160 U/L ALT: 124 U/L, glucose 221 mg/dL. The patient's arterial blood gas showed a pH of 7.35, a pCO₂ of 33.9 mmHg, a pO₂ of 89.4 mmHg, a HCO₃ of 18.3 mmol/L and an oxygen saturation of 96.7%. In her chest radiography (Image 1), the right diaphragm was elevated and there was a deterioration in her right diaphragm. In her thoraco-abdominal computed tomography(CT) (Image 2.3), there was imaging findings which were belonging to inferior portion of stomach and left lobe of liver in region of inferior lobe of right lung. The patient preferred to general surgery department with this findings. After surgical operation of general surgery, the patient was discharged in healthy at the tenth days after hospitalization.

Conclusion: Dyspnea is one of the common causes for admission to emergency department. There is usually an underlying cardiopulmonary cause and it may diagnose largely by medical history and physical examination. Although dyspnea is a common complaint, also a rare manifestation such as diaphragmatic hernia may be a cause of dyspnea. Therefore, emergency department doctor should be able to think this diagnosis in patients who has a physical examination and imaging findings compatible with this diagnosis and should be able to manage the patient according to this diagnosis.

P182 Case Presentation

PERIORBITAL EMPHYSEMA AFTER COMPRESSED AIR TRAUMA WITHOUT BONE FRACTURE

MA Dokuzoglu, MT Gokdemir, F Gungormez, H Kaya, O Sogut

Emergency Department, Harran University, Sanliurfa, Turkey

Corresponding author: Mr Kaya Halil (drhalilkaya@gmail.com)

Key-words: orbital emphysema ; compressed air trauma ; joke

Orbital emphysema usually appears within the first 24 hours after trauma including paranasal bone fractures. Findings after trauma sometimes appears after maneuvers such as sneezing that increase the wall pressure. Our case is the presentation of orbital emphysema caused by the joke with high pressure air compressor without evidence of fracture.

Case report: A 5-year-old male patient was brought to the emergency department with complaints of collapse of the eyeball and blurring vision after keeping on eye air compressor by his elder brother. There was no known history of trauma or any other assault. He did not have impaired vision. Eye movements were natural. In the left eye there are hyperemia, subconjunctival air and hemorrhage at the upper conjunctiva. Paranasal and orbital CTs were taken to rule out trauma. Para-orbital air was shown in CT scans. We prescribed antibiotic cream and closed eye. He was discharged with suggestion of eye clinic control.

Conclusion: Orbital emphysema is a benign phenomenon which is absorbed spontaneously within 1-2 weeks. Patients without orbital compartment syndrome or ophthalmoplegia, can be discharged without the need for surgical treatment.

P183 Case Presentation

UNUSUAL PRESENTATION OF HYDATID CYST PATIENT ON EMERGENCY DEPARTMENT

U Eryigit (1), Y Karaca (2), O Tatli (2), C Tekinbas (3), A Turkyilmaz (3)

1. Department of Emergency Medicine, Karadeniz Technical University Faculty of Medicine, Trabzon, Turkey

2. Department of Emergency Medicine, Kanuni Training and Research Hospital, Trabzon, Turkey

3. Department of Thoracic Surgery, Karadeniz Technical University Faculty of Medicine, Trabzon, Turkey

Corresponding author: Mr Eryigit Umut (umuteryigitacil@gmail.com)

Key-words: Hydatid cyst ; Hydatid cyst rupture ; pneumothorax

Pulmonary hydatid cyst developing in association with *Echinococcus granulosus* is a parasitosis representing a serious health problem for Turkey. Cysts opening into the pleura may cause pleural effusion, empyema, pneumothorax and pneumonia. Treatment for pulmonary hydatid cyst consists of surgery and postoperative albendazole therapy. Local hypertonic solutions and long-term postoperative albendazole therapy are particularly useful in preventing recurrence of hydatid cysts rupturing into the pleura. A 30-year-old male patient presented to the emergency department with fever, chest pain and shortness of breath. Multiple cystic lesions in the right hemithorax were identified at pulmonary imaging. We learned that tube thoracostomy for spontaneous pneumothorax had been performed because of prolonged air leak two years previously. During surgery, a hydatid cyst rupturing into the pleura was identified and he received albendazole therapy for two months postoperatively. The patient was hospitalized with a preliminary diagnosis of multiple pleural hydatid cysts. Several cystic lesions localized to pleural areas were determined at right thoracotomy and removed. The patient was recommended six months albendazole therapy and discharged.

P184 Case Presentation

TONIC SEIZURE DUE TO PULMONARY EMBOLISM.

FT SÖNMEZ (1), F BÜYÜKÇAM (2), Cİ SÖNMEZ (3), MC MERMERKAYA (4), M TANDOĞAN (5)

1. Department of Emergency Medicine, Yenimahalle State Hospital, Ankara, Turkey

2. Department of Emergency Medicine, Dışkapı Y.B.Training and Education Hospital, Ankara, Turkey

3. Family Medicine, Kalaba Primary Care Center, Ankara, Turkey

4. Family Medicine, Atatürk Training and Education Hospital, Ankara, Turkey

5. Department of Emergency Medicine, Esenyurt State Hospital, Istanbul, Turkey

Corresponding author: Mme Turan Sönmez Feruza (ferouzabakounova@yahoo.com)

Key-words: tonic seizure ; non epileptic seizure ; pulmonary emboly

Introduction

A seizure is a sudden change in behavior that is a result of brain dysfunction. Epileptic seizures result from electrical hypersynchronization of neuronal networks in the cerebral cortex. Nonepileptic seizures are sudden changes in behavior that

resemble epileptic seizures but are not associated with the typical neurophysiological changes that characterize epileptic seizures.

It is important for clinicians to recognize these transient nonepileptic events that may manifest as seizures in order to avoid unnecessary treatment with antiepileptic drugs and to institute correct treatment when appropriate.

The electroencephalogram is an essential study for differentiation between epileptic seizures and other etiologies with seizure-like behavior.

Many cardiovascular disorders may cause loss of consciousness complicated by abnormal movements due to generalized cerebral hypoxia, resembling epileptic seizures.

Herein, we report a patient with pulmonary embolus presenting with confusing symptoms suggestive of seizure.

Case report

A 61 year-old male submitted to emergency service unconscious with generalized tonic seizure. He gazed upwards and had an incontinence. He was resuscitated with airway and seizure was treated with phenytoin and diazepam. After slightly recovery the patient told he had had a chest ache and slightly shortness in breath for past two days, while waiting for cardiologist for examination.

At the emergency room, brain computed tomography and MRI showed no abnormal finding, a 12-lead electrocardiogram showed sinus rhythm with minor ST depression on the leads V1-V6. On blood examination troponin I elevation was determined, 0.12 nmol. During watching at ER he again lost consciousness suddenly with generalized tonic posture such that the arms were bent in toward the body and the legs were extended along with upward gazing. The tonic posture lasted for about 1 min. During all these episodes, electroencephalogram monitoring showed no epileptiform discharges. These episodes were thus confirmed to be non-epileptogenic.

The patient was then diagnosed as coronary artery disease and was taken on angiography laboratory. The coronaries were reported as well bloodstained and no narrowing or thrombus was established. Again a pulmonary hypertension was detected and the patient underwent a CT angiography, which showed bilateral pulmonary thromboembolism in middle branch arteries. He was then transferred to the intensive care unit for further management.

The patient's state improved rapidly, he had had no seizure any more, and he was finally discharged with anticoagulating therapy.

Discussion

We presented a case of pulmonary thromboembolism which accompanied seizure-like movements that were confirmed to be non-epileptogenic.

Since syncope is defined as a transient, self-limited loss of consciousness with an inability to maintain posture that is followed by spontaneous recovery that occurs due to global cerebral hypoperfusion secondary to variable conditions such as inadequate cardiac output, decreased intravascular volume, autonomic dysfunction and impaired cerebral blood flow autoregulation, the diagnosis of these events in our patient is likely to be cardiogenic syncope. A convulsive seizure lasting for seconds with an abrupt return of consciousness implies syncope instead of seizure.

Repeated convulsive syncopes without provocation also suggest cardiac syncope. We assume that these tonic postures, misinterpreted as tonic seizures, were caused by hemodynamic instability-induced dysfunction of the rubrospinal tract, reticulospinal tract and brain stem, resembling the cause of decerebrate and decorticate postures.

Since pulmonary embolism is an important, life-threatening diagnosis, our report highlights the importance of correctly identifying these misleading tonic postures. Misdiagnosis may lead to improper treatment and could be fatal.

P185

Case Presentation

HEMORRHAGIC NECROTIZING PANCREATITIS WITH A GIANT PSEUDOCYST

Y Aydin (1), FH Besir (2), H Erdem (3), F Ermis (4), A Kutlucan (1), L Kutlucan (5), I Ozaydin (6), A Saritas (7)

1. Internal Medicine, Duzce University, Duzce, Turkey
2. Radiology, Duzce University, Duzce, Turkey
3. Pathology, Duzce University, Duzce, Turkey
4. Internal Medicine, Gastroenterology, Duzce University, Duzce, Turkey
5. Anesthesiology and Reanimation, Duzce University, Duzce, Turkey
6. General Surgery, Duzce University, Duzce, Turkey
7. Emergency Medicine, Duzce University, Duzce, Turkey

Corresponding author: Mr Kutlucan Ali (dralikutlucan@gmail.com)

Key-words: pancreatitis ; necrotizing ; giant pseudocyst

A pancreatic pseudocyst is a localized fluid collection within or adjacent to the pancreas, enclosed by a nonepithelialized wall. Pancreatic pseudocysts often arise as a complication of acute or chronic pancreatitis. The prevalence of pancreatic pseudocysts in acute pancreatitis has been reported to range from 6% to 18.5% while the prevalence of pancreatic pseudocysts in chronic pancreatitis range 20% to 40%. A 52-year-old man with a diagnosis of acute pancreatitis was referred to our clinic, after admitting to emergency service with a diffuse abdominal and back pain. His relatives recalled that he had an acute pancreatitis attack 3 weeks ago. He didn't regularly follow up control visits as the cyst kept on enlarging in size. According to his medical history he had an ischemic stroke attack 13 years ago and a cholecystectomy operation due to cholelithiasis 4 years ago. On his physical examination he had diffuse abdominal tenderness, defense, and rebound. He was also hemiparetic. On admission, he had a subfebrile fever (37.5 °C), tachycardia (112 beats/min), tachypnea (respiration 28/min). Laboratory examination revealed a white blood cell count of $6.2 \times 10^3/\mu\text{L}$, a hemoglobin of 12 g/dL, and a platelet count of $381 \times 10^3/\mu\text{L}$. Liver enzymes were increased as 2 to 3 folds of upper normal limits, alanine aminotransferase (ALT) was 107 IU/L (5-40), aspartate aminotransferase (AST) was 129 IU/L (5-40). Alkaline phosphatase (ALP) was slightly elevated with a value of 186 IU/L (35-125), gamma glutamyl transpeptidase (GGT) was slightly elevated as 72 IU/L (10-45). Amylase and lipase were slightly elevated as 190 IU/L (28-100) and 65 IU/L (13-60), respectively. The patient's blood urea nitrogen was elevated as 186 mg/dL (13-43), and creatinine level was elevated as 2.3 mg/dL. His coagulation parameters were normal. Since his creatinine level had been found to be high an unenhanced abdominal computed tomography (CT) was performed. Abdominal CT revealed an irregular and lobulated contoured, 20x7 cm in size liquid collection that is localized approximately to pancreas. The liquid collection was pushing small intestines and stomach. Increase in volume and heterogeneity of pancreatic corpus were also seen adjacent to collection. After general surgery consultation laparotomy was performed. Pseudocyst was observed and 300 cc purulent fluid aspirated. Necrotic pancreas segment was also removed. The necrosis and hemorrhage were also seen in microscopic evaluation. Pancreatic pseudocyst is a well-recognized complication of acute and chronic pancreatitis. Acute pseudocysts often resolve spontaneously in a considerable time, expectant management for at least 4 to 6 weeks should precede surgery or intervention. However chronic pseudocysts rarely regress if they are larger than 4 to 6 cm in diameter. Although percutaneous drainage has become an attractive option to manage pancreatic pseudocysts, in complicated cases as in our case surgical drainage is considered to be mandatory. Pseudocysts more than 10 cm in size have been

termed as being giant. To our knowledge the size of the pseudocyst in our case was exceptionally large.

P186 Case Presentation

MASSIVE UPPER GASTROINTESTINAL BLEEDING DUE TO GIANT SPLENIC ARTERY ANEURYSM WITH GASTRIC FISTULA: REPORT OF A CASE

S AKKUCUK (1), A AYDOGAN (1), H BAYAROGULLARI (2), A. Karakus (3), I YETIM (4)

1. Department of General Surgery,, Mustafa Kemal University, Faculty of Medicine,, Hatay, Turkey
2. Department of Radiology,, Mustafa Kemal University, Faculty of Medicine,, Hatay,, Turkey
3. Department of Emergency Medicine, Mustafa Kemal University, Hatay, Turkey
4. Department of General Surgery,, Mustafa Kemal University, Faculty of Medicine,, Hatay,, Turkey

Corresponding author: Mr Karakus Ali (drkarakus@yahoo.com)

Key-words: Splenic artery aneurysm ; gastric fistula ; hemorrhagic shock

We aimed to report a case of a giant splenic artery aneurysm(SAA) with gastric fistula with thereview of the literature.A female patient with splenic artery aneurysm was admitted to our hospital with abdominal pain and massive upper gastrointestinal bleeding. Hemorrhagic shock occurred. Despite the resuscitation, the patient died. SAA are the most common visceral aneurysm occurring predominantly in females with a ratio of 4:1. Trombosed and giant aneurysm of the splenic artery is an extremely rare clinical entity and its size rarely exceeds to 3 centimeters.Although they are usually asymptomatic, SAA are clinically important because of the possibility of life-threatening rupture.Interventions or surgical treatment is indicated for symptomatic and giant aneurysms.Early diagnosis and prompt intervention is necessary for success of treatment.

P187 Case Presentation

BILATERAL PERFORATING EYE INJURY DURING TAUPÉ HUNTING

T Ocak (1), A Duran (1), M Erdurmus (2), UY Tekelioglu (3), MS Maltas (1)

1. Emergency Medicine, Abant İzzet Baysal University, Medical Of Faculty, Bolu, Turkey
2. Ophthalmology, Abant İzzet Baysal University Medical of Faculty, Bolu, Turkey
3. Anesthesiology and Reanimation, Abant İzzet Baysal University, Medical of Faculty,, Bolu, Turkey

Corresponding author: Mr Ocak Tarik (drtarik1977@gmail.com)

Key-words: Taupe Hunting ; Bilateral perforating ; Eye Injury

Abstract:

Eye traumas may lead to severe injuries and loss of important functions. Most of the vision loss cases are due to traumas. The penetrating injuries are more often the cause of the vision loss. Generally affecting only one eye, these traumas rarely lead to the loss of vision in both eyes. In this study, we discussed a bilateral eye perforation with a taupe gun manually produced.

Case Presentation:

A 63-year old male patient applied to our hospital with many facial injuries due to the accidental firing of a gun used to hunt taupe. The vital signs of the patient were stable and he was conscious.

Both eye lids displayed edema during the external examination. There were many shot metals and gunshot residues in the face and in eye lids. Severe chemosis and subconjunctival hemorrhage have been observed in both eyes. While the eye movements of the patients were unaffected, the visual acuity was low, the right eye light sensation was reduced and no light sensation in left eye was diagnosed. The left eye presented a phthisic appearance due to the perforating injury. The right eye presented a perforation with globe form. In the computer assisted tomography, 2 and 7 shot metals have been observed respectively in right and left orbits. Many shot metals have been detected under the skin. Following these observations, intraocular foreign body surgery, back vitrectomy and perforation rectification surgeries have been performed on right eye. No surgical procedure has been performed on left eye because no vision capacity recovery was expected.

Results:

Traumatic bilateral perforating eye injuries rarely affect both eyes at the same time and caused by the same event.

P188 Case Presentation

MALPOSITION OF THE DIALYSIS CATHETER

T Ocak (1), A Duran (1), A Demirhan (2), H Onder (1), MS Maltas (1)

1. Emergency Medicine, Abant İzzet Baysal University, Medical Of Faculty, Bolu, Turkey
2. Anesthesiology and Reanimation, Abant İzzet Baysal University, Medical of Faculty, Bolu, Turkey

Corresponding author: Mr Ocak Tarik (drtarik1977@gmail.com)

Key-words: Malposition ; Catheter ; Dialysis

Introduction:

The central venous catheter procedures are performed when acute dialysis, parenteral nutrition is required and when peripheral vascular access is necessary in an emergency situation. During the procedure, the subclavian vein or the internal jugular vein is preferred according to the anatomy of the patient. Various complications can be encountered during the procedure in relation with the experience of the staff performing the procedure, the anatomical variations, and the utilization or not of the auxiliary imaging techniques. One of these complications is malposition. In this study, we discussed about the orientation of the dialysis catheter from the right subclavian vein to the left subclavian vein in a patient requiring acute dialysis.

Case:

A 49-year old female patient applied for weakness, fatigue and body numbness. She mentioned that the symptoms started 1 week ago and that they increased progressively. In the patient history, we learnt that the left kidney functions at 18% and the right kidney is fully functional. TA: 140/80 mmHg, pulse: 70 /minute, sO₂: 96%. No pathology was observed during physical examination. The ECG was at a normal sinus rhythm, and the speed was 65 /mn. In laboratory analysis; Ca⁺⁺ : 21.4 mg/dL, BUN: 68 mg/dL, creatinine: 1.28 mg/dL, total protein: 6.8 mg/dL, albumin: 4.1 mg/dL have been obtained. In blood gas analysis, the pH was normal and the ionized Ca⁺⁺ was 2 mmol/L. A 250 cc/h 0.9% NaCl infusion and a 10 mg/h furosemid infusion have been started. At the end of the 6th hour, blood Ca⁺⁺ levels displayed no decrease, so an hemodialysis has been decided. A right subclavian 13 Fr dialysis catheter has been positioned. IN the PA lung graphy performed for the position control and the state of the lungs, the orientation of the catheter to the left subclavian vein has been observed.

Results:

As the central venous catheter rarely orientate to another way than the one planned, the after procedure controls shall be performed as firmly as before the procedure.

P189

Case Presentation

MORTAL RETROPERITONEAL HEMATOMA DUE TO FEMORAL DIALYSIS CATHETER

A Duran (1), M Sit (2), T Ocak (1), UY Tekelioglu (3), A Akkaya (3)

1. Emergency Medicine, Abant İzzet Baysal University, Medical Of Faculty, Bolu, Turkey
2. General Surgery, Abant İzzet Baysal University, Medical of Faculty, Bolu, Turkey
3. Anesthesiology and Reanimation, Abant İzzet Baysal University, Medical of Faculty, Bolu, Turkey

Corresponding author: Mr Ocak Tarik (drtarik1977@gmail.com)

Key-words: Retroperitoneal Hematoma ; femoral Dialysis Catheter ; dead

Introduction:

There are many medical indications for central venous intervention procedures, including emergency dialysis. The most recurrent complications associated with femoral catheters are infections and phlebitis. However, it may rarely lead to mortal complications. In this study, we discussed about a case where the patient underwent dialysis following the installation of a femoral dialysis catheter, and then developed a retroperitoneal hematoma, and died after the surgical intervention.

Case:

A 65-year old female patient underwent a femoral dialysis catheter 20 days ago and hemodialysis has been applied 8 times. 8 units of erythrocyte suspension has been used due to anemia after the hemodialysis. She has been transferred to our clinic for abdominal pain, protuberance and ecchymosed in right inguen and right lumbar region. TA: 90/60, Nb: 105. Wbc: 5700, Hgb: 10.6, Htc: 31.2 and Plt: 116000. In the abdominal tomography, in the superior part of the left lower quadrant, a 10 cm heterogeneous, hyperdense area have been considered as acute and subacute blood elements. With the pressure of the hematoma on the bladder, the urine delivery of the patient decreased, leading to the increase of urea-creatinine values. As the clinical state of the patient who also has renal impairment has not been ensured, an operation has been planned. Approximately 1 liter of blood was present in a hematoma under the terminal ileum and cecum in the abdomen. The hematoma and blood elements have been emptied. Femoral catheter has been removed. Drains have been positioned in both femoral area and the operation has been ended. The patient died at the 10th day postop due to the development of sepsis in intensive care.

Results:

Although the femoral catheters are the interventions with the less mortal complications, this can also lead to severe complications as discussed for the case.

1. Emergency Medicine Clinic, Umraniye Education and Research Hospital, Istanbul, Turkey
2. Department of Emergency Medicine, Beykoz State Hospital, Istanbul, Turkey
3. Emergency Medicine Clinic, Dr Lutfi Kırdar Kartal Education And Research Hospital, Istanbul, Turkey

Corresponding author: Mme Eren Çevik Sebnem (erenseb@yahoo.com)

Key-words: Fahr's disease ; intracranial calcification ; computed tomography

Computed tomography features of extensive intracranial calcifications due to postoperative hypoparathyroidism are rarely reported in the literature. We presented the cranial computed tomography aspects and clinical features of a female patient with postoperative hypoparathyroidism who had intracranial calcifications after many years from thyroidectomy operation.

A 69 year old female patient with past medical history of diabetes mellitus, hypertension, cronic obstructive lung disease and thyroidectomy (20 years ago) was admitted to our Emergency Department (ED) with paresthesia on her left side, urinary and fecal incontinence continued for 2 days. On physical examination, she was cooperative and oriented. Blood pressure measured in our ED was 134/56 mmHg, pulse rate 100 pulse/min, respiration rate 30 breaths/min, temperature 36Co and oxygen saturation 99%. ECG demonstrated sinus tachycardia, with a rate 100 beaths/min. The neurological examination was unremarkable. On auscultation of respiratory system; bilateral rhoncus was heard. Laboratory studies included: 5.5 mg/dl serum calcium (N, 8.4–10.2), 3.7 g/dl albumin (3.5–5), 2.2 pg/ml PTH (15–68.3), 0.16 TSH (0.49–4.67), 65 mg/dl Alkaline Phosphatase (40–150), 79 mg/dl Blood urea nitrogen (21–43), 1.98 mg/dl creatinin, 10.1 mg/dl hemoglobin, 155 mg/dl glucose. Brain computed tomography showed diffuse, symmetric parenchymal calcifications involving the dentate nuclei, basal ganglia and periventricular white matter (Fahr's disease?) and gyal type hyperdense appearance involving bilateral occipital lobe (Subaracnoid hemorrhage?). After the neurosurgery and internal medicine consultations, she was admitted to internal medicine to make the differential diagnosis of Fahr's disease. The patient was treated with 0.5 µg calcitriol and 1000 mg calcium carbonate (oral, three times daily). After 12 days, her paresthesias resolved and serum calcium rose to 9.1 mg/dl.

Fahr's disease is a rare degenerative neurological disorder characterized by the presence of abnormal calcium deposition and associated cell loss in the areas of brain that control movement, including basal ganglia and cerebral cortex. The condition was first described by Fahr in 1930. According to reports in medical literature, Fahr's disease is often familial. It is believed to have autosomal dominant inheritance but a few cases have been reported to have autosomal recessive inheritance and even some sporadic cases have been reported in literature.

Fahr's disease or familial idiopathic basal ganglia calcification is characterized by bilateral basal ganglia clacification .The most common site of calcification is the globus pallidus . However additional areas of calcification are putamen, caudate nucleus, internal capsule, dentate nucleus, thalamus, cerebellum and cerebral white matter. The calcium deposits occur in the extracellular and extravascular space often surrounding the capillaries. It is not clear whether the calcification in Fahr's disease is a metastatic deposition, secondary to local disruption of blood brain barrier, or is due to disorder of neuronal calcium metabolism. Fahr's disease should be considered as a differential diagnosis in the presence of hemorrhagic findings in cranial computed tomography images.

P190

Case Presentation

INTRACRANIAL HEMORRHAGE OR FAHR'S DISEASE?

OD Cakir (1), SE Cevik (2), O Guneyssel (3)

P191

Case Presentation

DIAGNOSTIC DILEMMAS IN ACUTE MYOCARDIAL INFARCTION

E. Beslagic (1), V Cengic (1), M. Dedic (2), E. Demirovic (2)
Emergency department, General Hospital "Prim. dr Abdulah Nakas", Sarajevo, Bosnia and Herzegovina

Corresponding author: Mme Balic-prasevic Lejla (lbalic@live.com)

Key-words: chest pain ; hiatal hernia ; myocardial infarction

Introduction

The classical triad of symptoms and signs that confirm a diagnosis of acute coronary disease, i.e. myocardial infarction, is in practice often not present.

Goal

In this work we present our experience of initial diagnostic dilemma with a patient who had acute myocardial infarction with chest pain as the dominant and sole symptom, a normal EKG, serum enzyme values within normal limits, and previously documented hiatal hernia.

Materials and Methods

The 48 year old patient reports to the Department for emergency medicine of our hospital in the early morning hours, with strong chest pains that radiate through both arms. Upon admission he had TA 150/100mmHg, pulse around 80/min, with regular rhythm. A promptly conducted EKG does not show pathological changes such as ischemia or lesion, laboratory results show normal enzyme values, and this, along with the existence of a gastroscopically-verified hiatal hernia, leads the two consulting interns to reach different conclusion: one perceives the problem as cardiac and the other as non-cardiac. The patient is kept for observation at the Department for emergency medicine due to persistent pain, and is given analgesics. EKG control two hours later demonstrates typical changes that prove inferior wall myocardial infarction. The patient is briefly admitted to the intensive care unit before being transferred to the Heart Center of the Sarajevo University Clinical Center for a cardiac procedure.

Results

Heart catheterisation reveals two-vessel coronary disease, with 85%LAD stenosis on trifurcation and on CX subocclusive lesion. A PTCA is conducted as well as several dilatation on OM1 and OM2 branches, with successful results.

Heart ECHO shows mildly reduced systolic function, EF 45%, mild hypokinesia of inferior wall and the medioapical part of the septum. Subjectively the patient feels well and is discharged after six days. The cardiosurgical committee will make a decision about a possible surgical treatment.

In patients with a history of posterior myocardial infarction (PMI) due to circumflex (Cx) artery occlusion ST elevation is not detected in half of the cases of standard electrocardiogram (ECG). Posterior derivation ECG is a tool of detection and diagnosis in these patients (1). In a previous study, it was reported that only 50% of doctors working in emergency clinics knew that posterior derivation ECG should be taken for the diagnosis of PMI (2). In this case presentation, our objective was to emphasise the importance of posterior derivation ECG in accurate detection and diagnosis of PMI.

Case:

A 58-year-old patient referred to emergency clinic with complaints of feeling of tightness in the chest. Standard 12-lead ECG showed no signs of ischemia. The patient, whose Troponin T was 3.525 ng/ml, was hospitalized in coronary emergency care unit with a diagnosis of acute coronary syndrome. In the angiographic examination, LAD after D2 was found to be %70 and Cx before OM2 was found to have %80 thrombosis. RCA was determined to be normal. Stent was inserted through PTCA into LAD in the first session and it was applied into Cx after 10 days. After fourteen days of follow-up, the patient, who showed no signs of chest pain, was discharged from the clinic with due recommendations and prescriptions. In two days after discharge from the hospital, the patient referred to our clinic again with complaints of chest pain. Standard 12-lead ECG showed no signs of ischemia; Troponin T > 50 ng/ml. However, when posterior derivation ECG of the patient was taken PMI was detected. In the examinations of CAG and CxOM1 the interior of the stent was found to have been totally clogged. Therefore the thrombosis was aspirated and dilated with PTCA and the patient was discharged from the clinic with recovery.

Conclusion:

For the patients who refer to the emergency clinics and whose standard ECG is normal, posterior derivation ECG must certainly be a tool of option and recommendation for a further evaluation of the patient. In addition, even if stent is inserted into coronary artery, the possibility of restenosis inside the stent should not be ruled out in the earlier and later periods.

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P193

Case Presentation

P192

Case Presentation

POSTERIOR DERIVATION ECG OF PATIENT WITH CHEST PAIN

H Gonullu (1), S Karadas (1), Y Oner (2), M Sahin (3), M Sahin (4)

1. Emergency Medicine, Yuzuncu Yil University, School of Medicine, Van, Turkey
2. emergency service, Niğde State Hospital, Niğde, Turkey
3. Department of Emergency Medicine, Yuzuncu Yil University, School of Medicine, Van, Turkey
4. Department of Cardiology, Yuzuncu Yil University, School of medicine, Van, Turkey

Corresponding author: Mme Gonullu Hayriye (drhayriyegonullu@gmail.com)

Key-words: Posterior derivation ECG ; Chest pain ; Myocardial infarction

Introduction:

A CASE REPORT WITH SPONTANEOUS GAS GANGRENE

O Guneyysel, F Kirar, G Simsek, S Sozen

Emergency Medicine Clinic, Dr. Lutfi Kirdar Kartal Education and Research Hospital, Istanbul, Turkey

Corresponding author: Melle Simsek Gozde (gsimsek79@gmail.com)

Key-words: gas gangrene ; clostridium septicum ; colon malignancy

Background. Gas gangrene is a rare condition, usually associated with contaminated traumatic injuries. It carries a high rate of mortality and morbidity. A number of studies have implicated non-traumatic gas gangrene and colonic neoplasia. Clostridium septicum infection is a rare cause of spontaneous nontraumatic gas gangrene. The resultant myonecrosis is acutely painful and rapidly fatal. The infection occurs in the absence of trauma and is usually associated with an underlying malignancy. We report a case of

spontaneous gas gangrene of the upper leg caused by *Clostridium septicum* infection associated by carcinoma of the colon.

Case Report. A 79-year-old male, with a history of rectum carcinoma, presented to the emergency department complaining increased left upper leg pain for 1-2 days with redness and swelling. His past medical history included rectum cancer that was diagnosed and operated 2 years ago and receiving chemotherapy. On physical examination the patient was in mild distress and his vital signs were blood pressure: 119/62 mmHg, heart rate: 110 bpm, respiratory rate: 20/min, temperature: 39°C and oxygen saturation: 100% on room air. There were swelling, inflammation and crepitus at the left upper leg and a foul-smelling odor. Dark blisters were noted with erythema tracking up the lateral aspect of the leg. There was a 2 × 1.5 × 1.5 cm ulcer with maceration of the periwound skin and a serosanguinous drainage that had a mild odor. On admission the blood studies showed WBC: 12000/mm³, Hb: 7.0 g/dl, Ca: 7.2 mg/dL, Na: 130 mEq/L, K: 2.98 mEq/L. The radiography and CT scan demonstrated an extensive subcutaneous gas formation around the left upper leg and intestine. The diagnosis of necrotizing fasciitis was considered and emergent surgical consultation was obtained. The patient was given intravenous meropenem 1 g/day and vancomycin 2 g/day. On the second day of the admission, he was operated. He remained febrile and on the fifth day after operation he became arrest and died.

Discussion. Intestinal flora includes *Clostridium* spp; an anaerobic Gram-positive rod. *Clostridium* has been accused of infections including gas gangrene, osteomyelitis, meningitis, brain abscess, subcutaneous abscesses, spontaneous peritonitis and cellulitis. Gas gangrene is called *Clostridial myonecrosis* that is characterized by muscle necrosis and systemic toxicity caused by clostridial exotoxins. *Clostridial myonecrosis* is occurred with traumatic or non-traumatic factors. In a study by Khan it is reported that malignancy was determined in 10% of all clostridial infections; however approximately half of the gas gangrene patients with intestinal cancer are related to *C. septicum* infection. The patients with cancer are believed to be predisposed to *Clostridial* infections because of anaerobic environment produced by cancer with pathogenesis as disruption of mucosal barrier and decrease of blood stream.

Conclusion. Clinical findings of gas gangrene can be mistaken with soft tissue infections; therefore emergency physicians need to be careful. Physicians should search for the disease in patients presenting with relatively acute onset of severe non traumatic limb pain who have underlying colon malignancy. Our case illustrates the fulminant nature of gas gangrene and although it is an uncommon diagnosis; it is essential that the management should be initiated as soon as possible. Treatment should include aggressive resuscitation, iv antibiotics, and surgical debridement.

treatments are not uncommon and may be detrimental. Proposed etiological factors include constant fluid pulsations against the anterior skull base transmitted by primitive or acquired arachnoid invaginations in combination with either trauma, elevated intracranial pressure, allergic rhinitis, sinusitis or congenital pathologic erosions of sellar and parasellar bone structures. We describe one case of this condition occurring in association with allergic rhinitis and sinusitis.

Case Report. A 46-year-old female presented with a 1-week history of bilateral clear rhinorrhea, undocumented fever, and postural headaches. She had previously been evaluated and treated for rhinitis and rhinosinusitis with a course of antibiotics and nasal steroids at another institution, without significant improvement. The patient had neither significant medical history nor any previous history of trauma or surgery. On physical examination vital signs were blood pressure 130/80 mmHg, pulse rate 74 bpm, respiration rate 17 breaths/min, body temperature 36.8°C and oxygen saturation %98 on room air and systemic physical examination was otherwise normal. No motor or sensory deficits existed on her neurologic examination. A collected sample of rhinorrhea tested for glucose and protein. Glucose was 95 gr/dl and protein of the serous drainage was 43.7 mg/dl. Unfortunately, the beta-2 transferrin could not be measured. CSF rhinorrhea was considered as the primary diagnosis. The non-contrast paranasal CT was unremarkable. A review at the neurosurgery clinic prompted a cranial MRI. MRI showed third and fourth ventricles enlargement and also an extension of bilateral cerebellar tonsils into the foramen magnum. Lumbar drainage was performed, but no CSF fistula discharge was determined. Despite the whole work up; the origin of the CSF fistula could not be identified. She was discharged for outpatient follow up.

Discussion. Disruption of the barriers between the sinonasal cavity and the anterior and middle cranial fossae can lead to the discharge of CSF into the nasal cavity. The etiology of the CSF rhinorrhea are; trauma, the sneezing during the allergic rhinitis, intracranial tumor or a congenital malformation. The sneezing during the allergic rhinitis or another act which increases intracranial pressure suddenly is opening a pathway for cerebrospinal fluid. Sometimes the CSF fistula could not be identified with radiological methods; in such cases surgical methods should be use for the diagnosis.

Conclusion. Spontaneous CSF rhinorrhea should always be considered in the differential diagnosis in the serous nasal fluids. Failure in diagnosis spontaneous CSF rhinorrhea may result in fatal complications such as meningitis.

P194

Case Presentation

SPONTANEOUS CEREBROSPINAL FLUID RHINORRHEA

O Güneysel, H Hocagil, E Kozan, G Simsek

Emergency Medicine Clinic, Dr. Lutfi Kırdar Kartal Education and Research Hospital, Istanbul, Turkey

Corresponding author: Melle Simsek Gozde (gsimsek79@gmail.com)

Key-words: Rhinorrhea ; serous nasal fluids ; rhinosinusitis

Background. Idiopathic spontaneous cerebrospinal fluid (CSF) rhinorrhea is a very rare entity which is difficult to manage and which has high recurrence rates. Since the precipitating cause is not apparent in most patients, delayed diagnosis and/or improper

P195

Case Presentation

ACUTE DYSTONIA AFTER APPLICATION OF PARENTERAL METOCLOPRAMIDE: REPORT OF TWO CASES

A. Akseli (1), B. Kantekin (1), I. Ok (1), E. Ozluer (1), I. Yavasoglu (2)

1. Emergency Department, Adnan Menderes University Medical Faculty, Aydın, Turkey
2. Hematology, Adnan Menderes University Medical Faculty, Aydın, Turkey

Corresponding author: Mr Coskun Sedat (doktor_sedatcoskun@hotmail.com)

Key-words: Metoclopramide ; antiemetic ; biperiden

Introduction:

The functioning of conduction system of central nervous system is provided with normal balance between dopaminergic and cholinergic receptors . Some drugs cause dystonia by disrupting this balance. Although these muscle spasms are frightening and disturbing for patients they are not life-threatening. Generally dystonia occurs after antipsychotic, antiemetic, and antidepressant medication intake . Metoclopramide induced dystonia are rare in the literature and usually occurs in young children.

Case 1

Twenty-year-old female patient with a contraction of neck muscles, limb weakness and was admitted to the emergency department with complaints of slurred speech. On previous day she has been treated with 10 miligrams of metoclopramide IV at another health facility which she admitted because of diarrhea, nausea and vomiting . After metoclopramide medication diarrhea and nausea was reduced but next day abdominal pain and nausea persisted. The patient received metoclopramide 10 mg IV therapy for the second time. 3 hours after the second treatment the patient admitted to the emergency room.

The patient's blood pressure was 130/80 mmHg, pulse 94 / min, respiratory rate 20 / min, and body temperature 36.8 C, respectively. In physical examination, light reflexes were bilateral positive and there was no neck stiffness. Conjugate eye movements were normal. spasm and The patient's head was deviated to the right side and there was a spasm at right sternocleidomastoid muscle. Nasolabial sulci were symmetrical . Cerebellar tests and examination of muscle strength were normal. Deep tendon reflexes were normal and Babinski's sign was negative. During follow up in ED, muscle spasm occurred at the left sternocleidomastoid muscle. After biperiden (5 mg) treatment, the patient's contractions decreased. Tremor developed in the short term after treatment.

Case 2

Twenty-year-old female patient admitted to emergency department with scrolling up in her eyes, and contractions of neck muscle. Due to her complaints of abdominal pain and nausea she has been diagnosed with cystitis and treated with metoclopramide 10 mg IV in 500 cc saline previous day at another health facility. After treatment the patient had been prescribed 500 mg of ciprofloxacin 2x1 and metoclopramide 10 mg tb 2x1. Next day in ED her eyes were scrolled upward and was suffering from headaches and neck muscle contractions.

The patient's blood pressure was 120/80 mm / Hg, pulse 84 / min, respiratory rate 22 / min, and body temperature of 35.5 C, respectively. Light reflexes were bilateral normal and in physical examination, there was no neck stiffness. In conjugate eye movements examination, bilateral looking down and looking to the right was restricted. Nasolabial sulci were symmetrical. Cerebellar tests and examinations of muscle strength were normal. Deep tendon reflexes were normal and Babinski's sign was

negative. The crisis was diagnosed with acute dystonia and oculogyric crisis. After Trihexyphenidyl (5 mg) application the patient's symptoms has been reduced.

Conclusion:

Early diagnosis and treatment of diseases is important for patient comfort. Physicians working in the emergency department must have adequate knowledge about an acute dystonic reaction and potential extrapyramidal side effects of metoclopramide therapy should be kept in mind.

P196

Case Presentation

NECROTIZING FASCIITIS SECONDARY TO TRAUMA RIGHT ARM.

N. Simarro, R. Lopez, E. Renilla, M Rosado, D. Montes, M. Urbano, O Salmerón Beliz

Emergency department, Hospital Universitario Fundación Alcorcon-MADRID, Alcorcon.Madrid, Spain

Corresponding author: Mme Esther Renilla Sanchez Maria Esther (estherrenilla@hotmail.com)

Key-words: necrotizing fasciitis ; streptococcal toxic shock syndrome ; soft tissue infections

ABSTRACT:

Anamnesis: Man of 43 years, language barrier; natural from Romania, referring pain and functional impotence of right upper extremity (ESD), The family reported that the patient had fallen two or three meters high about 72 hours ago and had taken analgesics without pain control and with progressive worsening so. Initially they didn't provide more information.

Physical examination: Blood pressure systolic 90, diastolic 60 mmHg, heart rate 105, respiratory rate 25 per minute, temperature 37.7 ° C, O₂ Saturation: 85% aware, w, collaborates, agitated, pale and with cold skin. Also lividity on flanks and in the lower limbs. At the right arm: pallor and coldness of the extremity, edema, bruising on shoulder and hand, small blisters on inner arm region, crusted lesions on the dorsum of the hand, and thready radial pulse and loss of function.

Investigations: Analysis: WBC: 3.43, neutrophils: 82.7%, Hemoglobin 16.5, hematocrit: 49.4, Plaquetas 160.000, Coagulation (TP: 16.04, APTT: 48.96, INR: 1.36, fibrinogen: 903.3, Dimer D: 1950), GAB (pH: 7.3, pCO₂: 22.4, PO₂: 72.5, HCO₃: 10.9, BEB: -13.2, Sat O₂: 93.6%), BQ (G: 103, U: 87, Creat.4.4, Album : 2.5, Ca: 10.7, Na: 134, K 3.6, Cl: 90, lactate: 17.9, CPK: 1291, BT: 0.9, GPT: 57, AST: 101), PCR: 574.

Thoraco-abdominal CT without intravenous contrast (CT) : important trabeculation and infiltration of fat planes and muscle of the axillary region, right shoulder and adjacent chest wall.

Treatment and Evolution:

Oxygen and basic life support measures, fluids and empirical therapy with imipenem and ciprofloxacin. Commented with critical care (ICU) unit, a central via is channeled and they proceed to orotracheal intubation for mechanical ventilation, due to the persistence of hemodynamic instability, requiring the infusion of norepinephrine. Clinical findings and the TAC suspected Necrotizing Fasciitis (FN) so that urgent surgical debridement is indicated and antibiotic coverage with clindamycin and linezolid. He suffered during surgery a cardio respiratory failure recovered with advanced life support maneuvers. Bad clinical evolution, and death after 72 hours. In surgical samples grows Staphylococcus aureus and Streptococcus pyogenes (Group A).

Discussion:

Initially, with the history reported by the accompanying trauma, hypovolemic shock is suspected in a patient with multiple injuries. The discordance of pain in the right upper extremity with little injury to the scan, and CT images helped to suspect a soft tissue infection, as necrotizing fasciitis. It is a type II, group A streptococcus (*S. pyogenes*). The estimated incidence is 3.5-4 cases per 100 000 inhabitants with a fatality rate of mortality 24-30%. Mortality increases to 50% if it is associated with streptococcal toxic shock syndrome. There are the classic symptoms of pain, anxiety, sweating and pain disproportionate to the apparent injury, so that early diagnosis is difficult even in experienced staff because it can be indistinguishable from cellulitis or abscess in early stages, so the main tool for early diagnosis is to have a high index of suspicion. Treatment includes supportive measures, broad spectrum antimicrobial therapy (including penicillin and clindamycin), and early surgical debridement. The latter is mainstay of treatment reducing the mortality rate. The prognosis without surgical is mortality of 100%. Also there is a high mortality rate with surgery, 46%. This increased in patients with infection and myonecrosis *Streptococcus* group A with associated risk factors. Scales have been developed with diagnostic predictive laboratory parameters (LRINEC) including hemoglobin, white blood cell count, sodium, creatinine, glucose and CRP. A score greater than or equal to 8 is highly predictive of FN. Therefore, this scale has proven useful in cases of scores over 8. In our patient it was > 8. It is necessary to alert about the importance of an early diagnosis with these warning signs to reduce the mortality rate.

P197

Case Presentation

ANGIOEDEMA; IS IT ALLERGIC OR HEREDITARY?

B. Karakus (1), O. Uzun (1), A. Ipekci (2), Y. Celik (1), T. Ocak (3)

1. Emergency department, Istanbul Bagcilar Training and Research Hospital, Istanbul, Turkey
2. Emergency department, Istanbul Okmeydanı Training and Research Hospital, Istanbul, Turkey
3. Emergency department, Bolu Abant İzzet Baysal University, Bolu, Turkey

Corresponding author: Melle Karakus Banu (banukarakus@yahoo.com)

Key-words: Angioedema ; Emergency department ; Hereditary

Introduction: Angioedema is characterized with edema of subcutaneous tissues and is evaluated in two classes which are classical form (characterized with urticaria) and hereditary. Hereditary angioedema is seen rarely. These patients are admitted to the emergency department during acute phase. Our goal in presenting this case to draw attention to discrimination of patients admitted to emergency department with first attack.

Case: 66 years old male patient admitted to emergency department with complaints of swelling of lips and face starting few hours before and difficulty in swallowing. Vital signs were stable. Swelling under both eyes, lips and edema of uvula was present. Examination of lungs was normal. Urticarial plaques on skin was not distinguished. Steroid and antihistamine therapy were applied with diagnosis of angioedema. Patients complaints were resolved after four hours follow up and patients were discharged with antihistamine therapy. Laboratory tests on admission and next day were measured as WBC:10.55, CRP: 7.05 mg/L (normal value 0-5), C3 (complement): 141 mg/dL (90-180), C4 (complement): 28.8 mg/dL (10-40), C1 inhibitor (C1 esterase inh): 29.4 mg/dL (60-130). C4 value was normal and family history was negative. Patients was followed with diagnosis of angioneurotic edema.

Discussion and Conclusion: Angioedema disease in patients admitted to the emergency department is usually diagnosed and treated clinically. Severe respiratory problems could be seen in the majority of patients admitted with these symptom. Especially in the emergency department, patients should be followed for these complications. Less than 1% of angioedema patients have autosomal dominant hereditary angioedema and diagnosis is made on the basis of family history, physical examination, C4 and C3 esterase inhibitor deficiency. Clinical signs may be more severe in patients with hereditary angioedema and infusion of C1 inhibitor or FFP is recommended for treatment. Screening of hereditary angioedema in this respect in patients admitted with first attack is important. In our case, patient was admitted with first attack and diagnosis of hereditary angioedema was excluded with clinical and laboratory results and therapy was recommended. As a results, hereditary angioedema should be considered in patients who is accepted as a allergic clinical situation and patients should be informed for further information.

P198

Case Presentation

ACUTE PANCREATITIS DURING PREGNANCY. A CASE REPORT

OB Cehreli (1), FO Kahveci (1), T Kahveci (2), S Mete (1), C Subasi (1)

1. Emergency Department, Bülent Ecevit University, Zonguldak, Turkey
2. Obstetrics and Gynecology, A Medical Center, Zonguldak, Turkey

Corresponding author: Mr Kahveci Fatih Ozan (drozankahveci@gmail.com)

Key-words: Acute pancreatitis ; Pregnancy ; Acute Abdomen

Introduction

Acute pancreatitis is a rare event in pregnancy, occurring in approximately 3 in 10 000 pregnancies. Nonetheless the incidence of acute pancreatitis continues to increase, rising noticeably in pregnant women in line with changing patterns of diet and lifestyle. Furthermore, it is associated with maternal and perinatal mortality.

Case

A 24-year-old nulliparous woman at 34 weeks' of gestation was admitted to our emergency department with complaints of abdominal pain in the right upper quadrant that radiated to the back and the epigastrium. Her antepartum obstetric history was unremarkable, but her past medical history was significant for a diagnosis of depression. On palpation, the patient had displayed tenderness in the right upper quadrant. An abdominal ultrasound examination revealed multiple gallstones and bile sludge were visualized in the gallbladder. Wall thickness of the gallbladder was 4 mm in diameter. The transverse diameter and intrahepatic and extrahepatic bile ducts were normal. A biochemical analysis of the serum revealed an elevated serum amylase level (1990 IU/mL); liver function tests and serum bilirubin levels were as follows: aspartate aminotransferase—149 IU/mL, alanine aminotransferase—83 IU/mL, alkaline phosphatase—183 IU/mL, gamma glutamyl transferase—121 IU/mL, total bilirubin—1.0 mg/dL, and direct bilirubin—0.5mg/dL. Diagnosis of biliary pancreatitis was established based on elevated amylase and lipase levels. As a result, oral intake was withheld. Intravenous fluid therapy was administered. And then she was admitted in the obstetrics and gynecology service.

Discussion

The etiological associations of AP during pregnancy are similar to those in the general population. AP in pregnancy is most often associated with gallstone disease or hypertriglyceridemia.

Gallstones are the most common cause of AP during pregnancy responsible for more than 70% of cases. Gallbladder disease is strongly related to the metabolic syndrome, a problem that is growing in incidence all over the world. Weight gain and hormonal changes predispose pregnant women to biliary sludge and gallstone formation. Cholesterol secretion in the hepatic bile increases in the second and third trimester compared to bile acids and phospholipids, leading to supersaturated bile; in addition, fasting and postprandial gallbladder volumes are greater, with reduced rate and volume of emptying. This large residual volume of supersaturated bile in the gallbladder of the pregnant patient leads to the retention of cholesterol crystals and eventual gallstones. The formation of biliary sludge and stones is strongly associated with frequency and number of pregnancies. Sudden abdominal pain, nausea and vomiting are three main symptoms of AP in pregnancy. Some cases may have persistent vomiting, abdominal distension and tenderness in the whole abdomen. The main laboratory finding is increased amylase activity. Appropriate investigations include ultrasound of the right upper quadrant and measurement of serum triglycerides and ionized calcium. Abdominal ultrasound with no radiation to the fetus is the initial imaging technique of choice to identify a biliary etiology. However, it is insensitive for the detection of common bile duct stones or sludge and the morphological changes of pancreas. Magnetic resonance imaging (MRI) provides multi-planar large field of view images of the body with excellent soft-tissue contrast and images of bilio-pancreatic duct systems, and, hence, is recommended for pregnant women. Although CT provides good evidence for the presence of pancreatitis, it is not recommended for pregnant patients because of radiation exposure to the fetus. Management of gallstone pancreatitis is controversial, although laparoscopic cholecystectomy and endoscopic retrograde cholangiopancreatography (ERCP) are often used and may be associated with lower complication rates.

Conclusion

Acute abdominal pain in pregnancy may be attributable to a broad range of nonobstetrical causes. The evaluation of an acute abdomen during pregnancy must include in the differential diagnosis appendicitis, cholecystitis, pancreatitis, and bowel obstruction. Fetal monitoring is essential during the management of acute abdomen in pregnancy. The majority of these cases can be managed successfully with conservative treatment. Surgical intervention should be performed as late as possible.

P199

Case Presentation

MINE ACCIDENT WITH MEAT HOOK

OB Cehreli (1), FO Kahveci (1), S Mete (1), II Oz (2), C Subasi (1)

1. Emergency Department, Bülent Ecevit University, Zonguldak, Turkey
2. Radiology Department, Bülent Ecevit University, Zonguldak, Turkey

Corresponding author: Mr Kahveci Fatih Ozan (drozankahveci@gmail.com)

Key-words: Neck injury ; meat hook ; mine accident

Introduction

Penetrating neck injuries are present in 5-10% of all trauma cases. Many kinds of materials such as knife, bullet, metallic rod, pencil, fragments of glass, wooden stick etc can cause penetrating neck injury. Such injuries can damage vital structures. We present the case of a patient who had an occupational penetrating (zone II) neck injury caused by a meat hook.

Case

A 30-years-old male patient presented to our emergency department with history of accidental penetrating injury on the left lateral side of his neck. He was working in underground mine when a meat hook stuck at left lateral side of his neck. On examination patient was conscious and well oriented. He was haemodynamically stable and did not have any neurodeficit. There was about 4 cm wound of entry along the junction of the upper one third and the lower two third of the sternocleidomastoid muscle. There was bleeding from this site. There was surrounding neck swelling and tenderness. A X-ray of the cervical region was taken in the anteroposterior and lateral view which revealed a subcutaneous emphysema at the level of the third, fourth and fifth cervical vertebra. A Ultrasonography of the neck revealed no injury to the vessels. He had no physical signs of major vessels injury; so extensive investigations were not done apart from the CT scan to get some information on subcutaneous emphysema the anatomical relationship with other structure in the neck and face. Haemostasis was achieved and the wound was closed in layers. There were no complications.

Discussion

The management of patients with penetrating neck injuries remains controversial. The neck contains a high concentration of vital structures, and aggressive management of these injuries has been suggested. Multiple vital structures of the neck can be divided into four groups, including (i) the air passages: trachea, larynx and lung; (ii) vascular structures: carotid, jugular, subclavian, innominate and aortic arch vessels; (iii) gastrointestinal structures: pharynx and oesophagus and (iv) neurological structures: cranial nerves, peripheral nerves, brachial plexus and spinal cord, which are vulnerable to injury in the neck. The injury in the zone III (area above the level of angle of mandible) is more dangerous than injury in the zone II. But fifty percent to 80% of injuries involve zone II, between the angle of the mandible and the cricoid cartilage. Penetrating injuries are the most common and tend to be the most severe form of neck trauma.

In the past, routine neck exploration was common practice for these patients, resulting in a large number of unnecessary procedures and iatrogenic injuries. One study demonstrates that clinically important arterial injuries, without signs of such injury, in the patient with a penetrating neck wound are rare (0.7%). Physical examination is good predictors of arterial injury in patients with penetrating neck wounds and can exclude injury in over 99% of patients.

Angiography is the useful diagnostic technique for both the evaluation of the vital vessels and the evaluation of the relationship between foreign bodies and vessels. One study looked at 178 adult patients with penetrating zone II neck injuries and found that the sensitivity and specificity of angiography was 100% and 95%, respectively. But other studies have shown that there is no significant difference between clinical examination and angiography for detection of vascular injury in zone II penetrating neck injuries. Angiography is an invasive diagnostic tool and allergic reactions can occur. Indication for an angiogram in zone II injuries included a stable patient who has persistent hemorrhage and neurological deficits. However, non invasive diagnostic tools such as computed tomography, CT angiography, MRI, MR angiography and Doppler examination give more information about the exact location of the foreign bodies and relationship between foreign bodies and vessels.

Conclusion

Penetrating injury to the neck is an uncommon but a potentially life threatening condition. Firstly the patients airway should be established and he should be made haemodynamically stable. Though the wound of entry might be inconspicuous making the injury look trivial, the underlying damage could be much more serious.

P200

Case Presentation

AORTIC DISSECTION IN PREGNANCY

B ATLI (1), H AYDIN (2), A COSKUN (3), Z DOGAN (4), SH EREN (3), I KARACA (3), I KORKMAZ (3), FM KUKUL GUVEN (3), KA TURKDOGAN (5)

1. EMERGENCY SERVICE, KARABUK STATE HOSPITAL, KARABUK, Turkey
2. BIOCHEMISTRY, CUMHURİYET UNIVERSITY FACULTY OF MEDICINE, SIVAS, Turkey
3. EMERGENCY DEPARTMENT, CUMHURİYET UNIVERSITY FACULTY OF MEDICINE, SIVAS, Turkey
4. EMERGENCY SERVICE, BOZYAKA EDUCATION AND RESEARCH HOSPITAL, IZMİR, Turkey
5. EMERGENCY SERVICE, ISPARTA STATE HOSPITAL, ISPARTA, Turkey

Corresponding author: Mme Kukul Guven Fatma Mutlu (mutlukukul@gmail.com)

Key-words: emergency ; pregnancy ; aortic dissection

The Case: The patient in 32nd gestational week who reported to suffer from intermittent nausea presented to emergency department with increased feeling of nausea and complaints of pain beginning from the stomach area and radiating to the chest and back. The patient who had not diarrhea and constipation, vomited only once in the emergency department with brown stomach content. General condition of the patient was moderate, she was conscious with 4-5/6 murmurs in the aorta and pulmonary focus on the cardiovascular examination. In addition, she had epigastric abdominal tenderness and pregnancy compatible with 32nd week.

ECG: Normal sinus rhythm,

Portable ECHO: Patient's diameter of ascending aorta was monitored as 6.4 cm at 3.9 cm after the aortic root. Furthermore, an appearance in aorta was consistent with flap and a severe aortic regurgitation was observed.

Laboratory Results

CBC: WBC: 19900, plt: 297000, Neutrophil: %82.6, PT: 10.5, Hb:12.7, INR: 0.95, Htc: 37.1, aPTT:28.9

Biochemistry: Blood glucose: 151, BUN: 6, creatinin: 0.7, LDH: 262, CK-MB: 8, CK: 60 Troponin: 0.0

K (+) Thorax + Lower-Upper Abdomen CT: The widest diameter of ascending aorta was 68 mm, wider than the normal. The dissection line was observed starting from the outlet of ascending aorta, extending to the level of celiac truncus.

CONCLUSION: Cardiovascular applications in pregnancy can be tolerated by the healthy women. However, concurrent heart diseases are encountered in 2-4% of the women in fertile age (1). Heart diseases emerging in pregnancy are valvular pathologies usually resulted from rheumatic fever. Rheumatic fever has decreased in the developed countries, although remains as a serious problem in underdeveloped countries. Mitral stenosis is the most common lesion (2). Aortic valve disease is less common. Aortic regurgitation is a sign of endocarditis (in 1/8000 pregnancies) or aortic dissection, and connective tissue disorders (like Marfan syndrome) must be considered in these patients. Significant aortic stenosis is rare in this group of age (3). Ischemic conditions are rare in pregnancy with an incidence for myocardial infarction as 1/10.000'dir (4). We wanted to emphasize on that bedside ECG and portable ECHO and an immediate cardiac examination with tomography of thorax and abdomen may be useful in order to set a diagnosis and decrease the hospitalization time and rates of mortality and morbidity as well as the need for intensive care unit and treatment costs in the patients presenting to the emergency department with chest pain. Furthermore, once again it should be remembered that two major diseases may be concurrent, threatening life of the patient and therefore, it will be more beneficial for the patients to approach in a multidisciplinary way in order to reveal the main problem(s). Keeping in the mind

the aortic dissection, proper laboratory and imaging methods should be used in the patients presented to emergency department with unexpected complaints for the aortic dissection such as change in consciousness, syncope, severe chest pain, lower back pain and power loss in extremities. Rate of mortality can be reduced by providing early treatment with a fast and correct diagnosis process.

P201

Case Presentation

ECG CHANGES IN SYNCOPE CASE

E Acar, CS Tanrikulu, S Karaman, O Delice

Emergency department, Erzurum district education and research hospital, Erzurum, Turkey

Corresponding author: Mr Acar Ethem (dr.ethemacar@hotmail.com)

Key-words: syncope ; electrocardiographic changes ; Subarachnoid hemorrhage

Introduction

Subarachnoid hemorrhage (SAH) is a cerebral phenomenon and it commonly is observed in the youngest and adults. The most common clinical findings in patients with SAH are sudden severe headache, nausea, vomiting and impaired consciousness, as well as to fluctuating electrocardiographic (ECG) abnormalities. ECG changes can be confused with acute coronary syndrome in SAH patients. In this situation, anticoagulation may be harmful.

Case

46-year-old male patient, had syncope at home, was brought to Emergency Department by 112 Emergency Services. Relatives of the patients did not describe that patient did not express chest pain or headache before syncope. There was sinus rhythm heart rate (HR): 60 beats / min 1:1 extra systole in ECG, taken at the scene by 112 Emergency Services. Extra systole had been improved ECG in 2nd ECG, taken in ambulance, but there were ST depression and T negativity. When patient arrived to Emergency Department, his unconscious was closed, and pupillary isochoric was IR + / +, and there was no stiff neck, but he had extensor clamping response for painful stimulus. Arterial blood pressure (BP) value was 100/60 mm Hg, and was pulse 55 beats / minute. Fingertip blood sugar was natural. ECG was retaken. HR was 55 beats / min, and there was no p-wave; rhythm was regular. There was minimal ST segment depression in DII-III-AVF, and T negativity. QRS and QTc were observed as 94 ms, 400 ms respectively. The patient woke up immediately after ECG, and ECG was renewed, and rhythm was still same. There was no seizure in his medical history, and brain CT was asked for patient. SAH was detected in brain CT and then patient was transferred to Neurosurgery Service. In that time, GCS was 14, and TA was 120/90, and heart rate was 60 beats / min.

Result

ECG changes can be confused with coronary ischemia and infarction in SAH patients. It is reported that some patients were treated with wrong diagnosis like acute myocardial infarct in SAH cases. It is important to rule out in SAH patients when they are unconscious and have headache, and there is ECG changes.

P202

Case Presentation

DIAFRAGMATIC EVANTRATION PRESENTING WITH SUDDEN DYSPNEA: A CASE REPORT

H BEYDİLLİ (1), N ÇULLU (2), M DEVEER (3), AK SİVRİÖĞLU (4)

1. Emergency Department, Muğla Sıtkı Koçman University Medical School, MUĞLA, Turkey
2. Radiology department, Muğla Sıtkı Koçman University Medical School, MUĞLA, Turkey
3. Radiology Department, Muğla Sıtkı Koçman University Medical School, MUĞLA, Turkey
4. Department of Radiology, Aksaz Military Hospital, Mugla, Turkey, Aksaz Military Hospital, Mugla, MUĞLA, Turkey

Corresponding author: Mr Beydilli Halil (hbeydilli@hotmail.com)

Key-words: CT ; Diaphragmatic evantration ; dyspnea

INTRODUCTION: Diaphragmatic evantration is one of rare disorders seen in adults. It may be asymptomatic or cause recurrent infections by changing pulmonary inflation. Here, we present a case of diaphragmatic evantration in an adult patient.

CASE: A 64-years-old man was referred to our emergency unit with sudden onset of severe dyspnea after a strong cough. His past medical and family history was unremarkable. Thorax Computed tomography (CT) revealed left diaphragmatic elevation, dilated segment of colon, replacement of spleen and stomach to the subdiaphragmatic area. Pneumonic infiltration was also seen. Diagnostic laparoscopy was performed and the diagnosis of diaphragmatic evantration was made.

CONCLUSION: Eventration of the diaphragm is an abnormal elevation of an intact diaphragm. There are two distinct etiologic types of eventration, congenital and acquired. Acquired diaphragmatic evantration is rarely seen in adults. CT is the gold standard for the diagnosis. Diaphragmatic pathologies must be considered in patients referring to emergency services with sudden onset of dyspnea.

We describe a patient with known enchondroma of the chest, who presents with a pericardial tamponade.

Case

A 34-year old man presented in the emergency department with progressive dyspnoea. He was on a waiting list for resection of his enchondroma, which was located parasternal at the 4th and 5th right rib. The diagnosis had been confirmed by radiological assessment and biopsy.

He complained that the tumor was growing but did not complain about fever, coughing, sputum, night sweats or weight loss. He experienced chest pain since 2 days, radiating to his back.

On physical examination he did not appear dyspneic. Vital signs were: RR163/98mmHg, pulse 115 bpm, temperature 38,3°C, respiration rate 20 per minute and pulse oximetry 96% with 4 liters of oxygen. No marked jugular venous distention. Chest excursions were symmetric, with normal percussion and normal breathing sounds. The heart sounds were normal. Further examination was unremarkable despite the chest tumor.

Chest radiography, revealed an enlarged symmetrically cardiac silhouette. Initially this was not interpreted as pathologic. There were no comparable x-rays. The lateral radiograph revealed calcifications located anterior of the sternum, related to the known tumor.

Retrospectively we can tell that this particular cardiac silhouette fits the so-called "water bottle configuration". This sign is typically seen in patients with large amounts of pericardial effusion of any origin.

A contrast enhanced CT was performed with a protocol for pulmonary embolism. There were no signs for pulmonary embolisms. The CT revealed severe pericardial effusion, with smooth margins. The HU-value of the pericardial fluid varies between 25-30 HU, suggestive for fluid with high protein substances like hemorrhage. There was no evident thickening of the pericardium. No pericardial mass was found. Compared with the latest performed routinely CT-scan the size of the chondrotumor had been unchanged.

EKG: sinus rhythm of 112 beats per second, normal P-wave morphology, PTA segment depression best seen in II, aVF, V6, PQ interval 0,14 seconds, QRS complex 0,08 seconds, vertical heart axis, minimal ST elevation in I, II, V4 to V6.

Conclusion EKG suspected for pericarditis.

Echocardiography showed a large amount pericardial effusion. There was an inflow impediment with an aggravated respiratory dependent variation on the inflow and outflow typically for heart tamponade.

Extended laboratory results showed no abnormal results, despite CRP 262 mg/dl (normal values < 5mg/dl) and leukocytes of 11,9x10⁹/l (normal value 3,5- 11x10⁹/l).

The patient was admitted and an uncomplicated pericardiocentesis was performed. Approximately 1 liter of sanguinolent pericardial effusion was drained and analyzed. No malignant cells were found, and cultures remained negative. He was treated with Doxycycline. He had an uneventful recovery. Two weeks later the chest tumor was resected. The final diagnosis made by the pathologist was a grade 1 chondrosarcoma.

Discussion

Common causes of pericardial effusion include post myocardial infarction, renal insufficiency, infection, neoplasm, auto-immune disease, injury or idiopathic. The main differential diagnosis in this case was: infection and neoplasm. Although rare, cardiac metastasis needs to be considered in a patient with enchondroma. This patient improved on pericardiocentesis and antibiotics and although no microbiological pathogen was found, infection was the most likely cause of his tamponade.

P203

Case Presentation

CHONDROTUMOR OF THE RIB AND PERICARDIAL TAMPONADE: COINCIDENCE?

K. Wüstefeld (1), A. Duijnhouwer (2), A. Steenbakkers (3)

1. Emergency department, Radboud University Medical Centre, Nijmegen, the Netherlands
2. Cardiology department, Radboud University Medical Centre, Nijmegen, the Netherlands
3. Radiology department, Radboud University Medical Centre, Nijmegen, the Netherlands

Corresponding author: Melle Wüstefeld Katja (katjawustefeld@yahoo.com)

Key-words: Pericardial tamponade ; Neoplasm ; Infection

Introduction

Enchondroma are the most common benign cartilage-forming tumors. They usually develop in the medulla of the bones of the hand and feet, and in the metaphysis and diaphysis of the femur and humerus. This type of tumor is more common the first 2 decades of life. Most enchondroma are asymptomatic and painless. Solitary enchondromas usually are self-limiting and do not metastasize. The risk of malignant transformation into chondrosarcoma is rare. Most cases of secondary chondrosarcoma are low grade and distant metastases are uncommon. Intracardiac metastasis from chondrosarcoma has only been described a few times^{2,5,6}.

Conclusion

Enchondroma is a benign tumor which can transform to chondrosarcoma. Chondrosarcoma very rarely metastasizes to the heart. However always consider tamponade secondary to neoplasm in a patient with a tumor.

P204

Case Presentation

CARDIAC TAMPONADE WITH A SCROTAL EDEMA

M.Günlalp, B.Gülünay, B.Oğuz, M.Koyunoğlu, S.Gürler, O.Polat, A.Demirkan

Emergency Department, Ankara University Faculty of Medicine, Ankara, Turkey

Corresponding author: Mr Gülünay Behnan (drbehnandrglnay@yahoo.com)

Key-words: cardiac tamponade ; scrotal edema ; medical emergency

Introduction:

Cardiac tamponade is a clinical syndrome caused by the accumulation of fluid in the pericardial space, resulting in reduced ventricular filling and subsequent hemodynamic compromise. Symptoms vary with the acuteness and underlying cause of the tamponade. Patients with acute tamponade may present with dyspnea, tachycardia and tachypnea. Here described the patient with cardiac tamponade may present with scrotal edema.

Case:

A 46 –year- old male is admitted to our emergency service with scrotal edema and dyspnea. He didn't complain any angina, muscular weakness, fatigability, diplopia, weight loss, anorexia and trauma in his previous history. On his physical examination the pulse was rapid and weak (110 beats / min) and the neck veins were distended. The blood pressure was 110/70 mm Hg. Pulse oximetry was 94 percent. He has painlessly bilateral scrotal edema. The electrocardiogram showed sinus tachycardia and low voltage. Chest X-ray showed that slightly widened cardio-thoracic index, mildly expanded superior mediastinum, pleural effusion on the right side and diffuse, massive light area in the upper and middle parts of the right lung. Laboratory findings were normal. Echocardiography showed right atrium and right ventricle collapse, inferior caval vein noncollapse, because of the widespread pericardial effusion with anterior mediastinal mass. Computed tomography (CT) scans showed a superior mediastinal heterogeneous mass with rough and longest dimensions of 15x12 cm. There were invasions in to the pericardium, the superior caval vein, the ascending aorta and the right anterior chest wall. There were multiple axillary and abdominal Lymphadenopathies. After the evacuation of pericardial hemorrhagic fluid (900 cc) the collapse disappeared. Mediastinal biopsy was taken. The biopsy was reported as non small cell lung cancer. The patient was consulted to the clinic of thoracic surgery. After the consultation the patient was considered inoperable. The patient was transferred to the chest clinic.

Discussion:

Cardiac tamponade is a medical emergency. Early diagnosis with a high index of suspicion is necessary to minimize morbidity and mortality from tamponade. Untreated cardiac tamponade is rapidly and universally fatal. The most common symptoms of cardiac tamponade are dyspnea, tachycardia and elevated jugular venous pressure. Scrotal edema is a very rare initial symptom of a pericardial tamponade. This report presents a patient who had hemorrhagic pericardial tamponade with a complain scrotal edema.

P205

Case Presentation

A CASE REPORT: CHILADITI'S SYNDROME

H. ŞAHİN (1), A. BAYRAMOĞLU (2), E. ACAR (1), A. AKÖZ (2), Z. ÇAKIR (2)

1. Emergency Department, Regional Training and Research Hospital, Erzurum, Turkey
2. Emergency Department, Ataturk University Medical Faculty, ERZURUM, Turkey

Corresponding author: Mr Bayramoglu Atif (atifbay@gmail.com)

Key-words: Chilaiditi's syndrome ; Chilaiditi's sign ; abdominal pain

Introduction:

Chilaiditi's syndrome is very rare clinical condition that interposed of the hepatic flexure of large bowels between the liver and diaphragm. Chilaiditi's sign is the appearance of free air under the diaphragm. It is usually asymptomatic and is an incidental finding. When the sign is observed in association with symptoms such as abdominal pain or vomiting it is termed chilaiditi's syndrome. We will report A case that admitted to our emergency service.

Case:

A 45 year old woman presented to the emergency department with the complaint of epigastric and central abdominal pain. There was no history of illness. On examination, diffuse abdominal tenderness and rebound were present. A chest radiograph suggested appearance of a pneumoperitoneum, with an elevated right hemidiaphragm and subdiaphragmatic free air. Routine laboratory tests were within normal range. The patient was referred to the surgical team for management of a suspected perforated duodenal ulcer. After surgical consultation, the patient was not considered a surgical emergency. The patient was discharged following treatment with fluid support in the emergency clinic.

Discussion:

Chilaiditi's syndrome occurs when this abnormal positioning of the bowel produces symptoms. A wide spectrum of symptoms may exist, including emesis, abdominal pain, distension, and constipation.

Free air observed under the diaphragm on radiograph can be an indication for immediate surgical exploration. However, such a finding may have other etiologies that do not mandate such urgent measures. Chilaiditi's sign could be mistaken for pneumoperitoneum, resulting in an unnecessary exploratory laparotomy. Therefore, this simple radiological finding merits further consideration.

P206

Case Presentation

A COMPLICATED PAN SINUSITIS CASE

OC Aydın (1), M Candar (2), A Kutlucan (3), M Memis (4), A Saritas (5), S Unal (6)

1. Clinical Microbiology and Infectious Diseases, Duzce University, Duzce, Turkey
2. Emergency Medicine, Duzce University, Duzce, Turkey
3. Internal Medicine, Duzce University, Duzce, Turkey
4. Otorhinolaryngology, Duzce University, Duzce, Turkey
5. Emergency department, Duzce University School of Medicine, Duzce, Turkey
6. Radiology, Duzce University, Duzce, Turkey

Corresponding author: Mr Saritas Ayhan (a_saritas_@hotmail.com)

Key-words: Sinus ; inflammation ; infection

Introduction: In our daily life, sinusitis is a common infection of paranasal sinuses. It affects our life comfort negatively. Pain felt in front of the head typically increases with the movement of the head. Also fever is seen in the majority of patients. Most of the patients suffer from obstinate headaches. But sometimes patients may have atypical complaints and may have misdiagnosis. Delay of correct diagnosis may sometimes cause a simple sinusitis turn into a complicated pan sinusitis.

Case: A 36 year old male admitted to hospital shaking with fever and headache. His complaints started 8 days ago. At first, he had pain in his left eye, and his eyes were itching. He was visited an ophthalmologist and he had a diagnosis of allergic conjunctivitis and its topical medication. But despite using the drugs every day, he had no recovery but even get worse. His headache continued increasingly. With feel of fever, he noticed a swollen rash the in left side of his forehead and he decided to go to emergency department.

His vital signs were: tension arterial: 120/70 mmHg, heart rate: 100 bpm, respiration rate: 16 /min. His fever was measured as 38.40C. In his examination, we noticed that he had an asymmetric, swollen but not fluctuating forehead with rash. He had no tonsillary hypertrophy. Respiration was normal in auscultation. His systemic examination had no pathological sign explaining his fever.

Superficial ultrasonography was performed for the swollen forehead. Increased echogenicity was interpreted as cellulitis. The patient had a computerized tomography (CT) of paranasal sinuses and the brain. His maxillary, ethmoidal and frontal sinuses were full of inflammation with liquid density and some air in these cavities. In bone aspect of CT, left front wall of frontal sinus was heterogeneous and lower bone density. The bone was eroded and the inflammation passed through bone, inflamed the soft tissue just beneath it and caused cellulitis.

The patient was consulted to infectious diseases and otorhinolaryngology departments. He was prescribed antibiotics containing fluoroquinolones. The fever was treated. He was advised to visit otorhinolaryngologist for follow up and discharged from hospital.

Conclusion: By early diagnosis we can treat the diseases before getting complicated with easier ways. This will decrease the loss of labor force, morbidity and coast. For early and correct diagnosis, the patients should be examined properly and first diagnosis should be supported with helpful tests and imaging techniques. This will reach us into a fast and correct diagnosis in emergency clinics.

P207

Case Presentation

BULLETPROOF

D Baltaci (1), M Candar (2), M Cikman (3), MO Inegol (2), H Kandis (4), O Ozturk (5), A Saritas (6), KO Yaykasli (7)

1. Family Medicine, Duzce University, Duzce, Turkey
2. Emergency Medicine, Duzce University, Duzce, Turkey
3. Emergency department, Duzce University, Duzce, Turkey
4. Emergency department, Duzce University Medical Faculty, Duzce, Turkey
5. Anaesthesiology, Duzce University, Duzce, Turkey
6. Emergency department, Duzce University School of Medicine, Duzce, Turkey
7. Medical Genetic, Duzce University School of Medicine, Duzce, Turkey

Corresponding author: Mr Saritas Ayhan (a_saritas_@hotmail.com)

Key-words: Bulletproof ; injustice ; emergency

Case: A 22 year old woman was admitted to our emergency clinic by her relatives with complaints vaginal haemorrhage and abdominal pain. Her vital signs were measured as: body temperature: 36.60C, tension arterial: 100/60 mmHg, heart rate:

80 beats/min, respiration rate: 16/min. Her general state was good and the patient was conscious.

We learned that she had refused to be examined and signed a refuse paper. She came back with demand of discharge. We talked to patient about the severity of her situation. During our short conversation with the patient, we had an idea about her depressive psychological condition. With great efforts of conviction attempts, the patient accepted taking an abdominal X-ray. X-ray showed 3 pieces of smooth shaped, metallic opacities. These were bullets of a blank gun. When we told her situation, she accepted to be examined shortly. There was no sign of any injury or scar in her skin. There was not any distension and no sign of defense or rebound tenderness in the abdomen. Rectum was empty. The patient was consulted to departments of general surgery, psychiatry and forensic medicine.

The patient was followed in emergency room for three days. Daily abdominal X-rays showed a progressive movement of bullets and no signs of obstruction or perforation in the abdominal cavity. General surgery chose a conservative way and advised her to eat fiber rich food and defecate naturally and called for outpatient follow up. Psychiatry had a diagnosis of major depression and anxiety and started her medical treatment. The patient was discharged with the advice of general surgery follow up after forensic medicine consultation. Forensic medicine examined the patient. It was learned that the patient had a sexual abuse before her unofficial marriage. When her secret was revealed with her new marriage and she had argued with her husband. These events dragged her to commit a suicide. Her husband was taken into police custody and judicial process was started immediately. The patient was taken under support of social services.

Conclusion: A lot of people are seen and treated in emergency clinics every day. The physicians should not only examine the complaints of the patients, but should aim the physical, mental and social well-being of them. This approach is a necessity of human rights and freedoms. For this reason, emergency physician is not only the physician but also the socially defender of the patients against injustice.

P208

Case Presentation

TRAMADOL: IS IT ANALGESIC? OR IS IT PAINFUL?

OB Cehreli (1), FO Kahveci (1), S Mete (1), II Oz (2), C Subasi (1)

1. Emergency Department, Bülent Ecevit University, Zonguldak, Turkey
2. Radiology Department, Bülent Ecevit University, Zonguldak, Turkey

Corresponding author: Mr Kahveci Fatih Ozan (drozankahveci@gmail.com)

Key-words: Tramadol ; Shoulder Dislocation ; Seizure

Introduction

Tramadol is an analgesic medication that is a synthetic analogue of codeine. It is effective in different types of moderate-to-severe acute and chronic pain, including neuropathic pain, low back pain, osteoarthritis pain and breakthrough pain. In comparison with other opiates, tramadol is renowned for having less abuse potential and less respiratory depression. Nonetheless tramadol is a potent seizure inducing agent. We present the case of a patient who had a seizure after tramadol injection.

Case

A 27-years-old man was presented to the emergency department from psychiatric valuation with the shoulder and arm pain that began after seizure. His medical history includes depression and chronic back pain. His medications include fluoxetine, alprazolam, quetiapine, and pethidine use for chronic back pain. Before 16 hours

from seizure, he was presented to a primary care facility with back pain and given intramuscular 60 mg tramadol. The physical examination reveals tenderness and deformation in the right shoulder and arm. He was awake, alert, and oriented to time, person, place, situation and glasgow come score was 15. Neurological and other system examinations were normal. X-ray and computerized tomography of the patient's right shoulder show the anterior dislocation of the shoulder and proximal humerus fractures. The injection of tramadol to the patient who not previously known to history of epilepsy, and use of antidepressants and antipsychotics was thought to increase susceptibility to seizure.

Discussion

Tramadol accounts for a significant number of drug interactions. Adverse reactions may develop during tramadol monotherapy, but appear much more likely to emerge during misuse/overdose as well as with the coadministration of other drugs, particularly antidepressants. In addition to antidepressants, tramadol may interact with a number of other psychotropic drugs including antipsychotics and anticonvulsants. Even though tramadol may induce seizures in large doses, some studies have shown seizure-inducing effects of tramadol even in therapeutic levels. In one study, more than 80% of patients had seizure(s) after ingesting recommended doses of tramadol. Neurotoxicity of tramadol commonly manifests as generalized tonic-clonic seizures occurring most frequently within 24 hours after tramadol intake. Seizure related to tramadol is more frequent in male.

Conclusion

Tramadol is a suitable candidate for the management of moderate to moderately severe chronic pain requiring treatment for an extended period of time. It is important to consider tramadol as a possible cause of seizures, especially in overdose administration or coadministration with antidepressants. Tramadol is a remarkable drug, but like all drugs, effective use entails balancing the benefits versus the risks.

CASE REPORT:

A 2-year-old boy whose face was injured on the right side while he was playing with a door at home. On admission, blood pressure was 90/ 50 mm Hg, heart rate 126 /min and the patient had a score of 15 on the Glasgow Coma Scale(E4V4M6) and he was fully conscious and did not have any neurological deficits. He had no loss of vision or ocular motility, but had a foreign body(door hinge) between the medial side of his right upper eyelid and nose. An emergent ophthalmology consultation was placed, and a Computed tomography (CT) of the head and cervical spine was ordered. The globe itself was intact and slit lamp biomicroscopy showed normal intraocular structures. CT scan of the orbits revealed the presence of a hyper-dense foreign body penetrating the periosteum and embedded in the right medial orbital wall. Emergent ENT surgeons and neurosurgery consults were then ordered. The child was admitted with a plan to intervene surgically. The patient recovered well after surgery and a course of antibiotic therapy.

CONCLUSION:

Management of periorbital foreign bodies should include an accurate and detailed history as well as a CT scan of the orbit, which is the imaging modality of choice for detection and localization of the foreign body. In conclusion, early and accurate diagnosis of penetrating soft tissue injuries is very important to avoid potential complications. Periorbital foreign bodies constitute an interdisciplinary challenge and help from Neurosurgery, Ophthalmology and ENT departments should be sought in every case. The final outcome and prognosis depend greatly upon early diagnosis, followed by surgical exploration and extraction when indicated. Foreign body injuries in the orbital region can be treated with a combination of clinical suspicion, basic knowledge and diagnostic tests and call for surgical skill and experience to decrease the risk of iatrogenic injury in relation to the inherent risk of retaining an organic periorbital foreign body. Parental counseling is important to prevent their children from playing with sharp and threatening objects.

P209

Case Presentation

AN INTERESTING PERIORBITAL FOREIGN BODY: A CASE REPORT

A. CEYLAN (1), Y. ZENGİN (2), F. BÜYÜKCAM (3), A.B. ERDEM (4), M. ÇALIK (5)

1. Emergency department, Şanlıurfa Training And Research Hospital, Şanlıurfa, Turkey
2. Emergency department, Dicle University, Diyarbakir, Turkey
3. Emergency department, The Ministry of Health, Diskapi Yıldırım Beyazıt Training and Research Hospital, Ankara, Turkey
4. Emergency department, Konya Numune Hospital, Konya, Turkey
5. Emergency department, Hospital of Bursa, Bursa, Turkey

Corresponding author: Mr Zengin Yilmaz (yilmazzengin79@myynet.com)

Key-words: periorbital foreign body ; diagnostic imaging ; surgery

INTRODUCTION:

Foreign bodies are seen in all age groups and detected as a result of accidents or abuse. Orbital foreign bodies are more commonly observed in men than in women and in younger rather than older people. They may result in severe structural and functional damage to the eye or other orbital contents. The management and prognosis depend on the composition and location of the foreign bodies as well as the possible presence of secondary infection. Foreign body injuries in the orbital region can be approached with a combination of clinical suspicion, basic knowledge and diagnostic imaging. The skill and experience of the surgeon are fundamental to decreasing the risk of iatrogenic injuries. We report a case of a home-related accident involving a periorbital foreign body.

P210

Case Presentation

A MAN WHO DEVELOPED ATRIAL FIBRILLATION FOLLOWING SUICIDE ATTEMPT BY HANGING: A CASE REPORT.

Y. ZENGİN (1), A. CEYLAN (2), M. ÇALIK (3), F. BÜYÜKCAM (4), A.B. ERDEM (5)

1. Emergency department, Dicle University, Diyarbakir, Turkey
2. Emergency department, Şanlıurfa Training And Research Hospital, Şanlıurfa, Turkey
3. Emergency department, Hospital of Bursa, Bursa, Turkey
4. Emergency department, The Ministry of Health, Diskapi Yıldırım Beyazıt Training and Research Hospital, Ankara, Turkey
5. Emergency department, Konya Numune Hospital, Konya, Turkey

Corresponding author: Mr Zengin Yilmaz (yilmazzengin79@myynet.com)

Key-words: Atrial fibrillation ; attempting suicide ; hanging

INTRODUCTION:

Hanging, one of the most common methods of suicide all over the world, is suspension of full or partial body weight using a ligature, at neck, resulting in compression of the neck that leads to unconsciousness or death by causing an increasingly hypoxic state in the brain. In few cases, if the person is brought down within very short period of suspension and treated vigorously in hospital, there is always a hope for life. Atrial fibrillation (AF) is the most common sustained arrhythmia seen in clinical practice. Atrial fibrillation

occurs when there are multiple, small areas of atrial myocardium continuously discharging and contracting. Predisposing factors for atrial fibrillation are increased atrial size and mass, increased vagal tone, and variation in refractory periods between different parts of the atrial myocardium. We present a 20-year-old man who developed atrial fibrillation following suicide attempt by hanging. CASE REPORT:

A 20-year-old man was referred after attempting suicide by hanging himself. The patient had attempted to hang himself from a height of three stories and was immediately rescued by an eyewitness. On admission, blood pressure was 127/ 71 mm Hg, heart rate 168/min and the patient had a score of 13 on the Glasgow Coma Scale(E3V4M6). Pupils were normal in size and equal, and reacted to light promptly. There was mark of hanging around her neck and no injury to cervical spines could be detected. On auscultation her heart sounds were feeble with no murmur with bilateral crepitations over her chest. Neurological examination revealed no motor weakness or sensory disturbance. His electrocardiogram (ECG) showed atrial fibrillation. Cervical and chest X-rays, CT Scan and other biochemical investigations were found to be within normal limits He was given symptomatic treatment. His hemodynamics and neurologic status improved rapidly. After complete oxygen support, repeat ECG showed normal sinus rhythm with recovery of atrial fibrillation. He was admitted to department of psychiatry with a diagnose of behavioral disorder as a result of consultation of neurosurgery, otorhinolaryngology and psychiatry.

CONCLUSION:

Hanging is known as a painless mode of death with a very narrow failure rate. Average fatal period is about 3 to 5 minutes and death occurs immediately if there is fracture and dislocation of the cervical vertebrae or heart block. We describe the case of a young man presenting with attempting suicide by hanging himself and developed atrial fibrillation in his ECG. With vigorous and prompt resuscitation methods, he gradually recovered without any residual arrhythmias. Prognostically good results could be achieved, if such victims are vigorously and promptly resuscitated, irrespective of their initial presentation.

P211 Case Presentation

MULTIPLE ISOLATED SPINOUS PROCESS FRACTURE OF THORACIC SPINE: A CASE REPORT

Y. ZENGİN (1), A. CEYLAN (2), M. ÇALIK (3), F. BÜYÜKCAM (4), A.B. ERDEM (5)

1. Emergency department, Dicle University, Diyarbakir, Turkey
2. Emergency department, Şanlıurfa Training And Research Hospital, Şanlıurfa, Turkey
3. Emergency department, Hospital of Bursa, Bursa, Turkey
4. Emergency department, The Ministry of Health, Diskapi Yıldırım Beyazıt Training and Research Hospital, Ankara, Turkey
5. Emergency department, Konya Numune Hospital, Konya, Turkey

Corresponding author: Mr Zengin Yilmaz (yilmazzenin79@mynet.com)

Key-words: fracture ; spinous process ; thoracic vertebrae

INTRODUCTION:

Fractures of the vertebral spinous process can be produced by several mechanisms such as a direct blow to the posterior aspect of the neck, cervical hyperextension and hyperflexion injuries and muscle and ligament stresses that generally due to shovel heavy loads. These injuries were well known at the beginning of the 20th century, but have become relatively rare with the introduction of earth-moving machinery. Today, falls automobile or pedestrian accidents are the most likely cause of

spinous process fractures. In this case report, we present a case of multiple isolated spinous process fracture of thoracic spine.

CASE REPORT:

A 27-year-old patient was involved in a road traffic accident and sustained a minor head injury. On arrival, her blood pressure was 122/76 mm Hg and her pulse rate was 102 beats per minute. Physical examination did not reveal any external lesions except mild back pain and tenderness over the thoracic spine. Clinical examination of the spine showed no kyphus nor any other deformity of the spinous processes; neurological examination was normal. X-rays showed three spinous process fractures of the thoracic vertebrae(T-4, T-5 and T-6). Computed tomography (CT) scan showed the fracture line on the basal area of the T4, T5 and T6 spinous processes, but no abnormality of the vertebral bodies. Emergent neurosurgery and orthopaedy consults were then ordered. Because there was no evidence of compression of the cord, the patient was given conservative treatment.

CONCLUSION:

Isolated spinous process fracture should be accepted as a warning sign for more severe spinal injury, therefore it is needed to be evaluated carefully to detect more severe spinal injuries. In the present case, the mechanism of injury was hyperextension injury due to an automobile accident. Patient hits a car while she was driving with seat belt buckled up. The most common symptom of isolated spinous process fracture is pain. Neurological signs and symptoms may be associated with additional spinal injuries. The most useful imaging study for a spinous process fracture is radiography. CT and magnetic resonance imaging investigations provide significantly more information regarding the bony and soft tissue of the spinal canal. Isolated spinous fractures are most frequently involving the T-1, then C-7, T-2, T-3, and C-6. Stable thoracic fractures are immobilized in a thoracolumbosacral spinal orthosis (TLSO) or Jewett brace for 6 to 12 weeks.

P212 Case Presentation

ANGIOEDEMA DUE TO PEAR

C.Kavalcı, F.Yılmaz, M. Sönmez, ED. Arslan, A. Demir, M.Özlem, N. Özüpek

Emergency, Numune Training and Research Hospital, Ankara, Turkey

Corresponding author: Mr Kavalci Cemil (cemkavalci@yahoo.com)

Key-words: Angioedema ; Pear ; fruid

Case Report

A 60-years-old female patient presented to our emergency department with dispne and edema in her mouth and lips. It was learned from the history that her symptoms were begun 15 minutes after eating a pear.

In her medical history there was no any illness and drug use. On physical examination, she was alert. She has a regular heart rate of 80 bpm, her blood pressure was 110/80 mmHg and respiration rate was 14 breathes per minute. Edema was present around her mouth (Fig. 1). The patient was placed on a cardiac monitor, an intravenous line was established and 4lt/min oxygen was started. 40 mg methylprednisolone and 50 mg diphenhydramine were administered intravenously. The patient was placed in our observation unit for 8 hours and was discharged without any further problems Discussion

In the Literature, cases of angioedema due to fragile fruits; such as apples, avocados, cherries, strawberries, were found. However, despite the pear is known to be allergen an angioedeme due to it, was not seen. Angioedema develops mostly due to drugs. In the

treatment, according to the patient's clinical state, oxygen, epinephrine, diphenhydramine, and methyl prednisolone are used. We treated our patient in accordance with the literature.

Conclusion

Fruits should be considered as the reason in patients who present with angioedema and questioned in the history.

P213 Case Presentation

WHAT CAUSED DELIRIUM IN A YOUNG MALE WITH ESSENTIAL TREMOR?

A. Akoz, H. Sevil, M. Saritemur, A. Bayramoglu, Z.G. Cakir
Emergency Medicine, Ataturk University Medical Faculty, Erzurum, Turkey

Corresponding author: Mr Akoz Ayhan (akozayhan@gmail.com)

Key-words: Central Nervous System findings ; poisoning ; Dideral

Introduction: Dideral (propranolol) is a non-selective β -adrenergic receptor blocking agent. Dideral is used to control essential and renal hypertension, after acute myocardial infarction, to control of cardiac dysrhythmias, in migraine prophylaxis, in treatment of essential tremor, in thyrotoxicosis, and in treatment of hypertrophic obstructive cardiomyopathy. After poisoning with propranolol, bradycardia, hypotension, congestive heart failure, AV block, paresthesia of hands, insomnia, mental depression, visual disturbances, hallucinations, memory loss, loss of orientation to time and place, nausea, vomiting, epigastric discomfort, and allergic reactions can be seen. In the treatment of poisoning, vasopressors such as epinephrine can be given to treat hypotension; atropine 1-2 mg may be applied for bradycardia, and bolus injection of 10 mg of glucagon can be applied to treat bradycardia. This dose may be repeated or 1-10 mg/h infusion of glucagon can be given. If there is no response, temporary cardiac pacemaker may be applied.

Case: A 24-year-old male patient presented to our emergency department (ED) with the complaints of talking meaningless, laughing, and tremor. Akineton 1 ml (5 mg/ml) was given IV in the ambulance. On physical examination, his general condition was moderate and orientation to place and person was disrupted. His pupils were isochoric, he had no neck stiffness, and there was no evidence of neurologic disorders. His muscle strength and reflexes were normal. The vital signs were within normal limits. The patient's laboratory results such as complete blood count, biochemical parameters, blood gas values and his brain CT were normal. Lumbar puncture was performed and there was no pathological finding. The electrocardiography revealed normal sinus rhythm, and the rate was 85/min. The patient was consulted to department of neurology, infectious diseases, psychiatry, and internal medicine. While neurology decided to admit the patient with a diagnosis of delirium, the patient stated that he had taken 1 or 8 or 30 tablets of propranolol. It was learned that the patient had been on propranolol for essential tremor and he admitted to the ED with diagnosis of poisoning of propranolol. Progressively, his blood pressure fell to 80/45 mmHg, and heart rate to 45/min. Dizziness and nausea began. The patient consulted to cardiology and admitted to the cardiology clinic. The temporary pacemaker was applied approximately 1 hour later. Pacemaker was removed 4th day and the patient was fully recovered and discharged on the 7th day of admission.

Conclusion: Dideral is a widely used drug. Although, the cardiac findings such as hypotension and bradycardia are prominent in the propranolol poisoning, some patients may present with neurological findings. So propranolol poisoning should be kept in

mind in the patients admitted to the ED with neurological symptoms.

P214 Case Presentation

POST-INTERVAL SYNDROME AFTER CARBON MONOXIDE POISONING

A. Akoz, A. Bayramoglu, M. Saritemur, S. Aslan, Z.G. Cakir, M. Emet

Emergency Medicine, Ataturk University Medical Faculty, Erzurum, Turkey

Corresponding author: Mr Akoz Ayhan (akozayhan@gmail.com)

Key-words: Carbon monoxide ; poisoning ; interval syndrome

Introduction: Carbon monoxide (CO) exposure and toxicity is a potentially lethal disorder with immediate and delayed side effects. One of the delayed effects of CO toxicity is interval syndrome. It is a syndrome of leukoencephalopathy of the centrum ovale (cerebral subcortical white matter) along with ischemic damage to basal ganglia and hippocampus. The interval form of CO poisoning characteristically shows an altered level of consciousness in the acute phase, followed by recovery and asymptomatic period extending over several days to weeks, after which neurological or psychiatric sequel recur.

Case: A 19-year-old female presented to our emergency department (ED) with CO poisoning. The source of intoxication was stove. The patient complained of headache, nausea and weakness. On physical examination, Glasgow Coma Score was 15, she was oriented and cooperated. Heart rate was 140/minute and other vital signs were within normal range. The systemic examination was unremarkable. The laboratory data obtained on admission revealed that troponin-I was 2,9 μ g/L, creatine kinase 73 U/L, creatine kinase-muscle band isoenzyme 34 U/L and lactate dehydrogenase was 305 U/L. Co-oximetry disclosed a carboxyhemoglobin level of 17.5%. The other laboratory results were within normal limits. Electrocardiography showed that rhythm was sinus, heart rate was 140/minute, and there was T-wave depletion of V1-6. Normobaric oxygen therapy with 100% oxygen was administered via nonbreathing face mask with reservoir and anti-edema management (0,5 gr/kg mannitol) was given. She was consulted to cardiology and follow-up of the patient was advised. On the second day of hospitalization, the patient recovered completely and she left the hospital against medical advice voluntarily with a CO level of 1.9%. Six days later, she presented to our ED with agitation, headache and restlessness. Interval CO syndrome was suspected and the patient was readmitted to the ED. Magnetic resonance imaging was normal. The oxygen and anti-edema therapy were administered. Hyperbaric oxygen treatment option was advised but it was unavailable in our city. The patient recovered completely on the 3rd day and was discharged with instructions.

Conclusion: Some of patients with CO poisoning may have interval CO syndrome or delayed neurologic symptoms from 2 days to 1 month after initial improvement. Discharge instructions should include this information.

P215

Case Presentation

ANTERIOR KNEE PAIN WITHOUT TRAUMA IN THE ED: CHRONIC OSGOOD-SCHLATTER'S DISEASE IN AN ADULT PATIENT

C. Ertan (1), M.S. Pepele (1), N. Yucel (1), D. Ertan (2)

1. Emergency Department, Inonu University Faculty of Medicine, Malatya, Turkey
2. Radiology Department, Private Sevgi Medical Center, Malatya, Turkey

Corresponding author: Mr Ertan Cem (cem.ertan@inonu.edu.tr)

Key-words: Knee pain ; Osgood-Schlatter's ; Emergency department

A 39 years old male attended to our ED with right anterior knee pain which started a few days ago, and worsened today. He denied any recent trauma. There was no history of any systemic infection or fever. Past medical history showed no chronic diseases either. His vital signs were neutral with no current fever. Patient's physical examination revealed no findings to suggest any systemic diseases. Musculoskeletal examination revealed tenderness on the tuberositas tibia and inferior portion of the patellar ligament at the right knee. Examination findings to suggest any articular problems such as ligament tears or meniscus diseases were negative (i.e. anterior and posterior drawer tests, Appley compression test, Lachman test). Vascular and neurological examinations of the extremities were also normal. Antero-posterior and lateral x-rays of the right knee showed two bony fragments of 2x1 cm and 1x0.5 cm on lateral view. The patient still denied any recent trauma, but recalled a sports related injury about one and a half years ago, but he revealed that he had no pain since, at least, one year. MRI was the next diagnostic evaluation and it showed 2 bony fragments, placed posterior to the patellar tendon, of which the largest one was measures as 12 mm. A fluid interface was visualized between the Hoffa fatty pad and the bony fragments.

The final diagnosis of the patient was chronic Osgood-Schlatter's disease (OSD) which was consistent with the MRI findings. OSD is the inflammation of the patellar tendon at the tibial insertion and it is a common disease of the rapidly growing adolescents, characterized with anterior knee pain provoked with knee flexion, rough contact to the inflamed zone and minor trauma. The patient was prescribed with NSAIDs and referred to Orthopedics clinic for further evaluation.

P216

Case Presentation

NONCONVULSIVE STATUS EPILEPTICUS

A. Akoz (1), L. Ozel (2), A. Bayramoglu (1), M. Saritemur (1), R. Demir (2), Z.G. Cakir (1)

1. Emergency Medicine, Ataturk University Medical Faculty, Erzurum, Turkey
2. Neurology, Ataturk University Medical Faculty, Erzurum, Turkey

Corresponding author: Mr Akoz Ayhan (akozayhan@gmail.com)

Key-words: Electroencephalography ; Nonconvulsive Status Epilepticus ; suspicion

Introduction: Status epilepticus (SE) can be divided into two subgroups, convulsive (CSE) and nonconvulsive (NCSE). NCSE is clinically characterized by recurrence or persistence of absence or complex partial seizures which unconsciousness persists. Seizures are lasted more than 30 minutes, and accompanied by mental and behavioral changes. Although the main feature is the change of level of consciousness, affective, memory, cognitive, speech, motor systems, behavioral and psychiatric disorders can be also seen.

Electroencephalography (EEG) is the single diagnostic method in this situation. NCSE constitutes approximately 25% of all SE, however it is thought that sometimes it is misdiagnosed and the incidence of NCSE may be higher. The causes are disorders of central nervous system (stroke, infection, trauma, tumor), and metabolic factors (hypoxia, renal diseases, drugs, failure to use antiepileptic drug). The treatment contains the standard therapy of SE. Short-acting benzodiazepines are preferred in initial treatment. For more resistant cases, loading of phenytoin is applied. If there is no response to treatment, midazolam and propofol additionally to barbiturates can be used.

Case: A 41-year-old male patient was brought to our emergency department (ED) with the complaint of consciousness after an epileptic attack. His family stated that he has a diagnosis of epilepsy since 11 years old and has been on Eptantoin 100 mg tablet twice a day. On the admission day, the patient started to be apathetic, and his level of consciousness decreased progressively. His previous attacks were similar and began with these symptoms: contractions of body, foam at the mouth, and sometimes urinary incontinence. However, there were no contractions and urinary incontinence on this last admission. On the physical examination, the patient's vital signs, blood tests and computed tomography were in the normal limits. He was consulted to neurology. The EEG showed bilaterally synchronic multiple paroxysms of spike-spike waveforms originating from frontocentral area and spreading through both hemispheres. The patient admitted to neurology clinic with diagnosis of NCSE. Diazepam 10 mg IV was given and eptantoine 100 mg tablet was continued twice a day. Keppra tablet started with dose of 500mg twice a day. After the treatment, the patient was recovered and the new EEG showed no pathologic waves. His treatment was arranged and the patient was discharged 7th day of admission.

Conclusion: Clinical suspicion is prominent and EEG should be performed for diagnosis of NCSE in ED which has a broad clinical spectrum. NCSE should be considered in every patient with change of consciousness with or without known epileptic activity.

P217

Case Presentation

MILLARD GUBLER SYNDROME

O Bilir (1), G Ersunan (1), B Giakoup (2), A Kalkan (1), S Yeniciocak (3), Y Yiğit (2)

1. Emergency Medicine, Recep Tayyip Erdoğan University Medical School, Rize, Turkey
2. Emergency Department, Recep Tayyip Erdoğan University Faculty of Medicine, Rize, Turkey
3. Emergency Medicine, Haseki Education and Research Hospital, İstanbul, Turkey

Corresponding author: Mr Asim Kalkan (drasimkalkan@hotmail.com)

Key-words: cerebrovascular accident difficult to recognize. ; Millard Gubler syndrome ; difficult to recognize.

INTRODUCTION: Cerebrovascular events in the world, is the most common neurological problem, after heart disease and cancer ranks third as a cause of death (1). The time elapsed after the start of complaints has great importance in order to ensure effective reperfusion and diagnostic tests should be carried out quickly (2-3). Aetiology is clinical disease group which features advanced degree of heterogeneity in terms of lesions. Mortality and morbidity caused by this disease is need to be minimized, diagnosis and treatment approaches required to be improved in appropriate format. Here, we aimed to represent a patient who admitted to the emergency clinic due to her complaints about facial curvature and double vision and further diagnosed as Millard Gubler Syndrome.

CASE: A 75-year-old female patient with double vision and facial curvature, which started two hours ago, admitted to the emergency. Her medical history did not involve any disease other than hypertension to be described. Physical examination of the patient's general condition was moderate, consciousness, open, cooperative, and oriented, GCS 15, BP: 150/90 mmHg, Pulse: 85/dk, Respiratory Rate: 16/dk, Pulse Oks: 90% . Nervous system examination; the right nasolabial groove disappearance, disability to close right eyelid fully. 1/5 strength loss in left upper and lower extremities. Other system examinations and blood test held in the emergency clinic yield no pathological result. Brain Cranial tomography revealed no pathology except senile atrophy. In diffusion and perfusion MRI taken three hours after incident, lacunar infarcts located in brain stem are observed. The patient is further admitted to neurology clinic with diagnosis of Millard Gubler syndrome. Upon discharge it is suggested to follow-up in order to prevent any possible problem.

CONCLUSION: Millard Gubler syndrome, which exist in Vertebrobasilar Syndromes; ventral pontine lesion, 6, 7, is characterized by nerve nuclei and the corticospinal tract involvement. N. Abducens (6th nerve) due to involvement of diplopia, strabismus import, export restrictions to the lesion side, ipsilateral facial paralysis due to facial nerve palsy and contralateral hemiplegia or hemiparesis also observed (4). These syndromes taking place in the group of cerebrovascular disease syndromes are sometimes difficult to recognize. They ranks first in terms of sequelae and have an important position in admission to hospitals and emergency services in industrialized societies. In this situation, it is obliged to initiate treatment via recognizing this table for emergency physicians.

P218 Case Presentation

RHABDOMYOLYSIS IN FIBRATE

O Bilir (1), A COSKUN (2), G Ersunan (1), A Kalkan (1), E Uğraş (2), S Yeniocak (3)

1. Emergency Medicine, Recep Tayyip Erdoğan University Medical School, Rize, Turkey
2. Department of Emergency Medicine, Recep Tayyip Erdoğan, University School of Medicine, Rize, Turkey
3. Emergency Medicine, Haseki Education and Research Hospital, İstanbul, Turkey

Corresponding author: Mr Asim Kalkan (drasimkalkan@hotmail.com)

Key-words: Rhabdomyolysis ; drug ; fenofibrate

INTRODUCTION: Rhabdomyolysis is a clinical condition caused by degeneration of striated muscle. Drug use and infections play a role in addition to traumatic causes lipid-lowering drugs, corticosteroids, colchicine, and many drugs can cause rhabdomyolysis. This situation may progress as asymptomatic severe hypovolemia, shock, cardiac arrhythmia and can lead to kidney failure (1-2). The presence of condition of Diabetes Mellitus in patients facilitates development of rhabdomyolysis. In this presentation, we discuss the case of rhabdomyolysis developed because of usage of fenofibrate.

CASE: A sixty-year-old female patient, Who admitted to the emergency room due to her increasing widespread muscle pain for two days. Her medical history presents type 2 Diabetes Mellitus for twenty years, Diabetic Nephropathy for two and a half years and coronary artery disease for two years. Due to her conditions she was being followed by related clinics. The patient's bilateral lower extremities, 1/5 system examinations, and vital findings were normal except for loss of strength. Diagnoses of urea: 117 mg / dl, creatinine: 6.73 mg / dl, AST: 369 U / L, CK: 8450: Ca: 8.1 mg / dl, Na: 137 mmol / L, albumin: 3.5 g / dl, LDH: 665 U / L, hemoglobin:

9.39 g / dl, respectively. Per patient of the renal ultrasonography were normal except for grade-1 increase in parenchymal echogenicity. Upon further investigation, it is learned that the patient was using 267 mg fenofibrate for at least 3 months as lipid lowering therapy and the muscle pains were started that time but they got worse within two days. Due to these findings, the condition of the patient considered as rhabdomyolysis caused by use of fenofibrate and she was inserted catheter in emergency room , then hospitalized in the Nephrology department to monitor.

CONCLUSION: Rhabdomyolysis, also May occur due the reasons other than trauma. For this reasons, drugs are required to be selected carefully for patients primarily those with chronic diseases. In addition the patients should be informed for possible side effects.

P219 Case Presentation

INCIDENTALLY DIAGNOSED TWO CASES IN THE EMERGENCY DEPARTMENT

MA Afacan, F Büyükcım, A Ceylan, AB Erdem, U Kaya

Department of Emergency Medicine, Diskapi Yıldırım Beyazıt Training&Research Hospital, Ankara, Turkey

Corresponding author: Mr Büyükcım Fatih (fatihbuyukcam@gmail.com)

Key-words: arachnoid cyst ; foreign body ; incidentally diagnosed cases

Case 1: Middle cranial fossa arachnoid cyst

A 2 year old boy was presented to the emergency department with head trauma. 30 minutes before, a shelf has fallen to his head. There was a laceration with a size of 3 cm at the middle of forehead. Neurological examination of the patient was normal. The patient had vomited once. There wasn't any other symptom and finding. Brain tomography was performed and an arachnoid cyst were diagnosed incidentally. It is diagnosed as middle cranial fossa arachnoid cyst. The patient was consulted to the neurosurgery and revealed them to further research.

Arachnoid cysts are relatively common cysts within the subarachnoid space which contain cerebrospinal fluid (CSF). They don't communicate with the remainder of the CSF space. They are located in the middle cranial fossa most frequently (50-60%). They are well circumscribed, with an barely visible wall, and displace nearby structures. Over time they can exert a remodeling effect on the bone. Although the most are sporadic, they are seen with increased frequency in mucopolysaccharidoses.

Case 2: Is this a foreign body or a mass ?

A 3 year old boy was presented to the emergency department with head trauma by a car accident. He was conscious but a short-duration of amnesia. Cranial computed tomography didn't showed any fracture or bleeding. but there were a hyperdense structure on ethmoidal bone with a diameter of 1.1x1.4x1.0. Its density was same with bone. Nasal endoscopic imaging revealed narrow but open nasal passage and there wasn't any foreign body. Elective radiologic diagnoses was advised to diagnose whether it is a foreign body or a tumor.

A foreign body in a child's nose can be present for a period of time without a parent being aware of the problem. The object may only be discovered when visiting a doctor to find the cause of irritation, bleeding, infection, or difficulty breathing. In our case there wasn't any symptom and the mass had same density with bone. So it is thought that it could be a tumor like a teratoma, osteoma or cartilage tumor. Further research will determine the exact diagnosis.

In conclusion, as these two cases some chronic conditions could be seen in the emergency department by chance. These patients should be directed to the appropriate follow-up clinics.

P220

Case Presentation

THE MASSIVE HEMOTHORAX DEVELOPING IN HOURS AFTER PENETRATING CHEST TRAUMA

F Büyükcım (1), A Ceylan (1), AB Erdem (1), DB Köroğlu (2), M Sırmalı (2)

1. Department of Emergency Medicine, Diskapi Yıldırım Beyazıt Training&Research Hospital, Ankara, Turkey
2. Department of Thoracic Surgery, Diskapi Yıldırım Beyazıt Training&Research Hospital, Ankara, Turkey

Corresponding author: Mr Büyükcım Fatih (fatihbuyukcam@gmail.com)

Key-words: chest trauma ; penetrating trauma ; massive hemothorax

Introduction

The incidence of chest trauma has increased in recent years; it is the third common trauma following head and limb trauma (1). The most frequent intrathoracic pathologies are pneumothorax and hemothorax (2). Herein, we described a rapid development of massive hemothorax in the emergency department after penetrating chest trauma.

Case Report

20-year-old male was admitted to the emergency department with assault and penetrating wound injury. On physical examination, arterial blood pressure was 129/81 mmHg, pulse rate was 96 beats/min. There was a laceration with a 1 cm length on the left posterior axillary line at the level of ninth rib. Auscultation of the lung were normal. On chest radiograph, minimal pneumothorax were there at the left apex. Abdominal ultrasonography was normal. After four hours patient suffered from increased dyspnea and thorax computed tomography revealed left pleural effusion and minimal pneumothorax. Tube thoracostomy was performed and initially 1400 cc of and in the first 12 hours extra 400 cc of hemorrhagic fluid has came. The patient was discharged without any complication on the fourth day.

Discussion

The incidence of pneumothorax is 26%, hemopneumothorax is 17-20% and hemothorax is 16-20% (3) and the mortality rate is 4-12% in the case of thoracic trauma. The mortality increases to 12-15% if there is an additional organ injury and increases to 30-35% if multiple organ injury are there (4).

The generally accepted approach to traumatic hemothorax is the chest tube application. Chest tube application is sufficient for the 60-90% of the patients. Despite the tube thoracostomy and fluid replacement therapy if the hypotension remains; the worsening of the patients' general condition, 1500cc hemorrhagic drainage at the beginning, 200cc/hour drainage in first four hours, 100cc/hour drainage in first eight hours, over 1500cc hemorrhagic drainage in the first 24 hours are the indications of thoracotomy (6).

In the case of massive hemothorax, direct thoracotomy should be preferred to avoid the loss of time (4). Thoracotomy rate of blunt thoracic trauma is 10% and 20-30% at penetrating trauma (4). The inappropriate drainage of the hemothorax causes accumulation of hematoma and compression of the lung (trapped lung), so it causes severe complications and empyema in 5-30% of the cases (2). In this condition fibrinolytic therapy via thorax tube and Video Assisted Thoracoscopic Surgery (VATS) could be preferred (2).

As a result, thoracic traumas has high mortality and morbidity. Post-traumatic hemothorax and secondary complications could cause rapid worsening of the condition and result with dead. So

thoracic traumas should be diagnosed rapidly and close monitoring is required.

P221

Case Presentation

A CRANIOCERVICAL FIREARMS INJURY FOLLOWING THE ATYPICAL WAY WITHOUT NEUROLOGICAL DEFICIT: A CASE REPORT

SB Alp (1), MK Bayram (1), UY Cavus (1), OF Demir (1), I Eren (1), F Kırar (2)

1. Emergency department, Diskapi Yıldırım Beyazıt Training and Research Hospital, Ankara, Turkey
2. Emergency department, Dr. Lütfi Kırdar Kartal Education and Research Hospital, Istanbul, Turkey

Corresponding author: Mr Cavus Umut (acildrumut@yahoo.com)

Key-words: Firearm injury ; Atypical way ; Craniocervical injury

INTRODUCTION

Head and neck regions are included many vital anatomical structures. Therefore firearms injuries of these regions are more commonly caused to life threatening than the other anatomical regions. According to 2009 data of National Vital Statistics Report in the United States, the fifth leading causes of death in 2009 was accidents (unintentional injuries) and ten percent of accidents were reported that firearms injuries. In this article, we presented an unusual firearm injuries that the bullet was entered cervical region and was penetrated on lateral wall of the left orbit without neurological deficit, as interesting for lead to atypical.

CASE REPORT

23 year old female patient was admitted to the emergency due to firearm injury. The injury zones are head and neck of the patient. She didn't lose consciousness. On arrival, the patient was conscious but inebriated (Glasgow Coma Score:14). Clinical examination revealed a ragged 1 cm laceration of the posterior occipital area with fresh gunpowder tattooing and a 1 cm split laceration of the skin overlying the occipital area. There was no blood in the external auditory meatus and no obvious cerebrospinal fluid leak. The patient's other physical examinations were normal. There was no neurological deficit. In her vital sign, Tension Arterial: 120/80 mm/hg, pulse rate was 78/min. The patient's cervical x-ray was normal. Foreign body in the lateral wall of the left orbit (lead seed) was detected. In the Cranial Computed Tomography (CCT) and radiography, there was a metallic density in the left temporal fossa and soft tissue. In the cervical CT and radiography; fracture was detected on the left posterior arch and transverse process of the atlas bone. The patient was hospitalized in the neurosurgical service. The bullet was removed with left zygomatic incision under fluoroscopy. The patient was immobilized with a cervical collar. After the surgery, neurological deficit was not observed and the patient was discharged.

DISCUSSION

Firearms injuries are had been the second most common cause of death in the accidents, due to the use of guns has moved from military grounds to the urban areas. Head and neck injuries account for 30% of all firearms injuries. In the literature reported that the extent of wound damage is related with multiple factors as type of firearm, composition of the projectile, velocity of projectile and composition of the soft tissue target. The kinetic energy of projectile was foremost major factor in determining the type and severity of the soft tissue wound. In the studies were reported that carefully and rapidly performed the first intervention was important for better clinical outcome of patients. Central nerve system and vascular system were under threat in the firearms

injuries. In the central nerve system, the clinical symptoms are changed according to the place where the bullet influence. The incidence of blunt arterial injuries in blunt trauma populations is approximately identified in the rate of 2%. Bleeding of major vascular structure is occurred hypoxemia in the brain so neurological symptoms are observed. In the firearms injuries, mortality of the patients is associated with arterial and brain injury that was very high. In the head and neck gunshot wounds, after primarily airway safety and local bleeding are taken into consideration, radiographs of thorax and cervical spine and localization of lead and bone fragments were important in determining the possible hemopneumothorax. In our case, there was no hemopneumothorax. The CT angiography was the best demonstrative study in the firearms injuries for evaluation of the head, face or neck wounds. Fracture of the bone and wound of soft tissue especially vascular structures are determined with CT angiography. In this patient, Craniocervical CT was showed that the fracture on the atlas and the bullet was entered to left posterior cervical spine region and was located that moving in the left temporal fossa without damage of neurovascular structure, as interesting. Treatment of firearms injuries, the surgery is usually required though an asymptomatic patient that if still in life. Our asymptomatic patient was operated.

CONCLUSION

In the firearms injuries, the bullet may followed an unexpected path. Head and neck injuries were life threatening cause of including major neurovascular structure therefore demonstrative assessment was important after the first careful evaluation.

P222

Case Presentation

PORTAL AND MESENTERIC VEIN THROMBOSIS IN A PATIENT WITH COAGULOPATHY

M. Saritemur (1), H. Sevil (1), A. Bayramoglu (1), A. Akoz (1), B. Ozogul (2), M. Emet (1)

1. Emergency Department, Ataturk University Medical Faculty, Erzurum, Turkey
2. General Surgery Department, Ataturk University Medical Faculty, Erzurum, Turkey

Corresponding author: Mr Saritemur Murat (muratsaritemur@gmail.com)

Key-words: Coagulopathy ; Portal Vein Thrombosis ; Mesenteric Vein Thrombosis

Introduction: Acute mesenteric vein thrombosis (MVT) is a life-threatening condition requiring rapid diagnosis and aggressive management. Etiologies of mesenteric vein thrombosis can be divided into local intra-abdominal factors and inherited or acquired hypercoagulable states. The diagnosis is frequently made by contrast-enhanced computed tomography (CT). However angiography and exploratory surgery still have important roles for diagnosis and treatment. Anticoagulation is preventive and associated with decreased recurrence and mortality. Thrombectomy and thrombolysis should be considered under feasible circumstances. Evidence of infarction indicates surgery and resection.

Case: A 65-year-old male patient presented to our emergency department (ED) with abdominal pain. He was diagnosed as protein C and S deficiency after an attack of deep vein thrombosis (DVT) previously and had been on anticoagulant therapy with warfarin. The value of protein C was 48% (70-130) and protein S was 44.2% (65-140). His family stated that the patient had taken his drugs irregularly. On physical examination, the patient was oriented and cooperated. The vital signs were normal. Electrocardiography revealed normal sinus rhythm and the rate was 92/min. There were abdominal tenderness and rebound sign particularly localized in upper right quadrant. Examination of other

systems as well as abdominal and chest radiographs was unremarkable. The value of INR was 1.1 (0.9 to 1.3) and D-dimer was 2796 ng/mL (0-500). Other laboratory results were within normal ranges. Abdominal CT showed a lesion measuring 38x34 mm compatible with hydatid cyst in the junction of 7th and 8th segments of the liver, a thrombosis material in the portal vein extending to the superior mesenteric vein, fluid in pelvic area, and edema of the intestinal wall. The patient was admitted to general surgery clinic with diagnosis of acute portal and superior mesenteric vein thrombosis. He was operated and a gangrenous small intestine segment of about 90 cm length beginning from 200 cm distal to ligament of treitz was resected. The pathology report was consistent with ischemia. The patient recovered and discharged 10th day of admission.

Conclusion: In a patient with history of DVT who presents with abdominal tenderness particularly in the upper right quadrant, the diagnosis of MVT along with portal vein thrombosis should also be considered. Therefore, the patients with known coagulopathy should be instructed about possible complications and anticoagulant therapy should be monitored closely.

P223

Case Presentation

DIAGNOSIS OF FEMORAL ARTERY INJURY DUE TO FEMORAL SHAFT FRACTURE WITH ARTERIOGRAM

M. Saritemur (1), E. Tekin (1), H. Sevil (1), Y. Yildiz (2), T. Tipi (3), E.C. Mermi (2), M. Emet (1)

1. Emergency Department, Ataturk University Medical Faculty, Erzurum, Turkey
2. Cardiac and Vascular Surgery Department, Ataturk University Medical Faculty, Erzurum, Turkey
3. Orthopedics Department, Ataturk University Medical Faculty, Erzurum, Turkey

Corresponding author: Mr Saritemur Murat (muratsaritemur@gmail.com)

Key-words: Femoral Fracture ; Arterial Injury ; Arteriogram

Introduction: Extremity injuries accompanied by vascular damage are associated with significant mortality and morbidity. Serious vascular injuries can be seen in lower extremity injuries, particularly fractures of the femur. Femur fractures usually develop due to high-energy trauma and are usually seen in patients with multiple trauma. There may be severe blood loss in patients. Therefore, assessment of vascular structures should not be neglected in these patients.

Case: 29-year-old female patient was transported by ambulance to the emergency department with injury as a result of a bus crash. General condition of the patient was good when she arrived to our emergency department. She was oriented and cooperative. Blood pressure was 90/70 mmHg, heart rate was 102/min and respiratory rate was 18/min. Airway and respiratory examination was normal. Deformity on the left femoral region and alaceration of about 0.5x0.5 cm above the left knee laterally was present on secondary examination. There were also two skin and subdermal incisions on maxillofacial region.

Type 1 open fracture at the shaft of the femur with transverse course and a butterfly segment was seen in radiograph taken in secondary examination. There was no pulse of the popliteal artery, arteria tibialis anterior and posterior. Also presence of pallor and coldness in the left leg suggested us arterial injury. After femoral arterial access via gray angiocath in the emergency department, we applied radiopaque and obtained x-ray of the left leg. This angiographic image of the femoral artery showed a filling defect approximately 5 cm in the femoral artery. The patient underwent urgent surgical operation by the cardiovascular surgeons and orthopedists. Vascular dissection and intraluminal obstruction was

observed at the site of filling defect area of femoral artery at the operation. Disrupted region of femoral artery was removed and has been restored by anastomosis. The intervention of fracture was made by orthopedists.

Conclusion: Tertiary examination after the secondary in the emergency department is important to detect in some injuries. Diagnosis of arterial injuries can be placed quickly by plain radiographs taken after arterial opaque in cases that arterial injury is suspected in the emergency department.

P224

Case Presentation

BILATERALLY BURNS AND FRACTURES OF UPPER EXTREMITIES: IS IT ABUSE OR HYPERACTIVITY?

M. Uzkeser, M. Saritemur, A. Bayramoglu, A. Akoz, S. Aslan, M. Emet

Emergency Department, Ataturk University Medical Faculty, Erzurum, Turkey

Corresponding author: Mr Saritemur Murat (muratsaritemur@gmail.com)

Key-words: Child Abuse ; Hyperactivity ; Trauma

Introduction: Although 'Attention Deficit Hyperactivity Disorder (ADHD)' in children has a higher risk of injury due to carelessness and hyperactivity, abuse or neglect of children in these injuries cannot be distinguished exactly. Children with ADHD are exposed to injuries 7 times more when compared with normal children. History of repeated injuries in 30% of boys with ADHD raises the suspicion of negligence. In this report, we represent a trauma patient with the suspicion of negligence or abuse as the history, the trauma mechanism and the diagnoses were incompatible.

Case: A 9-year-old boy was admitted to our emergency department with complaint of burned and broken arms. According to the parents' description, the child fell on the stove and then hot water on the stove poured on the child. On examination, the child was alert, oriented and cooperative. The patient's vital signs were stable. He was an introverted boy and reluctant to answer our questions. While speaking, he was looking at his parents scary. There was no evidence of burns in other parts of his body except second-degree burns in both upper extremities. Radiological examination revealed fractures of both radiuses. The patient was consulted with burn center. Burn dressing and bilateral long arm splint was applied. The patient was admitted to the clinic of orthopedic.

Conclusion: If a burn is accompanied by a fracture in children, suspicion of child abuse should be taken into consideration and whole skeletal screening must be done. Healing of bone fracture at different stages and presence of multiple fractures should remind physicians of about child abuse. History of patients should be checked carefully and differential diagnosis of child abuse should include ADHD.

P225

Case Presentation

A BIZARRE ACCIDENT: A BOY WITH A NEEDLE IN THE POSTERIOR URETHRA

I. Ikizceli, YS. Akdeniz, M. Balta, A. Ipekci

Department of Emergency Medicine, Istanbul University Cerrahpasa Medical Faculty, Istanbul, Turkey

Corresponding author: Mme Akdeniz Yonca Senem (dryonca@myynet.com)

Key-words: urethra ; self-insertion ; foreign body

Introduction

Self-insertion of penile foreign bodies is a common phenomenon worldwide. The aim is usually enhance sexual performance and virility. Especially for young adolescents the reason is just curiosity or desire for autoerotic stimulation. In the literature there are numerous reported-cases of self inflicted foreign objects in urethra but in Turkey the reported cases are relatively few. We report a case of a urethral self-inserted needle by an 11 years-old male.

Case Report

An 11 years-old male accompanied by his father presented to emergency department with slipping a needle in his urethra inadvertently after itching the urethral orifice with the needle. He did not have any complaint or symptom. His physical examination was entirely normal. Plain x-ray of pelvis showed a needle approximately about the level of posterior urethra. For the removal of the object the patient was interned to the pediatric surgery unit. By cystoscopy the needle is completely removed from the bulbar urethra without any complication. After the control cystoscopy witch was completely normal the patient was referred to pediatric psychiatry department for psychiatric management.

Conclusion

Cases of self-inserted urethral bodies are not rare, various objects have been reported. This behavior is often associated with psychiatric disorders, senility, intoxications or autoerotic stimulation. Patients often present with voiding symptoms such as dysuria, pyuria, increased urinary frequency, heamaturia, urinary retention and penile or perineal swelling. Pelvic x-ray is usually sufficient for diagnosis; ultrasonography and computered tomography are the next choices. Endoscopic retrieval is the initial management. In most of cases it is successful; rarely an open surgery is required. Avoiding the infective complications antibiotherapy is necessary. Psychiatric evaluation of these patients is indispensable.

P226

Case Presentation

A VERY RARE CAUSE OF DYSPNEA IN EMERGENCY DEPARTMENT: SWYER-JAMES (MACLEOD) SYNDROME

O. Tutar (1), YS. Akdeniz (2), A. Bas (1), I. Ikizceli (2)

1. Department of Radiology, Istanbul University Cerrahpasa Medical Faculty, Istanbul, Turkey

2. Department of Emergency Medicine Istanbul University Cerrahpasa Medical Faculty, Istanbul, Turkey

Corresponding author: Mme Akdeniz Yonca Senem (dryonca@myynet.com)

Key-words: dyspnea ; Swyer-James (MacLeod) Syndrome ; unilateral hiperluculent lung

Introduction

Swyer-James (MacLeod) Syndrome also called "unilateral hiperluculent lung" is an uncommon and complex disease characterized by roentgenographic hyperlucency of one lung or lobe due to loss of the pulmonary vascular structure and to alveolar overdistention. We describe a 44 years old male with dyspnea for years diagnosed and treated as asthma bronchial who was actually with "unilateral hiperluculent lung".

Case report:

A 44 years old male patient presents with dyspnea in emergency department. He had a history of asthma for years and was using inhaler bronchodilators for it. His breath sounds was decreased and over the left lung there were diffuse crepitations and rales. Computered thorax tomography revealed increased aeration and decreased vascular structures on the left lung. Also decreased

pulmonary arteriolar diameters and tubular bronchiectasies were marked. According to radiologists the case considered to be Swyer-James (MacLeod) Syndrome.

Conclusion:

Swyer-James (MacLeod) Syndrome is a unique well defined syndrome with a unilateral hyperlucent lung. It seems to be an acquired disease that follows viral bronchiolitis and pneumonitis in childhood. It must be differentiated from many other causes of unilateral lung "transradiancy" on the chest x-ray, such as those related congenital bronchial and vascular abnormalities. Especially in adults it is a very unusual diagnosis. Even though it is such an uncommon disease, with the help of radiology the diagnosis becomes relatively easy, and it must be considered among the cause of dyspnea even in adults presented to emergency department.

P227 Case Presentation

AN UNCOMMON CAUSE OF FALL IN INFANCY: ACUTE ARTERIAL THROMBOSIS IN A BABY BOY

I. Ikizceli (1), YS. Akdeniz (1), G.Gozubatik-Celik (2), A.Koksal (1), O. Tutar (3)

1. Department of Emergency Medicine, Istanbul University Cerrahpasa Medical Faculty, Istanbul, Turkey
2. Department of Neurology, Istanbul University Cerrahpasa Medical Faculty, Istanbul, Turkey
3. Department of Radiology, Istanbul University Cerrahpasa Medical Faculty, Istanbul, Turkey

Corresponding author: Mme Akdeniz Yonca Senem (dryonca@myynet.com)

Key-words: infancy ; acute arterial thrombosis ; fall

Introduction

During infantile period, admission to emergency department with a complaint of limited extremity motion after a fall is common. In the etiology there are usually orthopedic pathologies nevertheless cerebrovascular disease also must be considered in the differential diagnosis. Among these cerebrovascular diseases, especially in the course of infancy acute arterial thrombosis is a very rare phenomenon. We present the case of an 8-month-old male infant falling down due to ischemic cerebral infarction.

Case Report

An 8-month-old male infant was admitted to emergency department with loss of motion at the right arm and leg after a fall a day ago. In the physical examination he was active and alert, could hold his neck and establish eye contact. His pupillary reactivity and cranial nerve activity was normal. His spontaneous motions in right side were diminished. The cardiac, respiratory and abdominal examination was entirely normal. There was not any external sign of trauma over his body. He had a right hemiparesis with mild homolateral hyperreflexia. Laboratory tests and x-rays were completely normal. Cranial and spinal computerized tomography did not show any pathology. The magnetic resonance diffusion-weighted imaging revealed acute left cerebral infarct in the left middle cerebral artery zone. The patient was referred to the pediatric neurology unit for explore the etiology of thrombosis.

Conclusion

The incidence of pediatric stroke is between 1.29 and 13.0 per 100 000 children per year. The risk factors are multiple and should be detected after the acute state. The etiology is often idiopathic. Common causes include congenital and acquired heart diseases, systemic vascular diseases; vasculitis, vasculopathies, metabolic and vasospastic disorders, coagulopathies and hematologic disorders especially sickle cell disease, congenital cerebrovascular

anomalies, trauma and iatrogenic events. Since there are not randomized controlled studies for childhood stroke treatment is still controversial and relies on adult literature. Even stroke is very unusual in pediatric patients and still admission of such patients in trauma unit is very uncommon when a child presents with extremity problems in emergency department stroke also must be considered in the differential diagnosis.

P228 Case Presentation

SIGMOIDRECTAL INTUSSUSCEPTION DUE TO SIGMOID CARCINOMA IN AN ADULT

O. Tutar (1), D. Cebi (1), A. Kocael (2), P. Kocael (3), YS. Akdeniz (2), I. Ikizceli (2)

1. Department of Radiology, Istanbul University Cerrahpasa Medical Faculty, Istanbul, Turkey
2. Department of Emergency Medicine, Istanbul University Cerrahpasa Medical Faculty, Istanbul, Turkey
3. Department of General Surgery, Istanbul University Cerrahpasa Medical Faculty, Istanbul, Turkey

Corresponding author: Mme Akdeniz Yonca Senem (dryonca@myynet.com)

Key-words: sigmoid carcinoma ; sigmoidorectal intussusception ; adult

Introduction

Whilst intussusceptions are relatively common in childhood, they are very infrequent in adults. The status is commonly secondary to tumoral lesions. Also adhesions or duplications rarely could be the cause. In this report we present a 69 years old female with sigmoidorectal intussusception due to a sigmoid colon tumor.

Case Report

A 69 years old female presented with abdominal pain, constipation and tenesmus at our hospital. She had a history of sigmoid carcinoma. The abdominal computerized tomography revealed an invagination of an entire sigmoid segment with its mesentery about 15 centimeters long into the lumen of rectum. The patient referred to general surgery unit for tumoral resection.

Conclusion

In the medical literature reported cases of intussusception in adults are quite rare. In adults the reason is usually malignant tumors particularly which occurs in the large intestines. Usually invaginations are ileocecal, sigmoidorectal invaginations are very uncommon. Diagnosis is difficult; computerized tomography has a very important role in diagnosis. In our case the computerized tomography images were diagnostic and demonstrative. The treatment is surgical and includes primary reduction. In adults despite its infrequency intussusception in consequence of sigmoid neoplasm must be considered in differential diagnosis of abdominal pain and constipation.

P229 Case Presentation

THREE MAJOR COMPLICATIONS IN A PATIENT AFTER ERCP

O. Simsek (1), A. Kocael (2), YS. Akdeniz (2), O. Tutar (3), I. Ikizceli (2)

1. Department of General Surgery, Istanbul University Cerrahpasa Medical Faculty, Istanbul, Turkey
2. Department of Emergency Medicine, Istanbul University Cerrahpasa Medical Faculty, Istanbul, Turkey
3. Department of Radiology, Istanbul University Cerrahpasa Medical Faculty, Istanbul, Turkey

Corresponding author: Mme Akdeniz Yonca Senem (dryonca@mynet.com)

Key-words: ERCP ; complication ; fatal

Introduction

Endoscopic retrograde cholangiopancreatography (ERCP) is a technically complex endoscopic procedure that can cause significant morbidity and occasionally mortality. Major complications are mostly associated with therapeutic procedures and low case volume; in a large prospective multicenter study the rate of major complications after therapeutic ERCP was 5.4% compared with 1.4% after diagnostic procedures. We report a case of a female patient who had three major complications in the same time associated with ERCP.

Case report:

A 42 years-old female was admitted to emergency department with fever, vomiting and abdominal pain. She had a history of operation for gastric cancer four months ago. The laboratory tests and ultrasonography revealed a cholangitis whereat an ERCP is scheduled. After the ERCP the patient become worse, a shortness of breath and a serious abdominal pain occurred. The thoracic and abdominal computerized tomography showed a mild pneumothorax in right hemithorax, pneumomediastinum and, extensive free air and peritoneal fluid. With open surgery a small bowel perforation established and was repaired. For pneumothorax a right tube thoracostomy was applied.

Conclusion

Compared with other endoscopic techniques ERCP carries a higher potential for serious complications. Recent studies showed lower complication rates. According these studies; experience, practice, applied technique and taking time in difficult cases are important for diminish the rate of complications. Our case was unusual with three severe and fatal complications all together in one patient.

P230 Case Presentation

USE OF PROPHYLACTIC PROTON PUMP INHIBITORS IN ACCOMPANYING RELATIVES OF PATIENTS TO AVOID COMPLICATIONS DUE TO STRESS CAN BE A NEW REQUIREMENT?

P. Kocael (1), A. Kocael (2), YS. Akdeniz (2), O. Tutar (3), I. Ikizceli (3)

1. Department of General Surgery, Istanbul University Cerrahpasa Medical Faculty, Istanbul, Turkey
2. Department of Emergency Medicine, Istanbul University Cerrahpasa Medical Faculty, Istanbul, Turkey
3. Department of Radiology, Istanbul University Cerrahpasa Medical Faculty, Istanbul, Turkey

Corresponding author: Mme Akdeniz Yonca Senem (dryonca@mynet.com)

Key-words: stress ; peptic ulcer perforation ; accompanying relatives of patients

Introduction

Spontaneous gastric and duodenal perforations due to peptic ulcerations are very common in emergency medicine. Usually trigger factors are excessive use of medicaments especially pain killers. But sometimes just stress is an individual provoking factor for perforation. We present a accompanying relative of a patient who developed a peptic ulcer perforations during his stay in hospital.

Case Report

A 24 years old male, who stays in hospital for accompanying his father interned to general surgery unit because of colonic cancer, presented in emergency unit with severe abdominal pain. In the

physical examination he had abdominal defense and rebound. The plain abdominal x-ray was normal. The computerized abdominal tomography revealed free air in abdomen due to a peptic ulcer perforation. With open surgery the defect was repaired and the patient was referred to general surgery unit.

Conclusion

The role of stress should not be ignored as an important factor among the cause of peptic ulcer and perforation. There withal taking precautions against the complications of stress is necessary. Among the patient's accompanying relatives stress is very common and can be severe. Based on our case toward the risk of peptic ulcer perforation due to stress we recommend use of proton pump inhibitors in patient's relatives staying with them in hospital.

P231 Case Presentation

AN UNUSUAL COUSE OF CHOLANGITIS CAROLI'S SYNDROME

U ÇAVUŞ (1), C CİVELEK (2), A DUR (2), A ÖZKAN (2), E SÖNMEZ (3)

1. EMERGENCY MEDICINE, DIŞKAPI YILDIRIM BEYAZIT EĞİTİM EDUCATION AND RESEARCH HOSPITAL, ANKARA, Turkey
2. Department of Emergency Medicine, Bezmialem Vakif University, İSTANBUL, Turkey
3. Department of Emergency Medicine, Bezmialem Vakif University, Istanbul, Turkey

Corresponding author: Mr Sönmez Ertan (ertansonmez3@msn.com)

Key-words: Caroli's Syndrome ; intrahepatic bile ducts ; cholangitis

Caroli's syndrome is rare congenital disorders of the intrahepatic bile ducts. It is characterized by dilatation of the intrahepatic biliary tree. Treatment consists of symptomatic treatment of cholangitis attacks by antibiotics, some endoscopic, radiological and surgical drainage procedures and surgery. In our case 39 years old man was admitted to emergency medicine with the clinical signs of cholangitis and had been identified complicated Caroli disease. We performed percutaneous drainage with radiologically and performed antibiotics.

P232 Case Presentation

CASE REPORT: EARLY DIALYSES FOR METFORMIN INTOXICATION

MA Afacan, F Büyükcamlar, A Ceylan, AB Erdem, Y Zengin

Department of Emergency Medicine, Diskapi Yildirim Beyazit Training&Research Hospital, Ankara, Turkey

Corresponding author: Mr Büyükcamlar Fatih (fatihbuyukcam@gmail.com)

Key-words: metformin overdose ; dialysis ; lactic acidosis

24 year old male admitted to the emergency room with a suicide attempt. He has swallowed 38 metformin (850mg) pills before four hours. He suffered from nausea, vomiting. Physical examination revealed blood pressure of 120/85 mmHg, heart rate of 73 beats/min, there wasn't any other systemic examination finding. The initial laboratory results were as follows; glucose: 104 mg/dL, creatinin: 1.7 mg/dL, BUN:33 mg/dL, K:5.34 mmol/L, serum pH:7.37, HCO₃: 27.2 mEq/L. Gastric lavage was performed and 50 gr activated charcoal was given for only one dose. Because of the high risk of mortality and morbidity in the case of metformin associated lactic acidosis, early dialysis was planned. At the second hour of admission ultrafiltration was performed for two hours. At

the second day of follow up, serum creatinin was 2.31 mg/dL, serum gas values was normal and second ultrafiltration was performed. While the following days there was no problem and he was discharged at the eighth day of admission without any complication.

Metformin is a commonly used biguanide antihyperglycemic agent and it is used in the treatment of type 2 diabetes mellitus. Metformin has the distinct advantage of lowering serum glucose levels without causing hyper-insulinemia and subsequent risk of hypoglycemia or weight gain (1). Metformin enhance insulin function by decreasing insulin resistance in peripheral tissues, decreasing free fatty acid concentrations and lipid oxidation, decreasing intestinal glucose absorption, increasing intestinal utilization of glucose and lactate production, and decreasing hepatic glucose production (2).

Metformin associated lactic acidosis occurs frequently with therapeutic use and it is seen 1 to 5 cases per 100,000 person-years of metformin treatment but may be as high as 30 cases per 100,000 patient-years (3). Also the mortality rate of the metformin associated lactic acidosis is >50% (3).

In metformin intoxication, we should see the serum bicarbonate and pH levels, renal functions, blood glucose and serum lactate level. Also we must exclude other acidosis causes. Serum metformin levels is important for conformation but it has little role in clinical decision (4). In our case we couldn't follow the lactic acid or metformin level of serum due to lack of lab kits, but we followed blood creatinin, electrolytes, pH and HCO₃ levels closely to monitor acidosis and renal failure. This is the limitation of this report.

Management of metformin intoxication includes vital signs and blood glucose monitoring, intravenous dextrose if hypoglycemia seen; if hypotension appears intravenous crystalloid solutions or vasopressor could be used. Sodium bicarbonate usage to correct acidosis is still controversial because severe acidosis can cause to hypotension and tissue hypoperfusion, correction of acidosis would theoretically improve cardiovascular status. However, sodium bicarbonate can lead to paradoxical intracellular hypercarbia, and there is evidence that acidosis actually can be protective to anoxic tissue (1, 5). Various types of renal replacement treatments used for metformin associated severe lactic acidosis like hemodialysis, hemofiltration and continuous veno-venous hemodialysis (1).

In conclusion, early diagnosis could prevent mortality and morbidity in metformin overdose. But the main problem is when we will start dialysis; further studies should be done to determine over how much drug usage dialysis should be started.

Case: A 19 year old male patient presented to our emergency department with new onset fatigue and dizziness. He had been exhausted for about 2 months and had acute nasopharyngitis symptoms for 1 week. Medical history revealed anemia diagnosed 2 years ago and treated as iron deficiency anemia. On physical examination patient was normothermic and blood pressure was normal. Oropharyngeal hyperemia and pale conjunctiva were noted. The tongue of the patient was pale and hyperemic locally. There were deep painful grooves on the dorsum of the tongue and margin was irregular. Neurological examination was normal. Laboratory evaluation revealed Hb:10.2g/dl, MCV: 68 fL, transferrin saturation %55, ferritin: 65 ng/ml, erythrocyte sedimentation rate: 12mm/h. Folate, vitamin B12, hepatic and renal functions were normal. Thoracic X-ray and electrocardiography were also normal. With the diagnosis of *Lingua plicata*, patient was reevaluated for an underlying disease. Medical history and laboratory evaluation were inconclusive for a systemic disease. Further workup of microcytic anemia was consistent with thalassemia minor. Patient told that there had been grooves on his tongue for many years and the only problem he had was the pain when the food particles occluded them. As a result of diagnostic study, patient's tongue pathology was thought to be a variant of normal and patient was treated with a diagnosis of acute nasopharyngitis and given advices for the care and hygiene of his tongue. After 2 weeks, the patient was out of complaints and hyperemia around the grooves resolved. Patient was followed periodically for his hemoglobinopathy.

Discussion/Conclusion:

Tongue pathologies are important in outpatient clinics as diagnostic clues of systemic diseases. The prevalence of tongue lesions reach up to %15.5 in adults, so the evaluation of the tongue during physical examination is important. *Lingua plicata*, fissured tongue, is a rare tongue pathology characterized by grooves that vary in depth and are noted along the dorsal and lateral aspects of the tongue. Although a definitive etiology is unknown, a polygenic mode of inheritance is suspected because the condition is seen clustering in families who are affected. Patients are usually asymptomatic and it's mostly noted during routine intraoral examination. The only symptoms may be pain due to irritation of the food particles or coexisting systemic disease symptoms. *Lingua Plicata* may be a manifestation of Melkersson-Rosenthal syndrome, Down syndrome, acromegaly, psoriasis and sjogren's syndrome. It's prevalence ranges between %1-3, but in some part of the world it's reported to be up to %21. The exact prevalence in Turkey is unknown.

Our patient was diagnosed with LP and clinical and laboratory work up was inconclusive for a comorbidity and LP is excepted as a variant of normal tongue. The cases in literature were mostly associated with Melkersson-Rosenthal syndrome, but it's also known that LP is usually a physiologic deepening of normal tongue fissures. The history of several years and benign nature also excludes systemic pathology. Oral lesions are mostly noticed in outpatient clinics, thus the patient give us perspective about management of tongue lesions in emergency department. Our patient reminds us the importance of tongue pathologies and gives information about the etiopathogenesis and underlying diseases of LP.

P233

Case Presentation

A RARE TONGUE PATHOLOGY IN EMERGENCY DEPARTMENT: LINGUA PLICATA

A Alkan (1), A Karaosmanmemet (3), E Kaya (2), A Yurtseven (2), N Danlı (2), S Özdemir (1)

1. Internal Medicine, Sincan State Hospital, Ankara, Turkey

2. Emergency Medicine, Sincan State Hospital, Ankara, Turkey

3. Anesthesiology and Reanimation, Keçioren Research and Educational Hospital, Ankara, Turkey

Corresponding author: Mr Alkan Ali (alkanally82@yahoo.com)

Key-words: *Lingua plicata* ; tongue pathology ; fissured tongue

Introduction: Tongue lesions are commonly encountered in outpatient clinics, mostly as a sign of systemic diseases. They give important clues for the diagnostic work up. These lesions are rarely noted in emergency department. Here, we present a rare tongue pathology in our emergency department, *lingua plicata* (LP).

P234

Case Presentation

TEMPORAL ARTERITIS WITH ESR < 50 MMHG/HR: A CLINICAL REMINDER

M Cheema, S Ismael

Acute Medicine, Wirral University Teaching Foundation Trust, Wirral, Merseyside, United Kingdom

Corresponding author: Mr Cheema Muhammad Raza (drmrcheema@hotmail.com)

Key-words: Temporal Arteritis ; Prednisolone ; Erythrocyte sedimentation rate

Key learning points:

- Consider diagnosis of temporal arteritis in patients with new onset or new type localised headache with age 50 or more.
- Consider diagnosis of temporal arteritis even in patients with ESR <50 but meeting the criteria of temporal arteritis clinically.
- Prompt diagnosis and urgent treatment should be initiated by the acute medical doctors for temporal arteritis.

Abstract:

Temporal Arteritis, also known as Giant Cell Arteritis (GCA) is a systemic vasculitis that predominantly involves the temporal arteries. It is a medical emergency and should be treated promptly as it can lead to permanent loss of vision. It is very commonly associated with a raised ESR, usually more than 50 mm/hr and is one of the essential criteria by the American College of Rheumatology classification of GCA. Here, we describe a case of a 73 year old man presenting with sudden onset 2-day history of severe left sided headache with signs and symptoms of GCA and an ESR of 27 mm/hr. Patient was urgently treated with Prednisolone 60 mg per day and his symptoms dramatically improved within 24 hours of therapy. There should be a high index of suspicion of GCA in patients presenting with clinical symptoms of GCA even though the ESR falls below 50 mm/hr as stated in criteria of GCA.

Case History:

A 73-year old man presented to the Medical Assessment Unit (MAU) with a 2 day history of sudden onset severe left sided headache. He described the headache as dull and throbbing predominantly localised in the frontal and temporal area of the left side with radiation down to the left side of the neck. Additionally he had some mild nausea, slight photophobia since the headache began. There were no focal neurological deficits or meningism and no preceding aura. Past medical history included paroxysmal Atrial Fibrillation and Abdominal Aortic Aneurysm. On physical examination he was afebrile and vital signs were stable however he was exquisitely tender in the left temporal artery. CT head was performed to rule out any space occupying lesions.

A full blood count showed a normal white cell count of $9.2 \times 10^9/L$ with an ESR of 27 mm/hr (normal range 1-15 mm/hr) and C-reactive protein (CRP) of 20 mg/L (normal range <5mg/L) but was otherwise normal. Patient was urgently prescribed 60mg of Prednisolone and was monitored for complications. He had symptomatic relief within 24 hours of initiation of steroid therapy. Later, patient had a temporal artery biopsy 4 weeks after the steroid therapy was initiated and it suggested signs of post inflammatory changes with reduplication of internal elastic lamina modified by steroid therapy.

Discussion:

GCA is a large vessel vasculitis and affects individuals more than 50 year old. The disease is highly unlikely in individuals less than 50 years of age with prevalence estimated to be 1 in 500 in individuals older than 50 years. The mean age for diagnosis of GCA is 72 years. Symptoms includes constitutional symptoms of fatigue, malaise, fever and weight loss. Fever is usually low-grade however

approximately 15 % of patients can have fever >39°C. Other clinical features include headache, jaw claudication, non-productive cough, visual symptoms which can lead to diplopia or even blindness. Associated diseases include Polymyalgia rheumatic and Aortic involvement (aneurysms, dissection). Less common clinical features may include dysarthria, throat pain and tongue infarction, mononeuritis multiplex, sensorineural hearing loss and mesenteric ischaemia. According to American College of Rheumatology diagnosis of GCA should be considered in all patients over the age of 50 who have ≥ 3 findings present in the criteria. Temporal Artery biopsy should be performed in all patients suspected of GCA however, this should not preclude initiation of steroids in a suspected case of GCA. The yield from biopsy can be variable and is dependent on numerous factors. These include sampling error due to skip lesions, attaining too small a sample (<2cm), different phenotypic disease not associated with cranial arteritis in which case the temporal artery biopsy will be negative even if repeated. These patients may have GCA involving large vessels including subclavian (arm claudication), carotid and aorta (aneurysms, dissection).

ESR is considered as one of the most useful marker to predict the likelihood of having GCA. A normal ESR makes GCA unlikely however does not rule it out. A review of 114 studies showed that normal ESR values indicate much less likelihood of GCA (negative LR for abnormal ESR, 0.2; 95% CI, 0.08-0.51) however predictive physical finding of temporal artery tenderness indicated a high likelihood of GCA (positive LR, 2.6; 95% CI, 1.9-3.7). Our case reported to have temporal artery tenderness with ESR to be raised as well however ESR was not raised to a degree suitable for criteria that is used as a standard.

Conclusion:

A diagnosis of Temporal Arteritis requires a high index of suspicion as it may manifest in a variety of clinical features. However, a mildly elevated ESR in the presence of clinical features suggestive of GCA should still trigger treatment for GCA. The acute medical staff should be aware of the criteria for GCA but in addition should have a low threshold for treatment for atypical cases as well such as low ESR, arm claudication, dysarthria and phenotypic cases not involving cranial arteries.

P235

Case Presentation

LARGE SPONTANEOUS HAEMOPNEUMOTHORAX IN HAEMODYNAMICALLY STABLE PATIENT: A RARE CAUSE OF CHEST PAIN

M Cheema, S Ismael

Acute Medicine, Wirral University Teaching Foundation Trust, Wirral, Merseyside, United Kingdom

Corresponding author: Mr Cheema Muhammad Raza (drmrcheema@hotmail.com)

Key-words: Spontaneous ; Haempneumothorax ; pneumothorax

Learning points:

- SHP should be considered as a probable diagnosis in patients presenting with chest pain and dyspnea.
- Young patients in particular may be hemodynamically stable for long periods of time inspite of massive blood loss into the pleural cavity.
- Prompt examination, investigations and management can result in a favourable outcome and should be commenced even when clinical suspicion is not very high.

Case Report:

A previously healthy 30 year old male, presented to the accident and emergency department with sudden onset of left sided chest

pain and progressive shortness of breath for the past 4 days. The chest pain was sudden in onset, sharp and non-radiating. He described initially having chest pain 4 days ago after pulling a curtain shut this progressively increased in intensity. There was no history of fever, trauma or weight loss. Past medical history included a history of occasional smoking. At admission, he was afebrile and haemodynamically stable with a respiratory rate of 12, pulse of 85, oxygen saturations of 97% (on air) and blood pressure of 126/80mmHg. On examination, there was dullness to percussion and decreased air entry on the left side of chest. Trachea was central. Chest x-ray revealed large left sided hydropneumothorax with a degree of contra lateral mediastinal shift. CT chest confirmed findings and ruled out any other pathologies including occult rib fractures. He was transfused 3 units of blood as admission haemoglobin was 9.3 g/dl. An intercostal chest drain was inserted which drained 1500 mls of fresh red blood. The hydropneumothorax was treated conservatively with spontaneous resolution of bleeding. Repeat chest x-rays showed fully expanded left lung. Patient remained haemodynamically stable through out the admission. No aetiology was discerned.

Discussion:

Spontaneous haemopneumothorax (SHP) is defined as the presence of > 400 ml blood in pleural cavity in association with spontaneous pneumothorax (2) in the absence of trauma or other precipitating factors. It is a rare cause of unexpected circulatory collapse in a young patient and can be potentially life-threatening. Since it is a rare diagnosis to find, it is unlikely that admitting doctors have experienced similar cases especially in the context of no history of trauma. SHP is often life threatening and is associated with hemodynamic instability of the patient. Diagnosis of this condition presenting in haemodynamically stable patients, as in the case reported above, requires a very keen observation keeping spontaneous hemopneumothorax in mind as a differential diagnosis for chest pain and dyspnea. Prompt examination and investigations should be instituted to diagnose the condition earlier in order to prevent life-threatening complications.

SHP occurs mostly in young patients (mean age, 22.1 to 34.0 years) (1). Symptoms of spontaneous haemopneumothorax include chest pain, dyspnoea, haemoptysis and features of hypovolaemic shock. Most common cause of SHP is torn adhesion between visceral and parietal pleura (3). Diagnostic investigations include chest radiographs and computed tomography of chest. However, the definitive diagnosis of haemopneumothorax is established at the time of intercostal chest tube insertion. Initial treatment revolves around initial resuscitation, blood transfusion and insertion of intercostals chest tube. Surgical intervention includes video-assisted thoracic surgery (VATS) or open thoracotomy. Since there is a high probability of torrential bleeding and deterioration in patient's haemodynamics, majority of the patients undergo surgical intervention rather than chest intubation. A retrospective study (4) of 24 patients compared 11 patients with early VATS and 13 patients with initial conservative treatment demonstrated that early VATS group had less preoperative blood loss and required shorter period of chest tube drainage (4 days vs 7 days).

Conclusion:

SHP is a rare diagnosis especially in the context of a haemodynamically stable patient and no history of trauma in a young patient. We urge a high index of suspicion of SHP in young patients presenting with spontaneous onset of chest pain and dyspnoea and recommend prompt investigations, discussion with senior colleagues and cardiothoracic colleagues to prevent life-threatening complications in such patients. Conservative management with intercostals chest tube can be an option in haemodynamically stable patients however, a very low threshold should be maintained for early surgical intervention.

P236

Case Presentation

A SUDDEN HEADACHE

C Hermand (1), O Gardy (1), JP Desclefs (1), C Lejeune (1), J Pacanowski (2), D Pateron (1)

1. Emergency Department, Hôpital Saint Antoine, Paris, France

2. Infectious Diseases Department, Hôpital Saint Antoine, Paris, France

Corresponding author: Melle Hermand Christelle (christelle.hermand@sat.aphp.fr)

Key-words: meningitis ; sudden headache ; neurocysticercosis

Introduction: Headache is a common symptom in patients consulting to the emergency department (ED). Diagnoses vary from benign disease such as tension type headache to severe situation such as subarachnoid haemorrhage. The onset and characteristics of headache must be rigorously described. We present the case of a patient with sudden headache showing the crucial role of lumbar puncture when CT scan and MRI are normal.

Case presentation: A 37 years old Cape Verde immigrant male arrived at the Emergency Department complaining sudden headache. He previously has had three meningitises with no bacterial diagnosis in the past three years.

He was married and had a child. He had no alcoholic or tobacco intoxication. He was working as bricklayer. The patient had worked in a pork slaughterhouse in 1999. He has been living in France for 3 years and had not recently travelled.

The patient described a sudden onset headache half an hour before with dizziness, vomiting and photophobia. Blood pressure was 144/92, heart rate 82/min, and oxygen saturation 100%, body temperature was 36.3°C. Physical examination showed a confused man with violent headache, photophobia and right Babinski sign. He had no significative neck stiffness, the rest of the neurological and physical examination was normal. After analgesic prescription, the patient had no confusion and no nausea anymore; the pain was less intensive but was persisting in the occipital area. Blood test showed no inflammatory syndrome and cerebral CT scan was normal. Lumbar puncture revealed clear cerebrospinal fluid (CSF) with 150/mm³ white blood cells (69% lymphocytes, 10% neutrophils, and 2% eosinophils), 9 red blood cells, and no germ to direct exam. CSF proteins were 1.86 g/l and CSF glucose 0,1 mmol/l (glycaemia 6,8 mmol/l). CSF bacterial cultures were negative. The patient was hospitalised in infectious diseases department. All bacterial and viral tests remained negative, MRI was normal. Cysticercosis antibodies were detected in serum and CSF. He was treated by albendazole and corticoids. He recovered in a few days and he was discharged after 2 weeks hospital stay. Final diagnosis was neurocysticercosis.

Discussion: Usually, meningitis is described as association of fever, headache, and neck stiffness but this association has a low sensibility (around 45%). Thunderclap headache is usually described in subarachnoid haemorrhage but can be the first sign of cerebral venous sinus thrombosis, cervical artery dissection, acute hypertensive crisis, spontaneous intracranial hypotension, ischemic stroke, retroclival haematoma, third ventricle colloid cyst, or intracranial infection.

Neurocysticercosis is a common helminthic disease of the nervous central system caused by taenia solium. The usual clinical symptoms are epilepsy, focal neurological deficit, meningoencephalitis, raised intracranial pressure or psychiatric symptoms. MRI is a good neuroimaging tool for the detection of degenerating cysticerci and CT scan is better for calcified lesions. CSF examination shows raised protein, decreased glucose level and pleocytosis. Serological tests can be used to detect specific

antibodies. Therapy include a combination of symptomatic and cysticidal drugs.

Conclusion: In case of unusual and sudden pain, the neuroimaging and the lumbar puncture are essential tools diagnoses. Neurocysticercosis is a differential diagnosis of aseptic meningitis.

P237

Case Presentation

FAHR'S SYNDROME

BV Boz (1), R Buyukkaya (2), M Candar (3), M Cikman (1), S Dikici (4), E Kaya (5), A Saritas (6)

1. Emergency department, Duzce University, Duzce, Turkey
2. Radiology, Duzce University, Duzce, Turkey
3. Emergency Medicine, Duzce University, Duzce, Turkey
4. Neurology, Duzce University Medical Faculty, Duzce, Turkey
5. Pharmacology, Duzce University School of Medicine, Duzce, Turkey
6. Emergency department, Duzce University School of Medicine, Duzce, Turkey

Corresponding author: Mr Saritas Ayhan (a_saritas@hotmail.com)

Key-words: Fahr's Syndrome ; Ca ; Parathormone

Introduction: Fahr's Syndrome which goes with Para hypothyroidism or pseudohypoparathyroidism, is characterized by bilateral striopallidodentate calcification is an uncommon clinical condition. Although development of this calcification is not accurately known, it has been believed to be associated with infections, metabolic and genetic disorders. Sporadic facts have been informed as familial form as can be seen. In this informed samples autosomal dominant transition has remarkably found.

Case: A 73 years old male patient was been brought to our emergency department with deterioration of consciousness and speaking skills. We learned that his complaints had been started 45 minutes before arrival to the emergency department. When the patient came to the department, he had normal muscle tone, sensation and cerebellar examination however had dysarthria. At the beginning of the symptoms the patient described presyncope, the patients speaking skills completely become normal 20 minutes after patient's arrival to the emergency department. His vital signs were: Tension arterial: 160/90 mmHg, heart rate: 82 bpm, respiration was 11 /min. his fever was measured as 36.40C. Electrocardiogram was in normal sinus rhythm. Initially complete blood count, kidney and liver function tests and troponin levels are measured. Computerized tomography (CT) of his brain was performed. There were bilaterally calcific hyperdense zones on CT imaging. There was no abnormality in laboratory examinations however there were bilateral calcifications in basal ganglia level in the brain CT. In addition to previous examinations, calcium and parathormone levels wanted and the results were Ca: 7,9 (N: 8,5-10,4 mg/dl), Parathormone: 115 (N: 12-72 pg/ml). The patient was admitted to neurology service with diagnosis of transient ischemic attack.

Conclusion: In most cases Fahr's Syndrome is diagnosed coincidentally in clinics. It comes on with disorders in mental skills, personality disorders, dementia and mood disorders as well as movement disorders like rigidity, hypokinesia, tremor and ataxia. The patient with these symptoms in emergency departments has to remind Fahr's Syndrome and diagnosis of this syndrome has to be supported with Ca and parathormone levels.

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P238

Case Presentation

WOULD YOU LIKE DESSERT AFTER THE MEAL? BUT NOT THE SPOON!

BV Boz (1), R Buyukkaya (2), M Candar (3), M Cikman (1), O Ozturk (4), A Saritas (5)

1. Emergency department, Duzce University, Duzce, Turkey
2. Radiology, Duzce University, Duzce, Turkey
3. Emergency Medicine, Duzce University, Duzce, Turkey
4. Anaesthesiology, Duzce University, Duzce, Turkey
5. Emergency department, Duzce University School of Medicine, Duzce, Turkey

Corresponding author: Mr Saritas Ayhan (a_saritas@hotmail.com)

Key-words: Foreign body ; spoon ; gastrointestinal tractus

Introduction: Foreign bodies in gastrointestinal (GI) tract are mostly seen in small children by swallowing. Swallowed object is usually a part of a toy or a seed of the fruit. But in adults, foreign bodies by oral way is mostly seen in mentally retarded ones, or people with reduced psychological or neurological functions. In this case, we detected an extraordinary foreign body in GI tract.

Case: A 19 year old female patient admitted to the emergency department. Patient had mental retardation. When we asked what her complaint was, she smiled and told that she had swallowed a dessert spoon. Her parents told that she sometimes made that kind of jokes and had a lot of fun but that was never truly happened.

Vital signs were measured as: arterial blood pressure: 110/70 mmHg, pulse: 75 bpm, respiration: 16 /min and the body temperature: 36.50C. They were all stable. In her physical examination, her abdomen was comfortable; there was no defense or rebound tenderness. For imaging abdomen, we asked for posteroanterior and lateral sided abdominal x-rays in standing position. X-rays showed a 12 cm longed foreign body which was horizontally standing on the second lumbar vertebra level. This was a dessert spoon. The patient was consulted to general surgery. She was interned into general surgery service in order to follow the clinical progress and perform endoscopy if needed. She had no symptoms or signs of gastrointestinal obstruction or any ileus image. In the fifth day of follow up, the foreign body exited the GI tract with no need for endoscopy or any surgical operation.

Conclusion: Most of the time, patients or their relatives do not tell about some complaints which have the least possibility to be real

and sometimes they may be unable to tell these complaints because of their chronic illnesses. But an emergency specialist is always awake and takes these complaints seriously. This awareness makes the emergency specialist see the unseen and diagnose the undiagnosed.

P239

Case Presentation

A CASE REPORT: PULMONARY EMBOLISM DURING ANTIBIOTHERAPY FOR CELLULITIS

YK Akpak (1), A Atilla (2), O Coşkun (3), U Kaldırım (4), NC Oren (5), U Savaşçı (6)

1. Department of Obstetrics and Gynecology, Sarıkamış Military Hospital, Kars, Turkey
2. Department of Orthopedics and Traumatology, Sarıkamış Military Hospital, Kars, Turkey
3. Infectious Diseases and Clinical Microbiology, Gülhane Military Medical School, Ankara, Turkey
4. Department of Emergency Medicine, Gülhane Military Medical School, Ankara, Turkey
5. Department of Radiology, Sarıkamış Military Hospital, Kars, Turkey
6. Department of Infectious Diseases and Clinical Microbiology, Sarıkamış Military Hospital, Kars, Turkey

Corresponding author: Mme Savasci Umit (drumitsavasci@gmail.com)

Key-words: Pulmonary Embolism ; Cellulitis ; Low molecular weight heparin

A 42 year-old male patient with pain and redness in his right cruris came to Emergency Department of our hospital . His physical examination was positive for tenderness with palpation in his anteromedial part of his right cruris. There was also + 2 edema and hyperemia in the same area. His neurological and vascular examinations were all normal. Homan's sign was negative. His heart and lung auscultations were normal. His laboratory was all negative but WBC: $12.2 \cdot 10^3/\text{mm}^3$, ESR was 10 mm/h and CRP was negative. A colored doppler ultrasonography (CDUS) was performed to rule out any thrombosis in his right lower leg deep veins that was negative. A cellulitis was diagnosed. Ampicillin with sulbactam 3 gr and lornoxicam 8 mg were given intravenously for 10 days. His symptoms were reduced after treatment. After 13 days following treatment the patient came to our emergency department with shortness of breath and chest pain. CT examination with contrast showed pulmonary embolism in the right lower lobe pulmonary artery. Also thrombosis was seen in his right lower extremity deep venous veins after CDUS was performed.

In conclusion, Anti-thrombolytics such as low-molecular-weight heparin (LMWH) should be added to the treatment protocol as if the patients are young and negative for any predisposing factor for pulmonary embolism like surgery, immobilization.

P240

Case Presentation

INFECTED BULLOUS LESION THE FOOT OF A YOUNG MAN MIMICKING CUTANEOUS ANTHRAX

YK Akpak (1), A Atilla (2), O Coşkun (3), U Kaldırım (4), U Savaşçı (5)

1. Department of Obstetrics and Gynecology, Sarıkamış Military Hospital, Kars, Turkey
2. Department of Orthopedics and Traumatology, Sarıkamış Military Hospital, Kars, Turkey
3. Infectious Diseases and Clinical Microbiology, Gülhane Military Medical School, Ankara, Turkey
4. Department of Emergency Medicine, Gülhane Military Medical School, Ankara, Turkey
5. Department of Infectious Diseases and Clinical Microbiology, Sarıkamış Military Hospital, Kars, Turkey

Corresponding author: Mme Savasci Umit (drumitsavasci@gmail.com)

Key-words: Infected bullous lesion ; Cutaneous anthrax ; Foot

In military population infections among foot is a common problem due to long lasting wearing of boots without taking off them especially at operations on the field. We present a case that had a bullous lesion on his right foot mimicking cutaneous anthrax in the first look.

Twenty-two years old serving soldier admitted to Emergency Department outpatient clinic with 4 cm to 4 cm black, bullous, painful lesion on his right foot. He realised the lesion with a pain and taking off boots after a long lasted operation. There was no trauma history but tinea pedis lesions beneath finger webs. Lesion seemed infected and after taking an infection disease consultation a needle aspiration of 20 cc hemoragic fluid and culture of it was performed. At the culture *Streptococcus* spp. was identified and patient treated among the antibiogram results with levofloxacin with repeated dressings and antifungal treatment.

Among military population in the differential diagnosis of wide bullous lesions at foot *Streptococcus* spp. infections must be kept in mind and treatments should be via culture results because in this population there is a heavy bacterial and fungal load due to long lasting boot wearing. And commanders should be awarded of the threat and if possible allow soldiers to put off boots at least twice a day.

P241

Case Presentation

PERIORBITAL EMPHYSEMA DUE TO SNEEZING

F Büyükcım (1), E Çay (2), A Ceylan (3), AB Erdem (4), A Kesim (5)

1. Department of Emergency Medicine, Diskapi Yıldırım Beyazıt Training&Research Hospital, Ankara, Turkey
2. Department of Emergency Medicine, Van Regional Training & Research Hospital, Van, Turkey
3. Department of Emergency Medicine, Şanlıurfa Training&Research Hospital, Şanlıurfa, Turkey
4. Department of Emergency Medicine, Konya Numune State Hospital, Konya, Turkey
5. Department of Emergency Medicine, Ağrı State Hospital, Ağrı, Turkey

Corresponding author: Mr Büyükcım Fatih (fatihbuyukcam@gmail.com)

Key-words: periorbital emphysema ; sneezing ; trauma

A 34-year-old male presented with sudden ay his left eye after sneezing. He has a history of a blunt ocular trauma four hours before, but he had no symptoms, after sneezing he had problems. He has no loss of vision and the eye movements are normal. There is periorbital swelling and hyperemia also subcutaneous emphysema. He has no history of any other chronic diseases . The direct computerized tomography was normal and there wasn't any periorbital wall fracture but it displayed the orbital emphysema in the left orbit. Prophylactic antibiotherapy was applied. The patient was advised not to blow his nose. He had no complaints after one week. Follow-up examinations showed no ophthalmological complications.

Orbital emphysema is a rare condition in the absence of trauma or sinus wall defect. Its diagnoses is done with history, physical examination including orbital examination and it generally resolves spontaneously [1].

In most reports, trauma is the most common underlying etiology in orbital emphysema and reported injuries were usually unilateral, rarely bilateral. Other causes include forceful nose blowing, infection, post-surgical, sneezing , pressure changes during air travel, extreme accidents and sports [2]. Sneezing may cause orbital emphysema in patients with a history of old periorbital trauma or surgery. Gonzalez et al. reported two cases; one patient

had history of past trauma and the other patient had a history of nasal surgery and concurrent chronic sinusitis [3].

In physiopathological aspect, orbital emphysema occurs with the increase in intranasal air pressure (especially by sneezes) from maxillary, ethmoid and rarely frontal sinuses air enter the orbital space. With the destruction of the paranasal sinus mucosa and fracture line air enters into orbital region and don't go out because of the valve-like mechanism of fracture line [1]. It is a severe condition that can cause loss of eye. It could be seen in 50% of blow-out fractures [4].

Loss of vision on the effected eye don't show permanent optic nerve or retina damage but if there is doubt emergent decompression should be done because we don't know when we see the permanent loss of vision after direct pressure [5].

Careful observation and recommendation to avoid nose blowing are the only treatments necessary for orbital emphysema. Nasal decongestants, antibiotics, and steroids have also been used in orbital emphysema treatment. Nevertheless, orbital emphysema can cause ischemic optic neuritis and central retinal artery occlusion and may lead to visual loss according to the severity of the condition. When orbital emphysema shows signs of pressure effect like restricted ocular motility, sluggish pupillary reaction, disc edema or decreased visual acuity, air drainage and/or direct decompression should be considered [2].

As a result, orbital emphysema is usually a benign self-limiting condition seen after trauma of the facial skeleton. However, it could be ignored in the emergency departments because it could be seen also with minor traumas. In the treatment process, patient should avoid maneuvers that increase the intranasal pressure.

P242 Case Presentation

VISUAL DIAGNOSIS IN EMERGENCY DEPARTMENT: 'LICHTEBERG FIGURE' AS A RESULT OF LIGHTNING SHOCK

B Cander, MA Onal, C Dikmetas, M Ergin, H Nak, N Karakus
Emergency Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

Corresponding author: Mr Ergin Mehmet (drmehtemtergin@gmail.com)

Key-words: Lightning shock ; Lichtenberg sign ; Visual diagnosis

BACKGROUND: In case of unconsciousness, a complete medical history taking and a good inspection is very important in the diagnosis. While taking history, the environment and weather conditions should be also questioned when syncope occurred. In this report, we are presenting a rare cause of syncope and make you remind lightning shock and its pathognomonic skin sign 'Lichtenberg figures'. **CASE:** 30 year old male patient was found unconscious while working on open lands. After first evaluation, primary health care center had transferred him to our ED. He couldn't remember what happened and complained about chest and back pain. He had vital signs in normal range and normal physical exam except Lichtenberg sign. His ECG, complete blood count, other laboratory results and brain computed tomography were in normal range. He was admitted to observation unit. After 24 hour follow up, his complains lessened and discharged with proposal to come to outpatient clinic. **DISCUSSION:** Lichtenberg figures (LF) is a characteristic skin findings for lightning shock. Its name came from a German physicist Georg Christoph Lichtenberg who was described same models when performing static electric experiments in 1777. Despite there is much more higher voltages in lightning shock, a low mortality rate occurs because of flashover (slip over) phenomenon. So that, the victim has small burns instead of charring with fire. After lightning shock, six major type skin

findings which are linear burns, burn spots, Lichtenberg finding, thermal burns due to metal objects in contact with skin in contact, superficial erythema and combinations of these injuries. The entry and exit points are seen very rarely in lightning shock. LF is a pathognomonic finding which typically appears one hour later after being struck from lightning and disappears gradually in 24-36 hours. It does not match any anatomical vascular or neural pattern. Contrary to thermal and electrical burns, it is harmless to epidermis and deeper tissues. Although the exact mechanism is unknown, it is thought that dielectric breakdown of the skin and subsequent massive electron shelling make red blood cells extravasate into the superficial layers of the skin from capillaries. **CONCLUSION:** In case of unconscious victims found on opened area, differential diagnosis should include lightning shock. Pathognomonic skin findings can be important evidences.

P243 Case Presentation

A RARE PRESENTATION OF INSECT BITES: CENTIPEDE STING

M Gul, MA Onal, H Babadostu, M Ergin, AA Sevimli
Emergency Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

Corresponding author: Mr Ergin Mehmet (drmehtemtergin@gmail.com)

Key-words: Centipede ; Intoxication ; Insect bite

BACKGROUND: Approximately 3000 species of centipedes are found in the class Chilopoda, phylum Arthropoda. They are among the less well-studied arthropods. Centipedes are elongated multi segmented arthropods with a single pair of legs on each body segment. They are distributed widely, especially in warm temperate and tropical regions. They are capable of very fast movement when exposed. The most dangerous species belong to the genus Scolopendra, with the largest members (Scolopendra gigantea) reaching lengths of 26 cm. The venom delivery apparatus consists of a modified pair of front legs just behind the mandibles. The venoms have not been studied extensively but, at least in some species, contain 5-hydroxytryptamine, hemolytic phospholipase A, and a cardiotoxic protein. **CASE:** We reported 40-year-old male patient bitten by centipede. Our case showed local symptoms at his right foot. The patient admitted to our hospital due to complaints of right ankle pain and redness. After 6 hour-observations, his local symptoms diminished with antihistaminic treatment and he was discharged form ED. **DISCUSSION:** Physical findings due to centipede sting may include the following: local edema, small puncture wounds, erythema, lymphangitis and/or lymphadenopathy, possibility of local necrosis. The patient may be noticeably uncomfortable or anxious. While good data are sparse, in some regions of the world, centipede stings are not infrequent. Medeiros et al reported 98 such stings in São Paulo, Brazil between 1990 and 2007. Most species were relatively innocuous. Fatalities were extremely rare following centipede stings. A death was reported in a 7-year-old Filipino girl who was stung on the head by a centipede of the large species Scolopendra subspinipes. A case of electrocardiographic changes suggestive of ischemia has been reported in a 60-year-old man after a sting by a 12-cm centipede in Turkey. A case of rhabdomyolysis complicated by compartment syndrome and acute renal failure requiring temporary hemodialysis has been reported following the sting of the giant desert centipede, Scolopendra heros. **CONCLUSION:** Although the majority of centipede stings causes minor and local complaints, it should be noted that systemic effects can occur. So that

observation and well-designed discharged recommendations should be considered.

P244

Case Presentation

MTHFR (C677T) GENE MUTATION IN ETIOLOGY OF RENAL INFARCTION

S Karaman (1), E. Kadioğlu (2), C Şen Tanrıkulu (1)

1. Emergency Department, Erzurum District Training and Research Hospital, Erzurum, Turkey
2. Emergency Department, Kütahya Evliya Çelebi Training and Research Hospital, Kütahya, Turkey

Corresponding author: Mr Karaman Serhat (drserhatkaraman@hotmail.com)

Key-words: renal infarction ; gene mutation ; abdominal pain

Renal infarction is one of the rare causes of abdominal and side pains. It has been misdiagnosed since there is no distinctive symptom, and it is rare and unique. Cardiac diseases, trauma, malignancy, and increased thromboembolism risk, led to hypercoagulability, are among known causes in etiology of renal infarction.

A 43-year-old male attended the emergency department with left flank pain which had started 1-hour earlier. There was no history of hypertension, cardiac disease, diabetes, or hyperlipidemia. Physical examination revealed left costovertebral angle tenderness. Arterial blood pressure was 100/80 mmHg, heart rate was 86/min and body temperature was 36,4°C. The patient was initially considered as having renal colic. Hydration was started with saline, and for analgesia diclofenac sodium and fentanyl respectively were given intravenously. Sinus was natural rhythm in his electrocardiogram. There was no indication of a stone in the direct abdominal X-ray. Urinary tract ultrasonography was normal. Contrast abdominal computed tomography was taken due to continuous pain. In the abdominal CT and renal CT angiography scan, a view compatible with cortical infarction was observed in the lower part of left kidney. Acetylsalicylic acid who was diagnosed as renal infarction, enoxaparin was given. Eco was normally reported. Patient was hospitalized for investigation of the etiology and follow-up treatment. Kidney scintigraphy was evaluated as stenosis in the left renal artery. MTHFR (677 C / T) heterozygous genotype was determined from DNA mutations, extracted from peripheral blood. Patient was followed with oral anticoagulants after hospitalization. Renal infarction which is a rare disease was diagnosed. Point mutation in MTHFR (677 C / T), increased plasma homocysteine levels (hyperhomocysteinemia) and occurred thrombosis tendency, gene was detected. Clinical suspicion is very important for investigation both renal infarction and etiology.

P245

Case Presentation

A RARE CAUSE OF ACUTE URINARY RETENTION: SCHISTOSOMA HAEMATOBIIUM INFECTIONS

A Tok (1), S Karaman (2), O Delice (2)

1. Urology, Erzurum District Training and Research Hospital, Erzurum, Turkey
2. Emergency Department, Erzurum District Training and Research Hospital, Erzurum, Turkey

Corresponding author: Mr Karaman Serhat (drserhatkaraman@hotmail.com)

Key-words: schistosoma haematobium ; acute urinary retention ; emergency department

Schistosomiasis is a parasitic infection affecting almost 200-250 million people in the world and 80 million people in the Middle East. In the urogenital system, it is usually seen in the urinary bladder and more common in females than males. Patients may have proteinuria, and dysuria symptoms. If the disease is left untreated, it may lead to kidney failure as a mortal course. Today because of business, immigration or study tourism in the non-endemic regions of the world Schistosoma infection in rare cases may exist. In this study we present a case of Schistosoma haematobium infection who have acute inability

46-year-old male patient was admitted to the emergency department because of inability. After Physical examination suprapubic tenderness and a palpable mass (vesical glob?) were detected. The patient's story begins about 6 months ago with complaining of inability and combustion in the urine. From the urine of the patient's bladder probe revealed abundant erythrocytes. Laboratory findings were Hb: 13.6 mg / dl, WBC 7500/mm³, creatinine 0.9 mg / dl. Although Foley bladder catheter inserted the bladder didn't discharged. In the urinary tract ultrasonography coagulum mass was seen to fill the lumen in the patient's bladder coagulum as near-complete. The patient was planned to apply cystoscopy under anesthesia by a urologist. In urethrocystoscopy the bladder was detected to filled completely with soft-looking brown clots which is easily degradable. The foreign body seen in the dome were removed out. The foreign body was identified to be schistosoma hematobium.

In the event investigated because of acute urinary retention schistosomiasis infection case was seen. In our country it is a very rare and interesting case and do we thought it is necessary to present to all our colleagues. As Turkey is not an endemic country for schistosomiasis, a detailed medical history is mandatory for differential diagnosis of this parasitic infection. The clinician should suspect this clinical entity especially in patients with hematuria and a history of traveling to countries such as Asia and South Africa.

P246

Case Presentation

VAGINAL BLEEDING AFTER USE OF ORAL DICLOFENAC/MISOPROSTOL COMBINATION

O Dikme (1,2), H Topacoglu (2), AG Aydın (1), M Yazicioglu (1)

1. Emergency Department, Haseki Training and Research Hospital, Istanbul, Turkey
2. Emergency Department, Istanbul Training and Research Hospital, Istanbul, Turkey

Corresponding author: Mme Dikme Ozlem (ozlemakinci80@yahoo.com)

Key-words: misoprostol ; vaginal bleeding ; emergency department

GİRİŞ

Misoprostol sentetik prostaglandin E1 analogu bir ilaçtır. Kombine preparat olarak diklofenak ile birlikte kullanıldığında peptik ülser gelişim sıklığını azaltmak ve ilacın mide yan etkilerini azaltmak amaçlanmıştır. Nonsteroidal antiinflamatuvar ilaçlar (NSAİİ) ile tedavisine devam edilen, risk altındaki artrit hastalarını da kapsayan, duodenal ve gastrik ülserlerin tedavisinde endikedir. Ancak misoprostolun başka bir kullanım alanı da obstetridir. Gebe kadınlarda medikal abortus, servikal açılma, doğum indüksiyonu, postpartum hemorajinin azaltılması amaçlı kullanılmaktadır. Gebe olmayan kadınlarda ise intrauterin cihaz yerleştirilmesi, endometrium biyopsisi gibi işlemlerden önce kullanılmaktadır. Misoprostol kullanımı sonucu bulantı, kusma, ishal ve ateş yükseliği yan etkisi bildirilmiştir.

OLGU SUNUMU

34 yaşında bayan hasta acil servise yeni başlayan sağ diz ağrısı nedeni ile başvurdu. Öz ve soygeçmişinde özellik yoktu. Travma

öyküsü olmayan hastanın geliş vital bulgularında anormallik saptanmadı. Kardiyovasküler ve nörolojik muayenesi olağandı. Diz bölgesinin muayenesinde ısı artışı, hareketlerde kısıtlılık ve hiperemi saptanmadı. Diz zorlama testleri ve ballottman bulgusu negatifti. Hastaya oral yoldan diklofenak/mizoprostol 50mg/200mcg kombine preparat tedavisi başlandı. Hasta ilk dozu kullandıktan altı saat sonra başlayan vajinal kanama nedeni ile tekrar acil servise başvurdu. Hastanın adetlerinin düzenli olduğu ve son adet tarihinin altı gün önce olduğu öğrenildi. Fizik muayene ve vital bulguları normal değerlendirilen hastanın gebelik testi negatifti. Vajinal muayenede ve ultrasonografik değerlendirmede organik patoloji saptanmadı. Hastada gelişen vajinal kanama ilaç yan etkisi olarak değerlendirildi. Acil serviste izlem sonrası normal değerlendirilen hasta ilaç tedavisi kesilerek taburcu edildi.

TARTIŞMA

Literatürde misoprostol alımı sonrası gelişen vajinal kanama olgusu rapor edilmemesine rağmen, ilaç faz çalışmaları sonucu vajinal kanama yan etkisi rapor edilmiştir. Misoprostol alımı sonrası en sık görülen yan etkiler kendini sınırlayıcı ishal, bulantı ve kusma, yüksek doz kullanımı sonucu gelişen ateş yüksekliği, döküntü ve daha az sıklıkla vajinal kanama ve uterin kramplara bağlı ağrı olarak belirtilmiştir. Ayrıca tek doz oral misoprostol alımı sonrası uterus rüptürü bildirilmiştir. Postpartum hemoraji tedavisinde kullanılabileceği de doğurganlık çağındaki kadınlarda tek doz kullanımında vajinal kanamaya neden olabileceği bilinmelidir. Literatürde bildirilmediği ve olgumuzda gözlenmediği üzere mizoprostola bağlı vajinal kanamaların hayatı tehdit edici olmadığı düşünülebilir.

SONUÇ

Misoprostolün pre ve post menopozal kadınlarda tek doz kullanımında dahi vaginal kanama gibi ürogenital yan etkiler oluşturabileceği akılda tutulmalı ve hastalar bu konuda bilgilendirilmelidir.

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P247

Case Presentation

SKULL METASTASIS, HCC, EMERGENCY SKULL METASTASIS OF HEPATOCELLULAR CARCINOMA

S. Ozdemir, Y. Aydın, H. Demir, O. Öcal, O.E. Onur, T. Patan, R. Yorulmaz

Emergency Department, Fatih Sultan Mehmet RTH, Istanbul, Turkey

Corresponding author: Mme Onur Ozge Ecmel (ozberkozge@gmail.com)

Key-words: skull metastasis ; HCC ; emergency

Introduction: Hepatocellular carcinoma (HCC) is the fifth most common cancer in the world and is especially prevalent in African and East Asia. Late-stage HCC usually metastasizes to the regional lymph nodes and lungs, but less commonly to the skeleton. Scalp metastases from HCC are very rare but must be considered when treating a patient with known cirrhosis, hepatitis, or HCC.

Case: 61 years old male patient presented to the emergency room with complaint of headache. He had known HCC for one year and had an operation for it. There was no known metastasis of tumor, yet. In his physical examination there was no important finding except scalp mass on the right parietal bone of cranium. When it was questioned, we learned that it was slowly growing for 4 months. In his cranial computed tomography there was a osteolytic, expansile, and hypervascular lesion in right parietal bone and multiple lytic lesions were detected in other cranial bones.

Discussion: Especially in Asia, skull metastases from HCC should be included in the differential diagnosis of skull tumors, even if the patient is asymptomatic of liver cirrhosis. With the increase of survival in HCC patients, clinically significant bone metastases have also increased, affecting the patients' quality of life. Therefore, early diagnosis and proper management of bone metastasis from HCC is essential to prevent deterioration in the quality of life of HCC patients.

P248

Case Presentation

SMA, INTESTINAL OBSTRUCTION, CTSUPERIOR MESENTERIC ARTERY SYNDROME

S.E. Eroğlu, E. Altunbaş, S. Ömercikoğlu, A. Denizbaşı, O. Onur, C. Özpolat

Emergency department, Marmara University , Istanbul, Turkey

Corresponding author: Mme Onur Ozge Ecmel (ozberkozge@gmail.com)

Key-words: SMA ; intestinal obstruction ; CT

Introduction: Superior mesenteric artery (SMA) syndrome is an uncommon disease that may be diagnosed in emergency room. Here we present a patient who suffered from bowel obstruction and discuss associated findings of SMA syndrome.

Case: A 19-year-old female presented to our department complaining of epigastric pain, nausea and vomiting. Symptoms started and persisted despite treatment, leading to hospitalization for dehydration. During hospitalization, no pathology could be identified and the patient was discharged. Symptoms persisted and she was eventually readmitted. In her physical examination there was a splash sound on her stomach, the abdomen is tender. In her abdominal computed tomography scan, there was a huge stomach, dilatation of the first and second parts of the duodenum and reported as superior mesenteric artery syndrome. She was consulted to general surgery and after failure of conservative treatment for 2 days, she subjected to duodenojejunostomy. In operation it was seen that second portion of duodenum was compressed between superior mesenteric artery and aorta.

Discussion: The SMA arises from the abdominal aorta, and descends at an acute angle into the mesentery. Normally, this angle is 25° to 60°. The duodenum typically crosses the aorta at the level of L3 and is suspended within this vascular angle. In SMA syndrome, the angle collapses, thereby scissoring the duodenum between the SMA and aorta. Patients presents with intestinal obstruction symptoms and treatment includes nasogastric

decompression, intravenous fluids. Surgery is indicated if the conservative treatment fails.

P249

Case Presentation

CPR, TORSADES, SLIMMING PILL PROLONGED CPR IN TORSADES DE POINTES

S.E. Eroğlu, S. Kara, E. Salçın, A. Denizbaşı, O. Onur
Emergency department, Marmara University, Istanbul, Turkey

Corresponding author: Mme Onur Ozge Ecmel (ozberkozge@gmail.com)

Key-words: CPR ; Torsades ; slimming pill

Introduction: Torsades de pointes, or simply torsades, is a French term that means twisting of the points. Torsades de pointes can generate ventricular fibrillation (VF), which will lead to sudden death. Here we present a case of Torsades which was refractory to treatment but insistent trials resulted in an excellent outcome.

Case: A 34 years old female came to the emergency room (ER) with feeling bad. She had no known disease, but she has taken slimming pills for 5 days. Her Glasgow Coma Scale score was 15 and her vital signs were normal at presentation. There was no special finding in physical examination and laboratory tests. At the first hour of the presentation, she felt worse and cardiopulmonary arrest developed. In the ECG monitor, torsades rhythm seen, cardiopulmonary resuscitation started; magnesium and amiodarone treatments were given and she was defibrillated 80 times for VF in ER. She was hospitalized to coronary intensive care unit (CIU) with normal sinus rhythm at the end of nearly 220 minutes. She needed defibrillation at CIU fifty times more. Magnesium and lidocaine infusions were continued. The patient was discharged after 10 days without any neurological deficit.

Discussion: Drug-dependent torsade de pointes may be refractory; risk factors are age > 65 years, female gender, renal failure, electrolyte imbalance, genetic predisposition. This patient has taken slimming pill and torsades de pointes may be due to its use. In intoxication patients treatment strategies must be insistent in ER, and the results may be promising.

P250

Case Presentation

POPPING CANDY MAY BE MISINTERPRETATED AS OPACITY IN ABDOMINAL CT

E. Avanz (1), A. Denizbaşı (1), S.E. Eroğlu (1), O.E. Onur (2)

1. Emergency department, Marmara University Pendik Research and Training Hospital, Istanbul, Turkey

2. Emergency department, Marmara University Pendik Research and Training Hospital, Istanbul, Turkey

Corresponding author: Mr. Eroglu Serkan Emre (drseroglu@gmail.com)

Key-words: Popping candy ; Splenic laceration ; Radiological misinterpretation

Introduction: Blunt abdominal trauma is associated with significant morbidity and mortality. Multislice computed tomography (CT), has become the imaging modality of choice for these patients. But history is also an important guide in radiological evaluation.

Popping candy contains the candy mass in which liquid or paste-like state is provided with an inlet for the gas in its lower part. It also comprises at least one crystallizing device,

In this case report we mention that eating popping candy may misinterpreted as contusion of organs in abdominal CT.

Case: 4 years old girl presented to emergency room after motorcycle accident. In her physical examination there was tenderness in left upper quadrant of abdomen. In non-contrast abdominal CT there was opacity near spleen and interpreted as splenic laceration. The patient was stable and pediatric surgery decided to observe the patient. Because of the atypical image of opacity, control abdominal CT repeated 6 hours after the first, and seen that the opacity aligned through the bowel. After quering the history, we learned that she eat 'popping candy' before the accident. The child sent home after 24 hours observation.

Result: CT is indicated in all haemodynamically stable patients with suspected blunt abdominal trauma. A 'focussed CT' algorithm, as recommended by the Advanced Trauma Life Support program, may be useful for patients with isolated abdominal trauma who are conscious and cooperative. But only radiological interpretation must not guide the patient's treatment. Detailed history of trauma patients is also so important in management.

P251

Case Presentation

SUICIDE ATTEMPT BY SWALLOWING WITH 60 FORMOTEROL CAPSULES

MA Afacan (1), F. Büyükcım (1), M. Çevik (2), A. Ceylan (1), AB Erdem (1)

1. Department of Emergency Medicine, Diskapi Yıldırım Beyazıt Training & Research Hospital, Ankara, Turkey

2. Department of Emergency Medicine, Diskapi Yıldırım Beyazıt Training & Research Hospital, Ankara, Turkey

Corresponding author: Mr. Büyükcım Fatih (fatihbuyukcam@gmail.com)

Key-words: formoterol ; suicide ; swallowing

26 year old male admitted to the emergency department after a suicide attempt by swallowing 60 capsules of formoterol fumarate (12mcg). The patient has nausea, vomiting, vertigo and palpitation. He hasn't any chronic diseases. His blood pressure at left arm was 130/70 mmHg, heart rate was 110 beats/min. Electrocardiogram was normal. With intravenous hydration and symptomatic treatment including antiemetics and his symptoms disappeared in the first 2 hours and in the first 24 hours there wasn't any symptoms and patient was discharged.

Formoterol is a long-acting beta2 agonist that used alone or with budesonide by the form of capsule or solution inhalation. It is used in treatment of wheezing, shortness of breath, and troubled breathing caused by asthma and chronic obstructive pulmonary disease (COPD), which includes chronic bronchitis, emphysema, and other lung diseases. Its effect is seen by bronchial smooth muscle relaxation. The most frequent adverse effect is viral infection (>10%), the other some are bronchitis, chest infection, dyspnea, chest pain, tremor and dizziness. It can also cause angina, arrhythmias, hypo/hypertension, tachycardia, hypokalemia, hyperglycemia, metabolic acidosis, headache, insomnia, paradoxical bronchospasm and severe asthma exacerbation.

Symptoms of overdose may include: chest pain, fainting, rapid, pounding, or irregular heartbeat, nervousness, headache, tremor, seizures, muscle cramps, dry mouth, upset stomach, dizziness, excessive tiredness, difficulty falling asleep or staying asleep, thirst, dry mouth, tiredness, flushing, dry skin, frequent urination, loss of appetite, trouble breathing. But we don't know the effects of oral administration of it. In our case with oral administration of 60 capsules the symptoms were nausea, vomiting, vertigo and palpitation.

In conclusion we don't have any previously reported case report like this so we don't know the expected effects. With the further reports of similar cases the other effects and also dose dependent effects could be determined.

P252

Case Presentation

SUICIDE ATTEMPT BY ORAL INTAKE OF MOUSE GLUE TRAP

MA Afacan, F Büyükcamlar, A Ceylan, AB Erdem, Y Zengin

Department of Emergency Medicine, Diskapi Yıldırım Beyazıt Training&Research Hospital, Ankara, Turkey

Corresponding author: Mr Büyükcamlar Fatih (fatihbuyukcam@gmail.com)

Key-words: polybutene ; polyisobutene ; suicide

29 years old female admitted to the emergency department after a suicide attempt by eating 80 gr of mouse glue trap (including polybutene and polyisobutylene). She told that she has taken by oral route 30 minutes before and she has nausea, vomiting. She hasn't any chronic diseases. With intravenous hydration and symptomatic treatment including antiemetics and her symptoms disappeared and in the first 24 hours there wasn't any symptoms and patient was discharged.

A mousetrap is a specialized type of animal trap designed primarily to catch mice; however, it may also trap other small animals. Mousetraps are usually set in an indoor location where there is a suspected infestation of rodents. There are various types of mousetrap, larger traps are designed to catch other species of animals; such as rats, squirrels, other small rodents, or other animals. Glue traps are made using natural or synthetic adhesive applied to cardboard, plastic trays or similar material. These types of traps are effective and non-toxic to humans.

The ingredients of our substances polybutene and polyisobutylene are liquid oligomers widely used as plasticizers for high-molecular weight polymers, such as polyethylene. The liquid is clear, colorless, and is sold in many different grades.

According to the United States Environmental Protection Agency (US EPA) classification polybutene generally is of relatively low acute toxicity. It has been placed in toxicity categories III and IV respectively for acute dermal and oral effects (these are the lowest of four categories, indicating the lowest degree of acute toxicity). Polybutene is not irritating to the skin (Toxicity Category IV), but is irritating to the eyes and has been placed in Toxicity Category II for eye irritation effects. Dietary exposure to polybutene is not expected since no food-related uses are registered. In our case the patient only had nausea and vomiting by eating 80 gr of mouse glue trap.

In conclusion, oral intake of mouse glue trap and similar product not reported frequently, so we don't know the exact effects of them. We know that 80 gr of oral intake don't do cause any problem except nausea and vomiting.

P253

Case Presentation

AN UNUSUAL CAUSE OF ACUTE RIGHT UPPER QUADRANT PAIN: INTRABILIARY RUPTURE OF HEPATIC HYDATID CYST.

F Ozkan (1), MF Inci (1), S Bozkurt (2), N Ozcan (1), M Yuksel (1), EM Pircanoglu (3)

1.Radiology, Kahramanmaraş Sutcu Imam University Faculty of Medicine, Kahramanmaraş, Turkey

2.Emergency Medicine, Kahramanmaraş Sütçü İmam University School of Medicine, Kahramanmaraş, Turkey

3.General Surgery, Kahramanmaraş Sutcu Imam University Faculty of Medicine, Kahramanmaraş, Turkey

Corresponding author: Mr Ozkan Fuat (drfozkan@yahoo.com)

Key-words: Hydatid cyst ; Computed tomography ; Ultrasonography

Introduction

Hydatid disease presents as hydatid cysts primarily in the liver. Although hepatic hydatid cysts (HHCs) may be asymptomatic for many years, they may be symptomatic because of expansion, rupture, and pyogenic infection. Rupture of the HHC into the biliary tract is one of the most serious complications and is frequently related to overenlargement of the cyst. Patients with this disease usually have pain or jaundice. We report an HHC ruptured into left main intrahepatic biliary duct presented as the acute right upper quadrant pain and jaundice.

Methods

A 64-year-old man was admitted to the emergency department for right upper quadrant pain and jaundice. He had been complaining of suddenly onset of right upper quadrant pain, jaundice. Abdominal ultrasonography showed that cystic lesion measuring about 7x4 cm in diameters with lobulated contour adjacent gallbladder and communication between cyst and left main intrahepatic biliary duct. Abdominal computed tomography confirmed this findings and revealed floating membranes in distal choledochus.

Results

The patient surgically treated with pericystectomy and confirmed CT findings intraoperatively. The post-operative course was uneventful.

Conclusions

Intrabiliary rupture of hepatic hydatid cyst must be considered in the differential diagnosis of patients presenting with right upper quadrant pain in areas where the disease is endemic. Early diagnosis with ultrasound, CT and appropriate treatment are essential for favorable outcome.

P254

Case Presentation

PERIPHERAL FACIAL PARALYSIS AS A COMPLICATION OF CHRONIC OTITIS MEDIA

M. Uzkeser, K. Atac, M. Saritemur, A. Bayramoglu, A. Aköz, M. Emet

Emergency department, Atatürk University Medical Faculty, Erzurum, Turkey

Corresponding author: Mr Saritemur Murat (muratsaritemur@gmail.com)

Key-words: Peripheral Facial Paralysis ; Chronic Otitis Media ; Emergency Department

Introduction: Complications of otitis media are divided into two main groups as intratemporal and intracranial. Intratemporal complications include mastoiditis, subperiosteal abscess, petrositis, labyrinthitis, and facial paralysis. Intracranial complications include extradural abscess, meningitis, subdural abscess, cerebral and cerebellar abscess, lateral sinus thrombophlebitis, and otitic hydrocephalus. In approximately 80% of facial paralysis due to otitis media, cholesteatomas are responsible making pressure to tympanic or proximal mastoid segments of the nerve. Emergent surgery is indicated in facial nerve paralysis due to chronic otitis media which degeneration of the nerve is developed.

Case: A 19-year-old male patient was admitted to our emergency department (ED) with complaint of difficulty closing the eyelid and ear pain. The patient was oriented and cooperated. The patient's vital signs were stable. Physical examination of the patient

revealed peripheral facial paralysis on the left side and otitis media with purulent discharge in the left ear. In the patient's medical history, inflammation of the left ear started 3 years ago, and continued in spite of drug use occasionally and ear discharge had increased in the last month. The patient was unable to close his eyelid and had numbness in the left side of his face for 2 days. Blood assays of the patient were unremarkable. Brain computed tomography showed that parenchyma was isodense and the external canal and mastoid sinus in the left temporal bone was filled with inflammation. The patient was hospitalized to the clinics of otolaryngology. Tympanomastoidectomy and facial nerve decompression was performed. He was discharged on 10th day of hospitalization with no squeal.

Conclusion: If the appropriate treatment of chronic otitis media is not be done it will be worsen. It may progress and cause peripheral facial paralysis. If early and appropriate surgical intervention is not performed it may leads to permanent facial paralysis. Therefore, it should be considered as a cause of peripheral facial paralysis and consulted to otolaryngologist in the ED.

P255

Case Presentation

SUDDEN CHEST PAIN DUE TO NON TRAUMATIC RIB FRACTURE IN A COPD PATIENT

DM Yavşan (1), A Küçük (2), M Ergin (3), M.Tosun (1)

1. Pulmonary Medicine, Meram medical faculty, konya, Turkey
2. Rheumatology Department, Meram medical faculty, konya, Turkey
3. Emergency Department, Meram medical faculty, konya, Turkey

Corresponding author: Mr Maden Emin (eminmaden@yahoo.com)

Key-words: chronic obstructive pulmonary disease ; osteoporosis ; rib fracture

As chronic obstructive pulmonary disease (COPD) is a systemic inflammatory disease the use of steroids in its treatment is frequent. So, frequent use of steroid causes loss in bone density and risk of osteoporosis. In this report we reported a COPD case admitted to emergency department with sudden chest pain and non traumatic costa fracture was detected in radiological evaluation.

A 55 years old male patient, who was followed with severe COPD and received systemic intravenous steroid several times due to acute attack, was admitted to emergency department with right sided sudden chest pain and dyspnea. He had no trauma history. In his physical examination, he had tenderness at right side under scapular area with palpation, his breath sounds were decreased at both sides and expiratory time was increased. Electrocardiography was normal. His chest x-ray revealed fracture at 7th and 8th ribs. No pneumothorax or any parenchymal infiltration or sign of pulmonary embolism was detected. In his spiral thorax computed tomography pulmonary vascular system was normal and no parenchymal lesion was detected. However there was fracture in the 7th and 8th ribs at the right side. Total body bone densitometry revealed osteoporosis and rib fracture due to osteoporosis. In addition to his COPD treatment and anti-inflammatory treatment, alendronate sodium was given for osteoporosis. He is still being followed for his therapy.

As seen in this case, while evaluating severe COPD patients who admitted to emergency department with sudden chest pain and dyspnea beside pulmonary emboli, acute coronary syndrome or pneumothorax, non-traumatic rib fracture should also be thought in differential diagnosis. Radiological evaluation should be done and bone structures should be assessed carefully.

P256

Case Presentation

A RARE COMPLICATION OF NON INVASIVE MECHANICAL VENTILATION: HEMORRHAGE INTO BULLAE

DM. Yavşan, T. Teke, Z. Dağlı, E Maden, O Uzunay, K Uzun

Pulmonary medicine, meram medical faculty, konya, Turkey

Corresponding author: Mr Maden Emin (eminmaden@yahoo.com)

Key-words: chronic obstructive pulmonary disease ; bullae ; anticoagulation

In COPD cases with chronic respiratory failure the frequency of use of long term NIMV at home is gradually increasing, and atrial fibrillation and anticoagulant use is frequent in these patients. In this report; hemorrhage into bullae, which is a rare complication of NIMV, due to long term NIMV use at home and warfarin usage in a case with COPD and atrial fibrillation was reported.

A 57 years old male patient who was under follow up due to COPD related chronic hypercapnic respiratory failure and using long term NIMV at home and warfarin, was admitted to hospital because of increased dyspnea and hemoptysis lasting for the last two days. In his physical examination; tachypnea (30/min), tachycardia (130/min) and diffuse decreased respiratory sounds were present. Laboratory evaluation revealed: Hg: 8.8 gr/dl, Hct: %26.9, leukocyte:16860/mm³, thrombocyte:196000/mm³ and INR:13.7. In arterial blood gas analysis: pH: 7.35 pCO₂:43.9 mmHg, pO₂:48.8 mmHg, HCO₃:24.2 mEq/L and sO₂ was 82.8. As the chest graphy revealed new emerged homogenous density at right lower zone paracardiac area, computed tomography was obtained and it showed an appearance concordant with hemorrhage into bullae lesion at right lung lower lobe paracardiac area and in scattered location small consolidation areas due to parenchymal hemorrhage. The diagnosis of pulmonary hemorrhage and bleeding into bullae due to overdose warfarin was thought and warfarin was stopped. Fresh-frozen plasma transfusion was given. The patient who developed acute renal failure in his follow up was intubated and died in the seventh day of mechanical ventilation therapy.

In this case, we thought that barotrauma caused by high positive pressure applied with NIMV, may potentiate pulmonary hemorrhages which may develop due to warfarin overdose. For this reason it should be kept in mind that pulmonary hemorrhage may develop as a complication of NIMV treatment in COPD cases with bullous lung who receive long term anticoagulation therapy.

P257

Case Presentation

PSOAS ABSCESS DUE TO BRUCELLA

A. BAYRAMOĞLU (1), A. AKÖZ (1), S. EREN (2), M. UZKESER (3), Z. ÇAKIR (1), S. ASLAN (1)

1. Emergency Department, Ataturk University Medical Faculty, ERZURUM, Turkey
2. Radiology Department, Ataturk University Medical Faculty, ERZURUM, Turkey
3. Emergency Department, Ataturk University Medical Faculty, Erzurum, Turkey

Corresponding author: Mr Bayramoglu Atif (atifbay@gmail.com)

Key-words: psoas abscess ; brucella ; spondylodiscitis

Introduction:

Brucellosis, prevalent especially in Mediterranean and Central Asian countries, is a systemic infectious disease and is a common zoonotic infection in our country, affects multiple systems of the body. It is often transmitted to humans through infected animal

products, consumption of milk and milk products which are not pasteurized or direct contact with the infected animals or inhalation. Skeletal system involvement is relatively a common complication of human brucellosis, however, muscular involvement and psoas abscess are less frequent. Psoas abscess is usually secondary to spondylitis. Antibiotic combinations and drainage (percutaneous or surgical) should be considered in treatment. In this case paper, a 16-year old male patient with brucellosis complicated with spondylitis and psoas abscess is presented. The patient was successfully treated with triple antibiotic regimen and percutaneous abscess drainage.

Case:

A 16 year-old male patient, admitted to our emergency medicine service with grievance of fever, loss of appetite, low back pain, lower back kept, night sweating weight loss. He has worked in animal husbandry. . The patient night sweats which continued for six months, treatment had been started with tetradox and streptomycin with the diagnosis of brucella. When streptomycin treatment finished, Rif was added to treatment. The patient was referred to our hospital due to increased complaints . It was detected that lesions assessed in favor of abscess in lumbar vertebrae magnetic resonance imaging taken. There were an abscess with size of 29*11 mm on right and 26*14 mm , 12*10 mm on left adjacent to the L3-L4 vertebrae. Patient was hospitalized to the infectious diseases clinic. Abscess drainage was performed by interventional radiology for the purpose of differential diagnosis of brucellosis and tuberculosis and treatment, drain was inserted. The patient was diagnosed with brucellosis as a result of evaluation the aspirated fluid.

Discussion:

Psoas abscess is rarely seen and generally occurs secondary to spondylodiscitis. Early diagnosis and treatment are important for the prognosis of brucella infections. Therefore brucellosis should be in the differential diagnosis of patients with psoas abscess.

P258

Case Presentation

POSTTRAUMATIC UNILATERAL ANHIDROSIS

A. BAYRAMOĞLU (1), A. AKÖZ (1), M. EMET, S. KARAMAN (2), Z. ÇAKIR (1), S. ASLAN (1)

1. Emergency Department, Atatürk University Medical Faculty, ERZURUM, Turkey
2. Emergency Department, Regional Training and Research Hospital, Erzurum, Turkey

Corresponding author: Mr Bayramoglu Atif (atifbay@gmail.com)

Key-words: posttraumatic anhidrosis ; unilateral hiperhidrosis ; facial unilateral anhidrosis

Introduction:

Unilateral cephalic anhidrosis is a rare disorder of the autonomic nervous system. Unilateral cephalic anhidrosis has been observed following cerebrovascular accidents. We aimed to report a case developed unilateral cephalic anhidrosis who complained about shotgun injury in thorax.

Case:

A 39 year-old male presented to the emergency department with the complaint of shotgun injury in thorax. There was no history of illness. In physical examination, entry hole in the left anterior chest, exit hole in the left posterosuperior chest and subcutaneous emphysema were present. A chest radiograph suggested appearance of a pneumomediastinum, with second rib fractures and hemothorax. In the chest tomography taken to view the lung parenchyma had pulmonary Contusions. There were anhidrosis at right frontal area with hiperhidrosis at left frontal area. In laboratory findings in hemogram, these were measured that: WBC:15.3* 10⁹ /μL Hb: 14 g/dL, Plt 187*10⁹ /μL. The patient

was referred to the vascular surgery team for management of a suspected vascular injury. They evaluated vascular system as normal. After thoracic surgery consultation, the patient was hospitalized to thoracic surgery clinic.

Discussion:

Sweat glands are innervated by sympathetic nervous system under control of hypothalamus(first-order neuron) .The sudomotor and the vasomotor fibers leave the spinal cord at T2-T3 and travel within the sympathetic chain to synapse in the superior cervical ganglion.(second-order neuron) The postganglionic fibers (third-order neuron) then travel within the carotid plexus to reach their effectors. An ipsilateral sympathetic lesion leads to loss of flushing and anhidrosis on that side of the face with contralateral excessive sweating and flushing. We have believed that third-order neurons were affected by trauma in our case. As far as we know,Our case is the first and one case of the posttraumatic unilateral anhidrosis in the literature.

P259

Case Presentation

FOREIGN BODY PERFORATING THE ESOPHAGUS: CHICKEN BONE

G AKBULUT (1), F ALTINTOPRAK (1), MI USLAN (2), M YUCEL (3), Y YURUMEZ (3)

1. GENERAL SURGERY DEPARTMENT, SAKARYA UNIVERSITY, SAKARYA, Turkey
2. GASROENTEROLOGY DEPARTMENT, SAKARYA UNIVERSITY, SAKARYA, Turkey
3. EMERGENCY DEPARTMENT, SAKARYA UNIVERSITY, SAKARYA, Turkey

Corresponding author: Mr Yucel Murat (dryuc@yahoo.com)

Key-words: esophagus perforation ; chicken bone ; foreign body

Background: Esophageal perforation is uncommon but it is associated with high morbidity and mortality. Therefore, esophageal perforation requires prompt diagnosis and treatment. We present the case of a 70 year-old woman with upper esophagus perforation by a chicken bone.

Case Report: A 70 year-old woman was admitted to our Emergency Department (ED) with the complaint of dysphagia. While she was eating chicken meat, dysphagia has occurred suddenly two hours ago. There wasn't any abnormal vital signs in first look. In physical examination she had pain on right side of her neck. Cervical X-ray and computerized tomography of neck were performed. Foreign body was seen in upper esophagus therefore endoscopic intervention was planned. Foreign body and perforation of the esophagus revealed with upper gastrointestinal endoscopy. Foreign body was immovable and couldn't be removed. Thereupon General Surgery removed the chicken bone and repaired the perforation by surgical operation. The patient was discharged on seventh day without complications.

Conclusion: If a foreign body is settled to the esophagus, endoscopic intervention should be performed immediately. Esophageal perforation may be seen during endoscopy. If endoscopic intervention is not successful, the treatment is with surgery.

P260

Case Presentation

PNEUMOCOCCAL PNEUMONIA. ATYPICAL PRESENTATION.

N. Simarro (1), E. Renilla (2), M. Rosado (3), O. Salmerón (4)
Emergency Department, Hospital Universitario Fundación Alcorcón, Madrid, Spain

Corresponding author: Melle Simarro Grande Nuria (n_simarro@yahoo.es)

Key-words: Pneumococcal pneumonia. Atypical clinical presentation. Review. ; Streptococcus pneumoniae. ; Radiography. Lobar consolidation

ABSTRACT: A 21 years old patient refers non-productive cough and severe asthenia since five days ago. The physical examination disclosed coarse crackles at the base of the right lung, heart rate of 120 b.p.m., oxygen saturation 89%, blood pressure 110/60 mmHg and a temperature of 36°C. The routine biochemical analysis showed increase in creatinine (3). In the blood count there was an increase in band cells (17%). Chest X-Ray evidenced infiltrates in 3 lung lobes. This young patient, with no significant medical history and mild symptoms, was diagnosed of multilobar pneumonia. Blood culture was positive for growth of antibiotic-sensitive *S. pneumoniae*. The patient was admitted and received empiric antibiotic treatment (levofloxacin). The clinical evolution was favorable and the patient was discharged asymptomatic ten days after admission. We want to emphasize the atypical clinical presentation of this case and take the opportunity to present a review on pneumococcal pneumonia.

S. pneumoniae is the most common cause of community-acquired pneumonia (CAP), although the organism is frequently not isolated, but believed to be the cause of many culture-negative cases of CAP. Pneumococcal pneumonia is the paradigm of classic lobar bacterial pneumonia. Although commonly carried asymptotically in the nasopharynx (in 40 to 50 percent of healthy adults persisting for four to six weeks) pneumococci cause invasive disease when the host is exposed to large aerosolized inocula of new serotypes. The classic presentation of pneumococcal pneumonia, with abrupt onset of fever, chills, cough, and side pain, occurs more commonly in the younger patient. With increasing age of the population, older patients more frequently develop pneumococcal pneumonia, and exhibit fewer symptoms. Physical examination typically reveals signs of consolidation. Infectious complications involving other organ systems (including endocarditis, septic arthritis, peritonitis, pericarditis, and meningitis), once prevalent with pneumococcal infection, are now rare with antibiotic use. However, overwhelming infection can still lead to early mortality (often in the first 24 hours), despite use of antibiotics. Pulmonary complications associated with bacteremic illness and comorbidities include empyema, necrotizing pneumonia and lung abscess. While sputum Gram stain can suggest pneumococcal infection, the diagnosis of pneumococcal pneumonia should be confirmed by blood culture or urinary antigen. Although lobar consolidation is suggestive of bacterial pneumonia, radiographs cannot reliably differentiate bacterial from nonbacterial pneumonia.

The majority of patients with community-acquired pneumonia are treated empirically with a regimen that includes coverage against the pneumococcus. It is recommended that patients with documented penicillin-sensitive pneumococci be treated with a beta-lactam antibiotic. Also it is suggested that patients with pneumonia due to pneumococci that have intermediate susceptibility to penicillin be treated with higher doses of penicillin. Patients with bacteremic pneumococcal pneumonia who require ICU care should be treated with a combination antibiotic therapy (beta-lactam plus either a macrolide or fluoroquinolone). The therapy is given during five to seven days, or until the patient is afebrile for three to five days in more severe cases. Patients with bacteremic pneumococcal disease should receive a total of 10 to 14 days of antimicrobial therapy. We want to emphasize that we must be alert to atypical clinical presentation of pneumococcal pneumonia.

P261

Case Presentation

TRAUMATIC CRANIAL FRACTURE IN ASSOCIATION WITH PAGET'S DISEASE

C. Can (1), A. Sarihan (2), F. Akbulut (3), U. Gulactı (4), C. Girgin (5)

1. Emergency Department, Minister of Elazığ Education and Research Hospital, Elazığ, Turkey
2. Emergency Department, Minister of Basaksehir State Hospital, Istanbul, Turkey
3. Emergency Department, Minister of Bitlis State Hospital, Bitlis, Turkey
4. Emergency Department, Minister of Harput State Hospital, Elazığ, Turkey
5. Emergency Department, Minister of Bingöl State Hospital, Bingöl, Turkey

Corresponding author: Mr Can Cagdas (drcagdascan@yahoo.com)

Key-words: paget's disease ; skull fracture ; computed tomography

Introduction: Paget's disease, also known as osteitis deformans, is a disease of unknown etiology that disorder of bone remodelling typically begins with excessive bone resorption followed by an increase in bone formation. Skull involvement in Paget's disease occurs in 25 to 65% of cases and the neurological disorders such as cranial neuropathies, hydrocephalus and basilar invagination could be seen. In this case, we report computed tomography scan of the brain showed the unusual features of the traumatic skull fracture.

Case report: A 24 year old male patient came to the emergency service with head trauma. His vitals ,other systems examination and laboratory findings were normal except right temporo-parietal cephal hematoma. Because of cephal hematoma the patient was taken to brain tomography. Computed tomography scan of brain showed traumatic displaced fracture. The patient was admitted to neurosurgery service.

Conclusion: Displaced cranial fracture without any clinical manifest is rare. The excessive remodeling of bone associated with Paget disease may result in pain, fractures, and bone deformities. The point to keep in mind that in paget disease soft nature of the affected skull may result in fracture after minimal trauma.

P262

Case Presentation

DYSLIPIDEMIA AND STERNAL FRACTURE

C. Can (1), C. Girgin (2), U. Gulactı (3), K. Ozturk (4)

1. Emergency Department, Minister of Elazığ Education and Research Hospital, Elazığ, Turkey
2. Emergency Department, Minister of Bingöl State Hospital, Bingöl, Turkey
3. Emergency Department, Minister of Harput State Hospital, Elazığ, Turkey
4. Emergency Department, Minister of Okmeydanı Education and Research Hospital, Istanbul, Turkey

Corresponding author: Mr Can Cagdas (drcagdascan@yahoo.com)

Key-words: sternum fracture ; osteoporosis ; dyslipidemia

Introduction: Tenderness over the sternum is a clue for possible sternal fracture. Sternal fractures usually occur at the body or manubrium. Lateral chest radiography can detect a fracture, but diagnosis is usually made by tomography. Fracture of the sternum has been historically considered a marker of serious life-threatening injury as high-energy vehicles traffic accident. The definition of high-energy vehicles traffic accident is 40 km/h over speed collision, the front part of the car 50 cm or more crash, jumping out the passenger from the vehicle, and roll over the vehicle. In hyperlipidemia, oxidized lipids accumulate in vascular tissues and trigger atherosclerosis. Such lipids also deposit in bone tissues, where they may promote osteoporosis. Here we report a

case of a combine mixt type familial hyperlipidemia induced osteoporosis end up with sternum fracture in motor-vehicle accident.

Case Report: 43-year-old female who has got a familial combined hyperlipidemia disease was admitted to the emergency department because of motor vehicle accident. The patient who has drive the car was hit the standing vehicle approximately 20 km/h and she had a chest pain which was increased by the inspirium. Her Glaskow coma scale was 15 and blood alcohol level was below the limit of detection. One week before the patient's blood levels of total cholesterol was 340 mg/dl, triglycerides 580 mg/dl, thyroid-stimulating hormone level 3.2 uIU/ml, the level of free T4 16.2 pmol/L, the level of free T3 3.1 pg/ml, blood glucose level 135 mg/dl, serum 25 (OH) D levels 45 ng/ml. Due to exclude diabetes in patient with underlying hyperlipidemia, oral glucose tolerance test (OGTT), HbA1c levels and C-peptide levels were determined. OGTT level was 130 mg/dl, HbA1c level %4 and C-peptide level was found 1,1 pmol/l. These results ruled out diabetes diagnosis. Because of sensitivity on the front of sternum, lateral sternum X-ray radiography was taken. Osseous pathology was not seen at the X-ray radiography; for this reason, the patients thoracal computed tomography was taken for differential diagnosis. Sternum fracture was captured at corpus localization. Exclusion for pathologic fracture bone scintigraphy were taken and it was determined normal. The patient L1-4 lumbar bone spine densitometer was measured the value of a T-score was < -3,1 and Z score value was < -2,1. The patient was consulted with thoracic surgery and was hospitalized.

Conclusion: Sternal perfusion is impaired due to patient's existing hyperlipidemia and this situation was accelerated the formation of osteoporosis. Sternal fracture is expected to occur as a result of high energy trauma but in this case a fracture was developed after low energy trauma due to formation of osteoporosis. In hyperlipidemic patients traumatic fractures should be excluded due to fragile structure of the bone.

P263

Case Presentation

A CASE OF ANGIOEDEMA DUE TO HERBAL SOLUTION OF 'QUITTING SMOKING'

S OZDINC

Emergency Department, Afyon Kocatepe University Medical Faculty, Afyonkarahisar, Turkey

Corresponding author: Melle Ozdinc Serife (drseri03@hotmail.com)

Key-words: Angioedema ; Herbal ; Allergy

Introduction: The life time prevalence of urticaria is 3%. Almost half of the patients have findings of angioedema whereas about 15-20% of patients have angioedema without urticaria. Angioedema is frequently caused by drugs especially non-steroid antiinflammatory drugs and angiotensin converting enzyme inhibitors. Furthermore angioedema can be either hereditary or acquired as a result of deficiency of C1 esterase inhibitor. SLE, paraproteinemias and lymphoproliferative diseases are among the acquired causes.

The herbal products should not be forgotten among the causes of angioedema besides drugs. Tixiva® is a herbal product used to stop smoking, marketed on television and internet. This product contains French lavender, clove, melisa, coriander, licorice, menthol and acacia gum in different amounts. To our knowledge, there is not any case of angioedema related to this product, up to now.

Case: Twenty-six year old male patient preferred the drug Tixiva® which is frequently advertised on television to give up of smoking.

As written on prospectus, he used the medication as half dose 7 times per day on first day, again half dose 5 times per day on second and third days by melting the tablet on tongue. Soon on third day after the forth dose, the patient developed dyspnea and slight edema on his lips and admitted to our emergency department. On physical examination, he was slightly hypotensive and tachycardic, with blood pressure of 100/60mmHg, heart rate of 100 per min and body temperature was normal. There was pronounced edema on his lips and uvula, with rales and mild rhoncus at base of lungs. The rest of physical examination were normal. In addition to drug history, the medical and family history were normal. The required laboratory evaluation done and treatment of angioedema started at emergency room. He was discharged as the symptoms especially the edema of uvula resolved with vital signs stabilized on his follow ups. He was advised to not to use Tixiva® again and admit outpatient clinic of stop smoking.

Result: The patients should become conscious about the drugs which are thought to be innocent and said to be 100% herbal originated so is not even asked to doctor. This kind of drugs can have life threatening side effects as angioedema. When asking for drug history of patients admitted to ER with angioedema, the herbal drugs should also be asked. The commercial and usage of such drugs, which are commonly advertised on community communication tools and launched as totally herbal originated without any side effect, should be restricted. In our case, after usage of Tixiva®, angioedema developed. There are lots of herbs in it and angioedema may develop due to one of these content.

P264

Case Presentation

DIFFERENT PRESENTATIONS OF CEREBRAL VENOUS SINUS THROMBOSIS: A CASE SERIES OF 3 PATIENTS

E Gaffari (1), MO Erdogan (2), BG Yavuz (2)

1. Emergency Department, Beykoz State Hospital, Istanbul, Turkey
2. Emergency Medicine Clinic, Haydarpaşa Numune Training and Research Hospital, Istanbul, Turkey

Corresponding author: Mme Gaffari Emine (gaffariemine@gmail.com)

Key-words: cerebral venous thrombosis ; magnetic resonance angiography ; emergency department

Cerebral venous sinus thrombosis is a rare condition compared to cerebral artery thrombosis. Clinical presentation is non-specific; symptom and findings appear in a wide spectrum, thus delay in diagnosis and treatment may result in fatal conditions. Head trauma, use of oral contraceptives, pregnancy, postpartum period, infections, congenital or acquired coagulation disorders, antithrombin III deficiency, protein S and C deficiency, systemic inflammatory diseases, excessive dehydration, neurosurgery, malignancy, connective tissue diseases and vasculitis can be listed among etiologic causes. The most common reason for admission is headache that cannot be relieved by analgesics. Various symptoms and findings such as cranial nerve palsy (facial paralysis, homonymous hemianopsia), vision loss, epileptic attack, nausea, vomiting, fatigue, drowsiness, weakness, focal neurological deficit, changes in consciousness (confusion, coma), papilledema can be seen. Antithrombotic treatment besides treatment for etiology and symptoms is given for cerebral venous thrombosis.

In our case series, symptoms and findings, imaging techniques and management of three patients admitted to the emergency department with diagnosis of cerebral venous sinus thrombosis are presented.

In the first case, a 36 years old female was admitted to the emergency department with a history of sudden headache in postpartum period and paresthesia and paresis on left arm and left leg that developed 2 days after the headache. Venous MR angiography revealed sagittal sinus thrombosis. In the second case, a 25 years old male was admitted to the emergency department with a history of unconsciousness that developed after orbital cellulitis which started 5 days ago and venous MR angiography revealed cavernous sinus thrombosis. In the third case, a 28 years old male was discharged with the diagnosis of conversion disorder due to personality change and meaningless speech and he was admitted to the emergency department with convulsion 2 days after the discharge. Venous MR angiography revealed transverse sinus thrombosis and the patient was hospitalized in neurology clinic.

Cerebral venous thrombosis can be seen in all age groups with many different symptoms and findings. Clinic presentation is non-specific and symptoms and findings can mimic various clinical situations. In the literature the most common reason for admission is headache. Dalgic et al. reported two dural sinus thrombosis cases following head injury. The first case was admitted with one week history of headache and repeated vomiting; the second case was admitted with double vision due to abducens palsy. Jain and Nijhavan also reported cerebral sinus thrombosis in a patient with ulcerative colitis. She had a history of hemicranial headache with photophobia and redness of eyes preceded by earache and decreased hearing. In our case series, three different clinical situations (headache, paresthesia, paresis, unconsciousness, personality change, meaningless speech and convulsion) occurred in three patients.

Cerebral venous thrombosis can be diagnosed in early stages with clinical doubt and imaging techniques. Computed tomography of the brain, cranial MR imaging and MR angiography can be used to detect thrombosis.

P265

Case Presentation

PEGANUM HARMALA, INTOXICATION, EMERGENCY ROOM PEGANUM HARMALA INTOXICATION

T. Patan, A. Hünük, Y. Aydın, H. Demir, O. Öcal, O.E. Onur, R. Yorulmaz

Emergency Department, Fatih Sultan Mehmet RTH, Istanbul, Turkey

Corresponding author: Mme Onur Ozge Ecmel (ozberkozge@gmail.com)

Key-words: Peganum Harmala ; intoxication, ; emergency room

Introduction: Plants and plant extracts have been used since the dawn of civilization by mankind. However, modern textbooks usually pay less attention to them and average medical practitioner is not aware of their usage and toxicity, especially those remedies that are used by cultures other than his own. The present case report is a review of toxicity of Peganum harmala, which is used traditionally as a psychedelic, analgesic and an abortifacient agent in the Middle East.

Case: A 37 years old female patient admitted to the emergency room due to emesis, abdominal pain and palpitations. She told according to the recommendation she took P. Harmala one hour ago. On physical examination there was nothing except tachycardia. After few hours, signs and symptoms of toxicity relieved and she left hospital in a stable condition.

Discussion: Since this material traditionally has been used in the Middle East, emergency physicians must be aware of its possible toxicities.

P266

Case Presentation

PERINATAL DISLOCATION AND FRACTURE OF DISTAL HUMERUS DURING SPONTANEOUS VAGINAL DELIVERY: A CASE REPORT

S Ozkan (1), P Durukan (1), O Salt (1), A Yikilmaz (2), C Kavalci (3), A Guney (4)

1. Erciyes University Faculty of Medicine, Department of Emergency Medicine, Kayseri, Turkey
2. Erciyes University Faculty of Medicine, Radiology, Kayseri, Turkey
3. Ankara Numune Training and Research Hospital Department of Emergency Medicine, Ankara, Turkey
4. Erciyes University Faculty of Medicine, Orthopedics and Traumatology, Kayseri, Turkey

Corresponding author: Mr Durukan Polat (polatdurukan@gmail.com)

Key-words: emergency department ; trauma ; elbow dislocation

We want to report a very rare injury of a new born admitted to Emergency Department with difficulty to move right elbow since birth. The diagnosis was distal humeral dislocation with epiphyseal fracture. Spontaneous vaginal deliveries with considerable traction applied to extract the baby can be the risk factor of such an injury. Although supracondylar humerus fractures are the most common injuries of the elbow in children, the fracture and dislocation of elbow in a new born during spontaneous vaginal delivery is very rare. Traumatic separation of the distal humeral epiphysis at birth is a rare injury and difficult to diagnose. As the ossification centre of the capitellum arises at 3rd to 9th months after birth, its alignment with the radius cannot be ascertained in plain radiographs. It is thus difficult to differentiate this injury from dislocation of the elbow.

A female newborn presented at 7th day after birth with swelling at the right elbow and redness on the anterior aspect since birth. The baby was delivered by spontaneous vaginal way. Elbow movement was painful and crepitus was felt. There was no local warmth. Correlative antero-posterior and lateral X-rays of right and left elbow revealed anterior-lateral displacement of the distal humerus on the right side. There was periosteal new bone formation adjacent to the metaphysis of the left humerus. Left elbow was normal. Ultrasonographic examination of both the right and left elbow was carried out. The elbows were scanned lateral longitudinally along the length of the humerus. It showed lateral displacement of the distal humeral epiphysis on right side. Left side was normal. Lateral longitudinal sonogram of the right elbow showed lateral displacement of the distal humeral epiphysis and periosteal new bone formation.

We have consulted the patient with orthopedics. And they hospitalized the patient for open reduction and internal fixation. Spontaneous vaginal deliveries with considerable traction applied to extract the baby may confer the risk of traumatic separation of the distal humeral epiphysis. The mechanism of injury could be hyperextension of the elbow or a backward thrust on the forearm with the elbow flexed. The displacement is usually posteromedial, similar to that in older children. Soft-tissue swellings around the joint, focal tenderness, pain, and irritability are common symptoms of fracture-separation of the distal humeral epiphysis. The diagnosis is suspected when movement between the olecranon and 2 humeral epicondyles is absent while the elbow is stressed in the sagittal plane and a 'muffled' crepitus is present between the cartilaginous epiphysis and distal humerus.

The differential diagnosis includes septic arthritis, osteomyelitis, and traumatic dislocation of the elbow joint; all are rare at birth. The diagnosis of a Salter-Harris type-1 fracture is probable. The possibility of osteogenesis imperfecta, child abuse,

and other metabolic bone diseases should also be considered. Ultrasonography provides detailed imaging of the cartilaginous epiphysis and shows periosteal elevation associated with the fracture, but is uncomfortable and painful for patients in the presence of fractures.

P267

Case Presentation

AMNESIA AND BLURRED VISION DUE TO METOCHLOPRAMIDE

F Büyükcım (1), A Ceylan (2), AB Erdem (3), J Şen (4)

1. Department of Emergency Medicine, Diskapi Yıldırım Beyazıt Training&Research Hospital, Ankara, Turkey
2. Department of Emergency Medicine, Şanlıurfa Training&Research Hospital, Şanlıurfa, Turkey
3. Department of Emergency Medicine, Konya Numune State Hospital, Konya, Turkey
4. Department of Emergency Medicine, Dr.İ.Şevki Atasagun Nevşehir State Hospital, Ankara, Turkey

Corresponding author: Mr Büyükcım Fatih (fatihbuyukcam@gmail.com)

Key-words: amnesia ; blurred vision ; metochlopramide

17 year old female patient had admitted to a community health center with abdominal pain. She had received 250cc 0.09% sodium chloride solution with 5mg metochlopramide, 20mg hiyosin-N-butylbromür and 50mg ranitidine. At the half of the treatment patient suffered from blurred vision, vertigo, loss of balance while walking. Patient transferred to our emergency department. She didn't tell any major dystonic reaction. Neurologic examination didn't revealed any lateralized deficit or loss of power. Laboratory tests were normal, there were not any electrolyte imbalance. By intravenous hydration and rest the symptoms disappeared in four hours, but patient told that she couldn't remember the last night. On follow up, there wasn't any complication.

Metochlopramide is a dopamine receptor antagonist benzamide derivative and is frequently preferred as a prokinetic agent to accelerate gastrointestinal passage in the treatment of gastroesophageal reflux disease and antiemetic in many diseases presenting with nausea and vomiting. It can easily overcome the blood-brain barrier and may create side effects on the extrapyramidal system. The primary side-effect of the drug is extrapyramidal reactions with incidences as high as 25% in children.

The incidence of the acute dystonias following metochlopramide use is 0.2% with female preponderance up to 70% [1]. Patients present with combinations of neck pain, torticollis, retrocollis, ocular deviation and trismus. Acute dystonias may be confused with encephalitis, complex partial seizures, tetanus, strychnine poisoning and hypocalcemic tetany [2].

Metochlopramide is intended for short-term use; long-term therapy, especially in older patients, should be avoided. Its use also appears to be contraindicated in patients with Parkinson's disease. Because of its tendency to produce both acute and chronic movement disorders, metochlopramide should be used with the same caution and respect as neuroleptics [3].

Miller et al. reported 18 patients having both acute and chronic metochlopramide-induced disorders seen over a 2-year period and they showed a frequent association between the long-term use of metochlopramide and a parkinsonian syndrome that was often followed by tardive dyskinesia when this treatment was stopped [3]. All the patients in the present series were conscious at the time of admission and motor restlessness rather than drowsiness was observed. In this case report we showed the amnesia effect of metochlopramide. The patient suffered from blurred vision also,

but we thought that the cause of blurred vision was resulted from dystonic reaction of eye muscles.

It should be kept in mind that metochlopramide, a commonly used antiemetic in patients referred to the emergency service with acute dystonia, might have side effects. Dystonic reactions secondary to metochlopramide might occur idiosyncratically depending on overdose or independent from dosage thus, more care needs to be taken during dose adjustment.

P268

Case Presentation

REPLANTATION OF AVULSED TEETH AFTER TRAFFIC ACCIDENT: CASE REPORT

S Özkan (1), K Tarhan (2), BA Alkan (2), B Durukan (2), O Salt (1), P Durukan (1)

1. Erciyes University Faculty of Medicine Department of Emergency Medicine, Kayseri, Turkey
2. Erciyes University Faculty of Dentistry, Department of Periodontology, Kayseri, Turkey

Corresponding author: Mr Durukan Polat (polatdurukan@gmail.com)

Key-words: emergency department ; tooth avulsion ; replantation

As a result of trauma a slight movement of teeth may occur or complete separation (avulsion) of tooth from alveolar socket. can be seen Avulsion after fighting, sport or traffic accident is mostly seen at upper central teeth. Replantation is placement of tooth in to its socket with or without endodontic treatment after extraction or avulsion.

20-year-old male was admitted to Erciyes University Hospital, Department of Emergency Medicine after a traffic accident. Glasgow Coma Scale Score was 15. He had abrasions on the chin and dorsum of nose. During the intra-oral examination it was seen that upper right and left central (11-21) and left lateral (22) teeth were avulsed. The patient was consulted with a periodontist. Patients' relatives were asked to bring the patient's teeth from the crash site in a sterile container filled with saline. All three teeth had complicated crown fracture and alveolar sockets were hemorrhagic. But there were no alveolar fracture. Adjacent teeth and gum of the avulsed teeth were clinically healthy. Avulsed teeth were cleaned with saline and placed into the sockets without removing periodontal ligaments. During the recovery period in order to ensure the stability, splinting process was made including right and left canine teeth with polyethylene fiber reinforced resin (ribbond-thm, USA). After being discharged from the Emergency Department, the patient was referred to Faculty of Dentistry Restorative Dentistry Department for the restoration of broken teeth. One year after the accident patient was admitted to Periodontology Department for control and there was no pathological condition observed on the clinical examination. But there were radiographic root resorption areas on the replanted teeth that incompatible with healthy intra-oral clinical picture. And the patient was referred to the Department of Endodontics for root canal treatment.

P269

Case Presentation

TOXIC EPIDERMAL NECROLYSIS DUE TO CEFTRIAXONE THERAPY : A CASE REPORT

M. İÇER, Y. ZENGİN, H.M. DURGUN, M. ORAK, M. ÜSTÜNDAĞ, C. GULOĞLU

Emergency department, Dicle University, Diyarbakir, Turkey

Corresponding author: Mr Zengin Yilmaz (yilmazzengin79@mynet.com)

Key-words: ceftriaxone ; life-threatening ; toxic epidermal necrolysis

INTRODUCTION:

Toxic epidermal necrolysis (TEN) is a rapidly evolving drug induced skin disorder characterised by extensive painful cutaneous and mucosal exfoliation and systemic involvement which may be life-threatening. TEN is a rare disease with high mortality due to generalised infection, sepsis or lung involvement, and requires discontinuation of all potentially triggering medications and intensive care in a specialised burn centre. Apart from wound care with antiseptics, wound coverage may be achieved with a skin substitute; treatments are compared with regard to infection, protein loss, re-epithelialisation and mortality. We report a 71-year-old man who developed TEN after taking ceftriaxone at a dosage of 2 gr daily for about 5 days for pneumonia. His initial skin rash progressed to TEN.

CASE REPORT:

A 71-year-old man was admitted because of peeling of the skin around the neck, anterior torso, and upper and lower extremities. He had developed fever, cough, dispneu, and weakness 4 days earlier. Two days after the onset of these symptoms he was diagnosed as having a "pneumonia" and was treated with ceftriaxone. The next day he awoke with a rash over his back, abdomen, groin, proximal segment of all four extremities, and his neck. His BP was 110/70 mmHg, HR 80 bpm, and temperature 39.5°C. The physical examination was unremarkable except for a generalized, painful, extensive, morbilliform eruption of the skin, with confluence of some lesions forming bullae, and areas denuded of epithelium and a positive Nikolsky's sign (desquamation of the epidermis with light digital pressure). The lesions involved more than 80% of the body surface area (BSA). His oral mucosa was intact.

Serum sodium was 127mEq/L, chloride 97 mEq/L, and urea nitrogen (BUN) and creatinine (Cr) were 45 and 0.87 mg/dL, respectively, glucose was 105 mg/dL, and hemoglobin (Hb) 9.9 g/dL. An electrocardiogram (ECG) showed normal sinus rhythm. A double lumen catheter (7 Fr) was placed in the right jugular vein. During his stay in ER, his fluid replacement consisted of crystalloids at the rate of 100 mL/hr. This patient was admitted from the emergency room (ER) to burn intensive care unit (ICU).

CONCLUSION:

TEN is a rare but acute life-threatening syndrome in which the epidermis blisters and peels in large sheets. Currently, there is no ideal treatment protocol for TEN. In general, patients with this syndrome are managed as severe second-degree burn patients, but special consideration should be given to mucous membrane involvement that reduces fluid intake and worsens the fluid deficit, systemic involvement that makes these patients hemodynamically unstable, and progression of cutaneous lesions that enhances the risk of infection and sepsis. The early referral of TEN patients to a burn ICU for critical care and appropriate wound management can significantly decrease the mortality rate and improve outcomes.

P270

Case Presentation

HEADSCARF NEEDLE TRACHEOBRONCHIAL ASPIRATION : A CASE REPORT

M. İÇER, Y. ZENGİN, E. OZCETE, H.M. DURGUN, A. ÖZHASENEKLER

Emergency department, Dicle University, Diyarbakir, Turkey

Corresponding author: Mr Zengin Yilmaz (yilmazzengin79@mynet.com)

Key-words: adolescent girls ; bronchoscopy ; headscarf needle

Introduction: Foreign body (FB) in the air way is an emergency situation. The paediatric population suffers from foreign body aspiration (FBA) most commonly. Aspirated foreign bodies (FBs) vary from region to region as well as on the age groups. FBA (Headscarf needle) has been encountered among adolescent girls, especially in Turkey. Headscarf needles are 4 cm in length and have a pearl head. Headscarf needles are used for attaching the layers of turban to each other in order to keep it in a steady position around the head. During this action, needles are held with the lips and laughing, coughing, taking a deep breath, and speaking can end up with the aspiration of the needle. We present a 20-year-old woman who aspirated headscarf needles.

Case Report: 20 year-old-woman had aspirated turban pin with bead while trying to talk and keep pins in her mouth at the same time and she was admitted to the emergency department early in the post-aspiration period. She had no cough and dyspnea on admission. Vital signs were within normal limits at the time of admission. No significant abnormality was detected. Radio-opaque foreign materials were visualized with posteroanterior chest x-ray at inferior lobe of the lung. Due to the aspirated pin was located in the deeper right bronchial tree, we planned computed tomography. Patient had thoracic surgery department consultation for urgent bronchoscopy and then was hospitalized for further examination and treatment. Aspirated pin was extracted with the help of rigid bronchoscopy and forceps under general anesthesia in the operating room. There was no complication after bronchoscopy and she was discharged after 24 hours of observation.

Conclusion: Headscarf needle aspirations exhibit different characteristics from other foreign body aspirations with a diverse distribution of age and sex. Whereas foreign body aspirations are reported generally in boys aged 6 months to 4 years, headscarf needle aspirations are observed in adolescent girls most frequently. In other reports pins were located commonly in the right bronchial system. In contrast to other forms of FBA, headscarf pin aspirations tend to be easily diagnosed as all of these inhaled FBs are radio-opaque and, as such, can be picked up easily by chest radiography. Flexible bronchoscopy alone or in combination with rigid bronchoscopy is a successful method for retrieving aspirated pins.

We recommend safer methods such as the use of adhesive tapes and snap fasteners and to avoid holding the needles with the lips for those that are not accepting unveiling.

P271

Case Presentation

NEUROFIBROMATOSIS TYPE 1 ASSOCIATED WITH PHEOCHROMOCYTOMA

S. Ziyada, R. Satira, R. Schirripa, H. Alasow, M. Salim, P. Tittoto, V. Valeriano, FR. Pugliese

Emergency department, Sandro Pertini Hospital, Rome, Italy

Corresponding author: Mr Ziyada Shakib (shakibz@hotmail.it)

Key-words: endocrinology ; oncology ; lung diseases

Background:

Neurofibromatosis type 1 is an autosomal dominant multisystem disorder affecting approximately 1 in the 3500 people. The most prominent clinical hallmarks of the disorder are café-au-lait

macules, neurofibromas (dermal, plexiform), and axillary/inguinal freckling (Crowe's sign).

Other clinical manifestations are abnormalities of the cardiovascular, skeletal, Gastrointestinal, ophthalmologic, Endocrine systems, facial and body disfigurement, cognitive deficits. About 25% of people with neurofibromatosis type 1 develop one or more of these clinical complications, which together cause significant morbidity and mortality. The tumors that occur in NF-1 are dermal and plexiform neurofibromas, optic gliomas, malignant peripheral nerve sheath tumors, rhabdomyosarcomas and adrenal, extraadrenal-abdominal, and extraadrenal-thoracic pheochromocytoma. (1)

Case presentation:

A 47-years-old Romanian man was admitted to our emergency department for palpitation, sweating and headache due to hypertensive crisis (BP 190/115). He lives in Italy for about two years. His medical history is neurofibromatosis, there is no history of tobacco, alcohol, or illicit drug use.

Last year he was admitted to another hospital for weakness of the left side, there was found low-grade glial tumors in the brainstem. He refused to perform the radiotherapy.

On admission, the patient is awake, alert, and oriented to time, person. His vital signs are a heart rate of 110 beats/min, temperature is 36.8°C, his Blood pressure 190/110, and respiratory rate of 16 breaths/min.

Pulmonary auscultation reveals normal breath sounds bilaterally. The cardiac rhythm is regular, normal S1 and S2. He had multiple neurofibromatosis over the entire skin, café-au-lait spot on the trunk and a large skin nodules on the extremities.

In our patient a CT scan of the abdomen, chest: showed diffuse pulmonary nodules.

Urinary catecholamines were markedly increased.

Diagnosis:

Extraadrenal-thoracic Pheochromocytoma was diagnosed.

Conclusion:

NF-1 is an autosomal dominant multisystem disorder affecting approximately 1 in the 3500 people, pheochromocytoma occurs in 0,15-5,7% of patients with NF-1. (2)

After diagnosis of NF-1, patients who have episode of hypertension, sweating, headache and palpitation should be evaluated for Pheochromocytoma.

P272 Case Presentation

A SYNCOPE CASE THAT REQUIRES EMERGENT PERICARDIOCENTESIS: CARDIAC TAMPONADE

O. Kaplan, H. Topacoglu, S. Sadıllıoglu

Emergency Department, Istanbul Eğitim ve Araştırma Hastanesi, Istanbul, Turkey

Corresponding author: Mr Kaplan Onur (kaplan2852@yahoo.com)

Key-words: cardiac tamponade ; syncope ; pericardiosentesis

GİRİŞ

Kalp tamponadı azalmış ventriküler dolum ve sonraki hemodinamik bozulma ile sonuçlanan perikardiyal boşlukta sıvı birikmesi ile oluşan bir klinik sendromdur. Tamponad acil bir tıbbi durumdur ve komplikasyonları akciğer ödemi, şok ve ölümdür. Genel mortalite riski tanı hızı, sağlanan geçici (perikardiyosentez) ve kesin tedavi ve tamponadın altta yatan nedenine bağlıdır. Tedavi edilmeyen olgularda ölüm hızlı ve kaçınılmazdır.

OLGU

Acil servise 46 yaşında erkek hasta nefes darlığı ve göğüs ağrısı şikayeti ile getirildi. Tıbbi öyküsünde acil servise getirilmeden

once efor dispnesi sonrası olan ani bilinç değişikliği ve nefes darlığı ile bir sağlık kuruluşuna götürüldüğü ve izlem sonrası rahatlamayan hastanın kuruluşumuza başvurduğu tespit edildi. hastanın gelişinde genel durumu orta-kötü, şuur açık, oryante ve koopere idi. Olgunun ilk değerlendirmesinde vital bulguları; tansiyon arteriyel 133/82 mm/Hg, nabız 115/dk, solunum sayısı 32/dk, SO2 92, vücut ısı 36.2 °C olarak saptandı.

Fizik muayenede solunum sesleri bilateral bazallerde ral, jugular venöz dolgunluk ve sağ üst kadranda hassasiyet mevcuttu. Hastanın EKG'sinde sinüs taşikardisi mevcut olup ST/T değişikliği saptanmadı. Nörolojik muayenede anormal bulgu saptanmadı. normal olarak saptandı. Laboratuvar analizinde Hgb 10.9g/dL, glukoz 129 mg/dL, üre 51 mg/dL, kreatinin 0.8 mg/dL, AST 204 IU/L, ALT 242 IU/L, LDH 296 IU/L, CK 81 U/L, CK -MB 27 U/L ve troponin negatif olarak saptandı. Akciğer grafisinde kardiyotorasik oran kalp lehine arttığı ve sağ akciğerde yaygın nonhomojen konsolidasyonlar saptandı. Ayrıcı tanıda kullanılan BT anjiyografide, perikardta en kalın yerinde 4 cm e ulaşan perikardiyal efüzyon, tamponad ile uyumlu görünüm izlendi. Perivasküler, paratrakeal, aorta pulmoner, subkranial ve her iki hiler en büyüğü 15 mm çapına ulaşan multiple lenf nodu dikkati çekmektedir.

Hastaya acil serviste acil perikardiyosentez uygulandı ve hasta klinik olarak rahatladı. Perikardiyosentez sıvısı hücre sayımı ve patoloji için gönderildi ve hasta koroner yoğun bakım ünitesine yatırıldı. Hasta izleminde perikard sıvısının patolojisinde adenokarsinom ile uyumlu hücreler ve PET sintigrafisinde lezyon sonucu bronkoskopi yapıldı. Bronkoskopisi adeno karsinoma tespit edilen hasta onkoloji bölümüne yatırıldı.

SONUÇ

Kardiyak tamponad mortalitesi yüksek, acil tanı ve tedavi gerektiren tıbbi bir durumdur. Acil tanı ve tedavisinin yanı sıra buna sebep olan patolojinde erken tanınması önemlidir. Öyküsünde efor dispnesi nefes darlığı bulunan hastalarda kardiyak tamponad unutulmamalıdır. Kardiyak tamponada sebep olan faktör öncesinde acil perikardiyosentez hayat kurtarıcıdır.

P273 Case Presentation

A RARE CAUSE OF RECURRENT SYNCOPE

A AKGUR (1), G Aydınok (2), O DURAN (3), G OZBAY YENİCE (4), I PARLAK (1), A YAMANOĞLU (3), NG YAMANOĞLU (3)

1. EMERGENCY DEPARTMENT, BOZYAKA TRAINING AND RESEARCH HOSPITAL, İZMİR, Turkey

2. emergency department, bozyaka eğitim araştırma hastanesi, izmir, Turkey

3. EMERGENCY DEPARTMENT, BOZYAKA TRAINING AND RESEARCH HOSPITAL, İZMİR, Turkey

4. EMERGENCY DEPARTMENT, BOZYAKA TRAINING AND RESEARCH HOSPITAL, İZMİR, Turkey

Corresponding author: Mme Özbay Yenice Gökçe (gokce_ozbay@hotmail.com)

Corresponding author: Mme Özbay Yenice Gökçe (gokce_ozbay@hotmail.com)

Key-words: İZONİYAZİD ; HİPOGLİSEMİ ; SENKOP

70 yaşında erkek hasta, acil servise ani bilinç değişikliği ve senkop şikayeti ile yakınları tarafından getirildi. Hasta tam senkop olarak değerlendirilip muayenesi yapıldı. Özgeçmişinde; alerji ya da geçirilmiş operasyon öyküsü yok ancak KOAH ve DM hastalıkları mevcut idi. Kullandığı ilaçların; OAD (Novonorm 1mg tb 3*1, Pioglitazon 1*1) Gabapentin olduğu öğrenildi.

Vitalleri; TA:100/50 mm Hg SS:14/dk Nabız:70/dk SPO2:%98 SKŞ:72 mg/dl olarak saptandı. Fizik muayenesinde;

Genel durum iyi, bilinç açık, koopere, oryante. Kardiyovasküler sistem ve gastrointestinal sistem normal olarak değerlendirildi. Solunum sistemi muayenesinde bilateral ronküs dışında patolojik bulguya rastlanmadı. Nöromusküler sistem muayenesinde; GKS:15 IR+/+ izokorik. Menink irritasyon bulgusu yok, lateralizan motor-

duyu defisit saptanmadı. Dismetri, disdiadokinezi, ataksi saptanmadı. Rektal Tuşe; normal gaita buluşu izlendi.

Çekilen EKG : NSR idi ST-T iskemik değişiklik yoktu. PA akciğer grafisi ve beyin BT: Akut patolojiye rastlanmadı.

Hastanın hemogram ve biyokimya tetkikleri istenerek, monitorize edilip, Ventolin nebul tedavisine başlandı. Hospitalizasyonunun 1.saatinde hasta ve yakınlarından, hastanın 3 gündür bilinç değişikliği ve senkop şikayetleri ile çeşitli acil servislere başvurduğu ancak her defasında hasta düzeliş tetkiklerde herhangi bir patoloji saptanmayınca taburcu edildiği öğrenildi. Eş zamanlı elde edilen laboratuvar tetkiklerinde; WBC:7.1 K:4.7 Hb:10.8 Ca:8.8 PLT:207 Na:134 Üre:44 pH:7.34 Kreatinin:0.85 HCO3:22 Glukoz: 60 olarak saptandı.

Bunun üzerine hastaya %5 500 cc Dextroz başlandı, yarım saatlik SKŞ takibi yapılmaya başlandı ve anamnez derinleştirilerek hastanın bilinç kaybı nedenleri irdelendi. Yakınları hastanın önce kimseyi tanımadığını sonra bilinç kaybı geliştiğini ifade ettiler. Glukoz düzeyinin alt sınırdan olmasından şüphelenilerek, yakınlarına hastanın bilinç değişikliği olduğu sırada herhangi bir müdahalede bulunup bulunmadıkları sorulduğunda; oğlu tarafından hastaya bir bardak şekerli su içirildiği öğrenildi.

Yarım saatlik SKŞ takibi;

30.dakika: 98 mg/dl

60.dakika: 23 mg/dl iv %5 500cc dextroz ve oral alım eklendi.

90.dakika: 220 mg/dl

120.dakika: 66 mg/dl iv %5 500cc dextroz eklendi.

Eş zamanlı oral alım ve ilaç uyumsuzluğu açısından hasta ile görüşüldüğünde, oral alım ve ilaç kullanımının düzenli olduğu ancak 3 gün önce bir cilt hastalığı ile ilgili bir tedavi görmeye başladığı ve o günden beri benzer şikayetleri olduğu öğrenildi. Hastaya dirençli psoriasis'e yönelik profilaktik amaçla izoniyaizid tedavisi başlanıldığı öğrenildi.

Hastaya; Izoniyaizid ve OAD 'lerin sitokrom p450 enzim düzeyinde etkileşimine bağlı OAD metabolizasyonu inhibisyonuna sekonder, dirençli hipoglisemi geliştiği tanısı ile dahiliye konsultasyonu istenilerek internasyonu sağlandı.

Dahiliye servisinde, OAD'ler kesilerek hastaya diaformin 2*1 başlanarak izlemde hipoglisemi gelişmemesi üzerine hasta externe edildi.

P274 Case Presentation

THROMBOLYSIS OF MASSIVE PULMONARY EMBOLISM FOLLOWING AN ANKLE FRACTURE.

S.Charitidou (1), S. Papalexandris (2), S. Koutsoumpou (3)

1. Emergency department, General Hospital Mpodosakeio, Ptolemaida, Greece

2. Orthopaedic, Royal South Hants Hospital, Southampton, United Kingdom

3. Intensive Care Unit, General Hospital Mpodosakeio, Ptolemaida, Greece

Corresponding author: Mme Charitidou Stella (stellacharis@yahoo.gr)

Key-words: Pulmonary embolism ; Ankle fracture ; Thromboembolic disease

Venous thrombosis most commonly occurs in patients with multiple trauma and those undergoing major orthopaedic operations, especially lower limb arthroplasty. The incidence of deep venous thrombosis (DVT) following isolated long bone fractures ranges between 1% and 2%. Pulmonary embolism is underdiagnosed and is reported to happen to half of those who develop DVT. Massive pulmonary embolism in patients with low risk fractures is very rare.

We report the case of a 23 year old man with a lateral malleolus fracture, who suffered a massive pulmonary embolism as confirmed at post-mortem examination. The patient was transferred to the emergency department (ED) within half an hour

after the onset of severe shortness of breath, severe chest pain, discomfort and agitation. His Glasgow Coma Score was 15 on arrival, but he arrested within 5 minutes. Asystole was recorded on the ECG. He was intubated without delay, ventilated with oxygen 100% and resuscitated according to the CPR guidelines. The analysis of arterial blood gasses showed acidosis; pH: 6,25, pCO2: 153,6mmHg, pO2: 16,9mmHg, HCO3-: 13,9mmol/L, BE: - 25,8 mmol/L, Na+: 143,6 mmol/L,K+: 5,38 mmol/L. His medical history was clear, apart from a minimally displaced lateral malleolus fracture, immobilized in a below knee cast, 20 days prior to the attendance to the ED. There was no family history of coagulopathy. His family reported that he had not been on prophylactic anticoagulation. The clinical diagnosis of a massive occluding pulmonary embolus was made; therefore, he was thrombolysed with tenecteplase 10,000IU, IV bolus. Resuscitation was carried out for 60 minutes to no avail and the patient was pronounced dead. The post mortem examination confirmed massive pulmonary embolism.

This case report emphasizes the importance of high index of suspicion for pulmonary embolism, in patients with minimal or very low risk, as assessed with the DVT risk assessment scores. Despite being rare, it is a potentially life threatening condition, therefore treatment should be initiated promptly, even when it is diagnosed on clinical grounds only, especially on the critically ill patient.

P275 Case Presentation

DEEP VEIN THROMBOSIS AND MALIGNANCY

M. Günlap, M. Koyunoğlu, B. Gülünay, AB. Oğuz, S. Gürler, O. Polat, A. Demirkan

Emergency Department, Ankara University Faculty of Medicine, Ankara, Turkey

Corresponding author: Mme Koyunoglu Merve (mervekoyunoglu@gmail.com)

Key-words: deep vein thrombosis ; malignancy ; emergency

Introduction

The Trousseau sign of malignancy is a medical sign found in certain cancers that is associated with venous thrombosis and hypercoagulability. Deep venous thrombosis is associated with a significantly higher frequency of malignancy. The investigations clearly show that detailed screening especially for malignancies is necessary in patients with no known risk factor in etiology. Patients with idiopathic venous thromboembolism(VTE) have an increased risk of occult malignancy or subsequent development of cancer, compared with secondary VTE. Early diagnosis of a malignant disease would be beneficial to the patients and the healthcare centers. In this case we emphasized the relationship between deep venous thrombosis and undiagnosed malignant disease.

Case Presentation

31-year old man presented with a history of left sided inguinal pain. His body temperature, blood pressure, and pulse rate were 36°C, 100/68 mmHg, and 84 beats per minute, respectively. In his medical history, he was diagnosed with DVT six months ago. He also had Diabetes Mellitus(DM) and Graves' Ophthalmopathy. During his hospitalization at the Endocrinology Department, thrombophilia tests were considered all tests except FV Leiden mutation were negative. At this time, single dose long-acting insulin and warfarin treatments were started.

During the initial physical examination, the left inguinal area and testicle showed a severe edema, a heating sensation, and enlarged varicoce veins. Bilateral femoral, popliteal, pedal pulses were palpable. Therefore, for the evaluation of the torsion or epididymitis, scrotal ultrasonography(US) was performed on the

patient and US showed that the bilateral varicocele. The colour doppler ultrasonography showed heterogeneous solid mass lesions in the supero medial femoral region and near the left iliac vein and also thrombosis in the iliac and femoral veins. Following this procedure, Computed Tomography (CT) and Magnetic Resonance Imaging (MRI) were done for precise evaluation. At this time, enoxaparin and warfarin treatments were started. Upper Abdomen and Pelvic CT showed left sided pelvic mass, lung and bone metastases and thrombosis in the iliac vein. Thus, fine needle aspiration biopsy was performed on the patient. Report of the fine needle aspiration biopsy was malignant mesenchymal tumor infiltration findings. Upon receiving comprehensive therapy he was discharged and advised to go to medical oncology department.

Conclusion

A clinical evaluation that includes a comprehensive medical history, physical examination, routine laboratory testing seems to be appropriate for detecting cancer in patients with deep venous thrombosis. An undiagnosed malignancy may be the underlying cause of deep venous thrombosis, particularly in idiopathic cases. Early diagnosis of a malignant disease would be beneficial to the patients and the healthcare centers. In patients with DVT, detection of a mass may alter the treatment plan. More importantly abdominopelvic ultrasonography and computed tomography may enable early detection of the pathology, and thus, early initiation of the treatment. It should be kept in mind that patients presenting with idiopathic DVT tend to be diagnosed with occult malignancy. Clinicians must maintain a degree of awareness in the evaluation of patients with idiopathic DVT.

P276

Case Presentation

PSEUDORADIAL PARALYSIS AS AN ISCHEMIC EVENT IN THE TERRITORY OF THE MIDDLE CEREBRAL ARTERY - A CHALLENGING CASE IN THE EMERGENCY DEPARTMENT. PSEUDORADIAL PARESIS, STROKE, CAROTID ARTERY STENOSIS

H Borcea (1), N Romaniuc (1), M Sabau (2)

1. Emergency Department, Bihor County Emergency Hospital, Oradea, Romania
2. Neurology, University of Oradea Faculty of Medicine and Pharmacy, Oradea, Romania

Corresponding author: Mme Romaniuc Nicoleta (nico_nicole1980@yahoo.com)

Key-words: pseudoradial paresis ; stroke ; carotid artery stenosis

Introduction: The monoparesis as clinical pattern was described in several situations: superficial sylvian infarct, supratentorial and pontine lacunar infarct, capsular and thalamic hemorrhages. Other signs were also described by the medical literature as accompanying the monoparesis: pyramidal syndrome, sensibility disturbances, facial asymmetry, dysarthria.

Material and method: We are going to present the case of a patient that was admitted to the Emergency Department for paresthesias and motor impairment, mainly at the distal level of the upper right limb and with a clinical pattern that raised several issues during the diagnostic process

Case presentation: A 47 year old patient with a history of high blood pressure, during an intensive physical activity, suddenly presents at the upper right limb (the fingers III-IV-V) paresthesias and a significant drop of the muscular strength. After he tried to solve the problem by using antiinflammatory ointments applied locally but without any success the patient refers to the Emergency Department. Very few findings were discovered during the neurologic evaluation. The patient's right hand was in a particular position, with an extended and in abduction thumb and with the

fingers III-IV-V in flexion. With limited prehension the patient is able to grab only small objects and squeezes his fist with difficulty, the closure of the III-IV-V fingers with the thumb is limited and the extension of the same fingers is impossible. No other neurologic signs were found during the examination.

The motor impairment that was limited to the hand has suggested, at the beginning, a single peripheral nerve paralysis, but the clinical pattern was unusual for all the nerves of the hand. The radial nerve couldn't be involved because the patient was able to perform the fist extension, the supination of the hand and forearm, the extension of the IInd finger and the shape of the brachioradialis muscle was very well visible. Also the median nerve couldn't be involved because as a consequence of the median nerve paralysis the hand has a specific position with the IInd and IIIrd fingers extended and also the residual possibility of the flexion of the fingers.

The neurologic impairment had a particular pattern: a sudden occurrence during an effort is unusual for a peripheral nerve paralysis, it usually suggests a cerebro-vascular event.

In that moment we have decided to perform a CT scan of the head. The result was a recent ischemic lesion in the superficial territory of the left Middle Cerebral Artery.

Discussions. Conclusions

The clinical difficulty of the presented case was the unusual pattern of the paralysis located at the hand, without any associated pyramidal signs, facial asymmetry or speech impairment. The central nervous ischemic event was suggested by the way of occurrence and the type of the motor impairment was unusual and couldn't be related to any peripheral hand nerve paralysis. Usually the CT scan shows a normal brain but in that case the CT scan confirmed the suspected cerebral ischemic event. The particular pattern of a paralysis located at the hand could be interpreted in the emergency department as a peripheral nerve paralysis. A correct diagnosis and treatment were established as a consequence of the accurate analysis of the neurologic signs in the general context of the patient's clinical status

Keywords: Pseudoradial paresis, Stroke, Carotid artery stenosis

P277

Case Presentation

RELATION BETWEEN CITALOPRAM AND PULMONARY EMBOLISM

I. Parlak, N. Kahraman, N. Unal, AS. Miran, N. Siliv, FA. Gunduz

EMERGENCY DEPARTMENT, IZMIR BOZYAKA TRAINING AND EDUCATION HOSPITAL, IZMIR, Turkey

Corresponding author: Mme Siliv Neslihan (nesli1411@yahoo.com)

Key-words: CITALOPRAM ; SSRI ; PULMONARY EMBOLISM

A 57 year old female admitted to emergency department because of taking 40 piece of 10 mg citalopram. We learnt that she took the drugs 12 hours before admitting to hospital. As she admitted to hospital, She did not have any complaint.

From her relatives, we learnt that she had anemia and depression and she was using citalopram 10mg tb for a week. Her vital functions were; BP: 121/76 mmHg, RR:16/min, fever: 37,6 C, pulse: 110/min, SBG: 140mg/dl. Her physical examination was normal. We made to drink her active charcoal. Complete blood count and biochemistry tests were all normal. We made a plan for her discharge from hospital after 20 hours following when her vital functions and physical examination were all normal and she had no any complaint. As she was discharged from hospital she had a near syncope and hospitalized again. BB:122/81 mmHg, pulse: 119/dk,

O₂ sat %98, fever:36,9, SBŞ: 139mg/dl. TA: 122/81 mmHg. We learned that she had frequently syncope attacks and she was followed up psychiatry and neurology out patient clinics. While following up O₂ saturation was regressed up to %88 .Posteroanterior chest X-ray was normal and arterial blood gases without O₂ were pCO₂:26.5mmHg,pO₂:61.3mmHg,SO₂:%92,HCO₃:18.3mmol/l .d-dimer:1863 ng/ml (69-232) . With these results, our pre diagnose was pulmonary embolus.

Trombosis was detected at both main pulmonary arteries and leading to all segmental arteries at thorax angio CT. TPA was administered as her coagulation tests were normal. After TPA treatment unfractionated heparin was started.

She had hospitalized to intensive care unit after this treatment. Deep venous thrombosis was not observed at her bilateral lower extremity venous doppler usg.

Her tests which had done after hospitalized for etiology , homocysteine: :8.30mcmol/l(<12),Protein C:58%(72-160),Protein S:55%(60-150), Protein c act.:62%(70-140),protein s act.:90%(55-160),antitrombin act:117%(70-125)fac.VIII:8%(50-150),fac.XI:78%(50-150),factorV

Leiden:Mt/N(heterozigot),Prothrombin(fak.II)gen mut.:N/N(homozygote normal) were assigned.

Discussion:

We examined the patient who took antidepressant drugs of SSRI and then admitted to department of emergency medicine, she had no complaint when she came but while following up, she had tachycardia and oxygen saturation was decreased. And pulmonary embolus was determined. She had taking this drug for a week, and took 40 number before 12 hours of admitted to hospital. DVT was not determined. Although , She had no thrombosis and embolus history known previously, but protein c and s were both low. There is one case at the literature about massive pulmonary embolus after taking SSRI antidepressant. Unlikely, it took antidepressant at treatment dosage for 10 days regularly, and she had dyspnea and confusion. Coagulation parameters were all normal and DVT signs were not mentioned.

P278

Case Presentation

URINARY RETENTION DUE TO CARBAMAZEPINE OVERDOSE

MA Afacan (1), F Büyükcam (1), A Ceylan (2), AB Erdem (3), S Yıldırım (4)

1. Department of Emergency Medicine, Diskapi Yıldırım Beyazıt Training&Research Hospital, Ankara, Turkey

2. Department of Emergency Medicine, Şanlıurfa Training&Research Hospital, Şanlıurfa, Turkey

3. Department of Emergency Medicine, Konya Numune State Hospital, Konya, Turkey

4. Department of Emergency Medicine, Diskapi Yıldırım Beyazıt Training&Research Hospital, Ankara, Turkey

Corresponding author: Mr Büyükcam Fatih (fatihbuyukcam@gmail.com)

Key-words: carbamazepine ; urinary retention ; overdose

A 17 year-old female has taken five carbamazepine (300mg) pills eight hours before in order to commit suicide. She was drowsy, Glasgow Coma scale was 10. Blood pressure, pulse and breath rate were normal. Systemic examinations were normal except neurologic examination. At the 24th hour of pills taken, she suffered from urinary retention. She told that she wanted to urinate but she couldn't. Clinical examination revealed suprapubic tenderness without guarding or rebound, suggestive of distended bladder. Pelvic and gynecological examinations were normal. A urinary catheter was inserted and drained 2200ml of clear urine

intermittently. Kidney function tests, complete blood count, glucose, albumin, sodium and potassium serum concentrations were within normal range. Urine cell count and urine chemistry were normal. Abdomen plain X-ray and ultrasound were normal. After 12 hours, urinary catheter was taken and at 48th hour she was discharged without complication.

Carbamazepine is one of the frequently used antiepileptic drugs. Carbamazepine have adverse reactions like severe central nervous system effects, irreversible bone marrow depression, idiosyncratic reactions and allergic reactions. Carbamazepine-induced urinary retention has been reported before, but some of these cases had additional factors such as peripheral neuropathy [1], Fabry's disease with autonomic dysfunction [2]. In our case there wasn't any history of other chronic diseases or medications. Naranjo rating scale has revealed that the adverse drug event was probable [3].

Chemical relation between carbamazepine and tricyclic antidepressants may explain the occurrence of anticholinergic effects. It is thought that urinary retention due to anticholinergics is secondary to their inhibitory effect on bladder contraction in predisposed patients, particularly in the presence of outlet obstruction and autonomic nervous system dysfunction. This effect results from antagonizing postjunctional excitatory muscarinic receptors M2 and M3 in the detrusor muscle of the bladder interfering with bladder contraction and emptying, thereby facilitating urinary storage and retention [4].

In conclusion, carbamazepine-induced urinary retention should be kept in mind in case of acute overdose.

P279

Case Presentation

URGENT ACTION TO THE SUSPECTED VIRAL ENCEPHALITIS

E. Renilla (1), N. Simarro (1), C. Marín (1), M. Rosado (1), O. Salmerón (1), G. Santos (2)

1. Emergency department, Hospital Universitario Fundación Alcorcón , Alcorcón, Madrid, Spain

2. Anesthesiology and Resuscitation department, Hospital Universitario La Princesa- Madrid, Spain

Corresponding author: Mme Esther Renilla Sanchez Maria Esther (estherrenilla@hotmail.com)

Key-words: Viral encephalitis ; Acyclovir ; Polymerase chain reaction

ABSTRACT: We present a case of a woman of 71 years with a history of high blood pressure, obesity, primary hyperparathyroidism, and depression in treatment with atenolol, doxazosin, enalapril and escitalopram. She is admitted in the emergency department because the family has observed an acute disorientation, agitation and instability since some hours before. Four days ago she suffered a dermal injury at the right hemithorax, reason why she had consulted the same day in primary care, initiating treatment with valaciclovir and cloxacillin.

Physical examination: blood pressure 140/85 mmHg, afebrile, heart rate 90, 98% oxygen saturation, GCS 13/15 (O 4, V 4, motor 5). Conscious, disoriented in the three areas, agitated, restless and nothing collaborator. Absence of rigidity of neck and other signs of meningeal rigidity. Mobilizes the four limbs, inability to rest of the neurological examination for lack of cooperation. Vesiculobullous lesions crusted D4-D5 level right thoracoabdominal ipsilateral breast, suggestive of Herpes Zoster.

Complementary tests: analytical resulting bland except Lymphocytosis (2700/ μ L), Fibrinogen 658.30 mg/dL and C-reactive protein 32.70 mg/L. Computed tomography (CT) prompted head that doesn't reveal any significant alteration. Lumbar puncture (LP)

obtaining CSF with normal pressure, glucose 75 mg/dL (serum glucose 137 mg/dL), protein 70 mg/dL, leukocytes 52 cells/mm³ (98% lymphomononuclears). PCR for VHS is requested.

Suspecting viral encephalitis (probably herpes) the patient was treated empirically with intravenous acyclovir and ceftriaxone and was admitted at Neurology Department.

An Electroencephalographic study of vigil revealed a slow fund activity; diffuse salvos of theta, suggestive of a diffuse encephalopathy of moderate activity. Nuclear magnetic resonance (NMR), which shows only slight parenchymal retraction and leukoaraiosis

At 48-72 hours of admission the patient showed a significant neurological improvement.

PCR of CSF to VHS was negative, but treatment with acyclovir was maintained. A new lumbar puncture (LP) ten days after the admission had the following results: 43.5 proteins, glucose 63, lactate 1.9, Leuci 4 cells/mm³. VZV PCR is requested, which is negative.

After two weeks of treatment with acyclovir, the patient was asymptomatic, without motor deficits or sensitive, targeted and coherent, and Herpes Zoster chest in resolution.

DISCUSSION:

We present, therefore, the case of a viral encephalitis, probably herpetic, whose initial manifestation guide were the skin lesions, which resolved without sequelae after early treatment with intravenous acyclovir.

The typical presentation from the epidemiological point of view [elderly patient (age is the risk factor more important to develop encephalitis) and immunocompetent (the most important virus that caused sporadic cases of encephalitis in adult immunocompetent are VZV and HSV-1)] contrasts with the sequential appearance of skin lesions characteristic of herpetic and then abruptly neurological focality.

Despite the fact that in some published series of encephalitis caused by VZV have submitted in the absence of rash, the appearance of these skin lesions provided the approach of the acute confusional box debut the patient.

The diagnosis of herpetic encephalitis has changed in recent years thanks to the determination of the PCR in CSF, which is fast and of high sensitivity and specificity.

The study of VHS by PCR was introduced gradually since 1990. The positivity of the technique, can spread in the time up to 25 days since the beginning of encephalitis in the absence of treatment and up to 7 days from the start of treatment with acyclovir. Some publications have demonstrated the negativity of the test in the early stages (72 hours or earlier) from the box, becoming positive some days later (1-3). So the results should be interpreted in the context of a clinical suspicion, considering the time that practice test in relation to the onset of symptoms and the previous use of antivirals.

Introduction

We present a case of extreme gastric dilatation causing abdominal compartment syndrome with acute lower limb ischemia. It is a rare but severe complication of anorexia nervosa. Due to early diagnosis and intervention the patient recovered completely.

Case report

A 19-year-old female was admitted to the emergency department (ED) complaining of a painful, white left leg with diminished strength and sensibility. She also complained of severe pain in the lower back and gluteal area.

Medical history consisted of anorexia nervosa. Anamnesis revealed compulsive drinking of milk and water the day before. She had failed to induce vomiting. On physical examination hemodynamic parameters were a heart rate of 151 beats min⁻¹, a blood pressure of 69/42 mmHg and an oxygen saturation of 86%. Examination of the lower extremities confirmed the presence of a white left leg with ischemic mottling. Femoral arterial pulses were absent on both sides. Neurological examination showed dysesthesia and hypoesthesia of the left leg with clear motor deficiency. Some initial blood investigations to be noted are: Na 155 mmol l⁻¹, K 3.4 mmol l⁻¹, urea 70 mg dl⁻¹, creatinine 2.03 mg dl⁻¹, lipase 7664 U l⁻¹, lactate 8.0 mmol l⁻¹. Abdominal computer tomography (CT) showed an extremely distended stomach with compression of the inferior vena cava, aorta and both common iliac arteries. There was an altered perfusion of the left liver lobe due to compression of the portal vein. Furthermore, there was a compression of the right kidney, pancreas, small intestine and colon. Based on these findings the diagnosis of severe acute abdominal compartment syndrome was forwarded.

An emergency gastroscopy was performed to decompress the stomach and to evaluate its viability. The entire stomach was dilated with ischemic signs at the fundus. Approximately 6 liters of gastric fluid were aspirated resulting in immediate decompression of the intra-abdominal organs and vascular structures. Circulation of the lower limbs was restored resulting in improvement of pain and discoloration. Femoral pulses were now palpated. The patient was transferred to the Intensive Care Unit for resuscitation and monitoring. An abdominal control CT scan on the next day showed a partial necrosis of the stomach. An explorative laparoscopy revealed a very large stomach with necrotic discoloration of the fundus and the body of the stomach leading to a sleeve gastrectomy.

The patient slowly recovered and could be transferred to the surgical ward. The early post-operative phase was uneventful and after physical recovery the patient was transferred to the psychiatric clinic for further treatment.

Discussion

Acute gastric dilatation is a rare but severe condition. It is seen as a complication of anorexia nervosa but it can also result from a variety of disorders such as gastric volvulus, abdominal surgery or the superior mesenteric artery syndrome. Patients with acute gastric distention in anorexia nervosa do not generally complain of severe abdominal pain, but mostly of an abdominal discomfort. This may mislead the physician who initially examines the patient. Furthermore, acute gastric distention can cause an abdominal compartment syndrome (ACS) with compression of the intra-abdominal organs and lower limb ischemia. When ACS is present, the risk of fatal outcome is much higher. In our case, the primary complaint of the patient was pain in the left leg and gluteal area. She did not complain of abdominal discomfort. This emphasizes the importance of thorough clinical examination as the focus of diagnosis could have easily been directed towards circulatory problems of another origin.

Initial treatment of acute gastric distention is nasogastric decompression and fluid resuscitation. If there is decompression with persistence of gastric dilatation or if gastric necrosis is

P280

Case Presentation

AN UNUSUAL CAUSE OF ACUTE LIMB ISCHEMIA IN A YOUNG WOMAN

E Van Eetvelde (1), N Van De Winkel (2), L Verfaillie (1), I Hubloue (1)

1. Emergency department, UZ Brussel, Brussels, Belgium
2. Surgical department, UZ Brussel, Brussels, Belgium

Corresponding author: Mme Van Eetvelde Ellen (ellenvaneetvelde@hotmail.com)

Key-words: anorexia nervosa ; acute gastric dilatation ; abdominal compartment syndrome

suspected, surgical intervention must be undertaken. Our case is unique because a laparoscopic approach was used which, to our knowledge, has not been described previously. This was made possible because we were able to stabilize the patient prior to surgery.

Conclusion

In conclusion, this case report emphasizes on the importance of a thorough clinical examination in every patient admitted to the ED. Emergency physicians should be aware of the possible somatic complications of psychiatric disorders such as anorexia nervosa. Early diagnosis and treatment are mandatory in preventing fatal complications.

P281

Case Presentation

LIFE THREATENING RETROPERITONEAL HEMATOMA: RENAL CYST RUPTURE INDUCED BY LAPAROSCOPIC CHOLECYSTECTOMY?

H BEYDİLLİ (1), M ÇETİNKAYA (2), N ÇULLU (3), T MUT (2), R TÜRKEY (4)

1. Emergency Department, Muğla Sıtkı Koçman University Medical School, MUĞLA, Turkey
2. UROLOGY, Muğla University Training and Research Hospital, MUĞLA, Turkey
3. Radiology department, Muğla Sıtkı Koçman University Medical School, MUĞLA, Turkey
4. Radiology, Bursa Çekirge State Hospital, BURSA, Turkey

Corresponding author: Mr Beydilli Halil (hbeydilli@hotmail.com)

Key-words: Emergency Retroperitoneal Hematoma ; Renal Cyst Rupture ; Laparoscopic Cholecystectomy

Introduction: Spontaneous retroperitoneal hemorrhage is a rare event. Generally, abdominal aortic aneurysm, adrenal gland disorders and pancreatitis are the underlying reasons. Renal cysts, renal cell carcinoma and renal angiomyolipoma may be regarded as the less common causes. Herein, we give the clinical details of a patient who was treated in our hospital due to retroperitoneal bleeding and was initially misdiagnosed as pyelonephritis.

Case report: A 61 year-old female patient was referred to our clinic with a sudden-onset left flank pain. There was no history of trauma. Her initial laboratory findings were; WBC count 14800, hemoglobin: 11, hematocrit 34 and spot urine sample positive for pyuria. Initial ultrasonography revealed a suspicious area measuring 30*40 mm in dimensions. This finding was reported to be a focal pyelonephritic focus which seemed adequate to explain the whole clinical picture. Upon admission to our clinic, her vital signs were as follows; blood pressure: 102/57 mmHg, pulse rate: 103 beats/min, respiratory rate: 24/min and core temperature: 37.1 °C. Physical examination revealed costovertebral angle tenderness. She was hospitalized for pain stabilization and administered wide-spectrum antibiotics after obtaining urine sample for culture and antibiotic sensitivity test. Afterwards, her pain increased in intensity and radiated to cover the left upper quadrant. Repeated blood count revealed a major drop in hemoglobin and hematocrit value to 7,3/21. Ultrasonography confirmed the presence of a 51*65 mm mass bulging from the lower pole. Computerized tomography demonstrated a dense-fluid containing cyst originating from the upper pole and filling the pararenal region. Additionally, there was a contour disorganization on the inferoposterior aspect, being suspicious for a parenchymal rupture or laceration. A total of 5 units of erythrocyte suspension and 3 units of fresh frozen plasma was transfused. Hematoma showed a minimal expansion on repeated CT scan. However, hemodynamic findings and Hgb/Htc values remained stable. Further inquiry of the patient's medical history clarified that she

underwent a laparoscopic cholecystectomy one month ago. Abdominal ultrasonography which was performed before cholecystectomy, showed a 29*30 mm, complex cystic lesion which deserved further investigation by means of MRI as reported by the radiologist. Contrast enhanced MRI revealed the etiology retroperitoneal hemorrhage in this particular case. There was a complicated cyst being ruptured from the inferior aspect and containing a solid component on the superior side. Based on these findings she was scheduled for renal exploration. During the operation, the massive perirenal hematoma (15 cm) rendered any kind of nephron-sparing surgery impossible. Therefore, we performed radical nephrectomy and the solid component of cystic mass was reported to be a Fuhrman grade 2, clear cell RCC on final histopathologic examination.

Conclusions: Renal cystic masses with suspicious ultrasonographic features should be investigated with contrast enhanced tomography and/or magnetic resonance imaging. Laparoscopic interventions may induce the destabilization of renal cystic masses.

P282

Case Presentation

CHILDHOOD CRANIOCEREBRAL TRAUMAS CAUSED BY FALLING TELEVISIONS

M. ÇAKIR, H.H. KADIOĞLU, M. ZEYNAL

Neurosurgical Department, Ataturk University Medical Faculty, Erzurum, Turkey

Corresponding author: Mr Bayramoglu Atif (atifbay@gmail.com)

Key-words: trauma, ; head injury, ; televisions, tip over

Objective: To obtain a detailed description and to assess outcomes from trauma caused by television sets toppling onto children during recent three years.

Methods: The records of eleven patients 0 to 9 years of age with television-related head injuries during recent 36 months were retrospectively reviewed. The authors analyzed demographic information, Glasgow coma scale (GCS), length of hospital stay, additional injuries sustained the as scalp, cranium and brain, and Glasgow outcome scale.

Results: There were 11 children injured following televisions tipover during the years analyzed. Eighty-two percent of the children were aged 1–3 years; 73 % were girls. All of the cases were injured at home and all of them have a skull fractures. Most children (72.7 %) had GCS scores of over 13. The mean length of hospitalization was 6.5 days; 81.2 % of the cases discharged home; 2 children (18.2%) died in the hospital.

Conclusions: The data indicate that television-related injuries are a growing source of danger. Because a more hardly education to caution parent about the hazard of injury must be implemented and specific, age-related recommendations should be proposed.

P283

Case Presentation

A VERY RARE CAUSE OF ILEUS IN EMERGENCY DEPARTMENT: MECKEL'S DIVERTICULUM

O. Tutar (1), M. Velidedeoglu (2), O. Simsek (2), YS. Akdeniz (3), I. Yanik (1), A. Kocael (3), I. İkizceli (3)

1. Department of Radiology, Istanbul University Cerrahpasa Medical Faculty, Istanbul, Turkey
2. Department of General Surgery, Istanbul University Cerrahpasa Medical Faculty, Istanbul, Turkey
3. Department of Emergency Medicine, Istanbul University Cerrahpasa Medical Faculty, Istanbul, Turkey

Corresponding author: Mme Akdeniz Yonca Senem (dryonca@mynet.com)

Key-words: ileus ; adult ; Meckel's diverticulum

Introduction

Meckel's diverticulum is the most common congenital abnormality of the gastrointestinal tract affecting 2% of the general population. It is a true diverticulum containing all layers of the intestinal wall. It is well known that this structure is a remnant of the omphalomesenteric duct connecting the yolk sac to the intestinal tract during fetal life.

Most of the Meckel's diverticula are discovered incidentally during a surgical procedure performed for other reasons. Only 4% of patients with an MD develop complications that include bleeding, perforation, inflammation, or obstruction. Various mechanisms of small intestinal obstruction from Meckel's diverticulum include; diverticular intussusception, which is the most common mechanism, volvulus from persistent attachment to the umbilicus, Littre's hernias, foreign body impaction, diverticulitis, adhesions and neoplasms.

Other very rare cause of obstruction due to Meckel's diverticulum develops, as in our case, with trapping of a bowel loop by a mesodiverticular band. In this report we present a 36-year-old male manifested by ileus because of a mesodiverticular band of a Meckel's diverticulum.

Case Report

A 36-year-old male admitted in emergency department with abdominal pain and vomiting. The plain abdominal x-ray showed multiple air-fluid levels. The abdominal computerized tomography exposed a tubular structure originated from the antimesenteric side of an ileal segment, at the level of the right iliac artery bifurcation that elongate through umbilicus and compress distal ileal segments causing obstruction. According to radiologists this structure was a mesodiverticular band of Meckel's diverticulum. By diagnostic laparoscopy a mesodiverticular band that causes dilatation of a proximal ileal segment appeared. With open surgery the resection of the Meckel's diverticulum and wedge-resection of an ileal segment at the diverticulum level was performed.

Conclusion

Meckel's diverticulum is the most commonly seen congenital gastrointestinal abnormality. It is two times more frequent in males. In general before age of two it becomes symptomatic. Complications are usually manifested before age of twenty. The clinical presentation is variable according to age. Proportionally with the age the rate of complication increases. In the emergency department a small bowel obstruction in consequence of a Meckel's diverticulum is very infrequent; also a diagnosis of a Meckel's diverticulum by computerized tomography is uncommon. We report a case of adult intestinal obstruction caused by a mesodiverticular band of Meckel's diverticulum. The important aspect of our case is a clear demonstration of the mesodiverticular band of a Meckel's diverticulum with preoperative CT findings. According to our literature review this is the most and the first demonstrative mesodiverticular band image published until now.

VERY RARE CAUSE OF INTESTINAL OBSTRUCTION: A CASE OF TRANSMESENTERIC HERNIA

O. Tutar (1), P. Kocael (2), O. Simsek (2), A. Kocael (3), YS. Akdeniz (3), H. Kabuli (2), I. Ikizceli (3)

1. Department of Radiology, Istanbul University Cerrahpaşa Medical Faculty, Istanbul, Turkey

2. Department of General Surgery, Istanbul University Cerrahpaşa Medical Faculty, Istanbul, Turkey

3. Department of Emergency Medicine, Istanbul University Cerrahpaşa Medical Faculty, Istanbul, Turkey

Corresponding author: Mme Akdeniz Yonca Senem (dryonca@mynet.com)

Key-words: Intestinal obstruction ; internal hernia ; transmesenteric hernia

Introduction

Internal hernia is a condition that develops in consequence of protruded viscus, most commonly small bowel, through a peritoneal or mesenteric aperture, resulting in its encapsulation within another compartment. It is a very rare cause of bowel obstruction and the diagnosis is quite difficult. Especially it must be considered for differential diagnosis in patients with intestinal obstruction without any history of operation. We describe a case of 51-year-old female with transmesenteric hernia without any history of surgery.

Case Report

51-year-old female presented in emergency department with nausea, vomiting and abdominal pain. She didn't have any history of surgery. In physical examination she had severe, diffuse abdominal tenderness and distention. Plain abdominal x-ray showed multiple air-fluid levels. In laboratory tests she had high CRP level and leucocytosis. The computerized abdominal tomography revealed multiple air-fluid levels and collapsed ileal loops in jejunoileal region with dilated ileal loops in the proximal. Before the surgery she had a hematochezia. The laparoscopic examination exposed small bowel necrosis from the distal jejunum to the proximal ileum. With open surgery a segmenter resection of small bowel and anastomosis was performed.

Conclusion

The autopsy incidence of internal hernia is about % 0.2-0.9. Among the cause of small-bowel obstructions the incidence is 0.6 % to 5.8 %. These hernias may be either congenital or acquired; they may also be intermittent or persistent. In the radiologic and surgical literature more than 50% of reported internal hernias have been paraduodenal. Other types of internal hernia which are more infrequent include transmesenteric, prececal, intersigmoid, supra or perivesical, foramen of Winslow, and, rarely, omental hernias. According to recent studies transmesenteric hernias have become the most common subtype usually due to Roux-en-Y anastomosis constructions in operations. They can be fatal because of the risk of strangulation. The diagnosis is very important and difficult. The abdominal computerized tomography has a significant role in the diagnosis. The mortality becomes 50 % in case of delays in diagnosis. Identification of a transmesenteric hernia is a diagnostic challenge. It must be considered for the differential diagnosis of bowel obstruction in emergency department.

P285

Case Presentation

BEHAVIORAL DISORDER:SYMPTON OF BRAIN METASTASIS ALARM

E. Renilla (1), N. Simarro Gránde (1), C. Marín (1), M. Rosado (1), O. Salmerón (1), G. Santos (2)

1. Emergency departmet, Hospital Universitario Fundación Alcorcón- Alcorcón, Madrid, Spain
2. Anesthesiology and Resuscitation department, Hospital Universitario La Princesa- Madrid, Spain

Corresponding author: Mme Esther Renilla Sanchez Maria Esther (estherrenilla@hotmail.com)

Key-words: Behavioral disorder ; brain mestastases ; breast cancer

Clinical patient history: Woman 40 years old, diagnosed of an infiltrating ductal carcinoma of the breast (stage IIIA) 5 years before. She was treated with neoadjuvant chemotherapy (adriamycin), total mastectomy and left axillary lymphadenectomy, adjuvant hormone therapy (tamoxifen, GnRH analogues), and additional radiotherapy. After regular checks by Oncology and Gynecology departments, she was on complete remission without treatment, when she was admitted in our Emergency department. Chief complaint : The patient's husband, refers an alteration of her behavior since four months ago, coinciding with the completion of the hormone treatment (analogues of GnRH and tamoxifen); a deterioration of her mood, at the beginning with irritability and aggressiveness, and after with negativity, apathy, personal neglect and even poor care of their children; the primary care physician labeled it of depression and began treatment with antidepressants without improvement. The patient worsened and on the day of the admission, she was found sitting on a bench, refusing to lift due to an abdominal pain and with an isolated episode of urinal sphincter relaxation, without loss of consciousness. Once in our emergency department triage she was examined by the psychiatrist. The psychiatrist increased the dose of fluoxetine and added to this treatment aripiprazole 5 mg every 24 hours. After that, he submitted us the patient to our medical emergencies for titration the abdominal pain. Physical examination: TA 120/70, FC 75 bpm, Sat 98%, temperature 36°C. Careless overall appearance, poor hygiene, with passive attitude as well as affordable and collaborator, with negative mood. Without alterations of sensory perception, or ideas of death or autolytic ideation. Aware and oriented to person, place and time, collaborator excepting that she refuses to get up, fact which limits the rest of the physical examination. Normal cranial pairs, strength and sensitivity surface of limbs preserved, normal reflexes, and symmetrical. Rest of the physical examination is not possible by the lack of cooperation of the patient.

The husband insists that her wife has never acted like that, and refers an important change in her character. The absence of previous psychiatric illness added to the cancer history of the patient, and the limited physical examination, forced to rule out an organic cause of these symptoms. A complete analytical and urgent cranial CT were done.

COMPLEMENTARY EXAMINATIONS: Hemogram, coagulation, and general biochemistry with normal results. CT showed a single mass in the frontal region, centered, that could be related to large meningioma of the sickle with atypical features, or also, considering the cancer history, an extraaxial metastasis.

TREATMENT: The initial treatment was intravenous corticoids. Nuclear magnetic resonance (NMR) was made. The patient was admitted on Neurosurgery department, where surgical resection of the mass was done. Pathology report: metastasis of infiltrating ductal carcinoma of the breast. The patient received also

radiotherapy treatment. After the treatment the patient had a good postoperative cognitive situation, with minimal motor symptoms likely related to myopathy secondary to steroids, as well as a slight deficit at the fronto-basal level, with an excellent clinical evolution.

DISCUSSION:

1. The patient was initially diagnosed of depression in the context of a cancer of the breast, subjected to hormonal treatment, and in a social situation of unemployment. All those circumstances masked during months the possibility of an organic origin of the symptoms. Revised subsequently, the patient did not show the diagnostic criteria of DSM - IV for depression. In cancerous patients average prevalence of depression is 25%
2. The incidence of brain metastases in patients with cancer metastatic breast varies from 14 to 16% Our patient immunohistochemical study was positive HER-2, negative RE and RP. None of these subtypes implied suspicion of brain metastasis.
3. There are described cases of patients with large brain tumors and whose sole symptomatology is apathy.
4. Hence the importance in emergency department of acute alterations in behavior is to make a comprehensive clinical examination, and if the data provided by the patient or her/his environment give rise us to other diagnostic suspicion, it is always important to discard the possible organicity of the symptoms.

P286

Case Presentation

A CASE OF PNEUMOPERICARDIUM AFTER A PENETRATING CHEST INJURY WITH ECG FINDINGS

A. Kocael, M. Balta, YS. Akdeniz, I. Ikizceli

Department of Emergency Medicine, Istanbul University Cerrahpasa Medical Faculty, Istanbul, Turkey

Corresponding author: Mme Akdeniz Yonca Senem (dryonca@myynet.com)

Key-words: pneumopericardium ; ECG ; penetrating chest trauma

Introduction

Pneumopericardium is described as the presence of air in the pericardial space. It can be seen most commonly following penetrating chest injuries. There are few reported cases which develop in the context with blunt chest trauma or spontaneously after conditions causing high intrathoracic pressure. The situation can be associated with an underlying cardiac injury. In case of absence of cardiac injury usually it is a self-limited condition requiring no specific therapy. In this case electrocardiogram changes can occur. We report a case of pneumopericardium due to a penetrating chest injury with ECG abnormalities.

Case Report

A 53 year-old male admitted in emergency department with dyspnea and chest pain due to a penetrating chest injury. The physical examination exposed three entrance wound by knife; one over the third intercostals space in midclavicular line at the left hemithorax, the two other over the back in paravertebral region at the T9 vertebra level. The vital signs of the patient were regular. The plain chest X-ray showed air surrounding the heart and subcutaneous emphysema. ECG exposed ST-segment elevation in leads I, II, III, aVF and V3-V6, ST-segment depression in lead aVR. The laboratory tests were completely normal. The computered tomography revealed a pneumopericardium about 1 centimeter of thickness and a mild pneumothorax at the right hemithorax. During observation the dyspnea of the patient deteriorated; the control CT exposed evident pneumothorax at the right side and 4 centimeter thick pneumopericardium. A right tube thoracostomy performed. After seven days of observation and symptomatic therapy the ECG

abnormalities became normal as the patient's symptoms disappear.

Conclusion

ECG abnormalities in patients with chest trauma are usually diverse and non-specific. These findings may be non-specific ST segment or T wave changes, low voltages, axis deviation and dysrhythmias, such as premature atrial contractions, bundle branch blocks and ventricular fibrillation. In our case the ECG findings was mimicking myocardial infarctus. For the diagnosis a plain x-ray of the chest can be sufficient but a computerized tomography allows a more accurate assessment of the pneumomopericardium and concomitant injuries of the chest. Also echocardiogram and transesophageal echocardiogram have an important role for the evaluation of cardiac injury. The measurement of cardiac troponin and CK-MB levels can indicate cardiac injury. Usually this is a self-limiting condition requiring no specific therapy and may initially appear as asymptomatic can suddenly progress into a life-threatening situation. According the literature it has been suggested that the presence of pneumomopericardium is an indication for surgical intervention. However according to recent studies it may be an indication for conservative treatment in carefully selected patients. So continuous cardiac and vital signs monitoring and general support treatment is essential for these patients.

P287

Case Presentation

COMPULSIVE GASTRIC LAVAGE DUE TO BORDERLINE PERSONALITY DISORDER COMORBID WITH OBSSIVE-COMPULSIVE DISORDER

N. Yucel (1), A. Yucel (2), M. Saritemur (3), M. Uzkeser (3), M. Emet (3)

1. Child and Adolescence Psychiatry Department, Ataturk University Medical Faculty, Erzurum, Turkey

2. Psychiatry Department, Ataturk University Medical Faculty, Erzurum, Turkey

3. Emergency Department, Ataturk University Medical Faculty, Erzurum, Turkey

Corresponding author: Mr Saritemur Murat (muratsaritemur@gmail.com)

Key-words: Borderline Personality Disorder ; Obsessive-Compulsive Disorder ; Emergency

Introduction: Psychiatric patients occur frequently in emergency rooms (ER). Suicide and para-suicide are major psychiatric health problems in the world. Borderline personality disorder (BPD) is a common psychiatric disorder associated with severe functional impairment and also with high rates of suicide. Intensive treatment is needed. Therefore, it is associated with high medical costs. Especially comorbid obsessive-compulsive disorders (OCD) may require specific attention in the treatment of patients with BPD. Here, we present a case that had habitual suicide attempt with known BPD accompanied by OCD.

Case: A 22-year-old female patient presented to our emergency room (ER) with para-suicidal attempt. Her records showed that she had previously admitted to our ER 27 times in the last 62 days period. She had prior psychiatric follow-up irregularly. It was known that the prior diagnosis of the patient was BPD accompanied by OCD. She had been on oral medication for the past five years. Her family stated that she used her drugs irregularly and the treatment was modified occasionally by her psychiatrist. She had used clomipramine 225 mg, carbamazepine 400 mg, and clonazepam 2 mg daily for the last four months. On each admission, she presented to the ER with complaint of drug poisoning and because of the inconsistent information stated by the patient, the doses of drugs which were used for para-suicidal attempt could not be determined sufficiently. But her family reported that she uses her medications for these attempts. Each

time, she was oriented, cooperated and had normal vital signs. She usually refused psychiatric consultation and after a follow-up period in the ER, she was discharged with no complaint. But frequency of admission to the hospital had increased recently. On last admission, she was also oriented and cooperated. She asked for the same doctor as previously. Her vital signs were normal and physical examination was unremarkable. The electrocardiograph and laboratory results were normal. As a management of intoxication in the ER, a nasogastric catheter was inserted, gastric lavage was applied and activated charcoal was given. She began to insist about nasogastric lavage, which is an unpleasant application for majority of patients. Moreover, she was insisting on re-application of lavage procedure. This procedure was applied on all admissions. She stated that her stomach was not washed out adequately. She consulted to psychiatry and hospitalized. The treatment of clomipramine 300 mg/day, carbamazepine 400 mg/day, lorazepam 5 mg/day which was decreased with time and cognitive behavioral therapy (CBT) was performed in the psychiatry clinic. She recovered and discharged on 33rd day. CBT was continued a total of 16 times after discharge. Her out-patient follow-up was regular and there was no admission for last 3 months to the ER.

Conclusion: Psychiatric patients may be difficult to manage in crowded ER. The patients should be consulted to psychiatry instead of satisfying improper demands of the patients. In our opinion, such patients should be followed by the same psychiatry doctor and the doctor should be informed after each ER admission. Consequently, proper treatment will provide improvement of social life and reduce both the costs to society and admissions to the ER.

P288

Case Presentation

HYPOKALEMIC PERIODIC PARALYSIS ASSOCIATED WITH INSULIN RESISTANCE

M. Saritemur (1), R. Demir (2), N. Bulut (3), A. Bayramoglu (1), A. Akoz (1), M. Emet (1)

1. Emergency Department, Ataturk University Medical Faculty, Erzurum, Turkey

2. Neurology Department, Ataturk University Medical Faculty, Erzurum, Turkey

3. Internal Medicine Department, Ataturk University Medical Faculty, Erzurum, Turkey

Corresponding author: Mr Saritemur Murat (muratsaritemur@gmail.com)

Key-words: Hypokalemic periodic paralysis ; Insulin resistance ; Hyperglycemia

Introduction: Hypokalemic periodic paralysis (HPP) is characterized by reversible attacks of muscle weakness associated with decreased blood potassium levels. Hypokalemia may result with alteration in transcellular distribution of potassium and/or renal or extra-renal losses of potassium. It is important to make the diagnosis promptly because different therapies are required for each type.

Case: A 31-year-old male patient was presented to our emergency room (ER) with complaints of weakness in the legs and arms. He stated that weakness in the extremities was firstly occurred 3 months ago and recovered without treatment. He admitted to a hospital with pain in both legs the night before, and an analgesic was given before discharge. He could not move his legs and arms when he woken up in the morning. His symptoms were accompanied by shortness of breath. There was no difficulty in swallowing, loss of sensation, visual disturbances, or urinary-fecal incontinence. The medical history of patient's family was unremarkable. Before the beginning of these symptoms, he had not taken any drug, not eaten a heavy meal or not performed a heavy exercise. On physical examination, he was oriented and

cooperated. His heart rate was regular with 105/min and other vital signs were normal. The patient's cardiac and respiratory examination was unremarkable. The neurological examination revealed normal eye movements and isochoric pupils without nystagmus. The muscle strength in the lower and upper extremities were 1/5 and 3/5, respectively. There was no sensory deficit. Deep tendon reflexes were hyperactive and normal in the lower and upper extremities, respectively. Electrocardiography revealed sinus rhythm with 102/min and prominent U waves. Computed tomography of the brain was normal. Abnormal laboratory results were as follows: glucose: 230 mg / dL, K: 2.02 mmol / L, P: 0.9 mg / dL, and insulin: 171 µU / mL (2.6 to 24.9). Thyroid tests were normal. Although the electromyography (EMG) showed normal compound muscle action potential (CMAP) of upper extremities, amplitude of some nerves increased approximately 50% after 10 seconds of exercise. On the lower extremities, CMAP of tibial nerve had small amplitude and nerve conduction velocity was normal. There were no activation and motor unit potentials of muscles when needle EMG was performed. He was admitted to neurology clinic and potassium replacement was initiated. He was considered to have insulin resistance and metformin was started by internal physicians. The patient's symptoms completely improved after the treatment and he was discharged 3rd day of admission with no complaint.

Conclusion: In patients diagnosed as HPP, causes such as endocrine diseases should be considered in addition to genetic causes. We thought that insulin resistance is responsible about hypokalemic paralysis in this case. Early diagnosis and treatment of disorder will reduce the attacks of paralysis.

P289

Case Presentation

BEDSIDE ULTRASONOGRAPHY IN THE EMERGENCY DEPARTMENT: SAVING ANOTHER LIFE

YA Altuncı, O Bozkurt, S Kıyan, D Sezdi, E Tavas

Emergency Department, Ege University Faculty of Medicine, İzmir, Turkey

Corresponding author: Melle Tavas Ayse Ece (ecetavas@gmail.com)

Key-words: Bedside ultrasonography ; Leriche syndrome ; Aortic thrombosis

Introduction: Ultrasound has entered emergency medicine practice in 1994, when Mater et al published the first emergency ultrasound curriculum(1). Being an emergency medicine technique that is easy to learn and perform, ultrasound has become an important aiding tool for emergency medicine physicians. Many life threatening and emergent diseases such as pericardial tamponade, pneumothorax, aortic dissection can be diagnosed by bedside ultrasound. Thus, most countries have added ultrasonography to their residency training programme(1). To date, ultrasound is used for purposes like FAST (focused sonography for trauma), assessing the patient's volume status by evaluating inferior vena cava, performing basic echocardiography and aiding procedures like central venous line catheterization. The use of ultrasound in emergency medicine practice can save lives by aiding time critical decisions (1) and discovering catastrophes such as aortic emergencies(3). In this poster, we aimed to emphasize the importance of ultrasound in emergency medicine once more, since ultrasonography can both aid in gaining speed in the process towards diagnosis of life threatening diseases.

Case: Seventy eight year old male presented to our emergency medicine department with abdominal pain for the past seven days. His past medical history was significant for hypertension, and coronary artery disease and smoking. His initial vitals were within

normal limits. Abdominal examination revealed diffuse tenderness. Both lower extremities were cold and pale, and peripheral pulses were weak, motor function was preserved. Laboratory tests were ordered and bedside ultrasound was quickly performed with the differential diagnosis of aortic thrombosis and aortic aneurysm. An echogenic material that completely occluded the aortic lumen from below the level of the renal arteries to the iliac bifurcation was seen. Cardiovascular surgery was consulted as the patient was rapidly sent to thoracoabdominal contrast enhanced CT for further assesment. Blood tests showed no abnormality except D-Dimer:3927. CT scan revealed that the distal aortic lumen was occluded below the level of the renal arteries. The patient was diagnosed as Leriche Syndrome and admitted to cardiovascular surgery ward.

Discussion:

Emergency bedside ultrasound has now become part of the standard of care for several indications including aortic emergencies(2). Emergency bedside ultrasound has been shown to be accurate when performed by physicians with accurate training(4). Ultrasound has emerged as an excellent non-invasive modality to diagnose aortic emergencies(3). In our opinion, the presence of a portable ultrasound in an emergency department and the experience of the residents in performing ultrasonography makes it easier to manage many situations, providing early diagnosis and thus, early treatment. In our emergency department, there is a portable ultrasound and every resident attends an ultrasonography course in the first year of residency. Therefore, each resident is skilled at performing ultrasonography. The skill of the resident has sped up the time of diagnosis in this case.

Severe abdominal pain, severe back pain and the absence of peripheral pulses should prompt ultrasonographic evaluation, since these symptoms may occur due to serious pathologies like aortic aneurysm and thrombosis(3). Leriche syndrome, also referred to as aortoiliac occlusive disease, is due to thrombotic occlusion of the abdominal aorta just above the site of its bifurcation. The characteristic symptoms include inability to maintain penile erection, fatigue of both lower limbs, intermittent bilateral claudication with ischemic pain, and absent or diminished femoral pulses along with pallor or coldness of both lower extremities, absent or diminished femoral pulses (6). In our case, the patient had both abdominal pain and weak peripheral pulses. Performing emergency ultrasound in this patient helped us to speed up the diagnosis.

Conclusion: Emergency medicine physicians, who have taken ultrasonography training, use it frequently in daily practice and this helps speeding up the diagnosis of life-threatening diseases.

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P290

Case Presentation

A RARE AND DIFFICULT DIAGNOSIS IN THE EMERGENCY DEPARTMENT: RENAL CORTICAL NECROSIS

YA Altuncı, S Kıyan, D Sezdi, E Tavas

Emergency Department, Ege University Faculty of Medicine, İzmir, Turkey

Corresponding author: Melle Tavas Ayse Ece (ecetavas@gmail.com)

Key-words: Renal ; Cortical ; Necrosis

Introduction:

Renal cortical necrosis (RCN) is a rare cause of acute renal failure. The incidence of renal cortical necrosis is about 6% among acute renal failure patients. RCN is caused by the significant decrease of renal arterial blood flow, secondary to reasons such as vascular spasm, microvascular injury, or intravascular coagulation. We present this case to draw attention to the fact that renal cortical necrosis was diagnosed in a patient with no risk factors for renal cortical necrosis, who presented to the emergency department with renal colic-like symptoms and underwent further studies because his symptoms did not resolve.

Case:

A 67 year old male, with no previously known disease presented with left flank pain. He reported that one day ago he came to the emergency department with the same symptoms, he was diagnosed as renal colic and was sent home with an analgesic prescription. However, his symptoms did not resolve. The vital signs were within normal limits. Physical examination revealed left costovertebral angle tenderness. Laboratory work-up showed no pathological finding except D-Dimer=1232 and LDH=1848. The ECG showed normal sinus rhythm. Since his pain did not resolve with analgesics, contrast enhanced computer tomography (CT) was planned, with the differential diagnosis of renal artery thrombosis, renal cortical necrosis and renal vein thrombosis. The CT scan revealed a filling defect in the posterior branch of the left renal artery, perinephritic fluid around the left kidney and diffuse hypodense area at the posterior part of the left kidney, suggesting renal cortical necrosis. The patient was consulted by urology and cardiovascular surgery and interventional radiology. Because the renal functions and urinary output were normal, and because there was only partial unilateral injury, the three specialties did not plan surgical intervention. The patient was started on daily enoxaparin 0.4cc 1*1 and discharged, was asked to come for follow up in 2 days.

Discussion:

Renal cortical necrosis (RCN) is a rare cause of acute renal failure, but 30-50% of patients with this disease tend to develop chronic renal failure, requiring dialysis and transplantation. Risk factors for renal cortical necrosis include hemolytic uremic syndrome, nephrotic syndrome, trauma, contrast media, sepsis, shock, poisons, snakebite, NSAIDs, obstetric causes and hyperacute kidney transplant rejection.

The patient may present with abdominal or costovertebral pain and tenderness, hematuria and decreased urinary output. None of these risk factors were present in our patient. The physician must consider renal colic, renal infarction, renal vein thrombosis and renal artery thromboembolism in the differential diagnosis. Diagnosis can be made with ultrasonography, renal angiography but contrast enhanced CT is the most sensitive imaging modality. Treatment consists of restoring hemodynamic stability, treating the underlying cause and initiating early dialysis. The most important prognostic factor is the extent of necrosis. If untreated, the mortality can be as high as 50%. Renal cortical necrosis is a disease

that generally affects both kidneys at the same time, because of the underlying causes (sepsis, shock, HUS, hypercoagulability, etc.). In rare cases, unilateral kidney damage occurs. This is mostly due to thrombosis or emboli. In our case only the left kidney was affected, due to the occlusion of the posterior segment of the left renal artery. Generally, renal cortical necrosis causes irreversible kidney failure leading to dialysis. However, in our case, there was no kidney failure at all. This is probably due to the fact that the necrosis was unilateral and partial, with no serious underlying disease. The patient was discharged from the emergency department, without any need for surgical intervention. For this reason, our case is different from other renal cortical necrosis cases described in literature.

Conclusion:

Renal cortical necrosis is a rare cause of flank pain, kidney failure and hematuria. However, kidney failure might not be present in cases where only one kidney is affected and the other kidney is functioning normally. Therefore, the clinician should keep in mind that renal cortical necrosis takes place in the differential diagnosis of flank pain. It should be kept in mind that renal cortical necrosis can also be seen in patients who have no predisposing factors; and abdominal computerized tomography should be considered in a patient whose symptoms do not dissolve.

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P291

Case Presentation

THE ATYPICAL AORTIC DISSECTION

S. Battal

Acil Tıp, Gönen Devlet Hastanesi, Balıkesir, Türkiye

Corresponding author: Mr Battal Selvet (slvt_112@hotmail.com)

Key-words: acil servis ; böbrek ağrısı ; aort diseksiyonu

GİRİŞ

Akut aort diseksiyonları, ölümle sonuçlanabilecek acil kardiyovasküler durumlardır ve klasik olarak ani, şiddetli, yırtıcı göğüs, sırt, bel ve karın ağrısıyla karakterizedirler. Genellikle ileri yaşlarda sık görülmekle birlikte kadınlara oranla erkeklerde daha sık rastlanılmaktadır. Etiyolojisinde genellikle hipertansiyon rol oynar. Hipovolemik şok, miyokard infarktüsü, kardiak tamponad en önemli ve ölümcül komplikasyonlarından. Perikardial, torasik ya da abdominal kaviteye rüptür olabilir.

Bu hastalar daha çok yırtıcı tarzda göğüs ve sırt ağrısı ile acil servise karşımıza çıkar. Bunun yanında nadir de görüle atipik şikayetlerle de acil servise başvurulabilirler. Bu dediğimiz atipik bulgular ise; hiç ağrı olmaması ya da abdominal, kardiak, nörolojik iskemilerdir. Bu nedenle bu gibi yakınmalarla acil servise gelen hastalarda, aort diseksiyonu tanısı mutlaka akılda tutulmalı; ayırıcı tanı, laboratuvar ve görüntüleme yöntemleriyle desteklenmelidir.

OLGU SUNUMU

Elli bir yaşındaki erkek hasta şiddetli yan ve böbrek ağrısı şikayetiyle ambulans ile acil servise getirildi. Öyküsünde yedi yıl

öncesine dayanan hipertansiyon görüldü. Acil serviste şiddetli yan ağrısı ve kusması mevcuttu. Genel durum orta, bilinç açık, koopere ve oryante olan hastanın Glaskow Koma Skalası skoru 15 idi. Vital bulgularına bakıldığında kan basıncı 170/100 mmHg, ateş 36,9°C, solunum sayısı 27 soluk/dakika, nabız 84 atım/dakika olarak saptandı. Ağrı nedeniyle huzursuz olan hastanın karın muayenesinde istemsiz defans mevcuttu. Her iki alt ekstremiteleri bükmesiyle birlikte sol yan tarafında şişlik oluşmaktaydı.

Elektrokardiografide normal sinüs ritmi saptandı. Hastadan renal kolik ön tanısıyla laboratuvar tetkikleri ve görüntüleme yöntemleri planlanarak semptomatik tedavi başlandı. Tam kan sayımı ve biyokimya değerleri normal sınırlar içerisindeydi. Ayakta direkt batın grafisi çekileceği sırada retrosternal şiddetli ve yırtıcı tarzda ağrısı başladığı ifade eden hastanın aort diseksiyonu şüphesiyle alınan dört ekstremiteler kan basıncı değerleri; sol kol 140/90 mmHg, sağ kol 150/90 mmHg, sol bacak 200/120 mmHg, sağ bacak 200/110 mmHg olarak ölçüldü. Tekrarlanan elektrokardiografide V1, V2, V3, V4, V5 ve V6 derivasyonlarında ST segment çökmesi ve T negatifliği saptandı. Renal – abdominal bilgisayarlı tomografi çekilen hastanın tomografisinde; renal arterin üst kısmında diseksiyon hattı izlenmekteydi. Hastaya ağrı tedavisi ve hipertansif tedavi başlandı. Fakat hasta operasyona alınamadan acil serviste ex oldu.

TARTIŞMA VE SONUÇ

Aort diseksiyonunda, intima ve media tabakaları arasında kan akımına neden olan longitudinal yırtılmalar görülmektedir. Gerçek ve yalancı lümenler arasındaki yırtılma aortik rüptüre neden olabilir. Aort diseksiyonlarında erken teşhis ve tedavi büyük önem taşımaktadır. Çoğu zaman atipik bulgularla acil servise başvuran aort diseksiyonlu hastalarda ayırıcı tanı yapılabilmesi oldukça zordur. Hastamızın şiddetli yan ve böbrek ağrısıyla acil servise getirilmesi ilk başta akut aort diseksiyonu tanısını akla getirmemiştir.

Acil serviste çalışılan rutin laboratuvar tetkikleri akut aort diseksiyonu ayırıcı tanısında hekime fazla yardımcı olmaz. Bizim olgumuzda da laboratuvar sonuçlarında herhangi bir anormallik saptanmamıştır. Ta ki hastanın bize içinde bir şeylerin yırtılmış gibi olduğunu söyleyinceye kadar akut aort diseksiyonu düşünülmüdü. Daha sonra çekilen renal-abdominal bilgisayarlı tomografi ile saptandı.

Akut aort diseksiyonu çoğunlukla ölümcüldür. Doğru ve erken tanı ölüm oranını büyük ölçüde azaltmaktadır. Hastalığın tanısında aortografi, bilgisayarlı tomografi, EKO, manyetik rezonans görüntüleme kullanılmaktadır.

Hastamızın başvurduğu belirtilerle akur aort diseksiyonu tanısı konulamadı. Çekilen renal – abdominal bilgisayarlı tomografide renal arterin üst kısmında diseksiyon hattı saptandı.

Acil servise yan ve böbrek ağrısıyla başvuran hastalarda ölümcül bir tabloyla seyreden akut aort diseksiyonları tanısı akıld tutulmalıdır. Şüphelenildiğinde gerekli tetkikler zaman geçirilmeden yapılmalı ve tanı konulmasında geç kalındığında mortalitenin artacağı akıldan çıkarılmamalıdır.

P292

Case Presentation

LOW HEMOGLOBIN LEVEL INDUCED BY MENORRHAGIA

C. Can (1), C. Girgin (2), U. Gulactı (3)

1. Emergency Department, Minister of Elazığ Education and Research Hospital, Elazığ, Turkey
2. Emergency Department, Minister of Bingöl State Hospital, Bingöl, Turkey
3. Emergency Department, Minister of Harput State Hospital, Elazığ, Turkey

Corresponding author: Mr Can Cagdas (drcagdascan@yahoo.com)

Key-words: Iron deficiency anemia ; transfusion ; hemoglobin

Introduction: Anemia is a common problem, affecting an estimated one third of the world's population. By itself, anemia is not so much a disease as a symptom of an underlying process. Worldwide, the most common causes of anemia include iron deficiency, thalassemia, hemoglobinopathies, and folate deficiencies. Severe iron deficiency is relatively low as compared to mild-to moderate iron deficiency anemia. Chronic longstanding anemia might be compensated by the time. And the surprising part of the case is when does it really need to transfusion.

Case Report: A 21-year-old female was referred to our hospital because of lethargy, fatigue, loss of appetite and severe debilitation, which was worsened during the last three months. Vital parameters of the patient was mild tachycardia (110 minutes per minute) and had bilateral leg swelling. The patient was moderately mentally retarded. She has described menorrhagia for a four year. Because of pregnancy-related complications are the most common cause of abnormal vaginal bleeding in women of reproductive age we have sent the patient laboratory values including serum b-human chorionic gonadotropin (b-hCG) value. Serum b-hCG was negatif ,white blood cell counts (WBC) 4900 cells/mm³, hemoglobin 1.9 g/dl, hematocrit 5.3%, mean corpuscular volume (MCV) 48 fl, platelets 124.000/mm³, ferritin 1 ng/ml, total iron binding capacity 383 ug/dl and red cell distribution width (RDW) 75. She was admitted to hematology service. Serum Vitamin B12 and folate levels were within the normal ranges. On peripheral blood smear anisocytosis, significant hypochromia, and microcytosis were present. She was immediately transfused with two units of red blood cells. On the following day the patient's symptoms including tachycardia, debilitation, fatigue and respiratory distress resolved.

Conclusion: Patients with acute blood loss or symptomatic anemia frequently require blood replacement therapy in the emergency department (ED). Although blood replacement therapy is generally safe, it should be understood that certain risks accompany the transfusion of blood and plasma components. Accordingly, emergency physicians must be familiar with and be able to manage adverse transfusion reactions, ranging from self-limited febrile responses to life-threatening intravascular hemolysis.

Here, we have to emphasize the significance of avoiding unnecessary blood transfusions even in the setting of severe iron deficiency. Our case is practically is an exception and might illustrate the strength of compliance and compensatory mechanisms against severe anemia human body can compensate.

P293

Case Presentation

ELEVATED CREATINE KINASE MB IN A PATIENT WITHOUT ACUTE CORONARY SYNDROME

M. Saritemur (1), O. Gulcu (2), H.I. Tanboga (2), M. Emet (1)

1. Emergency Department, Ataturk University Medical Faculty, Erzurum, Turkey
2. Cardiology Department, Ataturk University Medical Faculty, Erzurum, Turkey

Corresponding author: Mr Saritemur Murat (muratsaritemur@gmail.com)

Key-words: Creatine kinase ; False elevation ; Malignancy

Introduction: Creatine kinase (CK) and CK isoenzymes are commonly used tests to assess cardiac injury. CK-MB is found in the myocardium with 90% but little amounts are found in small intestine, tongue, diaphragm, and uterus. Classically, an elevation in the level of CK-MB is considered as the hallmark of acute myocardial infarction (AMI). We present a patient with high levels of CK-MB and aim to discuss reasons of elevation different from AMI.

Case: A 72-year-old man came to the emergency department (ED) because of shortness of breathing. He denied cough, fever, wheezing, or hemoptysis. He had a history of AMI 5 months before. He had not used alcohol, but had used tobacco for 51 years until 5 months ago. There was no history of diabetes mellitus, asthma, or chronic obstructive pulmonary disease. He had been oral medication for coronary artery disease and hypertension for the last 5 months. On the physical examination in the ED, he had difficulty of breathing, was weak, but oriented and cooperated. The patient's blood pressure was 142/85 mmHg, the pulse rate was 92/min, and the respiratory rate was 24/min. Auscultation of the lungs revealed bilaterally basal rales. The heart examination revealed arrhythmic heart sounds. There was pretibial edema bilaterally on the legs. An electrocardiogram showed a tachycardia at a rate of 102 per minute with atrial fibrillation. A chest radiograph demonstrated a configuration suggestive of hypertensive cardiovascular disease. The CK level was 29 U/L and the CK-MB level was 20.5 U/L. Control values of CK and CK MB were 24 U/L and 25 U/L, respectively. The value of troponin was negative and level of creatinine was 1.9 mg/dL. The level of hemoglobin (Hb) and hematocrit were 10.4 g/dL and 31.4%, respectively. Other laboratory tests were unremarkable. Echocardiography showed akinesis of the left ventricular apical and mid septal segments with low ejection fraction (39%). Heart failure was initially considered and the patient was admitted to the cardiology clinic. His cardiac medication was arranged and because of the low level of Hb, a computed tomography of abdomen was performed and it showed a wall thickening of gastric cardia. A malign appearance of cardia was seen on esophagogastroduodenoscopy and biopsy was performed. The result of pathology was compatible with adenocarcinoma. Therefore, after cardiac treatment he transferred to the oncology clinic.

Conclusion: There are several causes of isolated elevation of CK-MB that have to be considered when faced without any change in total CK or any evidence of myocardial infarction. Malignancies have also been reported as reason for elevated CK MB. Therefore, these must be kept in mind before diagnosing a patient with AMI.

P294 Case Presentation

FATAL CASE OF TYPE A AORTIC DISSECTION PRESENTING AS ACUTE RENAL FAILURE

F. Ozkan (1), MF. Inci (1), S. Bozkurt (2), B. Altunoluk (3), H. Kahraman (4), M. Yuksel (1)

1.Radiology Department, Kahramanmaraş Sutcu Imam University Faculty of Medicine, Kahramanmaraş, Turkey

2.Emergency Medicine Department, Kahramanmaraş Sütçü İmam University School of Medicine, Kahramanmaraş, Turkey

3.Urology, Kahramanmaraş Sutcu Imam University Faculty of Medicine, Kahramanmaraş, Turkey

4.Chest Disease, Kahramanmaraş Sutcu Imam University Faculty of Medicine, Kahramanmaraş, Turkey

Corresponding author: Mr Ozkan Fuat (drfozkan@yahoo.com)

Key-words: Acute renal failure ; Computed tomography ; Aortic dissection

Aortic dissection is a life-threatening illness requiring early diagnosis and treatment. Uncommon early presentations mimicking various illnesses can delay diagnosis. Acute renal failure (ARF) is an uncommon complication of type a aortic dissection (AAD). Presentation with ARF is associated with an increased risk for in hospital death and persistence of renal dysfunction at midterm follow-up in type B aortic dissection but not AAD. We report a case of a type a aortic dissection complicated by ARF, with

a fatal outcome. A 56 year old male was transferred to the emergency service with oliguria and rapid deterioration of renal function. Computed tomography showed type a aortic dissection with near complete collapse of the true lumen at the level of the renal arteries and complicated with left renal infarct. Because of deterioration his general condition during hemodialysis, he was treated with supportive measures including ventilatory support. He died two days after admission. Aortic dissection initially mimicking ARF is rare. Accurate early diagnosis of aortic dissection with indeterminate presentation is crucial.

P295 Case Presentation

AN UNUSUAL CAUSE OF BITE: CRUSH INJURY

E Kacar

Radiology, Afyon Kocatepe University, Medical Faculty, Afyonkarahisar, Turkey

Corresponding author: Melle Ozdinc Serif (drseri03@hotmail.com)

Key-words: bite ; crush injury ; ultrasound imaging

Introduction: The frequent causes of bite wounds are dogs, cats and human. The precise frequency of these injuries can not be defined due to unreported cases. Local infections are a common finding, especially after cat and human bites, up to 50% cases are reported. Besides, the type of biting animal, age and immune status of bitten victim and the location of wound can give rise to different problems. These patients also should be followed up for rabies prophylaxis. We report an intramuscular hematoma produced after a donkey bite without a serious external wound with the ultrasound findings.

Case: Fifty four year old female patient referred to the Emergency Service with a painful swollen left calf developed in last 5 days. On her medical history she had been bitten by a donkey 2 weeks ago and admitted to her family physician where she administered primary wound care, rabies and tetanus prophylaxis. On her physical examination there was a superficial nodule with a diameter of 3cm and few superficial crusts that may be identical with teeth mark on her left calf. Local sign of erythema, edema and warmth or accompanying fever did not recognized. The laboratory tests including complete blood count, erythrocyte sedimentation rate and C-reactive protein were normal. The superficial ultrasound imaging (Toshiba Applio MX, multifrequency, linear probe) of the calf, revealed a mass heterogenous hypoechoic fluid collection which was compatible with abscess or hematoma. Under sterile conditions, drainage of the fluid revealed about 85cc blood collection. The patient is discharged with compression bandage unwrapped. On her control visit after 1 week, the swelling resolved and not recurred.

Result: Although the cause of late hospital admissions after bites is frequently infections, crush injuries should also be kept in mind. Superficial ultrasound imaging at emergency room is a valuable procedure in detecting the level and extent of injury.

P296

Case Presentation

CASE REPORT: AN UNUSUAL EMBOLIC SOURCE

M Autilio, M Carbone, MG D'Adamo, L De Nicola, G Gaudino, F Lamura, M Martorano, E Pennacchio, G Staffa
Emergency department, Azienda Ospedaliera Regionale San Carlo, Potenza, Italy

Corresponding author: Mr Pennacchio Edoardo (vzivol@tiscali.it)

Key-words: Pulmonary embolism ; Cardiac metastasis ; Echocardiography

Introduction: one of the risk factors for pulmonary embolism (PE) is active malignancy. We report a case of PE in a patient with an unique kind of neoplastic lesion.

Case report: P. G., male, 96-year-old. One year before the patient underwent resection of a malignant melanoma of the trunk. He reached the emergency department for dyspnea and syncope. At presentation, the vital signs were the following: BP 100/50 mm Hg, HR 115/min, SpO₂ 88%; the patient was breathless, pale, cold-sweated. A CT scan of the thorax was performed, that showed thromboembolic disease of the main pulmonary vein branch and of the lobar branches on the right and of the lobar superior branch and of segmentary inferior branches on the left. The US compression of the veins of the arms and legs didn't show pathological findings. The patient was admitted to the Emergency Medicine ward and treated with low molecular weight heparin. A bedside echocardiography performed the next day showed a mass in the right atrium through the tricuspid valve during each cardiac systole.

This mass was suspected to be a metastasis of malignant melanoma. The patient died at home 3 months after being discharged; the autopsy wasn't performed.

Conclusions: cardiac metastases are common in patients with metastatic cancer; missing the diagnosis of cardioembolic PE may lead to useless and potentially harmful therapy, such as the positioning of a caval filter (Borsaru, BJR 2007). Echocardiography is essential to suspect the diagnosis and plan the correct therapeutic strategy.

P297

Case Presentation

CASE REPORT: HYPERTROPHIC... BUT NOT COMPLETELY

M Autilio (1), F Cristiano (1), G D'Addeo (1), P Delmonaco (1), L Genzano (2), F Lisanti (1), E Pennacchio (1), M Ricapito (1), G Viggiano (1)

1. Emergency department, Azienda Ospedaliera Regionale San Carlo, Potenza, Italy
2. emergency department, Azienda Ospedaliera Regionale San Carlo, Potenza, Italy

Corresponding author: Mr Pennacchio Edoardo (vzivol@tiscali.it)

Key-words: Acute heart failure ; Hypertrophic cardiomyopathy ; Echocardiography

Introduction: we frequently manage, in the Emergency Medicine ward, patients with acute decompensated heart failure. We report a case of heart failure due to an uncommon form of heart disease. **Case report:** L. A. M., an 84-year-old female. The patient was admitted to the Emergency Medicine ward for acute decompensated heart failure. The vital signs at presentation were the following: BP 130/70 mm Hg, HR 98/bpm, SpO₂ 93%. Rest ECG showed non-specific changes of T waves. A chest US was performed; this examination showed a bilateral pleural effusion and a distension of inferior vena cava. Cardiac US showed an

hypertrophy limited to the apex of the left ventricle, with relative sparing of basal segments (spade-like configuration). A diagnosis of apical hypertrophic cardiomyopathy was made. A therapy with ACE-inhibitors, beta-blockers and intravenous diuretics was started. The patient was discharged 4 days later. Six months later she complained of mild dyspnea on exertion (NYHA II).

Conclusions: apical hypertrophic cardiomyopathy is an uncommon cause of acute decompensated heart failure. Diagnosis is made with the transthoracic echocardiography. It's important not to miss this diagnosis, because of the better prognosis in comparison to the more common forms of hypertrophic cardiomyopathy.

P298

Case Presentation

HAND, FOOT AND MOUTH DISEASE

B ATLI (1), A COSKUN (2), Z DOGAN (3), FM KUKUL GUVEN (2), KA TURKDOGAN (4)

1. EMERGENCY SERVICE, KARABUK STATE HOSPITAL, KARABUK, Turkey
2. EMERGENCY DEPARTMENT, CUMHURİYET UNIVERSITY FACULTY OF MEDICINE, SIVAS, Turkey
3. EMERGENCY SERVICE, BOZYAKA EDUCATION AND RESEARCH HOSPITAL, IZMİR, Turkey
4. EMERGENCY SERVICE, ISPARTA STATE HOSPITAL, ISPARTA, Turkey

Corresponding author: Mme Kukul Guven Fatma Mutlu (mutlukukul@gmail.com)

Key-words: fever ; itchy lesions ; rash

THE CASE: A 38 years old male patient presented to emergency department with a story of weakness, abdominal pain, and diarrhea repeating with varying intervals in the same year which lastly began three days ago, followed by a feeling of metallic taste and odor in the mouth and presence of partially itchy lesions in the base of the hands and feet on the following days. He had not any disease, travelling, animal exposure or drug use in his history.

Physical Examination: General condition was good with a fever of 38.3°C. On the examination; besides scattered ulcer-aphthous lesions in the ground of tongue and palate, disseminated vesicular lesions were observed in the base of the hands and feet. There were few submandibular LAPs, while no organomegaly, murmur or neurological deficits were observed.

CONCLUSION: Differential diagnosis is wide in the patients with rash and fever. A complete medical history and a careful physical examination are essential for a correct diagnosis. Although laboratory studies are useful for a definite diagnosis, the results can not be obtained immediately (1). The most common coxsackie virus is a mild-coursing, highly contagious infectious disease caused by A16 followed by A4-7, A9, A10, B2 and B5. Ulcers occur in the tongue, hard palate and buccal mucosa inside the mouth, following by 2-10 mm diameter oval shaped vesiculopustules lines parallel to the skin lines in the dorsal parts of the hands and feet and the edges of the fingers. It may not involve each three regions. It rarely spreads to the whole body and heals in 5-7 days without scars (2). It is more common in children than in adults (3). Coxsackie virus infections are seen often in the society especially in the summer months. Besides nonspecific febrile diseases and rashes in children, although the infection is generally benign, it can infect the infants if it occurs late in pregnancy and rarely causes to life threatening meningoencephalitis, cardiomyocyte or hepatitis. There is no any specific intervention method for pregnant women. However, infection-related symptoms may be helpful in diagnosis of the severe infections in newborns (4). There is no specific treatment. The disease resolves spontaneously without complications within 7 to 10 days.

In this case, it was aimed to provide supportive care in approach to febrile diseases and rashes, to take the protective measures in

early period and to reduce the use of antibiotics. Causal viruses usually are not identified since they are very common and cause a wide range of clinical pictures. Contact or droplet precautions can be added to the standard measures since the primary ways of transmission are fecal-oral route and respiratory tract. Hand washing is perhaps the most effective form of protection.

P299

Case Presentation

A RARELY ENCOUNTERED SPORT INJURY, DORSAL METATARSOPHALANGEAL JOINT DISLOCATION, A CASE REPORT.

S Ardic (1), YE Eyi (2), I Arziman (1), M Durusu (1), M Eryilmaz (1)

1. Emergency Department, Gulhane Military Medical Academy, Ankara, Turkey
2. Emergency Department, Hakkari Military Hospital, Hakkari, Turkey

Corresponding author: Mr Ardic Sükrü (sukruardic@hotmail.com)

Key-words: First metatarsophalangeal joint ; dislocation ; sesamoid fracture

Introduction:

Sports injuries are one of the common injuries that are presented to emergency department. Joint dislocations are rare among sport injuries. Metatarsophalangeal joint dislocations are extremely rare among joint dislocations and these kinds of injuries are rarely encountered in the literature.

Case Report:

26-year-old male patient was admitted to the emergency department with complaints of foot deformity and pain. The patient said that collided with the goalkeeper during a football match. On his physical examination; There were dorsal and medial angulation on 1. metatarsophalangeal joint. Also there was severe tenderness to palpation. The patient's dorsalis pedis pulse was being felt. An NSAIDs agent was applied to the patient for his severe pain. AP and Oblique radiographs of the foot revealed dorsal dislocation of the metatarsophalangeal joint, and tibial sesamoid bone fracture. After metatarsophalangeal joint dislocation was reduced using closed technique, the dorsalis pedis pulse and finger movements were checked. On post reduction check radiographs, reduction was successful. Also fractured sesamoid bone fragments were attached. Therefore, this dislocation was considered to be Class 2 b.

Then the patient underwent a short leg splint. Elevation, cold application, use of NSAIDs and Orthopaedics Polyclinic control during working hours were proposed to the patient. Short leg cast was applied by the Orthopaedics Polyclinic the following day. After 3 weeks short leg cast was removed. One year after the injury, the patient reported no complaint.

Conclusion:

Subluxation is a significant injury of the skeletal system. These injuries are painful and dangerous, especially in terms of neurovascular injury. In this case report we shared the rare occurrence of dorsal dislocation of first metatarsophalangeal joint associated with tibial sesamoid bone fractures. We applied closed reduction and short leg cast to the patient and this technique led to a successful outcome.

P300

Case Presentation

A STUDY OF 10 CASES OF SUICIDAL HANGING PRESENTING TO AN EMERGENCY AND NEUROSURGERY DEPARTMENTS

M. ÇAKIR, H.H. KADIOĞLU, S. ZENGİN

Neurosurgical Department, Ataturk University Medical Faculty, Erzurum, Turkey

Corresponding author: Mr Bayramoglu Atif (atifbay@gmail.com)

Key-words: Suicide, ; hanging, ; cervical spine fracture, mortality

Objective: The purpose of the study was to analyze the epidemiology, methods, outcomes and complications of near-hanging.

Methods: Patients were identified from hospital records. We analyzed cases of attempted suicidal hangings seen over a period of 5- year in our emergency and neurosurgical departments. Demographic information, hanging methods used, clinical status on admissions, and outcomes were investigated. Patient mortality rate was compared with the rate of mortality in the all suicidal attempts.

Results: This paper reports 10 cases of near-hanging presenting to the Emergency Department and hospitalized in Neurosurgical Department of a University Research Hospital over a 60-month period. There were 10 cases in the study period, 6 of whom were male and 4 female. The mean age was 28 years. There were two incidences of septicemia due to pulmonary infection. Six of the patients made a full recovery, and two persons died.

Conclusions: In the Turkish scenario, hanging was often faced with a method of suicide/homicide. The cervical spine also frequently occurred in patients attempted hanging. We conclude that the cases of hanging should be aggressively resuscitated and treated irrespective of dismal initial presentation, and keep mind of likely spinal cord injuries. The excellent outcomes can be obtained by meticulous approaches in hanging cases despite their poor initial condition.

P301

Case Presentation

A CASE REPORT OF INTRACRANIAL HEMORRHAGE PRESENTING WITH HYPOTHERMIA

M. Günlalp, AB. Oguz, B. Gulunay, M. Koyunoglu, S. Gurler, O. Polat, A. Demirkan

Emergency Medicine, Ankara University Faculty of Medicine, Ankara, Turkey

Corresponding author: Mr Oguz Ahmet Burak (aburakoguz@gmail.com)

Key-words: HYPOTHERMIA ; INTRACRANIAL HEMORRHAGE ; CONFUSION

BACKGROUND

Confusion may occur due to disturbances of higher cerebral functions such as memory, attention and awareness. Confusion is not a diagnosis but a symptom which may be related to a variety of different etiologies. Hypothermia which is one of the conditions that may cause confusion, is a life threatening medical emergency related to significant mortality rates. Prognosis depends on various factors including; underlying disease, being at very old or very young ages, the interval of time before treatment onset, severity of hemodynamic disturbance and particularly application of active internal and external rewarming.

In this case we aimed to demonstrate that physicians may encounter a number of factors leading to the same condition at the same time when examining a patient presenting with confusion.

CASE PRESENTATION

A 86 year old female patient was admitted to emergency department in an unconscious state. The patient had been found lying on the bathroom floor. In the patient history given by her relatives the patient was told to have hypertension, underwent a prior partial gastrectomy operation 25 years ago and a prior cholecystectomy operation 15 years ago. The medication she was receiving included acetylsalicylic acid and an antihypertensive drug of which the relatives could not remember the name. She was did not smoke nor consumpt alcohol and there was not a known history of allergy. Physical examination; Fever:Undetectable, Pulse:55 beat/minute, Arterial blood pressure:60/40 mmHg, respiratory rate:12 breath/minute, S_O2:%80, blood glucose level measured by glucometer: too high to be calculated, the patient had a glasgow coma scale of 4. Patient's clothes and skin was wet. The laboratory studies showed; Hb:9,5 g/dl, Hct: %28,4, INR:1,67, pH:7,17, pCO₂: 44,3, pO₂:46,2, S_O2:73,7 CHCO₃:15,8, and ketone 15. Osborn wave was noticed in patient's ECG in V2-V5 derivations. The patient was considered to have confusion related to hypothermia. Clothes of the patients were taken of and patient was dried, cardiac monitorization was established, she was administrated O₂ with mask, IV access was achived, she was covered with blanket, crystalloid solution which was heated by blood heater up to 42 celcius was administreaed intravenously, insulin infusion was started, the resuscitation room was warmed by electrical stoves placed around the patient, urinary and nasogastric catheters were placed thus stomach and bladder lavage with warm water could be performed. The patient started to exhibit minimal spontaneous motor movements and make meaningless sounds. Even though we recovered the body temperature within normal ranges, no improvments in mental status and neurological examination was noticed hence a cranial CT was performed. CT revealed widespread parenchymal and subarachnoid hemorrhage, the patient was transferred to neurosurgery department for an emergency operation. The patient died on the second day following surgery.

DISCUSSION

Hypothermia is defined as a body temperature less than 35C and could be related to theurapathic purposes or incidental. In case of hypothermia, sinus bradycardia, atrial fibrillation, J wave(Osborn wave,late delta wave), prolonging in the PR/QRS/QT intervals might be seen or malign arhythmias like asystole and ventricular fibrillation could be encountered as well. Osborn wave occurs usually in hypothermia but also serious cranial trauma, subarachnoid hemorrhage, hypercalcemia and acute coronary ischemia might also represent a Osborn wave.

In a patient representing with confusion, a detailed patient history should be taken as well as a reliable physical examination. Diagnostic test and labratory work up should be performed promptly and treatment onset should be as soon as possible. After a considered medical condition that leads to confusion is confirmed, treatment regarding this medical condition should be started then elemination process of the remaining differential diagnosis should be continued even with an initial diagnosis. As in our case there might still be etiologies to identify despite two major medical conditions such as diabetic ketoacidosis and hypothermia which affect mental status significantly. We consider that physicians should keep in mind some symptoms might be related to more than one condition and should approach patients in an investigative manner.

P302

Case Presentation

SUICIDAL ATTEMPT WITH BARBEXACLONE OVERDOSE

F Büyükcam (1), E Çay (2), A Ceylan (1), AB Erdem (3)

1. Department of Emergency Medicine, Diskapi Yildirim Beyazit Training&Research Hospital, Ankara, Turkey

2. Department of Emergency Medicine, Diskapi Yildirim Beyazit Training&Research Hospital, Ankara, Turkey

3. Department of Emergency Medicine, Konya Numune State Hospital, Ankara, Turkey

Corresponding author: Mr Büyükcam Fatih (fatihbuyukcam@gmail.com)

Key-words: barbexaclone ; paranoia ; overdose

An 18-year-old man was admitted to emergency department with a history of taking 15 pills of barbexaclone (Maliasin® 100 mg) by oral route for suicidal attempt four hours ago. He didn't have any other chronic medical disease or long-standing medication. On admission, physical examination revealed as follows; blood pressure of 110/70 mmHg, heart rate of 85 beats/min; on his neurological examination tendency to sleep, slurred speech, ataxia, decreased deep tendon reflexes was evident. Also decreased bowel sounds and paranoia was observed. Initial hemoglobin was 11.1 g/dL, platelet count was 547 10³/μL; other blood tests were normal as well as coagulation profile. Gastric lavage didn't applied but 50 gr activated charcoal was given for one dose and intravenous hydration with normal saline was applied at 250 mL/h flow rate. On follow up, at the fourth hour of admission patient was conscious, ataxia, slurred and paranoid speech was improved, deep tendon reflexes was normal.

The antiepileptic barbexaclone (a king of barbiturate) is the salt of the base propylhexedrine (indirect sympathomimetic) and phenylethylbituric acid (1). It was introduced in 1983. It is reported to be as effective as phenobarbital but better tolerated. 100 mg of barbexaclone is equivalent to 60 mg of phenobarbital (2). To best our knowledge, overdose of barbexaclone not reported in the literature. We reported a 18-year old man who has taken 15 pills of barbexaclone (Maliasin® 100 mg) for suicidal attempt and the effects of barbexaclone overdose.

Visintini et al. reported that barbexaclone was effective in primary and secondarily generalized epilepsies, and to a lesser extent in partial complex seizures. In that study the tolerability was good and a reduction of the side-effects due to treatment with phenobarbital has been noticed (3). Bretas et al. conclude that barbexaclone has an equivalent anticonvulsive effect as phenobarbital, with less alterations of the motor activity (4).

Barbiturate serum concentration isn't reliable in predicting clinical course in overdose because they do not reflect brain barbiturate concentrations (5). Such levels are also invalid in chronic barbiturate abusers who have developed physiologic tolerance and in patients with renal or hepatic disease who have decreased clearance (6).

In 1977 barbexaclone was tried in 48 patients suffering from epilepsy and no toxic reactions were noted, and the side effects, which were never very intense, tended to disappear in the majority of cases with continued use of the drug (7). No alterations were noted in the hemogram, liver or renal function tests. Side effects were minimal and didn't necessitate discontinuing the drug. 25% of the patients also showed a psychological improvement on the medication (8). The authors concluded that barbexaclone is an excellent therapeutic agent in the treatment of grand mal and in patients with behaviour disturbances without convulsive crises (9). Side effects were minimal and didn't necessitate discontinuing the drug. 25% of the patients also showed a psychological improvement on the medication (8). Chronic administration of barbiturates in the treatment of the epilepsies causes sedation (3).

The patient with barbiturate toxicity may present with any or all of the symptoms showed in Table 1 (5). In case of toxicity airway assessment and stabilization are the first management priorities. Intubation in severe sedative-hypnotic overdose is often required and should precede any attempt at gastrointestinal evacuation. Standard monitoring of vital signs, cardiac electrical activity, pulse oximetry, intravenous access, and supplemental oxygen therapy should be initiated on ED arrival (5). Gastric lavage should not be considered unless a patient has ingested a potentially life-threatening amount of barbiturates and the procedure can be undertaken within 60 min of ingestion. Lavage is not superior to activated charcoal alone. Multiple-dose activated charcoal (MDAC) is beneficial in reducing serum phenobarbital concentrations; however, no significant difference in clinical outcome has yet been demonstrated (5).

In conclusion, barbiturate overdose could be seen rarely but we should learn the toxic effects of it. In our case the tendency to sleep, slurred speech, ataxia, decreased deep tendon reflexes, decreased bowel sounds and paranoia was observed.

P303

Case Presentation

DOĞUM SIRASINDA OLUŞAN SAĞ OMUZ EKLEMİ İNSTABİLİTESİ

A Çakar (1), G Çığışar (2)

1. Ortopedi ve Travmatoloji AD, Kafkas Üniversitesi Tıp Fakültesi, Kars, Türkiye
2. Acil Tıp AD, Kafkas Üniversitesi Tıp Fakültesi, Kars, Türkiye

Corresponding author: Mme Çığışar Gülsen (gulakcay_42@hotmail.com)

Key-words: omuz dislokasyonu ; instabilite ; doğum

GİRİŞ: Glenohumeral (omuz eklemi) eklem vücudumuzda hareketliliği en fazla olan eklemdir(1.2). Bu eklem anatomik ve biomekanik özellikleri nedeniyle omuz instabilitesi toplumda özellikle de sporcularda yaygındır. Omuz instabilitesi terimi; dislokasyon, subluksasyon ve laksiteyi de içeren bir hastalık spektrumunu anlatmaktadır. Eklem humerus başı ve skapulanın glenoid yüzeyi arasında şekillenir ve eklem yüzeyleri arasındaki kemik uyumu yetersiz olduğundan eklem stabilitesinin sağlanmasında kaslar ve ligamanlar gibi yumuşak doku yapıları oldukça önemlidir. (1.2.3.4.). Stabilite; ligamentler ve tendonların statik ve kas kontraksiyonlarının dinamik etkisi ile sağlanmaktadır.(2) Statik ve dinamik stabilizatörler arasındaki dengesinde ilişkisinde herhangi bir bozukluk olması omuz eklemi instabilitesine yol açabilir.

OLGU: 22 yaşında bayan hasta yaklaşık 20 gündür sağ omuzda ağrı, şişlik ve hareketlerde kısıtlılık şikayetleri ile ortopedi polikliniğine başvuruda bulundu. Hikayesinde 20 gün önce normal spontan vajinal yolla doğum dışında herhangi bir özellik tarif etmiyordu. Hasta doğum sırasında ve sonrasında ilgili ekstremiteler ile ilgili herhangi bir travma hatırlamıyordu. Yapılan fizik muayenede ilgili ekstremitelerde cilt ve özellikle el parmakları diğer ekstremitelerde el parmaklarına göre soğuk (refleks sempatik distrofi), periferik nabızlar palpabl, nörolojik defisit yoktu. Aktif omuz hareketleri her yöne kısıtlı ve ağrılı olup. Pasif hareketler 45° abduksiyon, 10° adduksiyon, ~30° kadar öne fleksiyon, ~ 10° kadar arkaya ekstensiyon, iç ve dış rotasyonlar 15° ve ağrılıydı. Omuz eklemi palpasyonunda akromion belirgin değildi, sulcusta belirginleşme ve apolet bulgusu yoktu. Omuz eklem instabilitesi için yapılan muayenede (Anterior Apprehension Testi, Posterior Stres Testi gibi) provakatif testler değerlendirilemedi. Direkt radyografisinde Axiller Grafi ağrıdan ve hareket kısıtlılığından dolayı alınamamış olup çekilen Omuz AP grafisinde subluksasyon mevcuttu. Manuplasyon

sonrası ve yerçekiminin ortadan kalkmasına neden olan supin pozisyonunda çekilen omuz BT'sinde omuz eklemi redükte pozisyonunda idi.

SONUÇ: Ağrılı ve kısıtlı omuz toplumda oldukça yaygın görülen bir durumdur. Beşinci dekatta sıklığı progresif olarak artar ve yaşlı popülasyonda sık görülür. Sporcular dışındaki genç hastalarda travma tarif etmeseler bile omuz eklem ağrısı ve hareket kısıtlılığında omuz eklem instabilitesi ve subluksasyonu açısından mutlaka değerlendirilmelidir.

Anahtar kelimeler: Omuz dislokasyonu, instabilite, doğum

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P304

Case Presentation

A MAN WALKS INTO THE ED WITH HIS BRAIN HANGING OUT!

V Gupta, M Majeed, U Salanke, E Sipos, D Yeo

ED, QEH, BIRMINGHAM, United Kingdom

Corresponding author: Mr Majeed M Azam (azam.majeed@uhb.nhs.uk)

Key-words: Intracerebral Bleed ; Brain Herniation ; GCS 14/15

A 40 years old patient presented with right sided headache and swelling on the right temporal area in our Emergency Department. The swelling had developed suddenly in last few hours.

He had previous history of anaplastic astrocytoma and excision of the brain tumour. The procedure was complicated by CSF leak and S.aureus infection. A month ago an infected bone flap was removed from the right temporal area. He had normal observation except for reduced GCS which was 14(E 3). He had no focal neurological deficit.

Our differential diagnosis of this swelling was hematoma, abscess, recurrence of the tumour and metastasis. In view of his previous complicated history of surgery a CT scan was done which showed acute hemorrhage within the right cerebral hemisphere resulting 20mm midline shift to the left and herniation of the brain through the right temporal surgical defect. The swelling on the temporal area was the brain tissue itself!

The patient was admitted under neurosurgery and had uneventful partial temporal lobectomy done.

The reason patient had no usual symptoms of intracerebral hemorrhage.

was because the bleeding pushed the brain outside the cranium. We presented this case as its a very unusual presentation and complication of brain haemorrhage. There is no single case to discuss post intracerebral haemorrhage with brain herniation in the literature.

The lesson is to be careful in dealing with lumps coming from wound sites after brain surgery they might appear as lump of fat tissue, clot or skin infection. We need to have a low threshold to get proper imaging done before further probing & prodding it.

P305

Case Presentation

SACRAL ALA FRACTURES – IF YOU DIDN'T FIND IT THE FIRST TIME, YOU'RE NOT LOOKING HARD ENOUGH

J Kayani, M Majeed, E Sipos, D Yeo
ED, QEHB, BIRMINGHAM, United Kingdom

Corresponding author: Mr Majeed M Azam (azam.majeed@uhb.nhs.uk)

Key-words: Good history ; look harder ; modern investigations (MRI)

A 48 year old patient presented to the emergency department with lower back and right groin pain. She had previously fallen off a horse 5 days prior and had attended her local ED. She was investigated with plain Xrays and was diagnosed with a soft tissue injury only and discharged home despite having difficulty mobilizing due to pain.

On arrival to our ED she remained in significant pain and despite intravenous analgesia was unable to mobilize. Clinically she had a large bruise on her buttock with tenderness in her right groin. Anterior-posterior and lateral pelvic x rays did not reveal any bony injury. A pelvic MRI was performed to investigate this further. This showed right sided superior and inferior pubic rami fractures and an acute fracture of her right sacral ala. She was treated conservatively but required admission for pain control and rehabilitation.

"The most important advice given to us as medical students was that history and examination is the key to diagnosis".

In this case there was good history but insufficient effort was made to reach the diagnosis. The lesson is not to be dismissive of patient complaints when simple investigations do not elicit a diagnosis

Conclusion:

This case illustrates that pelvic fractures can be easily missed on plain radiography, especially vertical sacral ala fractures. This condition is frequently misdiagnosed and can have significant complications. Clinician should consider the use of cross-sectional imaging like CT or MRI if initial plain Xrays are unremarkable in the face of a good history and examination.

P306

Case Presentation

"FALLEN LUNG SIGN"

H Chatwin, M Majeed, P Najran, H Shahzad
ED, QEHB, BIRMINGHAM, United Kingdom

Corresponding author: Mr Majeed M Azam (azam.majeed@uhb.nhs.uk)

Key-words: Fallen lung sign ; Chest drian with suction ; Pneumothoracies

Case

We present a case of a 20 years old male admitted to the emergency department with sudden onset shortness of breath and chest pain. The symptoms occurred immediately after having sex. On clinical examination patient had essentially normal observations except respiratory rate which was >30/min and was found to have reduced air entry in the right lung. Radiographic investigations revealed a large right-sided pneumothorax with a "fallen lung sign".

This is a relatively uncommon injury which is associated with major blunt trauma¹ and there are limited reports seen post coital. This injury is found to occur in up to 2.0% of major blunt trauma¹. The

mechanism is a sudden increase in intrathoracic pressure against a close glottis, which causes a rupture along the proximal tracheobronchial tree¹. Bronchial tear has been reported more commonly than tracheal tear but again these findings are based on tracheobronchial injury secondary to significant major trauma. As many reported cases are associated with major trauma patients present clinically with associated significant thoracic injuries including upper rib and thoracic spine fractures³. Radiographic findings can be subtle and would require a bronchoscopy to confirm injury⁴. Plain radiograph findings would include a large pneumothorax, which occurs more commonly on the right side², with pneumomediastinum. This may correlate with clinical findings such as surgical emphysema. Ruptures of the proximal tracheobronchial tree causes a large pneumothorax and inability of the vascular pedicle to support the lung as a result the lung sags to the floor of the pleural cavity producing the "fallen lung sign"¹. This was the imaging finding the presenting case.

Conclusion:

As ED physicians we see many pneumothoracies every year. We follow the BTS guidelines to manage it. Now in this case a simple aspiration or even a simple chest drain would not cure the problem.

These injuries are managed by chest drain with some suction pressure. Therefore the knowledge of this unusual presentation will help alerting the ED physician to organise appropriate treatment.

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P307

Case Presentation

AN INSIDIOUS INTOXICATION WITH NEUROLOGICAL DEFICIT: CARBON MONOXIDE POISONING

AA Aydin (1), C Aydin (2), M Kaya (1), I Arziman (1), YE Eyi (3)

1. EMERGENCY DEPARTMENT, GULHANE MILITARY MEDICAL ACADEMY, ANKARA, Turkey

2. INTERNAL MEDICINE DEPARTMENT, NUMUNE EGITIM VE ARASTIRMA HASTANESI, ANKARA, Turkey

3. EMERGENCY DEPARTMENT, HAKKARI MILITARY HOSPITAL, HAKKARI, Turkey

Corresponding author: Mr Arziman Ibrahim (ibrahimaz@hotmail.com)

Key-words: carbon monoxide ; nerological deficit ; hyperbaric oxygen treatment

Introduction :

Carbon monoxide poisoning is one of the most common cause of fatal poisoning in the world. The clinical presentation of carbon monoxide poisoning is highly variable, which leads to misdiagnosis in many cases. We report a case carbon monoxide poisoning presenting with hemiparesis and headache. Carbon monoxide poisoning can cause many different neurological deficits like coma, seizure, parestesia, vertigo and headache.

Case Report:

A 32 year old female patient admitted to our emergency department due to headache and parestesia of left side of her body that had developed suddenly. Her initial blood pressure measured was 124/80 mmHg, fever: 36.4 c, pulse:95/minute,

SPO2: %99, respiration rate: 16/m and finger stick glucose was 112mg/dl. ECG had normal sinusoidal rhythm. She was alert, oriented to person, place and time. Her physical examination revealed no motor deficit but paresthesia in the left side and left sided babinsky reflex was undifferentiated. The computed brain tomography and magnetic resonance imaging were absolutely normal. Than COHb level was measured 12.1 in blood gas (Normal range: 0-5). Since the patient had neurological findings, hyperbaric oxygen treatment (HBO) was applied. She was cured after hyperbaric oxygen treatment. Considering following cardiac enzymes and ECG were normal, so the patient was discharged. Three months later her neurological examination revealed no any neurological sequel.

Conclusion:

Carbon monoxide poisoning can present with a wide spectrum of symptoms variable from changing mental status to coma. But there are extremely rare cases reported of Carbon monoxide poisoning presented with lateralized neurological deficit. So we must be aware of Carbon monoxide poisoning in patients who admit emergency department with neurological deficits.

P308

Case Presentation

A RARE CASE PRESENTATION IN EMERGENCY DEPARTMENT: INTERNUCLEAR OPHTHALMOPLÉGIA

AA Aydın (1), I Arziman (1), C Aydın (2), M Kaya (1), YE Eyi (3)

1. EMERGENCY DEPARTMENT, GULHANE MILITARY MEDICAL ACADEMY, ANKARA, Turkey
2. INTERNAL MEDICINE DEPARTMENT, NUMUNE EGITIM VE ARASTIRMA HASTANESI, ANKARA, Turkey
3. EMERGENCY DEPARTMENT, HAKKARI MILITARY HOSPITAL, HAKKARI, Turkey

Corresponding author: Mr Arziman Ibrahim (ibrahimmarz@hotmail.com)

Key-words: INO ; MLF ; Diplopia

Introduction:

Internuclear ophthalmoplegia (INO) is caused by a lesion of internuclear neurons of sixth cranial nerve. N. abducens originates from pontine nucleus, lengthen in medial longitudinal fasciculus and innervates contralateral oculomotor nerve. INO is characterized with same sided eye abduction deficit, contralateral adduction restriction with horizontal nystagmus.

INO as result of MLF lesion generally caused by Cerebro Vascular Accident in old patients. INO is presented whether with unilateral-bilateral diplopia or "One and half syndrome". The basic component of diagnose is a carefully neurologic examination of patients who suffer from diplopia. It also leads us to locate the area of lesion

Case Report:

61 year old male patient admitted to our emergency department with vertigo, blurring of visual image acuity and diplopia. He had a history of essential hypertension and used his medication regularly for hypertension. His initial blood pressure was 195/115 mmHg, fever: 36.9°C, Pulse 95/minute, SPO2: %98, respiration rate 16/m and finger stick glucose was 90mg/dl. Neurologic examination revealed that he was alert, oriented, cooperated and conscious, he had score of Glasgow Coma Scale 15. Ocular motility testing, right eye had adduction deficit and nystagmus was observed in the left eye on the leftward gaze. He had no motor and sensorial deficit but had bilateral dysidiadochikinesia, dysmetria and ataxia. A computed brain tomography showed there was an ischemic area affecting the nucleus caudatus in anterior left side of internal capsule. Magnetic resonance imaging T2-weighted revealed a high intensity lesion in the pontine tegmentum. The lesion was located at the

right side of pons. Diffusion-weighted imaging also helped to confirm this lesion to be an acute infarct. The patient was hospitalized for INO in neurology department. Three months later his neurological examination revealed no any neurological sequel.

Conclusion:

We want to emphasize the importance of carefully evaluation of patients with diplopia in order to detect of neurological lesions.

P309

Case Presentation

THE HIGH LEVEL OF LIVER ENZYME AFTER CONSUMPTION OF KOMBUCHA TEA AND CHOLESYSTITIS ATTACK

I Arziman (1), YE Eyi (2), A Bayir (1), E Tekce (1), M Durusu (1), M Eryilmaz (1)

1. EMERGENCY DEPARTMENT, GULHANE MILITARY MEDICAL ACADEMY, ANKARA, Turkey
2. EMERGENCY DEPARTMENT, HAKKARI MILITARY HOSPITAL, HAKKARI, Turkey

Corresponding author: Mr Arziman Ibrahim (ibrahimmarz@hotmail.com)

Key-words: Kombucha ; Combue ; Yeast

Introduction:

The increasing tendency for the alternative medicine nowadays, applying to the health institutions has been occurring because of the side effects of many unknown herbal products. Kombucha tea is also widely used herbal product in all of the world for its beneficial effects for the health. However, there are some certain side effects for the people that use kombucha tea in literature. We aimed to present a patient who admitted ED with abdominal pain to inform the emergency doctors about Kombucha Tea.

Case Report:

A 70 year old male patient, applied to our emergency service with the complain of stomachache and vomit that started 1 hour ago. Stating of consumption of kombucha tea just before the starting of the ache, the patient had also been taking medicaments for hypertension and coronary artery. During physical examination, the sounds of bowel increased, and rebound tenderness and Murphy of the patient that had epigastria sensibility were positive. The laboratory examinations when he came were: WBC: 16,7 e3/mikroL, Urea: 37 mg/dL, GGT: 87 mg/dL, AST: 96 U/L, ALT: 60 U/L, LDH: 430 U/L, ALP: 89 U/L. At his USG, the thickness of the gall bladder was 4 mm and there was a calculus with 15 mm radius at the bladder neck. The patient was hospitalized with the diagnosis of cholecystitis with acute gallstone.

Conclusion:

Many herbal products have been widely used for helping treatment in different sicknesses in last years. However, the data that indicate the positive or negative sides of these products are not sufficient in literature. The questioning of using of these products during the anamnesis of the patients that apply to the emergency service will be instructive for the differential diagnosis.

P310

Case Presentation

A RELAPSE PNEUMOTHORAX CASE AFTER BILATERAL PNEUMOTHORAX TREATMENT

I Arziman (1), M Kaya (1), YE Eyi (2), AA Aydın (1), M Durusu (1), M Eryilmaz (1)

1. EMERGENCY DEPARTMENT, GULHANE MILITARY MEDICAL ACADEMY, ANKARA, Turkey
2. EMERGENCY DEPARTMENT, HAKKARI MILITARY HOSPITAL, HAKKARI, Turkey

Corresponding author: Mr Arziman Ibrahim (ibrahimmarz@hotmail.com)

Key-words: Bilateral Pneumothorax ; Tube thoracostomy ; Relapse

Introduction:

Tube thoracostomy is a surgery method for the aim of reexpansion of the lung in pneumothorax. Although it is generally a safe method, the early complications as inefficient drainage, drain pull complications, abdominal organ injury, tissue separation at drain place can be seen.

Case Report:

A 21 year old male patient, applied to the emergency service with complain of increasing difficulty in breathing. Because of the bilateral pneumothorax, bilateral tube thoracostomy was applied to the patient 18 days ago. However, the tubes were removed because of the ending of the air leakages at the end of the 1st week. During physical examination, the respiration sounds were not taken at the left lung. Thorax Computed Tomography(TCT) was planned to the patient due to the inconvenient pneumothorax with the classical pneumothorax vision at apex and basal in the PA chest graph. At TCT in the middle of left lung cohesions, posteroanterior collapse vision were observed. Tube thoracostomy was applied to the patient at left side and he was hospitalized.

Conclusion:

The tissue cohesions after tube thoracostomy can cause to the early removing of the tube through giving the impression of ending of the air leakage. However, in the cases of early removing of the tubes after reexpansion, the relapses at 25% could be seen. Relapse pneumothorax should be considered at the applications with similar complains of patients that recently received treatment because of the pneumothorax, tube thoracostomy should be reapplied, and in case, should be directed to the surgery.

P311 Case Presentation

A BIG HEMATOMA AFTER TRAUMA: FACTOR V DEFICIENCY

I Arziman (1), YE Eyi (2), AO Yildirim (1), M Durusu (1), S Bilgic (1), M Eryilmaz (1)

1. EMERGENCY DEPARTMENT, GULHANE MILITARY MEDICAL ACADEMY, ANKARA, Turkey
2. EMERGENCY DEPARTMENT, HAKKARI MILITARY HOSPITAL, HAKKARI, Turkey

Corresponding author: Mr Arziman Ibrahim (ibrahimarz@hotmail.com)

Key-words: Factor V Deficiency ; Trauma ; Hematoma

Introduction:

Factor V Deficiency also known as parahemophilia is a coagulation disorder. Factor V Deficiency is less frequently than Factor V Leiden Mutation, deficiency has less tendency to thrombosis and is more frequent to bleeding. It may cause life-threatening bleedings. In this case report, we wanted to give information about Factor V Deficiency with sharing a patient admitted ED with a big hematoma after trauma.

Case Report:

20 year-old male admitted ED complaining swelling in left thigh after falling 2 days ago. In his history, Factor V Deficiency was presented, having not any treatment. On physical examination, there was a swelling in his left thigh with increased temperature. Both peripheral pulses were palpated. Left thigh diameter was 64 cm, right was 49 cm. X-ray radiography of femur was normal. In biochemical tests, the result were as followings: WBC: 12,6 e3/mikroL, HGB: 4,6 g/dL, HCT: 14,5, PLT: 438 x10.e3/mikroL, PTZ: 39,2 sc, INR: 3,072, ESR: 110 mm/h. 3 units of erythrocyte suspension and 2 units of Fresh frozen Plasma were given to the patient in ED. He was hospitalized to the orthopedics department.

Conclusion:

The patients suffering coagulation disorders have higher risks of bleeding after traumas. This bleedings can be life-treating not only in head, abdomen and chest spaces also in extremities. The patients admitted EDs must be questioned well about coagulation disorders and the diagnosed patients must be examined more carefully.

P312 Case Presentation

LIVER DAMAGE DUE TO FENYRAMIDOL HYDROCHLORIDE

T Caferov (1), M Kaya (1), I Arziman (1), S Ardic (1), YE Eyi (2)

1. EMERGENCY DEPARTMENT, GULHANE MILITARY MEDICAL ACADEMY, ANKARA, Turkey
2. EMERGENCY DEPARTMENT, HAKKARI MILITARY HOSPITAL, HAKKARI, Turkey

Corresponding author: Mr Arziman Ibrahim (ibrahimarz@hotmail.com)

Key-words: Fenyramidol Hydrochloride ; Toxic Hepatitis ; Liver Enzyme

Introduction:

Fenyramidol hydrochloride which has the analgesic and myorelaxant effect, is a drug used especially for low back pain complaints. Although not reported any side effects other than allergic reactions, it can cause liver damage due to elimination in the liver. This is a case of the situation by sharing the experience with the aim to inform physicians.

Case Report:

35-year-old male patient, gone to health facility built for control assay, and were elevated in some values, admitted to emergency department referred to a forward center. In the medical history, we learned that the patient was using fenyramidol hydrochloride due to low back pain about 15 days. The patient remarked to whether any complaints. Patient without a history of alcohol use, did not tell to us a chronic disease and the related use of a drug. Last 2-3 months did not take any medications, including analgesics and anti-inflammatory drugs. Vital signs and physical examination of the patient's first admission were normal and laboratory tests: WBC: 7.5 e3/mikroL, HGB: 14.5 g / dL, HCT: 44.6, PLT: 305 x10.e3/mikroL, PTZ: 15.2 sec, Urea: 37 mg / dL, creatinine: 1.21 mg / dL, AST: 319 U / L, ALT: 555 U / L, LDH: 817 U / L, ALP: 171U / L. These results were consistent with the results of the health care institution that patients came. Hepatitis markers (-) and there was no abnormality in the patient's hepatobiliary ultrasonography. Sung to the drug leaves the patient with no complaints of outpatients were followed on a daily basis. Liver enzymes returned to normal at the end of the fifth day.

Conclusion:

Which is the main organ for the metabolism of many drugs and chemical agents is one of the most common causes of liver injury induced by drugs, toxic events. The chemical composition of the drug, age, gender, underlying diseases and chronic alcohol consumption are the other risk factors for toxic events. Liver damage, cirrhosis, and fulminate hepatitis may occur clinically, or only to rise in liver enzymes must be considered in a wide range. Patients who are using drugs should be informed about it.

P313

Case Presentation

PNEUMOTHORAX CASE DEVELOPING AFTER FIBEROPTIC BRONCHOSCOPY

YE Eyi (1), I Arziman (2), M Durusu (2), S Ardic (2), C Kaya (2), M Eryilmaz (2)

1. EMERGENCY DEPARTMENT, HAKKARI MILITARY HOSPITAL, HAKKARI, Turkey
2. EMERGENCY DEPARTMENT, GULHANE MILITARY MEDICAL ACADEMY, ANKARA, Turkey

Corresponding author: Mr Arziman Ibrahim (ibrahimarz@hotmail.com)

Key-words: Pneumothorax ; Fiberoptic Bronchoscopy ; Dyspnea

Introduction:

Fiberoptic bronchoscopy is an invasive technique used for diagnosis and treatment of respiratory diseases that became popular for recent years. Although there are some common complications during this process such as bronchospasm and cough and bleeding, it is possible to develop pneumothorax after fiberoptic bronchoscopy.

Case Report:

Male patient of 26 years old has applied to ER complaining dyspnea and chest pain. It has been found out that, few hours ago, bronchoscopy has been done to the patient in order to identify his interstitial lung disease pre-diagnosis, subsequently his complains has appeared. All vital indicators were stabile, and no significant finding has been observed except reduced respiratory sound from right lung. Taken PA chest radiograph exposed about 10-15% pneumothorax. It has been not considered to perform any intervention on certain conditions of the patient. He has been followed as outpatient.

Conclusion:

Even though fiberoptic bronchoscopy is a safe invasive procedure in general, pneumothorax may develop particularly because of the increased intrapleural pressure due to cough promoted during bronchoscopy. The patients recently applied bronchoscopy must be considered on pneumothorax carefully. Developed pneumothorax may probably be treated without aspiration need; however patients have to be followed on regular basis.

Case presentation:

A 45-year-old woman presents to the emergency department (ED) with a 4-day history of generalized muscle weakness ,arthralgia and painful erythematous nodules on the lower extremities one week before the onset of symptoms, she had fever and sore throat resolved with three days of treatment with antibiotics. Her only medical problem is microcytic anemia treated with oral iron therapy.

On physical examination, she appears weak with pain in her legs ,and has a temperature of 98.2°F (36.8°C), blood pressure of 120/70 mm Hg, and a regular pulse of 70 beats/min. The chest, cardiovascular, abdominal neurologic examination are all normal. erythematous nodules on the lower extremities.

Laboratory investigations reveal a hemoglobin concentration of 8,7g/dL a white blood cell (WBC) count of 5,72× 10³/μL , with 50% neutrophils; and a platelet count of 319 × 10³/μL ,serum iron17μg/dl, serum ferritin 9 μg/dl, HBsAg, HCV, TB Gold, ANA, ANCA-C, ACE, Tumor Markers, were negative.

Antistreptolysin O titer 225 U.A.(Normal Range 0-200),ESR 85 mm/h (Normal Range 0-14) ,CRP 4,7 mg/dl (Normal Range 0,00-0,50), and pharyngeal culture was positive for Streptococcus Group G.

In our patient the diagnosis was confirmed by clinical evaluation, Laboratory Tests without skin biopsy. It was Erythema nodosum duo to Streptococcus Group G. infection, She was treated with NSAIDs and antibiotics, erythematous nodules were regressed in two weeks.

P315

Case Presentation

A CASE REPORT: HEREDITARY ANGIOEDEMA

R Koylu (1), E Akinci (1), A Isik Kinaci (1), NB Akilli (1), ZD Dunder (1), O Koylu (2), K Kokulu (1), B Cander (1)

1. Emergency Department, Konya Education and Research Hospital, Konya, Turkey
2. Biochemistry Department, Konya Education and Research Hospital, Konya, Turkey

Corresponding author: Mr Koylu Ramazan (drkoylu@yahoo.com)

Key-words: hereditary angioedema ; anaphylactic shock ; C1-inhibitor

INTRODUCTION

Hereditary angioedema (HAE) due to C1 esterase inhibitor deficiency (HAE-C1-INH) is a potentially life-threatening autosomal dominant disease characterized by recurrent episodes of oedema, commonly occurring in the skin, abdomen, and upper respiratory tract.It can cause serious air way obstruction.Therefore we have to be ready for advanced air way management such as tracheostomy. Classic treatments are not effective. We are offering a case diagnosed hereditary angioedema that has not improved clinically after standard treatments.

CASE REPORT

22-year-old female patient was admitted to our emergency department with complaints of dizziness, itching, swelling of the face and eyes and headaches.From her medical history, it has been learn that 20 minutes later she has got a headache after taking non steroidal anti-inflammatory drug. Patient has no story of allergies before.

On physical examination, the patient has a body with widespread maculopapular rash fading by pressing and her systolic arterial pressure is about 70/40 mm / Hg, pulse rate 128/min and the heat is near 36 ° C. Although there was an uvula edema patient's respiratory sounds were normal. Wheezing, and rhonchi weren't detected. The patient was accepted as unstable and admitted to the intensive care unit. The patient was monitored and treatment

P314

Case Presentation

A 45-YEAR-OLD WOMAN WITH PAINFUL SUBCUTANEOUS NODULES ON THE LOWER EXTREMITIES.

S. Ziyada, R. Schirripa, C. Cicchini, M. Salim, R. Satira, V. Valeriano, FR. Pugliese

Emergency department, Sandro Pertini Hospital, Rome, Italy

Corresponding author: Mr Ziyada Shakib (shakibz@hotmail.it)

Key-words: Internal medicine ; Rheumatology ; Infections Diseases

Background:

Erythema nodosum is a specific form of panniculitis characterized by the sudden onset of symmetrical tender,red or violet palpable,subcutaneous nodules usually located on the lower limbs.It often occurs with an underlying systemic disease including infections,rheumatologic diseases,autoimmune disorders,sarcoidosis,inflammatory bowel disease and TB. Diagnosis is by clinical evaluation,look for underlying cause,reserve skin biopsy for difficult diagnostic cases.Treatment depends on the cause.

ordered as SF 0.9%, from 250cc/hour, epinephrine 0.5 mg IM, steroids 1mg/kg IV, pheniramin maleate 45.5 mg and 100 mg ranitidine. Because of the patient's persistent hypotension, 10 mcg / kg / h dose dopamine infusion was started. There was no improvement in general condition of the patient, therefore it has thought the diagnose as hereditary angioedema and fresh frozen plasma was given. General status improved after 8 hours, and there was no need for sympathomimetic agents. Patient was followed up for 2 days in the intensive care unit.

C1 esterase inhibitor activity was studied in serum. Serum level of C1 inactivator was 79.6mg / dl (reference range :18-40 mg / dl) and C1 inhibitor activity was 15% (reference range :70-130) After these results patient was diagnosed with hereditary angioedema.

The patient was referred to dermatology. Family members of patient were investigated because hereditary angioedema is an autosomal dominant trait. It was also learned that the patient's mother had similar complaints time to time. The patient's mother was asked for the same tests. C1 inhibitor activity was 8%, C1 inactivator level was 94.8 mg / dl. The patient was discharged with the advice of polyclinic control.

DISCUSSION

Various vasoactive proteins especially bradykinin mainly plays a role in the etiology of hereditary angioedema. These proteins cause intermittent episodes of edema known as characteristic sign of the disease. Even if most episodes occur spontaneously without any precipitating factor, emotional stress, infection, menstrual cycle, trauma and surgical procedures may lead to episodes of hereditary angioedema. The most serious complication and the most common cause of death is laryngeal edema. Supportive treatment is important during acute attacks. To ensure airway patency and oxygenation in the first examination is important and should be checked. Giving C1-inhibitor is most effective method. Although fresh frozen plasma, attenuated androgens and androgynous are less effective, they can be used to treat attacks. We also used fresh frozen plasma because we couldn't get any response to the standard angioedema therapy.

RESULT

C1-INH deficiency should be considered if there is no response to conventional therapies in anaphylactic shock.

P316 Case Presentation

CEMENT RELATED EYE BURN

M. UZKESER (1), S.T. GÜR (1), A. BAYRAMOĞLU (1), H. ŞAHİN (2), S. TÜRKYLMAZ (1), S. ASLAN (1)

1. Emergency Department, Ataturk University Medical Faculty, Erzurum, Turkey
2. Emergency Department, Regional Training and Research Hospital, Erzurum, Turkey

Corresponding author: Mr Bayramoglu Atif (atifbay@gmail.com)

Key-words: CEMENT ; EYE BURN ; CEMENT RELATED BURN

Introduction: Chemical burns represent 7-10% of eye injuries. We represent a construction worker who fell from height and whose eyes were injured due to cement exposure.

Case: A 47-year-old man was brought to our emergency at about 17:00 o'clock by ambulance due to fall from height into cement storage of a cement plant. His complaints were severe abdominal pain and blindness. His initial vitals were as follows: TA: 110/60 mmHg, HR: 80/min, RR: 24/min, satO2%: 90, Temp: 36.7 °C and GCS:14. His whole body was covered by dry cement. In occipitoparietal region, there was a triangular shaped scalp laceration of about 15-20 cm. Eye examination revealed bilateral white and dull corneas (Photo 1 a-b). There were multiple abrasions and 2nd degree chemical burns (total 7.5%) on his body.

Abdominal examination revealed tenderness, defense and rebound. All clothing and jewelry were removed, dry chemicals were brushed off. He was sent to head and abdominal CT where his vitals deteriorated. He was immediately taken to resuscitation room and intubated. CPR was performed due to pulseless electrical activity. After 40 min. of resuscitation, he was termed death.

Discussion: In chemical burns, the first thing to be done is immediately irrigate the eye and the body copiously with water. Irrigation should begin at the site of contamination and should include the eyes and face. Among the few chemical toxins that should not be irrigated immediately with water are dry lime, phenols, concentrated hydrochloric acid, sulfuric acid, and elemental metals.

P317 Case Presentation

ISOLATED PANCREATIC INJURY DUE TO A SOCCER MATCH

M. EMET (1), G. OZTURK (2), M. UZKESER (1), Z. ÇAKIR (1), S. ASLAN (1), A. BAYRAMOĞLU (1)

1. Emergency Department, Ataturk University Medical Faculty, Erzurum, Turkey
2. Department of general surgery, Ataturk University Medical Faculty, ERZURUM, Turkey

Corresponding author: Mr Bayramoglu Atif (atifbay@gmail.com)

Key-words: pancreas ; soccer match ; isolated pancreatic injury

Introduction: Pancreatic injury is uncommon after sportive activities. Here, we present a complicated pancreatic injury.

Case Report: A 23 year-old man presented to the ED 1 h following abdominal injury. Mode of injury was direct hit to abdomen by a football player's knee. He was hemodynamically stable. Palpation revealed tenderness and defense. Initial WBC and serum amylase levels were 14650/μL and 2300 IU/L, respectively. The liver function tests, abdominal and chest radiograms were normal. Abdominal USG presented moderate free abdominal fluid. Abdominal tomography revealed a pancreatic injury at the level pancreatic neck. After 24 hours of observation, his abdominal findings progressed and amylase levels increased. An urgent laparotomy showed excessive free fluid and diffusely edematous pancreas. There was a %70 laceration on the pancreatic neck. Necrosed tissues were removed. Both sides of the lacerated pancreas were obliterated. Two drains were placed to the lesser sac and laceration area and the abdomen closed. An MR cholangiography revealed a 17 mm-sized fluid collection (in connection with the pancreatic duct) at the level of pancreatic neck on 15th postoperative day. Further investigation with ERCP showed pancreatic duct disruption. The patient underwent a pancreaticojejunostomy on postoperative 3th month. The postoperative period was uneventful after second operation and the patient is still well at 18 months follow-up.

Discussion: Any high-energy impact to the abdomen may result in pancreatic injury as a result of compression of the organ between the spine and external force applied to the abdomen as it was so in our case.

P318

Case Presentation

A RARE PEDIATRIC CASE THAT PRESENTS WITH HEADACHE AND CONFUSION

A Gultekingil Keser, O Teksam

Department of Pediatric Emergency, Hacettepe University Faculty of Medicine, Ankara, Turkey

Corresponding author: Mme Gultekingil Keser Ayse (aysegultek@yahoo.com)

Key-words: intracranial aneurysm ; subarachnoid hemorrhage ; pediatric

Introduction:

Headache is a common symptom in pediatric age group, 15-25% of children have headaches occasionally. Etiology of headache can be common causes such as upper respiratory tract infection and migraine as well as more serious problems like sinus thrombosis, intracerebral hemorrhage, tumors and meningitis, these problems usually have other symptoms as well. Patient with hemorrhagic stroke usually has some degree of loss of consciousness and also vomiting, seizures and focal neurologic signs. Although hemorrhagic stroke is rare in pediatric age group, it should be kept in mind in differential diagnosis of headache especially if patient has accompanying signs and symptoms. Hereby we present an adolescent boy presenting with headache and confusion to our pediatric emergency department.

Case Presentation:

A 16 year old male patient was admitted to our emergency department with a history of headache and fainting. Headache started suddenly at home 1,5 hours before admission, followed by loss of consciousness, contractions of hands and feet and vomiting. He had no history of fever or trauma. He did not have any important medical problems. His vitals were body temperature: 36°C, pulse:118/min, pulse:130/75. Glasgow Coma scale was 13. He was conscious but confused at the time of admission. Pupils were isocoric, light reflexes normal in both eyes, eye movements were free in all directions and cranial nerves were intact. There was no sensorial or motor deficit. Deep tendon reflexes were normal. Neck stiffness was noted. Laboratory results were normal. Cranial tomography showed massive subarachnoid hemorrhage filling basal cisterns and cerebral edema so tomographic angiography performed showing 2.5 mm saccular aneurysm and left internal carotid artery bifurcation. Craniotomy was performed and aneurysm was trapped. Patient was discharged neurologically normal 20 days later.

Discussion:

Intracranial aneurysms are rare in childhood, 5% of all aneurysms appear in that age and 60% appear in adolescence. It is more common in boys after 2 years. Our patient was in risk group according to these criteria.

Aneurysms commonly presents as subarachnoid hemorrhage in pediatric age group, more than half of subarachnoid hemorrhages are due to aneurysms so one should suspect aneurysm in an adolescent patient presenting with subarachnoid hemorrhage. Headache is the main complaint most of the patients with intracerebral hemorrhage, most of these headaches are severe and sudden, neurologic symptoms seen either at the same time with headache or in following couple of hours and loss of consciousness is the second most seen symptom. Meningeal signs are also common. As sudden and severe headache accompanying loss of consciousness were seen in our patient, serious causes of headache were investigated and subarachnoid hemorrhage due to aneurysm was discovered. Occasionally patient with aneurysm and subarachnoid hemorrhage may present with only headache and subtle neurologic signs so one should evaluate the patient with

headache carefully especially if onset was sudden, intensity was severe or nature of headache was abnormal, these patient should have a thorough neurological examination, imaging studies and clinical follow up. Computed tomography is the first choice of imaging studies, if hemorrhage was detected in tomography, an angiography should be done and admitted to neurosurgical intensive care unit like our patient.

Our patient has most of typical characteristics of childhood aneurysms and because of fast diagnosis and treatment, he could be able to return to a healthy state afterwards. Headache is a common complaint in childhood and it is very important to make a good differential diagnosis. Our case is guiding for a rare but very important situation in childhood in which fast diagnosis and treatment is vital.

P319

Case Presentation

BLEEDING OF THE COMMON CAROTID ARTERY ANEURYSM

F Büyükcım (1), S Yıldırım (1), A Ceylan (2), U Kaya (3), AB Erdem (4)

1. Department of Emergency Medicine, Dışkapı Yıldırım Beyazıt Training and Research Hospital, Ankara, Turkey

2. Department of Emergency Medicine, Şanlıurfa Training and Research Hospital, Şanlıurfa, Turkey

3. Department of Emergency Medicine, Keçiören Training and Research Hospital, Ankara, Turkey

4. Department of Emergency Medicine, Konya Numune State Hospital, Konya, Turkey

Corresponding author: Mr Büyükcım Fatih (fatihbuyukcam@gmail.com)

Key-words: carotid artery ; aneurysm ; radiotherapy

82-year old male admitted to the emergency department with a bleeding at the left side of his neck. He was operated because of larynx carcinoma 23 years before and tracheostomy was applied. Five years early, he was operated again because of carotid artery stenosis. On physical examination, blood pressure and heart rate was within normal range. Laboratory results were as follows: WBC:7.40 $10^3/\mu\text{L}$, RBC:4.96 $10^6/\mu\text{L}$, Hgb:14.1 g/dL, Hct:43.6%, Plt:234000 $10^3/\mu\text{L}$, INR:1.24, PT:14.27sec, APTT:26.25sec. Bleeding region was occluded temporarily immediately and that region was examined by ultrasonography. At the distal region of the left common carotid artery the diameter increases to 9,4mm from 4,7mm, it was diagnosed as aneurysm. Carotid stent was applied on the following day and he was discharged on the third day without complication.

Radiation induced carotid vasculopathy may present as stenosis or occlusive disease or less commonly as a pseudoaneurysm. Carotid artery rupture is sudden, massive hemorrhage that ranks among the most dreaded complications in the head and neck. However, several patients have been saved by hospital personnel who discovered the rupture in time to take appropriate measures such as cleaning of the wound and protection with myocutaneous or myofascial flaps. Therefore, it is important to be aware of the possibility of rupture or perforation of major vessels after irradiation, even when the radiation therapy was performed a long time ago. Rupture of irradiated great vessels is an uncommon complication, and it tends to occur in the carotid artery in patients with cancer of the head and neck (1). Although the angioembolisation is a good method to resolve the problems of ruptured pseudoaneurysm, there is still high mortality and morbidity (2). The aim of embolisation is to block the pseudoaneurysm; but sometimes, total occlusion of great vessels is ineludible.

In conclusion, pseudoaneurysm of carotid artery could be seen due to the radiotherapy to the head and neck and it has high mortality

rates, being aware of the clinical presentations and the changes of images could show the aneurysms earlier and it could prevent the severe results of them.

P320

Case Presentation

EVISCERATION OF ALL ORGANS INSIDE THE ABDOMEN AND THORACIC: A CASE REPORT

A Avcı, H Dogan, DN Ozucelik, A Temel

Emergency department, Bakirköy Dr Sadi Konuk training and research hospital, Istanbul, Turkey

Corresponding author: Mr Dogan Halil (drhalildogan@gmail.com)

Key-words: Evisceration ; trauma ; all organs

Giriş:

Travmaya bağlı total abdominal ve torasik eviserasyon oldukça nadir bir durumdur. Eviserasyon perianal, transanal, transvajinal ve abdominal duvardaki travmatik bir defekten olabilmektedir. Araç dışı trafik kazası sonucu, kalbin, akciğerlerin, böbreklerin, dalağın, karaciğerin, ince ve kalın bağıntıların sol inguinal bölgeden eviserasyonu vakasını sunarak, nadir görülen total abdominal ve torasik eviserasyonu tartıştık.

Olgu:

2 yaşında kız çocuğu Acil tıp kliniğimize yol temizleme aracının altında kalma nedeniyle getirildi.

Hastanın fizik muayenesinde; kalp tepe atımı, solunumu yoktu. Sol inguinal bölgenin altından başlayarak batin sol alt kadranda alt uca uzanan yaklaşık 20 cm uzunluğunda ve tüm katları geçen düzgün sınırlı laserasyon hattı içinden böbrek, akciğer, parçalanmış halde karaciğer, ince ve kalın bağıntıların dışarıda olduğu görüldü.(Resim 1) Maksillofasiyal alanda yaygın ödem ve düzensiz sınırlı kontüzyonları mevcuttu. Her iki hemitoraks ön yüzde düzgün sınırlı yer yer kare şeklinde ve yer yer bir kenarı tamamlanmamış dikdörtgen şeklinde (tekerlek izi olduğu düşünülen) kontüzyon alanı saptandı.(Resim 2) Hastaya gelir gelmez kardiopulmoner resüsitasyon ilkelerine göre uygulamaya başlandı. İşlem devam ederken hasta yakınları tarafından sonradan getirilen organ parçası incelendiğinde getirilen organın kalp olduğu anlaşıldı(Resim 3) ve kardiopulmoner resüsitasyon işlemi sonlandırıldı.

Tartışma:

Künt travma sonrası abdominal eviserasyon oldukça nadirdir ve yüksek enerjiye ihtiyaç vardır. Bizim vakamızda da aracın toraks ve batin üzerinden geçmesinden kaynaklı yüksek enerjili trvmaya maruz kalmıştır. Toraks'ın ve abdomen'in içindeki tüm organların eviserasyonu vakalarını İngilizce yazılan literatürde rastlayamadık. Olgumuzda kalbin de evisere olması ve inguinal bölgedeki açıklıktan dışarı çıkmış olması oldukça nadir bir durumdur.

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A CASE OF CARDIAC AND PULMONARY DAMAGE DUE TO THE LIGHTNING INJURY

M. Saritemur (2), I. Kucukaslan (3), E. Tekin (2), S. Celik (1), F.M. Sari (2), M. Emet (2)

1. Anesthesia Department, Ataturk University Medical Faculty, Erzurum, Turkey
2. Emergency Department, Ataturk University Medical Faculty, Erzurum, Turkey
3. Pediatrics Department, Ataturk University Medical Faculty, Erzurum, Turkey

Corresponding author: Mr Saritemur Murat (muratsaritemur@gmail.com)

Key-words: Lightning strike ; Apnea ; Cardiac damage

Introduction: Lightning strikes (LS) are uncommon but cause life-threatening injuries. LS may influence all organ systems, but commonly affects the neurological and cardiovascular system. LS may cause myocardial damage and pericardial effusion. Secondary damage to the myocardium may also occur due to catecholamine release or autonomic stimulation. Cardiac dysfunction is often reversible.

Case: An 11-year-old boy was admitted to our emergency department (ED) because of lightning injury. On admission, he was unconscious, intubated and had Glasgow coma score of 3/15. According to the transfer note, he was taken to the nearest medical center immediately after injury and on arrival, he was unconscious, and there was no breathing and pulse. After cardiopulmonary resuscitation which had been performed for 6 minutes, his heart began to work. On admission, his physical examination reveals blood pressure of 83/53 mmHg, body temperature of 37.4°C, heart rate of 126/min. On the neurological examination, there were isochoric pupils, papillary light reflexes and was no eye movement. Auscultation of the lungs revealed fine crackles bilaterally. Heart sounds were normal. The initial electrocardiography showed ST segment elevation in leads of DII, DIII and aVF suggesting inferior myocardial damage. Laboratory results were as follows: CK:948 U/L, CK MB:310 U/L, lactate dehydrogenase:505 U/L, myoglobin:>3000 ng/mL, troponin:>25 µg/L, glucose:589 mg/dL, creatinine:0.8 mg/dL, sodium:125 mmol/L, potassium:4.05 mmol/L, Protein:4.3 g/dL, albumine:2.7 g/dL, arterial blood gas: pH was 6.92; PCO2, 56.7 mm Hg; PO2, 52.5 mm Hg; bicarbonate, 11.1 mEq/L. The white blood cell count was 13000/µL, with 59.8% segmented neutrophils. His cranial computed tomography and MR was unremarkable and chest radiography was showed pulmonary contusion. Echocardiography demonstrated minimal pericardial effusion with normal cardiac functions. He admitted to the pediatric intensive care unit with diagnosis of cardiac damage, pulmonary contusion and rhabdomyolysis. Insulin infusion, hydration with isotonic sodium chloride solution, and urinary alkalization were initiated. Serum electrolyte levels were monitored closely and treated. Diuretics were given carefully for the pulmonary contusion and contusion began to regress on the 3rd day of admission. On the 14th day, CK, CK MB, and troponin values decreased to the normal range. The renal function was remained normal.

Conclusion: The immediate effects of lightning strike may cause asystole, ventricular fibrillation, or direct central nervous system injury to the respiratory center. Because of the cardiac damage was reversible, the apnea may be a more important role of survival than asystole. Therefore, early intubation and adequate ventilation should be attempted to all lightning victims.

P321

Case Presentation

P322

Case Presentation

SUCCESSFUL RESUSCITATION OF ARREST CASE FOLLOWING BUTANE GAS INHALATION

F Coskun (1), H Duymaz (1), MA Karamercan (2), Y Katirci (1), DU Kocasaban (1)

1. Emergency Department, Ankara Education and Research Hospital, Ankara, Turkey
2. Emergency Department, Gazi University Faculty of Medicine, Ankara, Turkey

Corresponding author: Mr Karamercan Mehmet Akif (mkaramercan@gazi.edu.tr)

Key-words: Butane ; Ventricular Fibrillation ; Resuscitation

INTRODUCTION

Butane is the most common cause of deaths among volatile substance abusers. Overall death rate is unknown but it's reported that in 1997, 56% of all volatile substance abuse (VSA) deaths in the United Kingdom were associated with butane. We describe here a case of butane-induced recurrent VF that successfully resuscitated within the emergency department.

CASE REPORT

A 16-year-old healthy male student was persuaded by peers to inhale the contents of a butane gas lighter refill can. They had found a secluded place and inhaled the contents by direct release into their mouth. Within minutes the boy became euphoric, run out of the place and collapsed subsequently. When the emergency team arrived he was in cardiac arrest with pulseless electrical activity (PEA). They gave four cycles of Advanced Cardiac Life Support (ACLS) protocol. At the emergency department his Glasgow Coma Scale was three, he had neither pulse, nor breathing and cardiac rhythm was PEA. He was intubated and after five cycle of Cardiopulmonary Resuscitation (CPR) the rhythm converted to ventricular fibrillation (VF). He was defibrillated with one 200 J. biphasic shock at 25th minute of collapse. ACLS continued for further 15 min. and he received 300 mg amiodarone and 4 times 200 J biphasic shocks. After the last shock sinus rhythm was detected, pulse was weak and arterial blood pressure was 80/40 mmHg. His physical examination revealed that he had mild head trauma with multiple dermal abrasions on face and extremities supposed to be formed during collapse downfall. Focused abdominal sonography for trauma examination, CT scans and cranial-diffusion magnetic resonance imaging showed no abnormality.

He was admitted to the intensive care unit. He had three generalized tonic-clonic seizures within two hours of hospitalization. All were treated with diazepam and after a second seizure attack he was given 18 mg/kg phenytoin and 5 mg/kg continuous infusion. His electroencephalography (EEG) was consistent with mild diffuse cortical dysfunction most probably due to toxic exposure. On the second day of hospitalization his pupils started to react to light and on the fourth day of hospitalization his spontaneous ventilation was achieved. He was discharged on the sixth day from the hospital without significant disability despite mild headache and retrograde amnesia. These symptoms had resolved within two weeks without medication. On his clinical follow up for three months, neurocognitive functions such as mental status, language, attention, memory and decision-making were normal and accepted as complete recovery.

DISCUSSION:

As there is no typical clinical finding in butane inhalation poisoning, the diagnosis is made upon the history of exposure to butane. In case of abuse, the spraying of liquefied gas directly into the throat, the depression of the central nervous system, together with cardiac arrhythmias and a history of abuse make the diagnosis which was the situation in our case.

Vagal inhibition of the heart is a reflex response associated with stimulation of the vagal nerve. By spraying the butane directly into the throat, the jet of fluid can cool rapidly to -20°C by expansion. Sudden or severe stimulation of the vagus may result in profound bradycardia or asystole. In our case the first documented cardiac rhythm was PEA and the mechanisms of arrest might be due to this severe vagal stimulation.

Although butane is a vasoactive substance that aggressively affects the heart, there is limited information about specific toxic effects of butane gas in the literature which mostly consists of case reports. Well controlled studies have shown that the serious ventricular arrhythmias and asystole are precipitated by inhaling many different volatile hydrocarbons, especially in the presence of hypoxia. Butane is absorbed quickly into fatty tissues, but its release back into the bloodstream is slow. In spite of the fact that the direct cardiac toxic effect of butane might cause primary cardiac arrest, together with its slow release into bloodstream might be the probable cause of recurrent VF seen in emergency department. We suggest that our case developed a primary or secondary recurrent VF which may have been initiated by myocardial ischemia but the administered adrenalin during CPR could have decreased the threshold for VF.

P323

Case Presentation

BACK PAIN AND MENINGITIS IN EMERGENCY ROOM

AO. Yildirim (1), O. Tezel (2), İ. Arziman (2), E. Eyi (3), M. Eroglu (1)

1. Emergency Department, GATA Haydarpaşa Training Hospital, İstanbul, TURKEY
2. Emergency Department, GATA Medical Faculty, Ankara, TURKEY
3. Emergency Department, Hakkari Military Hospital, Hakkari, TURKEY

Corresponding author: Mr Yildirim Ali Osman (draliosmanyildirim@gmail.com)

Key-words: Meningitis ; back pain ; EMERGENCY ROOM

Introduction

Meningitis is usually caused by an infection with a virus, with a bacterium or even with fungi. Non specific complaints fever, headache, nausea and vomiting, nuchal rigidity, lethargy, irritability, restlessness, back pain. Brudzinski sign and Kernig sign are classic signs of meningeal irritation. We wanted to share an insidious meningitis case.

Case Report

A 33-year-old-man presented to the emergency department headache, back pain, and nausea. He had no history of chronic diseases but history of trauma 1 month before this symptoms. He was taking amoxicillin- clavunate for 10 days and azitromisin for 5 days because

of his sore throat, headache, and flu symptoms

On examination, 80 beats/min, 110/70 mmHg, 37.1°C and breath sounds were normal. Findings on abdominal examination were unremarkable. There was no rash or lymphadenopathy. Kernig - Brudzinski signs and nuchal rigidity were found to be negative. Laboratory findings were 14.000 leukocytes/mm³ with 62.9% neutrophils, glucose 95 mg/dL, and C-reactive protein kantitatif:2.85

After a lumbar puncture in the emergency department, findings on CSF analysis were as follows: glucose, 41 mg/dL (serum glucose, 84 mg/dL); protein, 173 mg/dL (reference range, 15-45 mg/dL); nucleated cells, 530 (90% lymphocytes); no xanthochromia; no growth was observed on cultures for bacteria and viruses.

A computed tomography scan of the head showed no abnormal findings

Empirical therapy consisted of intravenous ceftriaxone (2 g twice a day). 21-day course of ceftriaxone was completed. The patient was discharged.

Conclusion

Meningitis is common and potentially fatal. Bacterial meningitis occurs at a rate of 5 to 10. cases per 100,000 person-years .Prompt recognition and treatment, including urgent provision of appropriate antibiotic therapy, saves lives. In such a case should not be missed in the emergency department.

P324

Case Presentation

EOSINOPHILIC GRANULOMA OF THE PARIETAL BONE: CASE REPORT

S Yıldırım, H Dogan, DN Ozucelik, A Avcı, K Acıksarı

Emergency department, Bakirköy Dr Sadi Konuk training and research hospital, İstanbul, Turkey

Corresponding author: Mr Dogan Halil (drhalildogan@gmail.com)

Key-words: Eosinophilic Granuloma ; travma ; Parietal bone

GİRİŞ:

Eozinofilik granüloma (EG) %90 oranında 10 yaş altı çocuklarda görülür. Kafa ve vertebral kemikleri tutar. Nadir görülen benign karakterli kemik tümörüdür. Tek ya da çok sayıda litik kemik lezyonları ile karakterizedir. Etiyolojisi tartışmalıdır. Kemiğin meduller tabakasına eozinofil ve histiositlerin birikmesi ile oluşur. Tanı ameliyat öncesi röntgen, kemik sintigrafisi, CT, MRI ve cerrahi sonrası histolojik ile inceleme doğrulanır. EG malign dönüşüm göstermez. Eğer şikâyet yoksa tedavisiz takip edilebilir. Kafa travması nedeni ile acil servise başvuran ve insidental olarak saptanan eozinofilik granüloma olgusunu sunarak travmalı hastalarda ayırıcı tanıda düşünülmesi gerekliliğine vurgu yapmak istedik.

OLGU:

10 yaşında kız hasta kafa travması sonrası mide bulantısı şikayeti ile acil servise getirildi. Hastanın travmayı sol parietal bölgeden almıştı. Hastanın geçmişinde cranial operasyon öyküsü mevcut değildi.

Fizik muayenesinde; genel durum iyi suuru açık oryante ve koopere kan basıncı 123/82mmhg, nabızı: 82/dakika solunum sayısı 18/dakika, nörolojik muayenesinde patoloji yoktu. Kafada sol fronto-parietalde 2x2cmlik ödem mevcuttu. Palpasyonla hassasiyeti mevcuttu lezyon üzerinde renk değişikliği laserasyon veya abrazyon yoktu. Hastanın yapılan kranial konpütörize tomografi görüntülemesinde sol frontoparietalde kemik destrüksiyonu tespit edildi (Resim 1)

Kontrastlı kranial Magnetik rezonans görüntülemesinde yoğun heterojen kontrast tutulumu gösteren epidural aralığa uzanan ve kemiği destrükte eden kitle lezyon izlendi.(Resim 2)

Hastanın yapılan laboratuvar incelemeleri normal sınırlardaydı.

Hastanın yapılan görüntülemeleri sonucunda lezyonun eozinofilik granülomla uyumlu olduğu görüldü. Eozinofilik granülomun en sık görüldüğü bölgeler (Kosta ve kısa kemikler) için yapılan görüntülemelerde patolojiye rastlanmadı. Travma açısından patoloji saptanmayan hasta polikliniği kontrolü önerilerek taburcu edildi.

Tartışma:

Eozinofilik granüloma (EG) olgumuzda olduğu gibi %90 oranında 10 yaş altı çocuklarda görülür. Kafa ve vertebral kemikleri tutar. Nadir görülen benign karakterli kemik tümörüdür. Olgumuzda sadece kafa kemiğini tutmuştur.Tek ya da çok sayıda litik kemik lezyonları ile karakterizedir. Etiyolojisi tartışmalıdır. Kemiğin meduller tabakasına eozinofil ve histiositlerin birikmesi ile oluşur. Tanı

ameliyat öncesi röntgen, kemik sintigrafisi, CT, MRI ve cerrahi sonrası histolojik ile inceleme doğrulanır. EG malign dönüşüm göstermez. Eğer şikâyet yoksa tedavisiz takip edilebilir. Olgumuzda olduğu gibi genellikle insidental olarak saptanır Kafa travması nedeni ile acil servise başvuran ve insidental olarak saptanan radyolojik görüntüsü tipik olan EG travmalı hastala kemik fraktürleri ile karışabilir.

P325

Case Presentation

PNEUMOMEDIASTINUM AS A RESULT OF AIR GUN INJURY

S Kocak, A Tuncar, M Ergin, B Cander, M Gul, AS Girisgin

Emergency Department, Necmettin Erbakan University Meram Faculty of Medicine, Konya, Turkey

Corresponding author: Mr Kocak Sedat (skocak@konya.edu.tr)

Key-words: pneumomediastinum ; air gun ; injury

Background: Although there is a high rate of mortality in shot gun injury, the serious air gun injuries is not frequent. We are presenting a case with air gun injury related pneumomediastinum. Case report: 15, M patient was shot with air gun which was being fired accidentally. He was transferred from community hospital at a small town. In our clinic, he did not accepted to admit to hospital. After 5 days, he readmitted to our ED and wanted missile to be excluded. His general condition was well and did not have any complaint. His medical history did not have any feature and his physical exam is in normal range except entrance point of missile which was 2 cm superiolateral to sternal notch and above sternum. Neck and chest computed tomography showed air image in paratracheal area and muscules and pneumomediastinum located anterior and posterior mediastinum. There was a hiperdens image of metallic object located right costovertebral joint and next to T2 vertebra. There was no injury reported virtual CT bronchoscopy. He was consulted and admitted to Thoracic Surgery Clinic. The rigid bronchoscopy was performed and no injury was determined. After 1 day follow up, he was discharged with recommendation to come out patient clinics. Results: It should not be forgotten that air gun related injuries can be serious and life threatening. According to injury zone, the underlying pathologies should be searched carefully.

P326

Case Presentation

SPONTANEOUS URETER RUPTURE SECONDARY TO URETERIC CALCULUS AND ITS COMPLICATIONS

A Aygun (1), O Bekar (1), E Erdem (1), U Eryigit (1), M Imamoglu (1), Y Karaca (2)

1. Department of Emergency Medicine, Karadeniz Technical University, Faculty of Medicine, Trabzon, Turkey

2. Department of Emergency Medicine, Kanuni Training and Research Hospital, Trabzon, Turkey

Corresponding author: Mr Imamoglu Melih (melihimam@gmail.com)

Key-words: Ureteric calculi ; Ureteric rupture ; Retroperitoneal abscess

Introduction

Spontaneous ureter rupture is a rare clinical condition that may be complicated with retroperitoneal urinoma, urosepsis, abscess formation, infection and renal impairment. In this case we

described a spontaneous ureteric rupture in a paraplegic patient and its complications.

Case report

21 years old paraplegic woman admitted to our emergency service with fever, nausea and vomiting. Her body temperature was 38°C and had contractures in both her lower extremities. In physical examination she had no sensory and motor activity from T8 vertebra level. She had a fluctuating lesion with erythema in her lumbar region which was approximately 15x10 cm. Abdominal tomography showed dilated left renal pelvis and ureter with air, and a calculi approximately 15 mm sized in the left ureter distal site. There was a milimetric defect in the left ureter proximal site and a 18x15 cm sized collection was seen in the left retroperitoneal area which showed peripheral enhancement with septa formations and air in it. There were a few calculi, 14 mm the biggest, in the bladder. The patient was then transferred to the urology department for advanced treatment.

Discussion and Conclusion

Ureteric ruptures usually occur due to trauma. Non-traumatic ureter perforations are generally associated with ureteral obstruction by calculi but it may appear due to increased pressure by a downstream obstruction caused by any other reason. Pain is the most common symptom but in paraplegic patients without the sensation of pain some non-specific symptoms like fever, nausea and vomiting can be seen. Urine extravasation may limit itself as urinoma but it may be complicated with abscess and sepsis if not treated. Emergency physician must be aware of such patients for complications.

P327

Case Presentation

ACUTE MECHANICAL ILEUS AFTER LAPAROSCOPIC SURGERY

C. Mehmetoglu (1), N. Nur User (1), S. Özdinç (1), O. Akpınar Oruc (1), K. Tunay (2)

1. Emergency Service, Afyon Kocatepe University School of Medicine, Turkey
2. Emergency Service, Afyon State Hospital, Turkey

Corresponding author: Mr Ergin Mehmet (drmehtmetergin@gmail.com)

Key-words: abdominal pain; ileus; Laparoscopy

Introduction: Cholecystectomy is performed by two ways: Open and Laparoscopic. Nowadays, because there are advantages and less post-operative complications, laparoscopic cholecystectomy is performed more frequently.

Ileus is the partial or total blockage of the intestinal content in GIS when it's passing over distally. It is a common cause of emergent abdominal surgery. Without appropriate treatment, it leads high morbidity and mortality. In this article, acute mechanical ileus obstruction which developed in a patient who underwent laparoscopic surgery because of acute cholecystitis will be presented.

Case Report: A 72-year-old female patient who had undergone a surgery of laparoscopic cholecystectomy 23 days ago applied us with complaints of not able to flatulence? And malodorous faeces vomiting 10 times a day. Physical examination vitals were found as following: Tension: 150/100 Pulse: 80 SS: 20? SaturationO2: 85. Examination of thorax: rhonchi is present. Abdominal examination: epigastric sensitivity is present. Defensive rebound was not present. Intestines sounded as hyperactive. 2 cm below a trace of old scar there was swollen/edema of 2x2 cm at umbilical region. The laboratory tests revealed as AST: 355.8 ALT: 247, additional findings were available. Other laboratory findings were normal.

Standing Abdominal Direct X-ray (ADB): 2 air-fluid levels were observed.

Abdominal CT: Jejunal loops which appeared dilated were compatible with ileus. At infraumbilical level, anterior abdominal wall 2.5 cm of the midline wall defect at subcutaneous adipose tissue showed herniation of the small intestinal segment. (the transition zone of ileus is at this localization). The appearances of ileal and colonic segments seemed collapsed.

The patient was consulted by general surgery and operated through hospitalization. Afterwards, she was discharged from hospital.

Conclusion: After laparoscopic pouch surgery, complications such as Mechanical Ileus, even though encountered very rare, should not be missed especially in a patients with lack of flatulence and long-term vomiting.

P328

Clinical Decision Guides and Rules

ANALYSIS OF PATIENTS PRESENTING WITH CLASSICAL MANIFESTATIONS BUT NOT POST-OPERATIVE DIAGNOSIS OF ACUTE APPENDICITIS

TH Huang, YC Huang

Department of Emergency Medicine, Chiayi Christian Hospital, Chiayi City, Taiwan

Corresponding author: Mr Huang Tai-hsun (terence720716@gmail.com)

Key-words: Appendicitis; Alvarado score; Pediatric appendicitis score

Acute appendicitis (AP) is a common emergency encountered in daily practice of emergency medicine. Although various clinical decision rules and imaging study decreased the negative appendectomy rate, not every high-risk patient does have AP. Herein we examined our patients undertaking surgical operations under the impression of acute AP and valued the surgery for those with pathologies other than AP.

Methods: We retrieved all patients receiving surgical operation for presumed AP in our hospital from January 1st, 2009 to April 30th, 2012. We calculated the Alvarado score in adult patients and the Pediatric appendicitis score (PAS) in patients younger than 18 years old. As recommended stratification for acute appendicitis, patients with scores < 4 were low-risk, 4-6 were moderate-risk, and > 6 were high-risk. We compared non-appendicitis (NA) patients with the AP counterparts. A p value < 0.05 was considered as statistically significant. The value of the surgical operation for NA patients was rated by three experienced emergency physicians and three experienced surgeons. The Delphi method was utilized to converge towards a consensus if there is any discrepancy greater than one scale to the median.

Results: There were 258 adults and 56 children enrolled in this study. In adults, the male/female (M/F) ratio was 1.10 and age was 45.4±18.7 years old. The Alvarado score was 6.5±1.7; with 7.3% of low risks, 40.7% of moderate risks, and 31.0% in high risks. In children, the M/F ratio was 1.67 and age was 12.5±3.1 years old. There were 15 adults (5.8%) whose pathological diagnoses were not AP. For there was only one NA child, we compared NA and AP patients in adults only. The NA patients had longer time from ED arrival to surgery (p=0.015), length of hospital stay (p=0.020). In our cohort, the gross positive appendectomy rate was 94.9%. In the negative appendectomy group, positive value of the surgical operation was 11/16 (69%).

P329

Clinical Decision Guides and Rules

COMPARISON OF ESTIMATING EARLY MORTALTY IN CANCER PATIENTS WITH EASTERN COOPERATIVE ONCOLOGY GROUP SCALE AND RAPID EMERGENCY MEDICINE SCORE

C. Doğru (1), F. Bildik (2), S. Güler (3), I. Kilicaslan (2), A. Keles (2), A. Demircan (2)

1. Department of Emergency Medicine, Sisli Etfal Education and Research Hospital, Istanbul, Turkey
2. Department of Emergency Medicine, Gazi University Medical Faculty, Ankara, Turkey
3. Department of Emergency Medicine, Mardin State Hospital, Mardin, Turkey

Corresponding author: Mr Dogru Cumali (dr.cumalidogru@gmail.com)

Key-words: Cancer ; Early mortality ; Scores

Introduction: Increasing awareness of society about cancer and developing new technologies provide early diagnosis and new therapeutic approaches make cancer patients to survive longer. They all cause a longer following up period of the patients and more applications to the emergency room (ER). We have compared the Eastern Cooperative Oncology Group Scale (ECOG) to Rapid Emergency Medicine Score (REMS) for early period of prognosis prediction in patients who have presented to the ER with any complaint or etiology.

Material and Method: This prospective observational clinical study has been carried out between 15/01/2010 to 15/07/2010 in Gazi University, Faculty of Medicine, Department of Emergency Medicine where 48 000 adult patients get secondary or tertiary care in a year.

Results: Of 598 (2.08%) cancer presentations have been taken in the study. All of the 598 presentations, 347 (76.9%) was only one time and 324 (57.2%) of the total number was man. Mean age was 59.11±15.58. Shortness of breath was the most common complaint (n=149, 25%). There was a documented metastasis in 267 cases (44.6%). Five patients (0.84%) have been diagnosed as cancer first time in the ER. Of 327 (54.2%) were discharged from but 27 (4.5%) patients died in ER. Those who died in the emergency department, 12 of them (44%) died within the first 24 hours. ECOG score was 4 in 243 presentations (40.6%). REMS score was 5 in 114 (19.1%) presentations. Among them whose REMS score was 5 died in the ER within the first 24 hours. Among all of the dead patients, the highest mean average ECOG score was in patients who died between 24 hours to 7 th day and the highest mean average REMS score was in patients who died in the first 24 hours. All patients who died at the day 30th, ECOG and REMS scores revealed positive weak and statistically significant correlation (Superman's rho: $p < 0.001$, $r=0.2663$ and $p < 0.001$, $r=0.286$).

Conclusion: REMS score was superior to the ECOG score in prediction of mortality within the first 24 hours (0.779, $p < 0.001$). The two scoring system revealed no statistically significant difference in mortality rates between 24th hour to 7th day or 7th day to 30th day.

P330

Clinical Decision Guides and Rules

A NEW HEAD INJURY PROFORMA FOR THE EMERGENCY DEPARTMENT

L Kendal (1), T Lasoye (2), T Locke (3)

1. Acute Medicine, Lister Hospital, Stevenage, United Kingdom
2. Emergency Department, Kings College Hospital, London, United Kingdom

3. Acute Medicine, Stepping Hill Hospital, Stockport, United Kingdom

Corresponding author: Melle Kendal Laura (lekendal@gmail.com)

Key-words: Head injury ; CT scan ; NICE guidelines

In September 2007, the National Institute for Health and Clinical Excellence (NICE) published updated best-practice guidelines for the management of patients with traumatic head injury presenting to the emergency department¹. The guidelines emphasise that such patients should be assessed within 15 minutes of arrival at hospital by an appropriately trained member of staff. Based on this initial assessment, the risk of clinically important brain injury can be evaluated and a decision on the urgency of computerised tomography (CT) diagnostic imaging made. To expedite the diagnosis and management of potential intracranial injury, the decision to scan urgently can emerge directly from this triage assessment.

Numerous studies have demonstrated a relationship between early diagnosis and treatment of intracranial bleeding with improved patient outcomes²⁻⁸. In the case of extradural haematoma, for instance, a lucid interval may precede severe deterioration caused by raised intracranial pressure and brain herniation. Until intracranial pressure rises, the formation of an extradural haematoma in itself does not necessarily imply there will have been significant injury to the underlying brain tissue; early surgical evacuation of the collection can therefore prevent subsequent cerebral damage. Indeed, it has been proposed that mortality rates from extradural haemorrhage could be reduced to zero by implementing strategies to achieve timely diagnosis and treatment of such bleeds⁹.

A typical patient journey in the Emergency Department starts with assessment by a triage nurse. It may then be followed by a considerable wait before seeing a doctor. With head injury patients, it is therefore crucial that the triage nurse has a tool that helps identify those needing urgent CT, and is empowered to act accordingly.

We have designed a new proforma (with specific adult and child versions) to be used in all cases of ambulatory head injury presenting to the Emergency Department. This new proforma is simpler and aligned directly with NICE guidance regarding indications for CT and over what timeframe CT should be performed.

The first page of the two-sided proforma presents the most important clinical questions first, so that indications for urgent imaging are captured at the earliest opportunity and the required action is explicitly stated to the triaging clinician. The second page enables clerking notes and observations to be recorded, as well as CT findings (where obtained) and a clinical management plan.

This single-sheet device captures only information of key clinical importance and has been designed to be completed in as short a time as possible. It can be easily attached into clinical notes, and in most cases should itself satisfy the documentation requirements for the entirety of the patient's presentation and management within the ED (prior to discharge or transfer to another hospital department).

Our hope is that the use of this new proforma will lead to improvements in the following: the speed of obtaining CT imaging where indicated; judicious, clinically appropriate use of CT scanning in head injury patients, as informed by current NICE guidelines; and the overall quality of triage and clerking record-keeping. We are piloting a study of the proforma in the Emergency Department of Kings College Hospital, from which we hope to obtain preliminary data on these outcomes.

Clearly, no proforma can replace or overrule clinical judgement; rather, we envision it as an aid to triage and clerking that should enable more consistent application of current guidelines with a view to optimising patient outcomes.

P331

Clinical Decision Guides and Rules

CAUSES OF DELAYED DIAGNOSIS IN PATIENTS ATTENDING THE EMERGENCY DEPARTMENT WITH SUSPECTED SEPTIC ARTHRITIS

S Ayathan, C Bailey, W Tan

Emergency Department, Royal Derby Hospital, Derby, United Kingdom

Corresponding author: Mr Tan Weijien (weijientan@nhs.net)

Key-words: septic arthritis ; delay ; hot swollen joint

Introduction: Patients presenting with a hot swollen joint is common in the emergency department (ED). Additional investigations and specialist advice is often needed to exclude septic arthritis which prolong a patient's stay in the ED causing treatment delays and poor patient experience.

Purpose:(i) To determine the length of time patients with suspected septic arthritis spent in the ED (ii) To identify the areas contributing to delays (iii) To improve patient processing times and streamline management

Methods: A retrospective review of all patients given a provisional diagnosis of septic arthritis at the ED of a teaching hospital between 1st May 2011 and 30th April 2012 was performed. We excluded patients with the following criteria: aged <18 years, seen at resuscitation area, joint aspiration already performed before presentation. The times of patient arrival, departure, clinician review and investigations were recorded.

Results: 66 patients were included. The mean time patients spent in the ED was 240 mins (SD=54.2). 18 patients (27.3%) exceeded the 4-hour national target. Among triaged patients, 33 patients (57.9%) were triaged as "standard" (category 4 of Manchester Triage System). 21 patients (36.8%) had venepuncture after 30 minutes following triage (maximum time= 216 mins). Mean time required by clinicians to process the patients from initial assessment to patient departure from the ED was 154 mins (SD=56.2). Mean time from initial assessment to orthopaedic input among patients who were referred (n=33) was 112 mins (SD=45.7). Joint aspirations (n=20) performed in the ED required a mean time of 114 mins (SD=69.2) from initial clinician assessment. ED doctors only performed 2 joint aspirations (10.0%). Spearman's correlation coefficient between time of joint aspiration and time patients spent in the ED was 0.79 (p=0.00003).

Conclusion: Patients suspected of septic arthritis had prolonged stay in the ED. The sources of delay were: inappropriate triaging, late venepuncture, delayed orthopaedic input and late joint aspiration. We have recommended guidelines to achieve these aims: earlier clinical identification of potential septic arthritis, higher triage prioritisation, immediate venepuncture following triage and earlier orthopaedic referral. We advocate the teaching of joint aspiration techniques to our ED clinicians to encourage earlier joint aspirations.

P332

Clinical Decision Guides and Rules

RETROSPECTIVE ANALYSIS OF THE PATIENTS ADMITTED WITH BLEEDING DUE TO WARFARIN THERAPY

M Ekiz (1), L Duran (2), HU Akdemir (2), F Çalışkan (2)

1. Emergency Service, Amasya Sabuncuoğlu Şerefeddin State Hospital, Amasya, Turkey
2. Emergency Department, Ondokuz Mayıs University Medical Faculty Hospital, Samsun, Turkey

Corresponding author: Mr Akdemir Hızır Ufuk (hufukakdemir@hotmail.com)

Key-words: Warfarin ; Bleeding ; Emergency department

Objective: Bleeding is the most serious side effect of warfarin which is the only orally anticoagulant drug and is prescribed frequently by many clinics. The effective factors on bleeding complications occurred in the patients taking warfarin was investigated in this study.

Material and Method: The hospital records of 111 patients taking warfarin therapy and admitted with bleeding compliant to Emergency Department of Ondokuz Mayıs University between January 2007 and December 2010 were evaluated retrospectively. Patients were divided group I (INR>3.5) and group II (INR≤3.5) according to "International Normalized Ratio" (INR) measured at admission. Patients were compared with demographic characteristics (age, gender), chief complaint, indication of warfarin therapy, comorbid diseases, duration of warfarin therapy, INR values, complete blood count, bleeding localization, treatment and interventions. In this study, the data was analyzed using non-parametric Mann-Whitney U test statistic. Alpha was set at 0.05 for all tests. Data was analyzed by "SPSS (Statistical Package of Social Sciences for Windows) 15".

Results: Of all patients, 85 patients were in group I and 26 patients were in group II. 56 patients (50.5%) were female and 55 (49.5%) were male. It was detected that the most common indication for warfarin therapy in our study was heart valve replacement in 52 patients (46.8%) and the most common complaint at admission in both groups was bloody stools in totally 46 (41.5%) patients. 79 patients (71%) had at least one comorbid disease (Table 2-3). The most common comorbid disease was hypertension in all patients (n=50, 45%). 79 patients had additional drug use except warfarin therapy. It was found that the lowest INR value was 1.16 and the highest value was 10.2 in all patients. No statistically significant difference was found between the groups according to INR value (p>0.05). It was determined that 100 patients had major bleeding (90.1%) and the other 11 patients had minor bleeding (9.9%). It was detected that major bleeding was higher in group I and duration of warfarin therapy was longer than 12 months in 81 patients (73%). The most common localization of bleeding was gastrointestinal tract in 55 patients (49.5%). It was detected that fresh frozen plasma was given to 109 patients (98%) and red cell replacement was applied to 73 patients (65.8%). It was found that duration of patients in emergency department was longer than 24 hours in 81 patients (73%) and 80 patients (72%) of 111 patients were discharged from emergency department.

Conclusion: Our study reveals findings related with predisposing risk factors in warfarin-induced bleeding and monitoring and treatment in emergency department. Although it is an important factor for bleeding secondary to warfarin, INR value is not alone responsible for bleeding, additional factors may be responsible for the bleeding.

P333

Clinical Decision Guides and Rules

RETURN VISITS IN GENERAL INTERNAL MEDICINE IN AN EMERGENCY DEPARTMENT IN BELGIUM

N De Launoit, I Roggen, I Lauwaert, I Hubloue

Emergency department, UZ Brussel, Vrije Universiteit Brussel, Brussels, Belgium

Corresponding author: Mme De Launoit Nancy (nancy_delaunoit@hotmail.com)

Key-words: return visits ; internal medicine ; quality control

Background

"Return visits" are a worldwide known phenomenon in emergency medicine: literature learns that 2.4 to 3.4% of all patients return within 72 hours for a second consultation.

Objective

We wanted to evaluate the rate of and the reason for return visits in adults in general internal medicine, admitted to our ED.

Methods

Using a retrospective cohort study design, we analyzed all International Statistical Classification of Diseases and Related Health Problems (ICD-9) codes in all medical records of adults above the age of 16 who were admitted to the internal medicine section of our ED between 1/1/2010 and 31/12/2010.

Results

Of all 21612 (46.1% male) visits, 570 (49.5% male) patients (2.6%) returned within 72 hours after their first visit. Median age (range) of all patients was 48.5 (16 – 103) years, median age (range) of those returning was 41.1 (16 – 93) years.

321 (56%) patients was diagnosed with the exact same ICD-9 code, 113 (20%) with a diagnosis within the same organ system, 74 (11%) had an allegedly missed diagnosis and 72 (13%) patients presented for complaints unrelated to the first visit.

Of all complaints, renal colic had the highest return rate: 9.1% (49 out of 539) of patients returned. Sore throat 6.8% (28 out of 411), biliary colic 6.5% (11 out of 168), gastritis 4.9% (39 out of 800) and constipation 4.9% (29 of 590) complete the top five.

Conclusions

Pain seems an alarm symptom for patients to return to the ED within 72h. Both renal and biliary colic are known to cause recurrent pain. In our hospital, the policy is to treat these patients orally, with instructions to come back to the ED if oral pain therapy fails. Yet with return visits up to 10%, it might be useful to revise our initial treatment policy and consecutively maybe also our admission criteria for these patients. Sore throat, gastritis and constipation are also known to cause discomfort, yet pain in these conditions is generally manageable with oral pain medication. Possible explanations for these returns might be the lack of knowledge on the natural evolution of the condition or an inadequate pain management. Further research is needed to investigate whether standardized pain management and additional patient information on the natural course of these conditions would reduce return visits.

P334

Clinical Decision Guides and Rules

ACUTE APPENDICITIS: SENSITIVITY TO OUR CLINICAL AND ULTRASONOGRAPHY C DIAGNOSIS SUSPICION

E Arana-Arri (1), S Carbajo (2), A Fernandez (2), A García de Vicuña (3), G Gutierrez (2), D Izaguirre (2)

1. Clinical Epidemiology Unit, Cruces University Hospital, Osakidetza, Barakaldo, Spain
2. Emergency department, Cruces University Hospital, Osakidetza, Barakaldo, Spain
3. Emergency Department, Cruces University Hospital, Osakidetza, Barakaldo, Spain

Corresponding author: Mr Aitor García De Vicuña (eunatea@euskaltel.net)

Key-words: Acute appendicitis ; Diagnostic accuracy ; Ultrasonography

Introduction: Acute appendicitis (AA) is one of the most common and challenging surgical emergencies, and can lead to appendiceal perforation and peritonitis, which are concomitant with high mortality and morbidity. Making the decision for a surgical operation based only on the patient's signs and symptoms results in removing normal appendices (negative appendectomy) in 15% to 30% of the cases. The rational approach is to decrease the negative appendectomy as well as appendiceal rupture rates. A

decrease in unnecessary appendectomies should not cause an increase in perforation rates

Aim: To determine the diagnostic accuracy of our suspected diagnosis of acute appendicitis and the sensitivity of the ultrasonography for the diagnosis of acute appendicitis in our department.

Methods: Retrospective observational study. **Design:** Diagnostic accuracy study. **Setting:** patient's signs and symptoms and ultrasound to assess the diagnostic accuracy of clinically suspected AA. **Participants:** 278 patients with suspected AA. We reviewed the clinical records of these cases with clinical suspicion of AA and ultrasound/CT scan performed, between the months of December 2009 and March 2010.

Results: Finally, we analyzed the data of 278 suspected AA, with diagnostic confirmation by biopsy in 101 cases. Diagnostic suspicion of AA in women was 30% vs. 44% in men. All of the AA diagnosis were made by ultrasound/CT scan besides one. The result of the biopsy was negative in 5 AA suspicion cases, besides the positive result in the ultrasonography (false positive). The sensitivity was 33.7% in resident physicians with one year of work experience at the emergency department versus 66.7% of AA in diagnostic suspicion by the resident physician with more than one year of experience. 4.3% of the ultrasound with a diagnostic result of AA was negative in the biopsy. In 19.1% patients a CT scan was performed and in those CT scans the diagnosis of AA was carried out in the 26.9% of then. The sensitivity was 93.6% (IC 95%; 86.8%-97%), specificity of 97.4% (IC 95%; 93.5%-99%). 42 patients were observed for 24 hours. Ultrasound was performed in two of these patients, with a diagnosis of AA in one of them. The remaining patients were home discharged without subsequently readmission. 21 patients were readmitted and in 4 cases acute appendicitis was detected. One of these four patients was previously discharged prior to performing ultrasound to be negative.

Conclusions: We have very good sensitivity in diagnosis with ultrasound the AA in our environment. As the sensitivity of diagnostic suspicion in the male more fine-tuned as described in other articles. We believe we have a bias when abdominal ultrasound request by deputies and we must improve our diagnostic suspicion. We have more percentage of patients with AA patients readmitted to turn to observation in the emergency department.

P335

Clinical Decision Guides and Rules

COMPARISON OF MODIFIED EARLY WARNING SCORE AND RAPID EMERGENCY MEDICINE SCORE ON INTERNAL MEDICINE PATIENTS APPLIED TO EMERGENCY DEPARTMENT

M BULUT (1), H CEBİCİ (2), A SAK (3), O DURMUS (4), AA TOP (5), EA BAS (6), F ELUMAR (7)

1. Department of Emergency Medicine, Bursa Şevket Yılmaz Education and Research Hospital, BURSA, Turkey
2. emergency department, Kayseri Education and Research Hospital, Kayseri, Turkey
3. Department of Emergency Medicine, Bursa Şevket Yılmaz Education and Research Hospital, BURSA, Turkey
4. Emergency department, Istanbul Umraniye Education and Research Hospital, ISTANBUL, Turkey
5. Emergency department, Trabzon Numune Education and Research Hospital., trabzon, Turkey
6. Emergency department, Bursa Şevket Yılmaz Education and Research Hospital, BURSA, Turkmenistan
7. Emergency department, Bursa Şevket Yılmaz Education and Research Hospital, BURSA, Turkey

Corresponding author: Mme Bulut Mehtap (mbulut94@yahoo.com)

Key-words: Modified Early Warning Score ; Rapid Emergency Medicine Score ; Emergency department

Introduction: Especially in crowded emergency departments (ED), the most important matter within limited time is to detect the serious patients whom need to be admitted to clinic or intensive care unit (ICU). The Modified Early Warning Score (MEWS) and Rapid Emergency Medicine Score (REMS) are different scoring systems that promise to predict patient disposition and clinical outcome in EDs. Our study aimed to compare effectiveness of the two scores, on internal medicine patients who applied to ED, for detecting the critical patients by the most accurate way.

Material and Methods: From 01.10.2011 to 31.03.2012, red and yellow categorized internal medicine patients after triage evaluation were been included to study. The study was designed multicenter (three emergency departments of education and research hospitals) and prospective. Trauma patients, under 16 age patients, triage green categorized patients, patients who were brought to ED as arrest and patients who were referred to another health center from ED were been excluded from study. Physical examination findings, vital signs, Glasgow Coma Scores (GCS) and diagnosis were recorded. The primer endpoints were clinic admission, ICU admission and death in hospital. Kruskal-Wallis and Mann-Whitney U tests were used in statistical analysis to compare groups. Risk factors were examined with logistic regression analysis. Descriptive values were given as mean \pm standard deviation. $p < 0.05$ was accepted statistically significant.

Results: Total patient was 2000; %52 male (1039) and %48 female (961). Mean age was $61,41 \pm 18,92$. When examined for diagnosis groups; the most common diseases were %28,2 of patients cardiovascular diseases, %19,72 central nervous system diseases and %17,1 respiratory diseases. %40,8 of patients were admitted to clinic, %29,8 admitted to ICU and %29,2 discharged from ED. Overall in-hospital mortality was %7,7 (153/2000). Mean MEWS was $1,55 \pm 1,54$ and REMS was $5,17 \pm 3,27$. Dead patients' mean MEWS and REMS value were $2,38 \pm 1,97$ and $7,59 \pm 3,15$ respectively and statistically significance was detected when compared to alive (MEWS $1,48 \pm 1,48$ and REMS $4,97 \pm 3,20$). Also clinic admitted patients' those scores were higher than discharged patients' and it's found out statistically significance. However, only REMS was statistically significance for ICU admitted patients. While $MEWS \geq 5$ OR=3,358 (%95 CI:2,358-6,243) and $REMS > 13$ OR= 14,564 (%95 CI:4,573-46,379) was detected in logistic regression analysis.

Discussion and Conclusion: For internal medicine patients who applied to emergency department, both MEWS and REMS score found to be effective to predict mortality and admitting to a clinic. Only REMS found to be effective to predict admitting to ICU. If $MEWS \geq 5$; mortality rate increases 3.358 times, if $REMS > 13$; mortality rate increases 14.564 times. As a result, REMS observed to be more sensitive than MEWS

triage performed in other countries it was concluded that the most appropriate person for patients triage was the triage nurse with the necessary training (professional formation) and specific skills.

Objectives

The present work intends an evaluation of the nurses triage activity in the Emergency Rooms in Cluj-Napoca, four years after the triage protocol implementation at a national level.

The study objectives are:

- Evaluation of the triage activity, reviewing the triage code comparing with the real emergency level assigned after the medical examination

- Identification of triage errors as over/underestimated triage for the emergencies of level 1, 2, 3

- Propose measures for optimizing the activity of triage and emergency care implicitly

Material and methods

The study is observational, prospective type, conducted from February to April 2012, in the two Emergency Room's from Cluj-Napoca.

There are two groups of nurses, marked with group UPU 1 - 14 triage nurses and group UPU Pedi - 11 triage nurses. The study was conducted through a questionnaire and evaluation of a sample observation sheets prepared by triage nurses. The data is in Excel tables represented as graphs type pie, bar, column and the statistical value of the study was analyzed with Fisher's exact test two tailed, on the statistical significance $p < 0.05$.

Results

During February to April 2012 were evaluated 1574 observation sheets at UPU 1 and 3700 observation sheets at UPU Pediatrics, of which 1025 sheets (65.03%) and 783 sheets (21.16%) were classified in levels urgent, critic and resuscitation. The main results show that errors in emergency occur, in most, due to subjective factors (overcrowding, lack of staff, the lack of consultation, triage nurses fatigue). We assessed whether patients' age, presence of pathological personal antecedents and experience influence nurses in triage errors. It was noticed that the risk of young people framing errors in triage level is higher than the risk of older people, most times by underestimating the level of triage ($p = 0,044$); triage errors are not influenced by the triage nurse experience or the existence of patient personal history.

After the evaluation of the activity we offer recommendations for improvement: introducing the parameter of triage pain scale, next to vital functions, and mentioning in writing of its assessment; comfort and good working conditions for the triage nurse by marshalling the support of another colleague (nurse / physician resident) at times of peak; adding places for consulting during overcrowding moments, continued professional training by organizing regular training courses in form of triage cases discussions, simulations, in mixed teams; information and awareness of the population regarding triage protocol and how to use it; framing, as part of the care team, a psychologist to provide the interface between medical staff and caregivers.

Conclusions

To ensure a good activity in emergency triage, nurse must have good knowledge about the protocol for triage, consultation places enough, have physical and psychological comfort and has to be supported by the entire care team. All these things lead to less waiting in triage, to a faster access to emergency measures required by the patients and increase patient satisfaction.

P336

Clinical Decision Guides and Rules

THE TRIAGE NURSE – EVALUATION, ERRORS, SOLUTIONS

A Golea (1), LM Horea (2), F Marchis (2)

1. Emergency Medicine Discipline, Iuliu Hatieganu University of Medicine and Pharmacy, Cluj Napoca, Romania

2. Emergency department, Pediatric Emergency Hospital, Cluj-Napoca, Romania

Corresponding author: Mme Horea Liana-maria (liana_horea@yahoo.com)

Key-words: national triage protocol ; triage nurse ; evaluation, errors, solutions

Introduction

The national triage protocol was established in Romania in year 2009. After some discussions and after comparing the emergency

P337

Clinical Decision Guides and Rules

ELDERLY SUICIDES ATTEMPT: A CASE-CONTROL STUDY AMONG 10 YEARS IN REANIMATION UNIT (SUICIDE ATTEMPT, ELDER, SEVERITY, SUICIDE)

M Doukhan (1), H Hubert (2), F Saulnier (3)

1. Emergency department, Hôpital Gustave Dron, Tourcoing, France
2. Public Health Laboratory EA2694, Lille Nord de France University, Lille, France
3. Public Health Laboratory EA2694, Lille Nord de France University, Lille, France

Corresponding author: Mr Doukhan Mathieu (doukhan.mathieu@yahoo.com)

Key-words: Suicide attempt ; elder ; severity

Objectives: the suicide of the elderly person is a reality under esteemed in France, it represents close to 30% of the suicides in 2008, and is in constant growth. Few works describe the characteristic quantifiables of the suicides attempters more than 65 years. Our study has for objective to evaluate the characteristics in terms of morbi-mortality attributable to the age. **Material and Method:** case-control study on 434 patients older than 65 years from 15 089 files of suicides attempts hospitalized in the respiratory emergencies and medical intensive care of Lille between the January First 1998 and December 31 2007. The files concern the diagnosis ICD-10 relating to a suicide attempt. The matching criteria between more and less than 65 years are the sex, the suicide method and the SAPSII without the age. The patients were matched one for one. **Results:** 392 couples were created. The patients of aged more than 65 years have more antecedents (51.8% vs 78.7%, $p < 10^{-3}$), they undergo more complementary examinations (67.5% vs 77.2%, $p = 0.003$), therapeutics (43.9% vs 53.6%, $P = 0.008$), for an longer average length of stay (2.3 ± 7.1 d vs 2.8 ± 6 d, $p < 10^{-3}$). Altogether there are more complications (26.1% vs 46.2%, $p < 10^{-3}$), secondary hospitalizations (63.2% vs 75.4%, $p < 10^{-3}$) most often in non psychiatric sector (44.4% vs 40.1%, $p < 10^{-4}$) with extra exit treatments. But these patients do not die more than those under 65 years [3.8% vs 5.8%, $p = 0.22$]. **Conclusion:** the elderly suicide is more serious, with a longer and complex care, but without mortality difference by report to younger similar cases: this mortality is as avoidable as in the younger population

P338

Clinical Decision Guides and Rules

COMPARISON OF PESI AND SPESI IN IDENTIFICATION OF PE PATIENTS WITH LOW IMMEDIATE MORTALITY RATE SUITABLE FOR AMBULATORY CARE.

M Mulkeen, K Saraya

Emergency Department, Ealing Hospital NHS Trust, London, United Kingdom

Corresponding author: Mr Mulkeen Matthew (matthew.m@cheerful.com)

Key-words: Pulmonary Embolism Severity Index ; Simplified Pulmonary Embolism Severity Index ; Ambulatory Care

Objectives & Background :

The Pulmonary Embolism Severity Index (PESI) is a validated prognostic model which estimates the risk of 30-day mortality in patients with acute pulmonary embolism (PE). Recently a simplified PESI (sPESI) was developed. It contains 6 of the original 11 variables. It has not been independently validated. We previously validated the PESI score in our cohort of patients and also assessed immediate mortality at 1, 3 & 7 days with an aim of identifying

patients with low immediate mortality rate suitable for ambulatory care. We re-score our cohort of patients using the sPESI, comparing both scoring systems and again look at immediate mortality at 1, 3 & 7 days. We assess the suitability of the sPESI compared to the PESI in identifying patients with low immediate mortality suitable for ambulatory care.

Methods:

In this observational retrospective case note study of 1,606 patients undergoing CTPA in Ealing Hospital between 30/12/2009 & 20/12/2011, we identified all patients ($n = 150$) diagnosed with PE on CTPA admitted through Ealing Hospital ED. We use the sPESI to score these patients into low and high risk groups. We examine mortality at 1, 3, 7 & 30 days and compare these to results obtained by previous scoring with the original PESI system. We validate our findings by comparison with previously published studies.

Results:

The original PESI classified a higher proportion of patients as low risk. The sPESI accurately identifies PE patients with low risk of mortality.

Conclusion:

The simplified PESI has greater ease of use than the original PESI scoring system.

The sPESI accurately identifies PE patients at low risk of immediate mortality suitable for ambulatory care.

P339

Clinical Decision Guides and Rules

EFFECTS OF CALCIUM LEVEL ON MORBIDITY AND MORTALITY IN PATIENTS WITH GASTROINTESTINAL HEMORRHAGE

R Koylu (1), ZD Dunder (1), O Koylu (2), NB Akilli (1), E Akinci (1), B Cander (1), MO Gonen (1), G Gungor (3)

1. Emergency Department, Konya Education and Research Hospital, Konya, Turkey
2. Biochemistry Department, Konya Education and Research Hospital, Konya, Turkey
3. Gastroenterology Department, Konya Education and Research Hospital, Konya, Turkey

Corresponding author: Mr Koylu Ramazan (drkoylu@yahoo.com)

Key-words: GASTROINTESTINAL HEMORRHAGE ; CALCIUM ; EMERGENCY DEPARTMENT

Introduction: Gastrointestinal hemorrhage is one of the most frequent causes that the patients are submitted to emergency departments of hospitals. It is an important clinical problem with high morbidity and mortality, causing higher expenses for therapy and requiring hospitalization and intensive care. Although etiology of gastrointestinal hemorrhage is multifactorial and requires a multidisciplinary approach, we aimed to examine effects of serum calcium level on morbidity and mortality in patients with gastrointestinal hemorrhage in this study.

Background: Patients submitted to Emergency service for suspicion on gastrointestinal hemorrhage who were then hospitalized in intensive care unit were evaluated retrospectively. The aim of this study was to determine if there was any correlation between serum calcium level and frequency and mortality because of gastrointestinal hemorrhage.

Methods: The patients who have been submitted to the Emergency Service with suspicion of gastrointestinal hemorrhage and then transferred to Intensive Care Unit between January-2009 and December-2011 were included in this study. The patients were evaluated by the criteria as follows: anamnesis, area for hemorrhage, medicine usage, comorbid diseases, endoscopic findings, period for hospitalization, what sort of therapy was taken, blood transfusion and biochemica values as well as haematologic parameters. Endicated patients on their first

submission were urgently attempted by endoscopy using an Olympus, Evis Exera II-CV-180 endoscopy.

Results: A number of 235 patient was evaluated. Of these, 156 (66.1%) were male, 80 (33.9) were female. The average age of all the patients were 62.5±19.3. 110 patients who were diagnosed an ulcer by endoscopic examination were classified by Forrest Classification. Of the patients, 4 (1.7 %) were class 1A, 28 (11.9 %) were class 1B, 22 (9.3 %) class 2A, 10 (4.2 %) were class 2B, 9 (3.8 %) class 2C and 37 (15.7%) were class 3. Eight (3.4 %) of the patients were undergone surgery while 65 (27.5 %) were sclerotherapied when eosophagogastrroduodenoscopy was being made. Three (1.3 %) of the patients were treated by surgery after sclerotherapic attempt failed since sclerotherapy could not succeed to put an end to haemorrhage. By monitoring 191 patients (80.9 %) a need for eritrocyte suspension transfusion appeared and an average of 5.3±3.8 (1-30) unit eritrocyte were transfused. Mean value of hospitalization period for the patients were 7.8±5.5 days. 214 (90.7 %) of the patients were dismissed while 22 (9.3 %) were died.

Mean values for haemoglobin and calcium records were 9.6±2.9 g/d L and 8.3±0.7, respectively. An evaluation based on correlation between calcium levels and other variables; a positive correlation between calcium levels and figures for haemoglobin was found ($r=0.39$, $p<0.001$).

However, calcium levels, amount of eritrocyte suspension transfused and period for hospitalization were correlated negatively ($r=-0.33$ ve -0.23 , respectively. For both: $p<0.001$).

On the other hand, the groups that made up the patients who died and those who survived were also compared; the group dead were detected to have less calcium levels by comparison with the group alive ($p=0.038$). Additionally, eritrocyte suspension requirement was detected to be statistically higher than the other group ($p=0.035$).

By Forrest Classification, no significant differences were found between the patient groups in terms of the criteria: Ca levels, haemoglobin values, period for hospitalization and need for eritrocyte suspension.

Conclusion: Ca levels in died group were significantly lesser than in alive group although no direct correlation between serum Ca levels and gastrointestinal hemorrhage frequency is evidenced. Furthermore, a negativ correlation between Ca levels and amount of eritrocyte suspension or hospitalization period makes us to consider that serum Ca levels should be screened closely and if necessary it should be added.. Future work should focus on randomised clinical studies on this issue.

P340 Clinical Decision Guides and Rules

RE-ATTENDERS - RECOGNISE THE RISK

N Bagley, P Martin, A Soorma

Emergency, Maidstone and Tunbridge Wells Hospital, Maidstone, United Kingdom

Corresponding author: Mr Martin Peter (petermartin3@nhs.net)

Key-words: Re-attenders ; recognise ; risk

An audit was performed in the Emergency Department(ED) of a district general hospital in the UK, on all patients who re-attended within two weeks of their initial presentation. The data was collected over eighteen months (12/10/09-21/04/2011). The number of patients who re-attended was 4483.

We looked at these patients as we felt they represented a particularly high risk group who needed extra caution when managed. This data was collected prior to the College of Emergency Medicine and UK Department of Health decision to

monitor unplanned re-attendance as one of its Clinical Quality Indicators (CQI). They chose to monitor re-attendance as the evidence base both nationally and internationally suggests this indicator is a very useful surrogate marker of the quality of care that an ED delivers.

The CQI target is for the re-attendance rate to be between one and five percent (within seven days). Our rate was 4.4%. Deeper analysis showed one third of those returning were admitted, compared to 22% of primary attenders. This suggests that the re-attendance group have a higher morbidity.

We also recognised that this is an important group of patients with regards safety, governance and risk management. We feel that a robust procedure should be in place within the ED to safeguard this particular group and decrease further risk.

P341 Clinical Decision Guides and Rules

IS MODIFIED EARLY WARNING SCORE(MEWS) VALUABLE FOR DETERMINING CRITICAL PATIENTS WITH MALIGNANCY IN EMERGENCY DEPARTMENTS?

H. Aygun, E. Armagan, F. Ozdemir, S.A. Aydın, O. Koksai, A. Kose

Emergency Department, , Uludag University Faculty of Medicine, Bursa, Turkey

Corresponding author: Melle Ozdemir Fatma (drfatmaozdemir@yahoo.com)

Key-words: modified early warning score(MEWS) ; malignancy ; emergency department

Objective The modified Early Warning Score (MEWS) is a triage instrument that promises to predict patient disposition and clinical outcome in emergency departments (EDs). In this study we evaluated the predictive value of MEWS in patients with hematological or oncological malignancies.

Methods: Five-hundred and one patients with hematological or oncological malignancy admitted to ED of Uludag University Hospital were included in this prospective study. The MEWS was recorded in all patients on admission. All patients were followed up for 30 days to detect mortality rates.

Results: Mean MEWS value for all patients was 3.05. Mean MEWS for surviving and dead patients were 1.66 and 6.67, respectively and the difference was statistically significant ($p<0.001$). Besides MEWS value of "2" was detected to be significant with ROC analysis for these group of patients rather than "4" for validated value for general population.

Conclusion: We suggest that MEWS should be used routinely in ED for patients with malignancy and the patients with MEWS ≥ 2 have to be estimated as critical.

P342 Clinical Policy

IDENTIFICATION OF NSAID USERS AT RISK FOR GASTROINTESTINAL COMPLICATIONS A SYSTEMATIC REVIEW OF CURRENT GUIDELINES AND CONSENSUS AGREEMENTS

T Eikendal, MM. Tielemans

Emergency department, Radboud University Nijmegen Medical Center Nijmegen, The Netherlands

2. Department of Gastroenterology and Hepatology, Radboud University Nijmegen Medical Center, Nijmegen, The Netherlands

Corresponding author: Mr Eikendal Ties (t.eikendal@seh.umcn.nl)

Key-words: NSAID ; ;

NSAIDs are among the most often used drugs worldwide. Numerous NSAID users are at risk for developing gastrointestinal complications. The purpose of this review was to identify and stratify risk factors for gastrointestinal complications in NSAID users documented in guidelines and consensus agreements, and to collect recommendations regarding over-the-counter (OTC) NSAID use. To facilitate this, a PubMed search from 1 January 1999 until 1 March 2009 was performed, resulting in the inclusion of nine English-language guidelines in our analysis. Risk factors were defined as 'definite' if mentioned in all guidelines; otherwise they were defined as 'controversial' risk factors. 'Definite' risk factors were a history of (complicated) peptic ulcer disease, older age (cut-off range 60-75 years), concomitant anticoagulant or corticosteroid use and multiple NSAID use, including low-dose aspirin (acetylsalicylic acid). 'Controversial' risk factors were high-dose NSAID use, concomitant clopidogrel or selective serotonin reuptake inhibitor use, a history of gastrointestinal symptoms, rheumatoid arthritis disability and cardiovascular disease. Infection with *Helicobacter pylori* was identified as an additive risk factor. Risk factors in OTC NSAID users were difficult to identify in the current literature. Risk factors were not all uniformly present in analysed guidelines and consensus agreements. We identified a history of (complicated) peptic ulcer disease, older age, concomitant anticoagulant or corticosteroid use and multiple NSAID use, including low-dose aspirin, as definite gastrointestinal risk factors in NSAID users and therefore these patients should be treated with a proton pump inhibitor.

P343

Clinical Policy

JUST WHAT THE DOCTOR ORDERED: IMPROVING MEDICATION COMPLIANCE THROUGH AFFORDABLE ED PRESCRIBING HABITS

LM Lindley (1), S D'Andrea (2), L Moreno-Walton (3)

1. Emergency Medicine, Louisiana State University Health Sciences Center, New Orleans, United States
2. Emergency Medicine, Louisiana State University Health Sciences Center & Harvard University, New Orleans & Boston, United States
3. Emergency Medicine & Research Genetics, Louisiana State University Health Sciences Center, New Orleans, United States

Corresponding author: Mme Moreno-walton Lisa (DoctorMoreno@gmail.com)

Key-words: medication compliance ; prescribing habits ; ED policies

Background:

Emergency physicians routinely prescribe a broad range of medications to treat acute illnesses and injuries and refill prescriptions for chronic illnesses. Many patients, particularly the uninsured or underinsured, face financial barriers to acquiring medications. Patient financial limitations are cited among the most common reasons for medication noncompliance nationally. Greater awareness of affordable alternatives may foster prescribing habits that maximize patient access to medications. Several national retail chain drug programs offer specific discount prescription medications. Resident education should include instruction about these resources and about State and regional benefit programs to maximize affordable prescription writing.

Purpose:

We seek to facilitate medication compliance through the development of an educational intervention to familiarize residents with retail chain drug programs and State and regional benefit drug programs.

Methods:

We assembled a notebook which includes hard copies of retail discount drug lists and our hospital formulary. Copies are placed in areas of the ED where physicians typically input electronic prescriptions. We created a power point lecture for Resident Orientation which presents this aspect of our systems based practice.

Result:

The availability of retail chain discount lists throughout the ED is resulting in fewer bounce backs for inability to afford medication or for the consequences of non-compliance. Following the institution of the didactic training in July, we will perform a statistical analysis to assess the full impact of the intervention.

Conclusions:

Educating residents towards systems based prescribing facilitates patient compliance with medication regimens and can improve outcomes and ultimately decrease the cost of healthcare.

P344

Clinical Policy

GERIATRIC PATIENT ADMISSIONS TO EMERGENCY SERVICE

N Kozacı

acil tip, adana NEAH, adana, Turkey

Corresponding author: Mme Kozacı Nalan (drkozac@yahoo.com)

Key-words: Emergency ; geriatrics ; epidemiology

Purpose: In this study it was aimed to analyse the demographic features of the patients over 65 years old.

Material and Method: All of the patients over 65 years old included in this retrospective study. Admission dates (Month, season), ages, sex, admission types, diagnosis, duration of hospitalisation, outcome in emergency department of the patients were recorded. Data were analysed with student T test and Chi square test by using SPSS 17.0.

Results: Of the 8.793 (%3.6) patients were over 65 years old through 238.222 total admissions to the emergency department. Of the 58 % were female and 42 % were male. COPD in respiratory problems in males, and hypertension in cardiac problems in females found high and it was statistically significant. The highest admission rate was in autumn months. The most reason of the admission to the emergency department was cardiac problems (21.7 %). This was followed by neurologic problems, trauma, respiratory system problems and urinary tract infections, respectively. The highest mortality rate was (45 %) in general intensive care unit. The first reason of the mortality was cardiac problems.

Conclusion: Cardiac problems was the first line in admissions to the emergency, hospitalisation and mortality causes in geriatric patients. Conducted studies for determining the geriatric admission rate, most observed illness might be helpful to constitute the special care areas and special screenings.

P345

Clinical Policy

ADHESIVE SMALL BOWEL OBSTRUCTION.HOW MANY PATIENTS TREATED WITH NONOPERATIVE THERAPY

M.Tireli, S.Aslan

General Surgery, Celal Bayar University, Manisa , Turkey

Corresponding author: Mr Tireli Mustafa (mustafatireli@yahoo.com)

Key-words: adhesive small bowel obstruction ; nonoperative therapy ; strangulation obstruction

INTRODUCTION:

Although postoperative adhesion ileus is the most common cause bowel obstruction in adults. This obstruction may create life threatening complications. For this reason, there is debate about the optimal treatment surgical or nonsurgical management. The aim of this study, the evaluation of the usefulness of the nonoperative (conservative) therapy.

MATERIAL:

We retrospectively studied 222 patients who had been treated in Department of Surgery of the Celal Bayar University Hospital and Surgical Clinic of The Tepecik Training Hospital, Izmir. The diagnosis of small bowel obstruction was based on a history of previous laparotomy, clinical (abdominal pain, nausea, vomiting, obstipation, abdominal distention) and radiological (plain direct abdominal radiography, computerized tomography) findings. In the choice of treatment method we benefited from signs of strangulation (fever, tachycardia, leukocytosis, permanent abdominal pain, localized tenderness), tomography findings and experience of surgeon.

RESULTS.

In the initial examination, 36 of the 222 patients who had suspected strangulation obstruction, by urgent surgery. 19 of the 36 patients had 3 or more signs of strangulation. 13 of the 36 cases had incomplete and 23 complete obstructions. In this group, preoperatively, 15 (41.7 percent) strangulated intestine and 9 gangrenous bowels were observed. One case of the 36 urgent operation died because of multiple system failure.

Conservative therapy applied in 186 patients who had 145 (78.1 percent) incomplete and 41 (21.9 percent) complete obstructions. The duration of this therapy changed 24 hours and 17 days. Nonoperative therapy was successful in 144 (77.4 percent) of 186 cases. The success of this method was 86.1 percent in incomplete and 47.6 percent in complete obstructions. The morbidity of this technique is null. But duration of this management one patient died due to myocardial infarction. Nonoperative therapy failed in 42 cases (20 not healing clinical and radiological findings; 19 arising clinical and radiological signs and symptoms; three early re-obstructions). These 42 cases underwent delayed surgery. At laparotomy, we found 9 (21.4 percent) strangulated and 6 gangrenous intestine. Two of the 42 delayed surgery died postoperative period due to acute renal insufficiency and multiple system failure.

CONCLUSION:

77 percent of the adhesive small bowel obstruction may be treated with nonoperatively. The mortality and morbidity of this method is very low.

P346

Clinical Policy

IT'S PLAIN TO SEE THE NEED FOR MRI IN DIAGNOSIS OF RADIOGRAPHICALLY OCCULT SCAPHOID FRACTURE.

B Ramasubbu, A El-Gammal, D Shields
Emergency Medicine, St James's Hospital, Dublin, Ireland

Corresponding author: Mr Ramasubbu Benjamin (ramasubb@tcd.ie)

Key-words: scaphoid ; management ; protocol

Introduction

Up to 40% of scaphoid fractures can be missed at initial presentation and investigation. Follow-up plain film radiograph has poor sensitivity and reliability. MRI has been shown to have an

almost 100% sensitivity and specificity and so would be the gold standard in scaphoid fracture diagnosis. In busy hospitals with ever tightening budgets and increasing demands on services, it can be difficult to introduce MRI in a scaphoid fracture diagnosis protocol. Our institution currently uses NM Isotope Bone Scanning for clinically suspected Scaphoid fracture. Its sensitivity approaches 100% however, it is less specific than MRI.

Methods

All patients presenting to St James's Hospital Dublin Emergency Department in 2011 with suspected scaphoid fracture and having 3-view scaphoid x-ray were included.

Results

92 patients had a scaphoid x-ray. 16 had a scaphoid fracture. 76 had no scaphoid fracture (17 had other fractures present). 23 out of 76 patients had a second scaphoid x-ray (30.3 %). Two had scaphoid fracture diagnosed from second x-ray. Median duration from first to follow-up x-ray was 10.7 days.

Eleven bone scans carried out at a range of 1-38 days from initial x-ray. Three MRIs were performed due to inconclusive bone scan results. Two showed an absence of scaphoid fracture and one showed the presence of an occult distal radial fracture. Their durations were at 6 days, 10 weeks and 8 months from initial x-ray. The remainder of patients were followed up by the orthopaedic service.

Conclusions

Given the low number of MRI's that would be required, we propose same day MRI in cases of second negative x-ray. MRI may be cost-effective, if MRI is done with a limited protocol and the total cost of presumptive care, including productivity lost from work is included in the analysis.

P347

Clinical Policy

IT'S PLAIN TO SEE THE NEED FOR MRI IN DIAGNOSIS OF RADIOGRAPHICALLY OCCULT SCAPHOID FRACTURE.

B Ramasubbu, A El-Gammal, D Shields

emergency department, St James's hospital, Dublin, Ireland

Corresponding author: Mr El Gammal Ayman (Draymanelgammal@hotmail.com)

Key-words: MRI ; scaphoid fracture ; protocol

Introduction

Up to 40% of scaphoid fractures can be missed at initial presentation and investigation. Follow-up plain film radiograph has poor sensitivity and reliability. MRI has been shown to have an almost 100% sensitivity and specificity and so would be the gold standard in scaphoid fracture diagnosis. In busy hospitals with ever tightening budgets and increasing demands on services, it can be difficult to introduce MRI in a scaphoid fracture diagnosis protocol. Our institution currently uses NM Isotope Bone Scanning for clinically suspected Scaphoid fracture. Its sensitivity approaches 100% however, it is less specific than MRI.

Methods

All patients presenting to St James's Hospital Dublin Emergency Department in 2011 with suspected scaphoid fracture and having 3-view scaphoid x-ray were included.

Results

92 patients had a scaphoid x-ray. 16 had a scaphoid fracture. 76 had no scaphoid fracture (17 had other fractures present). 23 out of 76 patients had a second scaphoid x-ray (30.3 %). Two had scaphoid fracture diagnosed from second x-ray. Median duration from first to follow-up x-ray was 10.7 days.

Eleven bone scans carried out at a range of 1-38 days from initial x-ray. Three MRIs were performed due to inconclusive bone scan results. Two showed an absence of scaphoid fracture and one showed the presence of an occult distal radial fracture. Their durations were at 6 days, 10 weeks and 8 months from initial x-ray. The remainder of patients were followed up by the orthopaedic service.

Conclusions

Given the low number of MRI's that would be required, we propose same day MRI in cases of second negative x-ray. MRI may be cost-effective, if MRI is done with a limited protocol and the total cost of presumptive care, including productivity lost from work is included in the analysis.

P348

CPR / Resuscitation

CPR & INTRA-HOSPITAL PERSONAL : ARE WE REALLY READY ?

F. CAUGANT (1), P. DIEMUNSCH (2), I. HSSAIN (1), P. SCHOETTKER (3)

1. Emergency department, Mulhouse General Hospital, Mulhouse, France
2. Anesthesiology department, CHU Haute-Pierre, Strasbourg, France
3. Anesthesiology department, CHUV Lausanne, Lausanne, Switzerland

Corresponding author: Mr Caugant Fabien (fabiencaugant@gmail.com)

Key-words: CPR ; Healthcare provider ; education

Aim of the study: The intra-hospital personnel should be regularly trained to CPR (Cardio Pulmonary Resuscitation). We aim to analyze the quality of this training as well as the knowledge of cardiac arrest management.

Method: A prospective single-centre survey was conducted among 136 members of health care provider (composed by physician, resident, nurse, auxiliary nurse and hospital housekeeping) in a general hospital, randomly chosen among the 30 functional units composing the hospital. The survey was conducted by a single investigator and contained two parts: to list and prioritize the management for an unconscious and non-breathing patient, followed by an assessment of the training, such as date of last training and interest in following a new class.

Results: On the survey on the 136 member of the personnel we have 134 answers and 2 persons who doesn't want reply. 89.7% of the answers about management did not comply with any existing recommendation. 3.7% followed the AHA 2010 recommendation (not taught in France: these recommendations suggest 1. Assess the presence of cardiac arrest, 2. Call resuscitation team, 3. Start CPR, 4. Free the airway 5. Administer oxygen. The automatic external defibrillator will be brought in as soon as possible), 3.7% followed the ERC 2010 (taught in France. 1. First check, 2. Call for help, 3. Free the airways, 4. Assess the presence of the cardiac arrest, 5. Call resuscitation team, 6. Start CPR, 7. Administer oxygen), 0.7% Followed the AHA 2005 recommendation (1.First check, 2. Call for help, 3. Free the airways, 4. Assess the presence of cardiac arrest, 5. Call the resuscitation team, 6. Administer oxygen, 7. Start CPR).

The results showed that the main error was the confusion of the « assessment» (look for sign of life) link with the "first check" who was included on the question of the reply.

By taking into account this confusion, 34.6% of the answers didn't comply with any recommendation, 3.7% followed the AHA 2010, 36.8% followed the ERC2010, 22.8% followed AHA 2005 and 2.2% didn't give any answers.

Overall, 14% didn't know the correct emergency number (15 or 112), of which 63.2% thought they knew the number.

64% of providers had followed a class within the last 4 years, 35.3% longer than 4 years and 16.2% did never follow a class. (1.5% of non responders).

84.5% of intra-hospital personal believed they needed a training in CPR.

Discussion: Teaching of CPR seems to be problematic, as mistakes in the correct sequencing were present in 61.1%. In France, the only taught sequence is the ERC 2010, which represented 36.8% of the answers. Among the wrong answers, 22.8% follows the AHA 2005 ABC chronology. Three reasons could be responsible for these errors: « ABC » represents the « historical » sequence, it is the easiest to remember, and it represents the sequence for patients in other situations that cardiac arrest. Also, although the emergency numbers are taught and posted, 14% of the respondent didn't know the correct number. This shows that it is mandatory to insist on the emergency number while teaching CPR. Finally, we noted that the intra-hospital personnel is willing to be trained, as 84.5% were ready to follow classes.

Conclusion : Teaching the management of CPR is essential and mandatory, as the messages understood by intra-hospital personnel varies between reminiscences of older courses or misunderstanding of key elements. A simplification of the key messages might be necessary in order to enhance understanding of the new guidelines. A comparison between the different teaching of the different guidelines would be interesting in order to assess its efficacy. BLS and ALS courses should be taken every year.

P349

CPR / Resuscitation

EFFECTIVE CARDIOPULMONARY RESUSCITATION AND THERAPEUTIC HYPOTHERMIA

B. Karakus (1), K. Erkalp (2), O. Uzun (1), A. Ipekci (3)

1. Emergency department, Istanbul Bagcilar Training and Research Hospital, Istanbul, Turkey
2. Anesthesia and reanimation department, Istanbul Bagcilar Training and Research Hospital, Istanbul, Turkey
3. Emergency department, Istanbul Okmeydani Training and Research Hospital, Istanbul, Turkey

Corresponding author: Melle Karakus Banu (banukarakus@yahoo.com)

Key-words: cardiopulmonary resuscitation ; therapeutic hypothermia ; emergency medicine

Introduction: Cardiopulmonary arrest management is the most important topic in the emergency medicine education. Return of spontaneous and neurologic recovery are the most important targets of personnel. Effective CPR and hypothermic resuscitation which is more recently into use are the most emphasized issues. Aim of this case is remind this issue with patient which is provided full neurologic recovery after effective CPR and therapeutic hypothermia.

Case: 40 years old women was brought into emergency department by 112 ambulance. CPR were performing during transport. According to information she described shortness of breath at home then lost her consciousness. 112 personnel were performed 10 minutes resuscitation. The patient was intubated and chest compressions were applied. Patients spontaneous circulation was returned after 45 minutes CPR and admitted to intensive care unit. Patient was underwent coronary angiogram. Coronary arteries were open. Dilated cardiomyopathy was determined. Hypothermic resuscitation were started in the intensive care unit. Patient was followed at 32 °C and mechanical ventilation for 24 hours. Patient was heated 24 hours after intensive care unit admission. Patient was weaned from mechanical ventilation 15. day of intensive care unit admission.

Patient who was developed a pseudoaneurysm during angiography at femoral artery access site was underwent operation 3 times at plastic surgery clinic. Patient was discharged with full neurologic recovery 2 months after emergency department admission.

Discussion and Conclusion: Hundreds of thousands people were dying or developing neurological deficit because of acute brain damage after numerous causes such as cardiac arrest in all around the world every year. Good neurologic recovery with therapeutic hypothermia in post cardiac arrest comatose patients were demonstrated by randomized controlled trials and the use of it were suggested (class I, B). In our case, patient who were return of spontaneous with more effective and continuous CPR were discharged with full neurological recovery after therapeutic hypothermia. We thought that initiation of these practises in emergency departments and continuation of them in intensive care units might be important for the survival of patients.

P350

CPR / Resuscitation

COMPARISON OF END-TIDAL CARBON DIOXIDE LEVELS WITH CPR SUCCESS AND SURVEY OF PATIENTS PRESENTED TO EMERGENCY DEPARTMENT WITH CARDIOPULMONARY ARREST.

E Akıncı (1), E Atayık (2), F Coşkun (3), H Ramadan (3), Y Yüzbaşıoğlu (3)

1. Emergency department, Konya Training and Research Hospital, Konya, Turkey
2. Department of Allergy and Immunology, Cumhuriyet University School of Medicine, Sivas, Turkey
3. Emergency department, Ankara Training and Research hospital, Ankara, Turkey

Corresponding author: Melle Akinci Emine (emineakinci@yahoo.com)

Key-words: end-tidal carbon dioxide ; cardiopulmonary resuscitation ; emergency clinic

Introduction

In this study we aimed to compare partial end-tidal carbon dioxide levels with the success of CPR performed on patients presented to the emergency department (ED) with cardiopulmonary arrest, to identify end-tidal carbon dioxide levels based on arrival rhythms and benchmarking of patient surveys.

Method

After receiving local Ethics Board approval, this prospective study was conducted at the Ministry of Health Ankara Training and Research Hospital Emergency Department between January 2011-August 2011 on patients presented with cardiopulmonary arrest. Standard ACLS (Advanced Cardiac Life Support) protocols were performed to the patients arriving with said condition. Providers consisted of 1 emergency medicine specialist, 1 emergency medicine resident and 2 nurses. Patients were categorized in 2 groups based on their rhythms on arrival as Ventricular Fibrillation/Pulseless Ventricular Tachycardia and Asystole/Pulseless Electrical Activity. Following intubation, patients' end-tidal carbon dioxide values were recorded every 5 minutes as 0,5,10,15 with an EMMA (EasyNote MB85) capnometer device until resuscitation was terminated or spontaneous circulation has returned.

Findings

Initial and final PetCO₂ values of patients were found as 24.5 (3-99) and 20 (4-75) mmHg respectively. We have found the PetCO₂ levels of the Return of Spontaneous Circulation (ROSC) group in the 5th, 10th, 15th and 20th minutes to be significantly higher compared to the exitus group (p<0.001). In distinguishing ROSC and exitus, PetCO₂ measurements within 5-20 minute intervals showed highest performance on the 20th and lowest on the 5th minutes. We identified the area of 0.850 (95% confidence interval:

0.721 – 0.980) as statistically meaningful distinguisher in PetCO₂ 20th min. measurements and the best intersection point was 28.0 mmHg (p<0.001).

Conclusion

According to our study, the PetCO₂ values are higher in the ROSC group. During the CPR, 20th minute is the most reliable time in estimating ROSC based on PetCO₂ values. Capnometry appears to be an effective tool to evaluate the progress and results of cardiopulmonary resuscitation, and should be used more widely by emergency physicians for this purpose.

P351

CPR / Resuscitation

EVALUATION OF KNOWLEDGE ON BASIC LIFE SUPPORT OF POLICE

S OZDINC

Emergency Department, Afyon Kocatepe University Medical Faculty, Afyonkarahisar, Turkey

Corresponding author: Melle Ozdinc Serife (drseri03@hotmail.com)

Key-words: basic life support ; students ; knowledge

Introduction: Basic life support (BAS) is also known from not welfare personnel. The knowledge on BAS always saves somebody's life. Policemen, who always serve social event, frequently stand accident scene before health team. BAS forms a sound basis for an advanced cardiac life support. If BLS performs effectively, probability and ratio of survival increases. So, level of knowledge on BAS is so important for the policemen'. Thus, in the present study we aimed to evaluate level of knowledge on BAS of policemen.

Material - methods: Sociodemographical data and level of knowledge on BAS were evaluated on 269 students who majored Afyonkarahisar Police Vocational School. The questionnaire contained 31 questions. It was applied to the students using face to face communication. The SPSS 18 programme was used in for evaluation of the data.

Results: All the students who participated to the study were men. The mean age of the students was 20±1,6. %82 of the students decelerated that training on BAS was useful for their career, %32 of them had info on BAS before, %47 of them intended to get info on BAS. To hit right answering rate on BAS was %38,7. To perform cardiopulmonary resuscitation ratio was %72,5 (n=195). To correctly recognize cardiopulmonary resuscitation area ratio was %19,3 (n=52).

Conclusion: Training on BAS should be improved, up to dated, repeated and continued via increasing knowledge and skill.

P352

CPR / Resuscitation

HOW ACTIVE ARE EMERGENCY DOCTORS IN ISSUING DO NOT RESUSCITATE ORDERS?

J Fryckstedt (1), K Lavén (2)

1. Emergency department, Karolinska University Hospital, Solna, Sweden
2. Emergency Department, Karolinska University Hospital, Solna, Sweden

Corresponding author: Melle Lavén Kristina (laven.kristina@gmail.com)

Key-words: Do Not Resuscitate ; Emergency doctors ; Ethics

Objective: In this study we have investigated how the “Do Not Resuscitate order” (DNR) policy of Karolinska University Hospital, Solna, Sweden is implemented and documented, and to what extent the doctors at the Emergency Room (ER) issue the order for patients who deceased within 48h of admittance through the ER.

Background: When admitting a terminally ill patient to the ward it is important to have a plan how to proceed in case of a cardiac arrest. If the decision is to refrain from cardiopulmonary resuscitation (CPR), a formal DNR should be issued and clearly documented in the medical record. Failure to issue DNR will result in inappropriate CPR and utilization of the hospitals' emergency and intensive care resources. It is also important to inform the patient, the family and the patient responsible doctor of the decision.

Method: A retrospective descriptive quality assessment of DNR in adult patients deceased within 48h of arrival at the ER at Karolinska University Hospital, Solna, Sweden during 2007-2010. Data were collected from the computerized medical record. Statistics have been calculated from the data base using Microsoft Excel.

Result: The study population consisted of 493 patients, 55.6 % men, mean age 69.5 years. Most of the patients (28.8 %) were admitted to the Emergency wards (EW) followed by 24.5 % to Surgery, 20.9 % to Internal Medicine, 19.7 % to Neurology and 6.1 % to Oncology wards.

60.9 % of the patients had a DNR prior to death, 53.3 % men, mean age 74.8 years. Among the 142 patients admitted to the EW 83.1 % had a DNR compared to 51.9 % of the 351 patients admitted to the rest of the hospital. There was a marked difference between wards (Oncology 73.3%, Neurology 62.9 %, Internal Medicine 55.3 % and Surgery 34.7 %). In total Emergency doctors issued 43.0 % ((104+25)/300) of all the DNR, 88.1 % (104/118) of the DNR for the patients in the EW and 13.7 % (25/182) of the orders among the patients admitted to the rest of the hospital. Among the 129 decisions taken by Emergency doctors 29.0 % were issued at the ER on admittance (59.6 % (62/104) of the EW patients and 100 % (25/25) of the patients at the rest of the hospital).

DNRs were documented in different locations within the computerized medical record, 50.3 % were documented in full text, 27.0 % as a separate Pro Memoria and 15.3 % as a Warning symbol.

Information of the DNR was given to relatives in 77.0 % of the cases. Documentation regarding consultation with patient responsible doctor was found in 27.0 % (81/300) of the decisions.

193 (39.1 %) patients did not have a DNR prior to death, 59.1 % men, mean age 61.3 years. Among them 44.6 % received CPR, 32.6 % had documentation interpretable as no further care in their medical record, 13.0 % received other full life saving measures than CPR without success and 9.3 % were cases of sudden unexpected death or had no documentation regarding the circumstances of their death. Ward specific results showed documentation of palliation for 12.5 % of the EW patients not having a DNR compared to 36.1 % for the rest of the hospital (77.8 % Neurology, 62.5 % Oncology, 23.9 % Internal Medicine and 21.8 % Surgery).

Conclusion: In this study we have shown that only approximately every second patient deceased within 48 hours of arrival has a formal DNR documented. The frequency varies between different wards with the EW having the highest frequency and the surgical wards the lowest. The Emergency doctors are most active in DNR decisions. The documentation is not uniform and often a formal DNR is not written, but the medical record implies palliative care. The relatives are informed of the decision to a large extent.

P353

CPR / Resuscitation

APPLIED ANATOMY FOR TIBIAL INTRAOSSEOUS ACCESS IN ADULTS: A RADIOANATOMICAL STUDY

O. Polat (1), A. Comert (2), AB. Oguz (1), A. Demirkan (1), HI. Acar (2), E. Tuccar (2), S Ekinçi (1)

1. Emergency Medicine, Ankara University Faculty of Medicine, Ankara, Turkey
2. Anatomy, Ankara University Faculty of Medicine, Ankara, Turkey

Corresponding author: Mr Oguz Ahmet Burak (aburakoguz@gmail.com)

Key-words: Intraosseous (IO) access ; anatomy ; vascular access

Objective: Intraosseous access is a method for providing vascular access in resuscitation of critically ill and injured patients when traditional intravenous access is difficult or impossible. The purpose of this study was to examine best anatomical region for intraosseous access the relationship and to clarify the anatomic approach required for preventing iatrogenic injury.

Methods: Radiographic computed tomography CT images of a total of 50 dry tibia bones (25 right and 25 left, obtained from adult cadavers) were obtained. The anterior-posterior and lateral scanograms of the tibia bones were performed.

Results: It was recommended that standard length for intraosseous canule should be 17 mm. The safe region for proximal tibia acces and landmark and most suitable insertion point for intraosseous infusion should be at level 0.5 cm below tibial tuberosity in the midline of the medial surface.

Conclusions: Intraosseous access gun has become mandatory to emergency departments in Turkey. As a result of this situation intraosseous infusion has become widely used and complications of access has become more common nowadays. Presented study reveals a certain localization for intraosseous access and this will be more effective in reducing the complications.

P354

CPR / Resuscitation

GENERAL KNOWLEDGE IN THE FIELD OF BLS AMONG PEOPLE WITHOUT ANY MEDICAL EDUCATION.

L BONDARUK (1), D CELINSKI (1), M DUSINSKA (1), R GALAZKOWSKI (1), G MICHALAK (2), S PILIP (1)

1. Medical University of Warsaw, Medical Emergency Department, WARSAW, Poland
2. Medical University of Warsaw, Medical Emergency Department, Warsaw, Poland

Corresponding author: Mr Slawomir Pilip (spilip@wum.edu.pl)

Key-words: BLS ; ALS ; Cardiac Arrest

Aim: The evaluation included knowledge of rules and ability of conducting BLS procedures by people from the outside of medical personnel depending on their level of education and courses taken in this area. Materials and metods: The research had a form of survey and was conducted among 100 randomly chosen people from Warsaw. It was in a form of test with 24 questions of multiple choice. This statistic analysis was created on the basis of ANOVA Rang Kruskala-Wallis test and U'Manna-Whitney test. Results: The difference of knowledge of BLS in dependency of education level was observed. People with primary education has shown statistically lower standard of knowledge of BLS than those with secondary and higher education. (adequately: 6.4 ± 3.1 vs 8.7 ± 2.3 ; $p=0.01$ i 6.4 ± 3.1 vs 10.5 ± 2.9 ; $p<0.001$). There are distinctions in level of BLS knowledge and the number of first aid trainings. People

repeatedly trained have shown considerably higher level of knowledge than those trained once or not trained at all. (adequately: $10,9 \pm 3$ vs $8,4 \pm 2,6$; $p=0,004$ i $10,9 \pm 3$ vs $5,3 \pm 2,7$; $p<0,001$). It was also proved that people trained once have considerably higher knowledge than those not trained at all. ($8,4 \pm 2,6$ vs $5,3 \pm 2,7$; $p=0,001$). Conclusions: Knowledge of BLS correlates with level of education and the number of courses taken. There is a necessity of continuing education of general public in the area of BLS.

P355

CPR / Resuscitation

EARLY IDENTIFICATION OF SAH(SUB-ARACHNOID HEMORRHAGE) AS CAUSE OF OHCA(OUT-OF-HOSPITAL CARDIAC ARREST) MAY HELP EMERGENCY PHYSICIANS MAKE THERAPEUTIC DECISION

SW Kim (1), JS Oh (2), BH So (3)

1. Emergency department, The Catholic University of Korea Bucheon St.Mary's Hospital, Bucheon, Korea, (South) Republic of
2. Emergency department, The Catholic University of Korea Euijungbu St.Mary's Hospital, Euijungbu, Korea, (South) Republic of
3. Emergency department, The Catholic University of Korea St.Vincent Hospital, Suwon, Korea, (South) Republic of

Corresponding author: Mr Kim Sung Wook (mdkaptain@naver.com)

Key-words: Sub Arachnoid hemorrhage ; Out of Hospital Cardiac Arrest ; Computed tomography

Background

Patients who initially survive cardiac arrest are often comatose. Early identification of SAH(Sub-Arachnoid Hemorrhage) as cause of OHCA(Out-of-Hospital Cardiac Arrest) may help emergency physicians make therapeutic decision as quickly as they can. The incidence and clinical characteristics of SAH-induced OHCA were not known yet. The earlier detection of SAH as a cause of OHCA, the more medical burden was reduced by using brain CT scans

Method

From Jan., 2008 to Aug., 2010, a retrospective data analysis was conducted of all survivors (age>18 years) of non-traumatic OHCA who underwent brain CT.

Results

A total 105 patients were identified and 74 patients met the inclusion criteria. Brain CT scan was feasible with an average door-to-CT time 49.9 minutes. 13 patients (17.6%) exhibited findings consistent with either ICH or SAH. Compared with 61 survivors who were negative for SAH or ICH, 13 SAH induced OHCA survivors were significantly less likely to be presented shockable rhythm ($p=0.030$). Similarly pupil light reflex was significantly less likely to be seen in SAH induced OHCA group ($p=0.030$). The survival rate to discharge was significantly lower for SAH group (15.4% vs 57.4%, $p=0.012$). Regarding other variable which effects to return of spontaneous circulation; for example age, past history and hemodynamic status there were no significant differences between the two groups.

Conclusion

SAH induced OHCA survival rate and good neurologic outcome were significantly low. Alteration in management did occur in those patients with abnormality on CT scans. Immediate brain CT scan may particularly be useful in excluding SAH induced OHCA. The brain CT scan in post cardiac arrest period is useful in early identification of SAH induced OHCA and may help us provide proper management in emergency department.

P356

CPR / Resuscitation

THROMBOLYSIS FOR MYOCARDIAL INFARCTION COMPLICATED WITH REFRACTORY CARDIAC ARREST

E. Pistollato (3), A. Zorzi (2), M. ElMaghawry (2), F. Stella (3), N. Gasparetto (2), L. Cacciavillani (2), F. Tosato (1), A. Bortoluzzi (1)

1. Emergency Department, University Hospital of Padova, Padova, Italy
2. Division of Cardiology, Department of Cardiac, Thoracic and Vascular Sciences, University of Padova, Padova, Italy
3. Department of Medicine, University of Padova, Padova, Italy

Corresponding author: Melle Pistollato Elisa (elisa.pistollato@libero.it)

Key-words: cardiopulmonary resuscitation ; myocardial infarction ; thrombolysis

Background: Previous studies focusing on out-of-hospital thrombolysis for refractory cardiac arrest due to suspected acute myocardial infarction showed mixed results. The cause of cardiac arrest in these studies was not systemically addressed by clinical investigations or autopsy.

Aim: To assess the outcome of thrombolytic therapy during ongoing resuscitation for refractory cardiac arrest due to acute myocardial infarction, proven by either coronary angiography or autopsy.

Methods: A retrospective survey was conducted on all patients who received thrombolysis during refractory cardiac arrest in our emergency department over a 10-year period. Surviving patients underwent detailed work-up including coronary angiography, while autopsy was performed in the deceased to determine the cause of cardiac arrest. Suggestive symptoms or ECG abnormalities were not considered sufficient for the diagnosis. Characteristics of patients with acute myocardial infarction were analyzed.

Results: Thirty-two patients received thrombolysis for refractory cardiac arrest: 18 (56%) were excluded because they had pulmonary embolism (N=15) or other conditions (N=3), while the remaining 14 (44%) had confirmed acute myocardial infarction. Three patients (21%) survived to emergency department discharge. Two patients suffered cardiac arrest following progressive deterioration of hemodynamic conditions ("secondary" cardiac arrest), failure of thrombolysis was demonstrated by coronary angiography, they had major bleedings and died during in-hospital course. On the contrary, coronary angiography showed successful thrombolysis in a patient who had good condition prior to an arrhythmic storm ("primary" ventricular fibrillation). This patient had no bleeding complications and survived with mild neurologic sequelae.

Conclusion: The outcome of patients with refractory cardiac arrest due to acute myocardial infarction is ominous even with thrombolysis. However, thrombolysis may be justified in selected patients with favorable hemodynamic conditions preceding cardiac arrest due to "primary" ventricular fibrillation.

P357

CPR / Resuscitation

SHOULD POST-RESUSCITATION CORONARY ANGIOGRAPHY INDICATIONS BE EXPANDED ?

E. Marcil (1), Z. Kaya (2), A. Seydanoglu (1)

1. Emergency Department, Konya Numune State Hospital, Konya, Turkey
2. Cardiology, Konya Numune State Hospital, Konya, Turkey

Corresponding author: Melle Marcil Emine (eminemarcil79@gmail.com)

Key-words: postresuscitation angiography ; sudden cardiac arrest ; acute coronary syndrome

Aim : Pointing to importance and indications of postresuscitation coronary angiography (PRCA) for sudden cardiac arrest (SCA) patients.

Introduction : Despite important advances in prevention, SCA continues to be a leading cause of death in worldwide. SCA has many etiologies (cardiac or non-cardiac), circumstances (witnessed or unwitnessed) and settings (out-of-hospital or in-hospital).

Based on past clinical studies, recent guidelines recommend that patients resuscitated from out-of-hospital cardiac arrest (OHCA) who have electrocardiographic criteria for myocardial infarction with S-T elevation should undergo immediate coronary angiography with subsequent percutaneous intervention (PCI), if indicated. However, the predictive value of the ECG for coronary artery occlusion is poor and clinical data such as chest pain or risk factors often are lacking in the setting of OHCA. Furthermore, given the high incidence of acute coronary syndrome (ACS) in patients with OHCA, guidelines also recommend considering immediate coronary angiography in all patients with postcardiac arrest in whom ACS is suspected. Therefore, it is difficult in clinical practice to select candidates for early coronary angiography, especially in patients without S-T elevation in whom this strategy occasionally is challenged.

Case Report : We report the case of a 78-year-old woman presented with sudden cardiac arrest. After about 20 minutes of CPR a nodal ritm was performed with 30 beats per minute. We performed transcutaneous pacemaker. Her blood pressure was 110/60 mmHg. Glucose: 366 mg/dL, BUN: 145 mg/dL, Creatinine: 1.9 mg/dL, AST: 573 U/L, ALT: 561 U/L, CK: 50 U/L, CK-MB: 51 U/L, Sodium: 130 mmol/L, Potassium: 8.7 mmol/L, Troponin I : 0.194 ng/mL (0.12-0.60ng/mL), CK-MB Mass: 2.48 (0.0- 5.6). We determined hyperkalemia and therefore we applied to medical treatment for hyperkalemia.

After return of spontaneous circulation (ROSC), we learned that she underwent to coronary angiography and was inserted stent to left anterior descending coronary artery about a week ago and was prescribed Spironolactone.

We decided to take her to angiography laboratory to perform PRCA because she had a coronary artery disease (CAD). During coronary angiography acute stent thrombosis was determined. Coronary occlusion was opened by performing subsequent PCI and thrombolysis in myocardial infarction (TIMI 3) coronary blood flow was obtained. After PCI, she was taken to ICU.

Discussion : SCA patients are a special group of patients with special diagnostic and therapeutic dilemmas. In patients with cardiac arrest up to 71% have CAD and 50% have ACS.

As defined in Part 9 (Post-Cardiac Arrest Care) of 2010 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care whether the postresuscitation ECG showed STEMI or high suspicion of ACS, coronary reperfusion is recommended. In clinical practice, S-T elevation is still used as a selection criterion for coronary angiography in patients with OHCA. In particular, the interpretation of post resuscitation ECG often presents difficulties, as its sensitivity and specificity varies across different studies. Spaulding et al. report that the prognostic value of ECG and history of previous chest pain are not enough to conclude to a definite triage. In that study, patients who were transferred to the angiography laboratory did not have chest pain or ECGs indicative of STEMI and they were finally found to have significant CAD. So they concluded that it should be their intention that all patients with no obvious non-cardiac cause of SCA should be directed to the catheterization laboratory.

Our patient had a nodal ritm without S-T elevation on her ECG after ROSC and she had also hyperkalemia as an obvious non-cardiac etiology of SCA.

Conclusion : We determined hyperkalemia (non-cardiac etiology) and myocardial infarction (cardiac etiology) together in a SCA patient.

In conclusion, we consider that PRCA should be performed for all CAD patients presented with SCA, even if an obvious non-cardiac etiology was determined.

Further clinical studies are essential to determine whether immediate coronary angiography and PCI should be performed in all patients with OHCA after ROSC.

P358

CPR / Resuscitation

IMPROVED PROGNOSIS AFTER IMPLEMENTATION OF CHEST COMPRESSION DEVICE IN OUT-OF-HOSPITAL CARDIAC ARREST.

S Morozov

Emergency deptment, Moscow State University of Medicine and Dentistry, Moscow, Russia (Russian Federation)

Corresponding author: Mr Morozov Sergey (mnmnmn1@rambler.ru)

Key-words: load-distributing band ; cardio-pulmonary resuscitation ; cardiac arrest

Out-of-hospital cardiac arrest (OHCA) is associated with a poor prognosis. Following European Resuscitation Council Guidelines for Resuscitation 2010, application of several cardio-pulmonary resuscitation (CPR) devices may improve prognosis when used by well-trained providers. The load-distributing band (LDB) device (AutoPulse) was used for chest compressions during CPR. The aim of this study was to assess if there changes improved the outcomes after OHCA before and after implementation of LDB.

Methods

The study was carried out in the Emergency Medical Services Station of Yakutsk (Russia) from 2009 to 2011 based on analyzing 188 emergency call-out reports. Patients were divided into two groups: 83 patients, when LDB device was used during CPR, were included in the first group (CPR-A); 95 patients were included in the second manual CPR group (CPR-M). The primary endpoint was Return of Spontaneous Circulation (ROSC) at scene, but we also recorded survival to hospital admission. Groups were compared using IBM SPSS Statistics 19 software for odds ratio (OR) and relative risk (RR).

Results

We found that ROSC increased significantly after implementation of LDB device: 44 (52%) out of 83 patients of CPR-A group and 24 (25,2%) out of 95 patients of CPR-M group (OR 2.32). On the other hand the probability of an adverse outcome in the group CPR-M was higher than in patients with CPR-A (RR 1.55). CPR duration median value made: 19,5 min for CPR-A group and 28 min for CPR-M group. Among patients who survived to hospital admission, 28 (33,7%) belonged to CPR-A group, and 17 (17,9%) to CPR-M group. No significant difference was found in age, gender and cause out-of-hospital cardiac arrest.

Conclusion

The implementation of LDB device is associated with improved ROSC and survival to hospital admission after OHCA, therefore it is expedient to apply it in pre-hospital environment.

P359

CPR / Resuscitation

PUSH AS HARD AS YOU CAN INSTRUCTION FOR TELEPHONE ASSISTED BYSTANDER CPR. A DOUBLE BLIND, RANDOMIZED, PARALLEL-GROUP SIMULATION STUDY

R. van Tulder (1), D. Roth (1), C. Havel (1), P. Eisenburger (1), B. Heidinger (1), C. Chwojka (2), H. Novosad (2), H. Herkner (1), F. Sterz (1), W. Schreiber (1)

1. Department of Emergency Medicine, Medical University of Vienna, Vienna, Austria
2. Emergency Dispatch and Coordination Center- Lower Austria, NOTRUF NOE, St. Poelten, Austria

Corresponding author: M. Van Tulder Raphael (raphael.van-tulder@meduniwien.ac.at)

Key-words: chest compression ; cardiopulmonary resuscitation ; quality

Background:

In telephone assisted, medical priority dispatch system (MPDS®) driven, lay-rescuer, compression only cardiopulmonary resuscitation (COCPR) it remains unclear which instruction leads to sufficient compression depth.

Methods:

This was a prospective, experimental, double-blind, randomized, controlled, parallel group study to investigate chest compressions following the instruction "push down firmly 5 cm" versus "push as hard as you can". Primary outcome was defined as compression depth. Secondary outcomes were participants estimations of 5 cm, exertion measured by BORG scale, provider's systolic and diastolic blood pressure and quality values measured by the Resusci® Anne skillmeter manikin.

Results:

13 participants were each allocated to control and intervention. 1 participant (intervention) dropped out after minute 7 because of exhaustion. Primary outcome showed a mean compression depth of 44.1 mm with an interindividual standard deviation (Sdb) of 13.0 mm and an intraindividual standard deviation (SDw) of 6.7 mm for the control group versus 46.1 mm and a Sdb of 9.0 mm and a SDw of 10.3 mm for the intervention group (Difference: 1.9 (-6.9 to 10.8) p=0.66). For secondary outcome participants estimated 5 cm with a mean of 43 ± 13 mm in control group versus 45 ± 15 mm in the intervention group (p=0.99). Secondary outcomes showed no difference for exhaustion and COCPR quality values.

Conclusions:

There is no difference in compression depth, quality of COCPR or physical strain on lay-rescuers by using the initial instruction "push as hard as you can" versus the standard MPDS® instruction "push down firmly 5cm".

P360

CPR / Resuscitation

PRELIMINARY OUTCOME DATA OF RHINOCHILL® TRANSNASAL COOLING PRIOR TO PROTECTED AIRWAY DURING OUT-OF-HOSPITAL CARDIAC ARREST

R. van Tulder (1), MS Grave (1), A Nürnbergger (1), S Fykatas (2), D Sebald (2), F. Sterz (1)

1. Department of Emergency Medicine, Medical University of Vienna, Vienna, Austria
2. Municipal Ambulance Service, City of Vienna, Vienna, Austria

Corresponding author: Mr Van Tulder Raphael (raphael.van-tulder@meduniwien.ac.at)

Key-words: cardiopulmonary resuscitation ; hypothermia ; outcome

Background: In animal studies, a vasomotor reflex due to transnasal cooling during early cardiopulmonary resuscitation (CPR) is discussed to increase coronary perfusion pressure and resuscitation success, consecutively. We aimed to investigate preliminary outcome data after RhinoChill® transnasal cooling has been initiated "as soon as possible" and prior to achieving a protected airway during cardiopulmonary resuscitation (CPR) in an out-of hospital cardiac arrest (OOHCA).

Methods: Presented outcome data are descriptive and derived from a single-center, descriptive, feasibility trial conducted by emergency medical personnel in the out of hospital setting.

All patients included by ambulance personnel for OOHCA were analyzed. Outcome was defined as any return of spontaneous circulation, sustained ROSC, survival >24 hours, and best cerebral performance category (CPC) within 6 months.

Results: At the moment, thirteen patients were included for further investigation. Six patients (46%) were female. The mean age was 67 (± 15) years. The initial rhythm documented was ventricular fibrillation (VF) in four (31%) patients, pulseless electrical activity (PEA) in three (23%) patients, asystole in five (38%) patients and one (8%) remained unknown; five patients (38%) were admitted to hospital; ROSC was achieved in four patients (31%). These patients had VF, PEA and one undetermined rhythm on presentation. Three patients (23%) survived. Two of them (15%) with a CPC of 1 and 2 (conscious) and one of them (8%) with a CPC of 4 (comatose). At the moment two patients (15%) survived 30 days (CPC 1 and 4). By now, no patient reached the 6 months survival threshold.

Conclusions: Aware of the small number of patients there might be an increase in initial ROSC after initiating Rhinochill® in comparison to other studies. Prospective randomized trials are needed to evaluate the exact impact of Rhinochill® on outcome in OOHCA.

P361

CPR / Resuscitation

THE COMPARISON BETWEEN ARCTIC SUN AND WATER BLANKET IN CARDIAC ARREST PATIENTS RECEIVING THERAPEUTIC HYPOTHERMIA.

YS Jung, KS Kim, WY Kwon, GJ Suh, YH Kwak

Department of Emergency Medicine, Seoul National University Hospital, Seoul, Korea, (South) Republic of

Corresponding author: Mr Kim Kyung Su (knesu@gmail.com)

Key-words: Cardiac Arrest ; Hypothermia ; Equipment and Supplies

Background: Therapeutic hypothermia improves neurological outcome for comatose survivors of out-of-hospital cardiac arrest. Generally, it is known that faster cooling and stable maintenance of hypothermia result in better outcomes, although there is insufficient clinical evidence. Therefore, the reliable cooling devices are necessary for the effective and safe therapeutic hypothermia. We want to compare the effectiveness and safety of Arctic Sun (AS) and water blanket (WB) during therapeutic hypothermia.

Hypothesis: There is no difference between AS and WB regarding the effectiveness and safety during therapeutic hypothermia.

Methods: Retrospective analysis was performed in single hospital. Patients who received therapeutic hypothermia after cardiac arrest from January 2010 to May 2012 were identified. Patients who did not complete 24-hour of therapeutic hypothermia were excluded. Demographics and resuscitation factors were abstracted. The time to target temperature (<34°C) from the application of cooling was measured to evaluate the effectiveness of cooling method. After the achievement of target temperature, the temperature most remote from 33°C was selected every hour. If the selected temperature was not between 32°C and 34°C, then that hour was

considered as violation of maintenance. Total numbers of violation was compared to evaluate the safety of cooling method. All patients were treated by either AS or WB and were continuously monitored using rectal thermometer. Hospital survival and 28-day cerebral performance category score were obtained. Cerebral performance category score 1 and 2 were considered as good neurologic outcome.

Statistics: Continuous variables were compared using t-test. The proportions were compared using Chi square test. P value < 0.05 was considered statistically significant. Stata version 10.1 was used for statistical analysis.

Results:

Among 53 patients enrolled, 23 patients were treated using AS. Demographics and factors associated with resuscitation did not differ between two groups. Patients discharged alive were more frequent in AS group (73.9% [AS] vs. 43.3% [WB], $p=0.026$). Patients with good neurologic outcome were not different between two groups (26.1% [AS] vs. 16.7% [WB], $p=0.402$). There was no difference between two groups regarding temperature at start of cooling (35.6°C [AS] vs. 35.6°C [WB], $p=0.992$). Time to target temperature (134.2 min [AS] vs. 233.4 min [WB], $p=0.056$) was lesser in AS group, but it was not statistically significant. Patients with target temperature before 4-hour of cooling (87.0% [AS] vs. 63.3% [WB], $p=0.053$) were not different between two groups. Total maintenance hour (22.6 hr [AS] vs. 21.5 hr [WB], $p=0.109$) was not different between two groups. However, violation of maintenance (0.1 hr [AS] vs. 4.7 hr [WB], $p<0.001$) was more frequently observed in WB group. Most violations (107/142 [75.4%]) were hypothermic event (<32°C) in WB group. However, all violations were hyperthermic event (>34°C) in AS group.

Conclusion: Arctic Sun is superior to water blanket in the maintenance of therapeutic hypothermia. Strict temperature control achieved by Arctic Sun may be useful to minimize unwanted adverse effects of therapeutic hypothermia in cardiac arrest victims.

P362

CPR / Resuscitation

SUCCESSFUL PROLONGED CPR IN A CHILD WITH WPW SYNDROME

I Beydilli (1), N Bozdemir (1), R Guven (1), O Kiraslan (2), V Sayrac (1)

1. Emergency department, Antalya Training and Research Hospital, Antalya, Turkey
2. Cardiology department, Mardin state Hospital, mardin, Turkey

Corresponding author: Mr Beydilli Inan (inan_beydilli@hotmail.com)

Key-words: Wolf Parkinson White syndrome ; Sudden Cardiac Death ; Prolonged CPR

Introduction

Sudden and unexpected death caused by cardiovascular reasons is called sudden cardiac death (SCD). Death or irreversible neurological damage occurs within an hour after the symptoms arise. (1).

Chances of survival, depend on the length of cardiopulmonary resuscitation (CPR), the amount of adrenalin administered during CPR, the age of the patient, whether the arrest was witnessed or not, the initial heart rhythm, and rhythms that develop during CPR. However, none of these factors alone is enough to predict the outcome. (2).

Case Presentation

A ten-years-old girl undergoing cardiac arrest was admitted to our hospital by the 112 ambulance service.

Once at the emergency department, further life support was provided and the patient was intubated. Due to the existence

of ventricular fibrillation (VF) when the heart rhythm was checked during CPR, the patient was defibrillated with 60 joules at 2 joule/kg (using a biphasic defibrillator). CPR was continued. In the course of CPR, the heart rhythm has shifted between VF, pulseless electrical activity (PEA) and asystole. At the 90th minute of CPR, a pulse control showed VF. The patient was then defibrillated with 120 joules and CPR was resumed. In rhythm control, the monitor displayed a sinus heart rate of 60/min. The pulse could be detected from carotid and femoral arteries. A 12 lead ECG of the patient displayed a sinus wave. The patient was transferred to the pediatric intensive care unit.

A 12 lead ECG taken when the patient was at the intensive care unit showed broad QRS complexities in all derivations, delta waves in especially V2, as well as in V4, V5 and V6, and a short PR interval. The patient was diagnosed with Wolf Parkinson White (WPW) syndrome and the reason for cardiac arrest was judged to be development of WPW-related VF.

A cranial MRI performed the same day displayed signs of diffuse cerebral edema. Nonetheless, the last neurological examination of the patient revealed a recovery rate that was faster than expected. The last MRI showed almost no signs of diffuse edema.

Result

Based on this single case, advanced cardiac life support and CPR with the application of more accurate techniques with recently published guidelines, we can say the duration of CPR might be extended. However, comprehensive studies should be made to support this opinion. These studies will help to improve advanced cardiac life support and CPR techniques. All of these, perhaps CPR's recommended the optimum time threshold will increase.

P363

CPR / Resuscitation

EVALUATION OF THE BLUE CODE CALL SYSTEM APPLICATION AT A SECONDARY REFERRAL HOSPITAL

U Gulacti (1), C Ustun (2), M Celik (3), S Akcay (4)

1. Emergency Department, Ministry of Health Harput General Hospital, Elazig, Turkey
2. Infectious Diseases and Clinic Microbiology, Ministry of Health Harput General Hospital, Elazig, Turkey
3. Anesthesiology and Reanimation, Ministry of Health Harput State Hospital, Elazig, Turkey
4. Cardiology, Ministry of Health Harput State Hospital, Elazig, Turkey

Corresponding author: Mr Gülaçti Umut (umutgulacti@gmail.com)

Key-words: Blue Code ; Cardiac Arrest ; Cardiopulmonary Resuscitation

Aim: To evaluate the "Blue Code Call System" applied in cases of emergency at a secondary referral hospital.

Methods: This study was conducted at a general hospital between January-December 2011. In total, 161 Blue Code Call System cases were examined using the data of patients' file retrospectively. There are many blue code call system buttons which activate the system in the hospital, of which three are in polyclinics and the others in services. When this system is activated by an announce, the emergency team including a physician and health care staffs migrates immediately in the place of the event. Cases are divided into two groups: not responding (Group 1) and responding (Group 2) to the cardio pulmonary resuscitation (CPR). Statistical analysis was done using SPSS software (Version 17.0).

Results: In the study, the ages of 166 cases were between 1-87 years, of whom 75 (45.2%) were female and 91 (54.8%) were male. Of these, CPR was applied to 141 (84.9%) cases, and 22 cases were not required to CPR. Cardio-pulmonary arrest was not occurred in these 22 cases later. A false announces was detected

for three cases. Of cases who CPR was applied, 76 (45.8%) were in Group 1, and 65 (39.2%) were in Group 2. The mean arrival time to place of event after blue code call announces was 38.8 seconds in hospital. After working hours (17:00-08:00), 53 (62.4%) of 85 cases were not respond to CPR ($p=0.016$). In patients whose initial cardiac rhythm was pulseless electrical activity (16.3%) had a significantly higher CPR unresponsiveness ($p=0.012$). There were 6 (4.5%) cases in whom CPR application time was under 15 minutes, all of them have responded to CPR ($p=0.005$).

Conclusion: Regarding the recently applied blue code call system in our country, a system that ensures fast reaction to the emergency cases should be installed. Blue code call is applied not only for cardiac arrest cases but also for all unstable patients after defining a standard call criterion.

P364

CPR / Resuscitation

IMPROVISED SYRINGE PUMP IS 29% FASTER THAN A PRESSURE BAG IN SIMULATED FLUID RESUSCITATION

C Smart (1), C Primrose (2), A Peters (2), E Speirits (2)

1. Anaesthetic Department, Crosshouse Hospital, Kilmarnock, Scotland.

2. School of Medicine, The University of Glasgow, Wolfson Medical School Building, University Avenue, Glasgow, Scotland.

Corresponding author: Mr Primrose Colin (0805012p@student.gla.ac.uk)

Key-words: Fluid resuscitation ; Pressure bag ; Syringe pump

Introduction:

Titrating intravenous fluid to exactly maximise cardiac output response is increasingly possible thanks to the growing availability of cardiac output monitoring devices. To monitor the response to a bolus of fluid, it is useful to be able to give a small bolus as quickly as possible.

To achieve this, it is becoming common practice to syringe boluses of fluid using a 50ml syringe and twisting the positions of a 3-way-tap. This practice is attention consuming, and is made inefficient by refluxing of fluid back into the pump. Rapid, high volume resuscitation is onerous as a result, and limits the device to small titrated boluses. Higher volume resuscitation is therefore more easily achieved using an inflatable pressure bag system.

We propose a modification of the three-way-tap design, by incorporating two one-way-valves on either side of the three-way-tap. By doing this, an efficient piston pump is created, capable of infusion rates which exceed those attainable by a pressure bag.

We characterised flow rates through the device, the pressures generated, and identified if haemolysis of blood occurred at high flow.

Methods.

The device was compared to a pressure bag system, when connected upstream of a fluid warmer circuit (RangerTM). The time within which two litres of 0.9% NaCl (in 500ml bags) could be infused through a 16G cannula was recorded. The bags were changed as quickly as possible by one operator, whilst the management of the pressure bag, or syringe pump was the responsibility of another. The pressure bag system was brought up to and maintained at an operating pressure of 300mmHg as quickly as possible, and the syringe pump was pumped at its maximum capacity.

The trans-cannula pressure was measured continually by a transducer connected 30cm upstream of the cannula. As the Syringe pump generated a saw-tooth pressure, the mean pressure of the waveform was recorded. To measure haemolysis, a bag of expired blood was divided between the two systems, and run through as quickly as possible. The haemolysis index was measured

from downstream samples by absorption spectroscopy of the supernatant.

Results: [95% CIs in parenthesis].

Time to infuse 500 ml of saline via Syringe Pump = 80.26s [79.26 to 81.25] vs. Pressure Bag = 112.6s [109.6 to 115.6] ($p<0.0001$)

Time to infuse 2000ml total via Syringe Pump = 361.4s [350.1 to 371.9] vs. Pressure Bag = 506.0s [486.7 to 525.3] ($p=0.0003$)

Time to change over fluid bags in Syringe Pump system = 10.1s [8.4s to 11.8] vs. Pressure Bag = 13.26s [11.6 to 14.9] ($p=0.0036$)

Maximum trans-cannula pressure in Syringe Pump system = 269.75mmHg [260.5 to 279.0] vs. Pressure Bag, 216.3mmHg [208.0 to 224.5] ($p<0.0001$).

Time to achieve a 200mmHg trans-cannula pressure in Syringe Pump system = 5-15s vs. Pressure Bag = 30-40s.

Percentage of time running single bag with a trans-cannula pressure > 200mmHg for Syringe Pump = 88.2% [81.4 to 95.0] vs. Pressure Bag = 20.8% [16.2 to 25.5] ($p<0.0001$)

Haemolysis index for expired packed cells through Syringe Pump = 63.3 Units [61.60 to 65.1] vs. Pressure Bag = 61.3 Units [60.0 to 62.6] ($p=0.145$).

Discussion:

The modified Syringe Pump surpasses the Pressure Bag system, both in its time to deliver a 500ml bag of fluid, and in the time to changeover fluid bags. Consequently there are cumulative time savings when delivering larger fluid loads.

Analysis of the trans-cannula pressures indicated that the syringe pump achieved a faster flow, not by generating dangerously high pressures, but by reaching a working pressure faster, and remaining at pressure until the end of the infusion. The pressure bag system by contrast was extremely inefficient.

The lack of any significant difference in haemolysis index between the two systems implies that the device can deliver blood safely.

There are additional advantages to the device when used in with a fluid warming system. Notably, the syringe fills itself under hydrostatic pressure up to the end of travel, then allows fluid to bypass into the patient. There is thus a reserve of fluid, even between IV bags. The 60ml volume of the syringe also allows time-critical drugs to be flushed very efficiently, and can easily clear a blocked cannula.

A syringe pump device should be used with caution, as it is possible to generate high pressures if injudicious force is used with obstructed venous outflow. It is recommended that the cannula is always visible, and that a force of 22N (sufficient to generate 300mmHg) is not exceeded.

P365

CPR / Resuscitation

EPIDEMIOLOGY OF PATIENTS WHO SURVIVED TO DISCHARGE AFTER PRESENTING TO AN INNER CITY EMERGENCY DEPARTMENT WITH OUT-OF-HOSPITAL CARDIAC ARREST (OOHCA).

T Breslin, N Cretu

Emergency Department, Mater Misericordiae University Hospital, Dublin, Ireland

Corresponding author: Melle Cretu Nicoleta (nicoletacretu14@yahoo.com)

Key-words: Epidemiology ; cardiac arrest ; out-of-hospital

Objectives

The objective of this study was to explore the characteristics of patients who survived to hospital discharge after presenting to the Emergency Department (ED) in cardiac arrest in our institution.

Methods

We conducted a retrospective study of data collected from records of all patients presenting to the Emergency Department of the Mater Misericordiae University Hospital with out-of-Hospital Cardiac Arrest (OOHCA) for three calendar years from 2008 to 2010.

Results

In the 3 period studied there were 392 patients presenting with OOHCA, of whom 86 patients (21.94%) were resuscitated initially and went to ICU, and 41 patients (10.45%) survived to hospital discharge.

CONCLUSION

Our cohort mirrors international data, with the major discriminators favouring survival from OOHCA, consisting of VF/VT arrests which occur in public places, where prehospital DC shocks are delivered. The majority of our survivors had cardiac interventions after resuscitation, either coronary stenting, or insertion of implantable defibrillators. Increasingly patients are presenting to our ED having had prehospital advanced airway insertion and drug administration. Patients presenting with OOHCA associated with deliberate self harm and drug overdose form a significant cohort of our presentations of OOHCA. We believe this is important information, and we have begun a more detailed study of this cohort, and all our patients, which will be compiled in the near future.

Dr Tomás Breslin, Consultant in Emergency Medicine
Mater Misericordiae University Hospital, Dublin, Ireland
Dr. Nicoleta Cretu, Registrar in Emergency Medicine.

Entubation and invasive mechanical ventilation was required for 20 (74.1%) patients. When the distribution of last diagnosis was evaluated, there were 12 (44.4%) patients with definite PE; 7 (25.9%) with suspected PE or AMI; 6 (22.2%) with definite AMI and only one (3.7%) patient with suspected fat embolism or AMI. General mortality rate was 70.3% (n=19). When drug timing was considered, patient group which had taken drug during CPR had mortality rate as 12/13 and the other which had taken drug during follow up or after successful CPR was 7/14. There was only one patient who had intramuscular hemorrhage and compartment syndrome after fibrinolytic treatment. **DISCUSSION:** There are many trials related with patients unresponsive standard regimen during CPR. Some trials demonstrated a small improvement in survival as discharging from hospital and major recovery in survival as admitting to ICU. There were case reports showing survival as discharging from hospital in three cases. However, there also were two major clinical trial didn't show any improvement when fibrinolytic treatment was performed in out of hospital cardiac arrest victims who were unresponsive against standard regimen during CPR. Although many small clinical trial and case series didn't report any evidence for major hemorrhagic complication related with thrombolytic treatment performed during CPR, there were a major trial and a meta analysis showed a increment in intracranial hemorrhage rate when fibrinolytic agents were used routinely during CPR. **CONCLUSION:** The fibrinolytic treatment should not be used routinely in cardiac arrest. If there is definite or suspected diagnosis for PE, it should be considered.

P366

CPR / Resuscitation

THE 2 YEAR- RETROSPECTIVE EVALUATION OF FIBRINOLYTIC TREATMENTS PERFORMED AT AN ACADEMIC EMERGENCY DEPARTMENT

M Ergin, B Cander, S Kocak, MR Ozer, B Babagil, G Calik, AS Girisgin, M Gul

Emergency Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

Corresponding author: Mr Ergin Mehmet (drmehtemergegin@gmail.com)

Key-words: Resuscitation ; Fibrinolytic treatment ; Emergency Department

BACKGROUND: Though their different mechanisms, all fibrinolytic agents have an similar end point which is transformation of plasminogen into plasmin, causing destruction of fibrin and thrombus. The study have goal to evaluate results of patients who had fibrinolytic treatment in emergency service and critical care unit. **MATERIAL – METHOD:** This retrospective study included the patients who were >18 years old and had fibrinolytic treatment at Necmettin Erbakan University Meram Medicine Faculty Emergency Department and Critical Care Unit between 1 January 2010 – 31 December 2011. The data was supplied from data process system of hospital. **RESULTS:** The study included 27 patients and 17 (63%) were women. The mean age was 66.9±9.9 (min- max 44-83) years old. The most common presenting complaints were dyspnea (n=11; %40.7), syncope (n=4; 14.8%) and chest pain (n=4; 14.8%). When the fibrinolytic treatment was begun to infuse, 13 (48%) patients had cardiac arrest and 12 (44.4%) had mean arterial pressure below 90 mmHg. There were also 22 (81.5%) patients taking vasopressor support. The fibrinolytic treatment was applied during CPR for 13 (48%) patients, during follow up for 10 (37%) one, after a returning of spontaneous circulation with successful CPR for 4 (14.8%) one. There were 19 (70.4%) patients taking streptokinase and 8 (29.6%) one taking alteplase treatment.

P367

CPR / Resuscitation

COST-EFFICIENCY OF A AUTOMATED EXTERNAL DEFIBRILLATION PROGRAM IN A SCATTERED POPULATION AREA IN THE NORTHWEST OF SPAIN

ac antonio casal sanchez, ai antonio iglesias vazquez, ls luis sanchez santos

emergency department, public foundation of emergency health services of galicia 061, santiago, Spain

Corresponding author: Mr Sanchez Luis (luis.sanchez.santos@sergas.es)

Key-words: cost-efficiency ; automated external defibrillation ; resuscitation

Introduction

63.000 myocardial infarctions occur annually in Spain, a third of them die before reaching the hospital. The semi-automatic external defibrillator (AED) device may sort this problem out if it is applied shortly after the collapse. Once the assistance results are analyzed, this study is intended to evaluate the cost-effectiveness relationship of the AED program, which has been carried out by the emergency service of Galicia (ES-061).

Methods

A cost calculation is done, by the means of the identification, classification and quantification of costs structure. In order to measure the effectiveness of AED program, three indexes were established, each of them reflecting either the progress or the worsening resulting from the program implantation, regarding the following criteria:

Criterion 1: Number of assisted patients (tried resuscitations);

Criterion 2: Vital signs recuperation;

Criterion 3: Survival to hospital discharge.

In order to find out the cost-effectiveness of AED program, the cost-effect ratio will be calculated, taking survival as the effect: saved lives as a consequence of AED program implantation.

Discussion

The AED program carried out by the ES-061 is undoubtedly effective, causing an increase of the number of assisted CRA, vital signs recuperations and hospital discharges. The cost of a saved life attributed to AED implementation is 8.783,90 €. AED program cost-effectiveness relationship in the Galician autonomous region is very high, as confirmed by this study
Results included en pdf attached

P368

CPR / Resuscitation

A REVIEW OF OUT-OF-HOSPITAL PEDIATRIC SUDDEN CARDIAC DEATH IN GALICIA (SPAIN)

ac antonio casal sanchez, ai antonio iglesias vazquez, ls luis sanchez santos

emergency department, public foundation of emergency health services of galicia 061, santiago, Spain

Corresponding author: Mr Sanchez Luis (luis.sanchez.santos@sergas.es)

Key-words: pediatric sudden cardiac arrest ; out-of-hospital ; resuscitation

Introduction

Sudden cardiac death (SCD) is a rare event in childhood and its characteristics are not well known all over the world. Our objective was to know the characteristics of pediatric SCD and the immediate results of CPR in Galicia.

Methods

Prospective observational study. Data were prospectively recorded following the Utstein's style guidelines. All children (0-16) who suffered an out-of-hospital SCD in Galicia and were assisted by the Emergency System staff, from June 2002 to February 2005 were included in the study

Results

31 cases were analyzed. Time SCD-CPR was lower than 10 minutes in 32.2% and longer than 20 minutes in 29.0%. 22.6% of children received bystander CPR.

The first recorded rhythm was asystole in 67.7%. Bag-mask ventilation was used in 80.6% and 87% of patients were intubated. A peripheral venous access was achieved in 67.7% and intraosseous access was used in 16.1% of patients.

Statistical analysis indicates a low and non significant relationship between intubation and bystander CPR with survival. We think that an increase in the number of children of the study would show this initial difference much better.

After initial CPR, restoration of spontaneous circulation was achieved in 38.7%. In 32.2% CPR was unsuccessful. Out of 21 patients who arrived at hospital 11 were dead before admission (35.5%) and 10 (32.2%) were admitted; 4 died during hospital stay (12.9%) and 6 survived until hospital discharge (19.4%).

Discussion:

Pediatric SCD characteristics and CPR results in Galicia are comparable to references from other communities. Programs to increase bystander CPR, to improve laypeople basic CPR skillfulness and to update life support knowledge of health staff are needed.

P369

CPR / Resuscitation

THE FREQUENCY AND THE ROLE OF INVASIVE MONITORING IN MANAGEMENT OF IN-HOSPITAL EMERGENCIES.

S. Charitidou (1), T. Aslanidis (2), S. Koutsoumpou (3), C. Tsiotras (4)

1. Emergency department, General Hospital Mpodosakeio, Ptolemaida, Greece
2. Emergency deptment, Hippocrateion, Thessaloniki, Greece
3. Intensive Care Unit, General Hospital Mpodosakeio, Ptolemaida, Greece
4. Emergency department, Hippocrateion, Thessaloniki, Greece

Corresponding author: Mme Charitidou Stella (stellacharis@yahoo.gr)

Key-words: in-hospital emergencies ; invasive monitoring ; management

The aim of the study was to investigate the frequency and the role of invasive monitoring during the management of in-hospital emergencies in a tertiary hospital.

Material- method:

During a 36 month period we recorded in detail every Medical Emergency Team – call in our hospital. The team was anesthesiologists-based and the parameters recorded were: reason for call, method of monitoring and vital signs and immediate outcome. A total of 550 calls were included for further analysis, conducted with Microsoft Office Excel 2007. Calls for patients how had been managed with the help of any invasive monitoring before M.E.T. –call were excluded.

Results:

Immediate outcome	Patients
Operation room	98
Ward management	82
DEATH	57
ICU	116
Coronary Unit	51
High Dependency Unit -General	67
CT Room	43
High Dependency Neurosurg.Unit	36

TOTAL 550

MONITORING:

1)HR 550/550,2)ECG 258/350 3)CVP 263/550,4)BP 435/550 5)Urine out put 346/550, 6)ABG 294/550 7)SpO2 550/550,8) RR 550/550

The study proves that although a relatively high percentage of patients admitted in high dependency type units, this was possible only with simple monitoring. Moreover, only 10,3% of calls had as immediate end-point DEATH. The latter implies the importance of simple monitoring, and set the limits to the first management of intrahospital emergencies.

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P370

CPR / Resuscitation

IMMEDIATE OUTCOME OF IN-HOSPITAL CARDIAC ARRESTS: A THREE YEAR EXPERIENCE.

S. Charitidou (1), T. Aslanidis (2), S. Koutsoumpou (3), C. Tsiotras (4)

1. Emergency department, General Hospital Mpodosakeio, Ptolemaida, Greece
2. Emergency department, Hippocrateion, Thessaloniki, Greece
3. Intensive Care Unit, General Hospital Mpodosakeio, Ptolemaida, Greece
4. Emergency department, Hippocrateion, Thessaloniki, Greece

Corresponding author: Mme Charitidou Stella (stellacharis@yahoo.gr)

Key-words: Cardiac arrests ; Resuscitation ; Outcome

Aim of the study was to record the outcome of in-hospital cardiac arrests managed by anesthesiologists.

During our 36 month prospective cohort study, we recorded all in-hospital cardiac arrests managed by our anesthesiologist-based MET team in our hospital. The parameters recorded were: reason for call, method of monitoring and vital signs and immediate outcome. A total of 170 out of 550 calls were included for further analysis, conducted with Microsoft Office Excel 2007.

Results:

109 out of 170 patients with cardiac arrest regained ROSC or ROSB and transported to ICU –type unit, and 61 died. No defibrillation therapy was admitted. 147/380 patients eventually died after a cardiac arrest, though the reason for MET activation was other than cardiac arrest.

Our study outlines the importance of CPR and especially response time in the management of in-hospital cardiac arrest and enforces the significance of alertness health personnel should have about the possibility of an forthcoming cardiac arrest.

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P371

CPR / Resuscitation

COMPARISON OF THE EFFECT OF IMMEDIATE, LATE, AND DELAYED RESUSCITATION EFFORTS ON THE OUTCOMES FOR CRITICALLY ILL PATIENTS MANAGED IN THE RESUSCITATION ROOM

IH Park, SD Shin, JY Lee, MJ Choi, CH Park, DK Kim, HK Choi, MY Kim

Emergency Department, Seoul National University Hospital, Seoul, Korea, (South) Republic of

Corresponding author: Melle Park Inhyun (thisismiso@gmail.com)

Key-words: resuscitation ; mortality ; emergency department

Objectives

The resuscitation room is the critical space equipped with medical devices and staffed with trained professional providers for emergency care for critically ill patients. This study is aimed to compare the effect of immediate and late or delayed resuscitation

efforts on the outcomes for critically ill patients managed in the resuscitation room.

Methods

Emergency patients with level 1 emergency severity index were enrolled from Jan. 2009 to Dec. 2011, who were managed in the resuscitation room in an urban, tertiary, academic hospital emergency department (ED). Data were collected from electronic medical record system for demographics and designed resuscitation room registry (RRR) for specific risk factors for patients managed in the room which were recorded by emergency registered special nursing staffs.

We classified patients with immediate resuscitation effort (IRE) group, late resuscitation effort (LRE) group, and delayed resuscitation effort group (DRE) according to the time from arrival at the ED to providing treatment at the resuscitation room. The cut-off time between IRE and LRE, between LRE and DRE was 10 minutes, and 60 minutes after entering the resuscitation room, respectively. Potential risk factors were age, gender, ambulance use, injury or disease, systolic blood pressure, respiratory rate, and mental status (AVPU).

Primary outcome was hospital mortality. Secondary outcome was ED mortality. We compared the demographics and outcomes by patients' groups (IRE, LRE, and DRE). Adjusted odds ratios (ORs) and 95% confidence intervals (95% CIs) for outcomes were calculated for adjusting potential risk factors.

Results

Eligible population was 2,543, excluding less than the 15-year-old (46,572), non-RRR group (112,028), and death on arrival patients (556). Of these, IRE was 1,992 (78.3%), LRE 294 (11.6%), and DRE 257 (10.1%), respectively. ED mortality was 4.6% for total group, 4.4% for IRE, 3.1% for LRE, and 7.8% for DRE group, respectively. Hospital mortality was 16.1% for total group, 15.3% for IRE, 12.6% for LRE, and 26.5% for DRE group, respectively. Adjusted OR (95% CI) for hospital mortality was 2.10 (1.38-3.18) in LRE and 6.45 (4.44-9.37) in DRE compared with IRE group, respectively.

Conclusion

ED and hospital mortality for emergency patients managed in the resuscitation room was 4.6 and 16.1. The LRE and DRE group showed significantly higher mortality rate than IRE.

P372

CPR / Resuscitation

IMPROVING CPR QUALITY IN EMS SERVICES MAHARAT NAKHON RATCHASIMA HOSPITAL

N Prasertsukjinda

Accident and Emergency, Maharat Nakhon Ratchasima Hospital, Nakhon Ratchasima, Thailand

Corresponding author: Melle Rojinnakorn Nitaya (erkorat03@yahoo.com)

Key-words: CPR ; Chest compression ; EMS

Emergency Medical Service (EMS) department is one of emergency service system in Maharat Nakhon Ratchasima hospital which provides service for emergency patients outside hospital. There were a large number of critical patients (over 2000 emergent level patients) in 2011. The ninety-six patients were need cardiopulmonary resuscitation (CPR). The American Heart Association Says 'C-A-B' Is the Way to Go: Compressions, Airway, and Breathing (standard guideline CPR 2010: American Heart Association). The main problems in doing CPR were ineffective chest compression. The chest compressions were also too shallow - less than the recommended 1½–2 inches "deep", inaccuracy rate, inaccuracy rhythms and inaccuracy in duration time to reassessment. So that we invented the mechanical box which use

sound (MP3) to keep strokes while doing CPR, this box name "E.R. 100 Goo-Jai". E.R. 100 Goo-Jai has multifunction to help CPR teams to perform correctly chest compression such as the function which to keep strokes 100/min, breathing assistant 10 time/min, remind for adrenaline administration every 3 minute. This equipment has available both for Basic Life Support (BLS) and Advance Life Support (ALS). Result: After used this equipment in resuscitation room, the success CPR was evaluation by the number of patients who had return spontaneous circulation (ROSC), CPR success rate and CPR team satisfaction. The result showed 45/50 patients (90%) had ROSC in average 12 minutes and 48 second (compared with before used this equipment = 17 minutes). CPR success rate increased to 54.1% (before = 51/225 patients, 22.6%). The CPR success rate in EMS service was 4/5 patients, 80% (before = 65/96 patients, 67.7%) and CPR teams satisfaction were 97%. Discussion: E.R. 100 Goo-Jai is the useful mechanical equipment which can improve CPR quality in ER and EMS services in Maharat Nakhon Ratchasima hospital.

P373 CPR / Resuscitation

USING AEDS IN ATHENS INTERNATIONAL AIRPORT (AIA)(6 YEARS PERIOD DATA)

M Armiriotti, D Gkesoura, V Kekeris, S Papanikolaou, D Pyrros, S Tsionas, S Xeniadis
EKAB-AIA, NATIONAL CENTRE OF EMERGENCY CARE (EKAB), ATHENS, Greece

Corresponding author: Mr Papanikolaou Spiros (papanikolaouspiros@yahoo.com)

Key-words: resuscitation ; BLS/AED ; AIPOPT

One of the common dangers for airport passengers is unexpected cardiac arrest – a rapid, sudden loss of heart function, respiration and consciousness.

Sudden cardiac arrest is a medical emergency. If not treated immediately, it causes sudden cardiac death. With fast, appropriate medical care, survival is possible.

With more than 30% of adults having cardiovascular disease meaning that more than 4 million people-passengers that fly through AIA per year –(statistical data through AIA: Total Number of Passengers (in millions) 15.4) – have cardiovascular disease, it's too great of a risk to not be prepared or, worse, to ignore it.

AIA has provided defibrillators access to public, and also educational/training & refreshing programmes for the working non medical stuff. Within AIA a fully functioning medical station with 2 doctors, 1 nurse and 2 rescuers-ambulance crew and a mobile intensive care unit (MICU) is operating on a 24/7 basis EKAB-AIA AEDs are strategically placed within 90 secs walk from any point in airport terminals and are posted in AIA visibly located AED CABINETS, linked to the National Centre for Emergency Care medical station at AIA (EKAB-AIA)

Removing an AED automatically notifies the Airports' Emergency Communications Center & EKAB-AIA. The EKAB-AIA MICU with professional rescuers immediately dispatched to the area, also non medical stuff of AIA dispatched to the scene of cardiac arrest. Our experience these 6 years are

2004 male 81 yrs deceased
2006 male 60yrs resuscitated
2006 male 62 yrs deceased
2006 male 60 yrs resuscitated
2007 male 39 yrs resuscitated
2008 female 76 yrs resuscitated
2008 female 83 yrs deceased
2008 male 72 yrs deceased

2009 male 59 yrs deceased
2011 female 45 yrs deceased
2011 female 77 yrs deceased
2011 male 60 yrs resuscitated
Confirmed resuscitation after cardiac arrest: 41,6%, deceased :58,4%
Most important point is that CPR & BLS/AED was initially performed from non medical stuff of AIA (as first responders) trained by EKAB-AIA

P374 CPR / Resuscitation

EPIDEMIOLOGY & OUTCOME OF OUT OF HOSPITAL CARDIAC ARREST RESUSCITATION IN GYEONGGI-DO -DO, SOUTH KOREA.

YJ Kim (1), GW Kim (2), KY Kim (3), KH Noh (1), JH Choi (1), SY Park (1), JE Rhee (1)

1. Department of Emergency Medicine, Seoul National University Bundang Hospital, Gyeonggi-do, Korea, Seongnam, Gyeonggi-do, Korea, (South) Republic of
2. Department of Emergency Medicine, Ajou University School of Medicine, Gyeonggi-do, Korea, Suwon, Gyeonggi-do, Korea, (South) Republic of
3. Prehospital care, Gyeonggi-do Fire Service Academy, Gyeonggi-do, Korea, Yongin, Korea, (South) Republic of

Corresponding author: Melle Kim Yu Jin (myda02@gmail.com)

Key-words: Out of hospital cardiac arrest ; Return of spontaneous circulation ; survival rate

Objectives: The recent annual incidence of out-of hospital cardiac arrest(OHCA) in the South Korea is approximately 55 per 10,000 population and survival remains low. We examined EMS treated OHCA data from EMS records including discharge information of receiving hospitals. To identify and investigate in transport practices in relation to documented prehospital return of spontaneous circulation (ROSC) from 34 EMS agencies covered entire Gyeonggi-do.

Methods: Consecutive patients who experienced nontraumatic OHCA from January, 1, 2011 through December, 31, 2011 were enrolled. Demographic, prehospital arrest characteristics, prehospital treatment, and survival data using the Utstein template were collected. Good Neurologic survival was defined by a Cerebral Performance Categories (CPC) score of 1 or 2.

Results : During the study period, 2,235 arrests had attempted resuscitation and transported by EMS. The mean age was 65.8 years (standard deviation : 18.8 years), 62.4% were male, 68.7% were at home. Of these, 50.2% had witnessed arrest, 31.4% had bystander cardiopulmonary resuscitation (CPR) performed, and 10.8% had ventricular fibrillation or pulseless ventricular tachycardia or other shockable rhythm as their initial rhythm. The median time of major EMS response time (call EMS to field, stay at field, and call EMS to arrival at hospital) were 7 minutes (interquartile range : 5 minutes), 7 minutes (interquartile range : 6 minutes), and 23 minutes (interquartile range : 11 minutes), respectively. 129(5.8%) had prehospital return of spontaneous circulation (ROSC), 59(2.6%) survived to hospital discharge, and 47(2.1%) had a good neurologic outcome.

Conclusions: Overall OHCA survival in Gyeonggi-do is remains low, This first reporting of OHCA in regional area in Korea may help clarify the quality of prehospital resuscitation and provide a target for identifying EMS practices most likely to enhance survival from OHCA in Korea.

P375 *Diagnostic Technology & Radiology*

BEDSIDE USG FOR ATFL INJURY

C. Gün (1), P.H. Kara (1), O. Oyar (2), E.E. Unluer (1), N. Vandenberk (1)

1. Emergency Department, Izmir Katip Çelebi University, Atatürk Research and Training Hospital, Izmir, Turkey
2. Radiology Department, Izmir Katip Çelebi University, Atatürk Research and Training Hospital, Izmir, Turkey

Corresponding author: Melle Kara Pinar Hanife (hpinarkara@hotmail.com)

Key-words: bedside ultrasonography ; ankle injury ; Emergency department

Objective: Our objective was to study the accuracy of emergency medicine (EM) physician performed bedside ultrasonography (BUS) in patients with suspected anterior talofibular ligament (ATFL) injury.

Methods: After six-hour training program, from January to December 2011, an EM physician used BUS to prospectively evaluate patients presenting to the emergency department (ED) with suspected ATFL injury. Then patients underwent direct graphy and Magnetic Resonance (MR) Imaging. Outcome was determined by official radiology reports of the MR Imaging. BUS and MR imaging results were compared with Chi-square testing.

Results: Of the 65 enrolled patients, 30 Patients were BUS-positive. Of these, MR imaging results agreed with the BUS findings in 30 patients. In 35 cases, BUS was negative, and 33 of these were corroborated by MR imaging. The sensitivity, specificity, Positive predictive value, negative predictive value, and negative likelihood ratio for BUS were 93.8%, 100%, 100%, 94.3% and 0.06 respectively. The diagnostic accuracy of BUS were not statistically different from MR imaging ($\kappa=0.938$ $p=0.001$)

Conclusion: BUS for diagnosis of ATFL injury is another application of BUS in the ED. EM physicians can diagnose ATFL injury using BUS with high degree of accuracy.

fractional shortening value. The sensitivity, specificity, and the positive and the negative likelihood ratios of RVOT fractional shortening to truly estimate CVP were calculated.

RESULTS: Fifty-eight consecutive patients had invasive CVP monitoring. Nine patients with high CVP and eight for other reasons were excluded. Forty-one patients were enrolled in the study, of whom 21 were in low CVP group and 20 were in normal CVP group. RVOT diastolic diameters, RVOT systolic diameters, and RVOT fractional shortening were lower in low CVP group and this difference was statistically significant ($P < 0.001$). The cutoff value for RVOT fractional shortening to differentiate the low and normal CVPs using the highest sensitivity and specificity was 26.44%. Area under the receiver operating characteristic curve was 0.933 (0.810-0.987) with a P value of less than 0.001. The sensitivity and specificity of RVOT fractional shortening to truly estimate CVP were 95 (75-99) and 80% (58-94), respectively.

CONCLUSION: In the hands of emergency physicians, a RVOT fractional shortening measurement is a good predictor of low CVP.

P377 *Diagnostic Technology & Radiology*

PARAMEDIC-PERFORMED FAST IN THE EMERGENCY DEPARTMENT

E.E. Unluer (1), O. Yavaş (1), P.H. Kara (1), T.Y. Kılıç (1), N. Vandenberk (1), K. Kayayurt (1), S. Kıyanççek (1), H. Akoglu (2), C. Yılmaz (3)

1. Emergency Department, Izmir Katip Çelebi University, Atatürk Research and Training Hospital, Izmir, Turkey
2. Emergency Department, Dr. Lutfu Kırdar Kartal Research and Training Hospital, Istanbul, Turkey
3. Radiology Department, Izmir Bozyaka Research and Training Hospital, Izmir, Turkey

Corresponding author: Melle Kara Pinar Hanife (hpinarkara@hotmail.com)

Key-words: Paramedic ; FAST ; Emergency

BACKGROUND: Our objective was to evaluate the accuracy of paramedic-performed Focused Assessment with Sonography in Trauma (PFAST) for detection of free fluid in patients admitted to the Emergency Department (ED) following trauma.

METHODS: After four hours of didactic and four hours of hands-on training, four paramedics prospectively evaluated trauma patients. Our gold standard was the official radiologist reports of ultrasonography and computerized abdominal tomography (CAT). The sensitivity, specificity, positive and negative likelihood ratios, and diagnostic odds ratio of PFAST were calculated and analyzed using SPSS 15.0 with X2 testing.

RESULTS: One hundred and twenty-seven patients were evaluated by the paramedics. Fourteen patients had positive free fluid in the abdomen. Of these, 11 were corroborated by radiology reports and CAT (true positives), and three were found to be negative (false positives). In 113 cases, PFAST was negative for free fluid. Of these, 111 were determined not to have free fluid (true negatives), whereas free fluid was detected by CAT in 2 (false negatives). The sensitivity, specificity, positive and negative likelihood ratios, and diagnostic odds ratio of PFAST were 84.62, 97.37, 32.15, 0.16, and 203.50, respectively.

CONCLUSION: Our study shows that paramedics can perform FAST in hospital Eds with a high degree of accuracy.

P376 *Diagnostic Technology & Radiology*

BEDSIDE ASSESSMENT OF CVP BY SONOGRAPHIC MEASUREMENT OF RVOT FRACTIONAL SHORTENING

E. E. Unluer (1), H. Akoglu (2), S. Bayata (3), A. Gürbüz (4), P. H. Kara (1), O. Yavaş (1), L. Yılık (4), I. Yürekli (4)

1. Emergency Department, Izmir Katip Çelebi University, Atatürk Research and Training Hospital, Izmir, Turkey
2. Emergency Department, Dr. Lutfu Kırdar Kartal Research and Training Hospital, Istanbul, Turkey
3. Cardiology Department, Izmir Katip Çelebi University, Atatürk Research and Training Hospital, Izmir, Turkey
4. Cardiovascular Surgery Department, Izmir Katip Çelebi University, Atatürk Research and Training Hospital, Izmir, Turkey

Corresponding author: Melle Kara Pinar Hanife (hpinarkara@hotmail.com)

Key-words: RVOT fractional shortening ; CVP ; emergency bedside echocardiography

OBJECTIVES: We aimed to assess the suitability of right ventricular outflow tract (RVOT) fractional shortening for estimating low central venous pressure (CVP). To the best of our knowledge, there have been no similar studies in the English language literature.

METHODS: In this cross-sectional study, the emergency physicians measured the RVOT fractional shortening on parasternal short-axis view. A receiver operating characteristic curve analysis was conducted to identify the threshold that maximized the sensitivity and specificity for discriminating normal and low CVPs by the RVOT

P378

Diagnostic Technology & Radiology

ROLE OF INFERIOR VENA CAVA AND RIGHT VENTRICULAR DIAMETER IN ASSESSMENT OF VOLUME STATUS: A COMPARATIVE STUDY

S Zengin (1), S Genç (1), B Al (1), C Yildirim (1), S Ercan (2), M Doğan (1)

1. Emergency Department, Gaziantep University, Gaziantep, Turkey
2. Cardiology Department, Gaziantep University, Gaziantep, Turkey

Corresponding author: Mr Zengin Suat (zengins76@gmail.com)

Key-words: Ultrasonography, ; inferior vena cava, ; right ventricle,

Background: Ultrasonography has been suggested as a useful non-invasive tool for the detection of hypovolemia. Two possible sonographic markers for hypovolemia are the diameter of the inferior vena cava (IVC) and the right ventricle (RV).

Objective: The goal of this study was to evaluate the change in the IVC and RV diameter (dRV) in relation to the intravascular volume loss.

Methods: Fifty healthy volunteers and 50 consecutive hypovolemic patients were recruited to participate in the study. The IVC diameter (dIVC), both during inspiration (IVCi) and during expiration (IVCe), was measured in hypovolemic patients both before and after fluid resuscitation, and they were measured in volunteers during the time they participated in the study. The dIVC was measured ultrasonographically by M-mode in the subxiphoid area. The difference between the diameters of the IVCe and IVCi was regarded as collapsibility, and it was defined as IVCe-IVCi/IVCe. Results: The average diameters of the IVCe and IVCi in the hypovolemic patients upon arrival were significantly smaller than in the volunteers (1.27 ± 0.43 , 0.73 ± 0.37 versus 1.81 ± 0.38 , 1.32 ± 0.35 cm). After fluid resuscitation, there was a significantly increase in the mean diameters of the IVCe and IVCi in the hypovolemic patients (1.27 ± 0.43 , 0.73 ± 0.37 versus 1.55 ± 0.41 , 1.01 ± 0.44 cm).

Conclusions: Our data indicates that the dIVC and dRV are consistently low in hypovolemic status when compared with euvolemic, and the measurement of the dIVC and dRV are reliable indicators of hypovolemia. The measurements of the dIVC and dRV may be an important addition to the ultrasonographic evaluation of trauma and other potentially volume-depleted patients.

P379

Diagnostic Technology & Radiology

RADIOLOGY MISSES IN EMERGENCY DEPARTMENT : IS IT WORTH LOOKING?

R GORMAN, F PASHA

EMERGENCY MEDICINE, LEEDS TEACHING HOSPITALS NHS TRUST UNITED KINGDOM, LEEDS, United Kingdom

Corresponding author: Mr Pasha Farooq (drfupasha@doctors.org.uk)

Key-words: RADIOLOGY ; MISSED X-RAYS ; LITIGATION

INTRODUCTION:

Missed X-Ray findings are a major source for Emergency Department medical litigation costs. The radiology service reviews all X-Rays performed within the Emergency Department to detect discrepancies missed at the time of patient attendance

METHODS:

The missed X-Rays from the Leeds Teaching Hospitals NHS Trust were reviewed to assess what pathology we were missing, how long it took us to act upon these misses, and was there a change in management for the patient. We also looked at what type of plain film we were poor at interpreting.

RESULTS:

There were 137 missed X-Rays included. The percentage of misses that were actual misses was 36%. The other 64% were simply coded incorrectly leaving the radiologist with the impression that the original X-Ray had been missed or that appropriate follow-up had not been arranged.

The majority of misses were fractures (57%), followed by abnormalities seen on chest radiographs. The most common type of plain film involving missed abnormalities was the chest radiograph, followed by the ankle and then hand radiographs. Overall, 82% of those X-Rays that were true misses resulted in a change in management for that patient. Fifty per cent of these were called back to the department for further review and treatment. The maximum number of days it took to review the X-Ray misses by the radiology and emergency department was 10 and 13 days, respectively. The minimum time taken to review was one day by both the radiology and emergency departments.

CONCLUSION:

A safety net of reporting system in ED where radiology highlight missed fractures in ED does have a beneficial effect in change in management of these patients and preventing complaints and litigation cost for the department.

P380

Diagnostic Technology & Radiology

AN UNUSUAL CAUSE OF WEAKNESS OF EXTREMITY: VON HIPPEL-LINDAU DISEASE

CA Görmeli (1), ZB Aydın (2), G Görmeli (3), H Aydın (4), R Dursun (5)

1. Radiology, Van Training and Research Hospital, Van, Turkey
2. Radiology, Diyarbakir Education and Research Hospital, Diyarbakir, Turkey
3. Orthopedics and Traumatology, Van Training and Research Hospital, Van, Turkey
4. Radiology Department, Dışkapı Yıldırım Beyazıt Education and Research Hospital, Ankara, Turkey
5. Emergency Service, Van Training and Research Hospital, Van, Turkey

Corresponding author: Mr Görmeli Gökay (ggormeli@yahoo.com)

Key-words: Hemangioblastoma, ; von Hippel-Lindau, ; renal and pancreatic cyst

VHL disease is a rare autosomal dominant disease with the disorder matched to the short arm of chromosome 3. The disease is a multisystem disorder with phenotypic variability.

A 50-year-old man presented to emergency service with history of weakness of the right upper and lower limbs. Magnetic resonance imaging studies revealed the cerebellar and spinal hemangioblastomas. We present a case of von Hippel-Lindau (VHL) disease with symptomatic central nervous system hemangioblastomas, multiple renal and pancreatic cysts. To determine the lesions relationship with VHL and its appropriate management, we discuss its salient radiologic and clinical features.

P381

Diagnostic Technology & Radiology

A RARE CAUSE OF HEADACHE: RUPTURE OF INTRACRANIAL LIPOMA

HM Durgun, C Guloglu, N Kurt, M Orak, A Ozhasenekler, M Ustundag,

Emergency Department, University of Dicle, Medical School, Diyarbakir, Turkey

Corresponding author: Mr Ozhasenekler Ayhan (drhasenek@hotmail.com)

Key-words: headache ; intracranial lipoma ; emergency department

Introduction: Intracranial lipomas (ICLs) are quite rare congenital malformations arising from primitive layer of meninx by abnormal differentiation. They form less than 1% of intracranial tumoral mass lesions and are typically seen in childhood or early adulthood period. Lesions are located pericallosally in 25-50% of cases. ICLs are generally asymptomatic and detected incidentally in cross-sectional imaging studies ordered for another cause. It is imaged in air density in computerized brain tomography (CBT) parenchymal sections. Although mostly asymptomatic, it may rarely cause seizures, headache, vertigo, diplopia, intellectual alterations, and hemiparesia.

Key words: headache, intracranial lipoma, emergency department

Objective: We aimed to present a case of rupture of an intracranial lipoma detected incidentally in CBT sections of a young man who presented to our emergency department with head trauma.

Case report: A 27-year old male patient presented to our emergency room with complaints of headache, vertigo, and diplopia. He had had no headache before, but he gave a history of head trauma 1 week prior to presentation and a headache since then. His vertigo and diplopia had begun the night before the presentation. On physical examination; his general appearance was well, he was conscious, and his vital signs were stable. There were no signs related to trauma, his neurologic, cranial nerve, and other systemic examinations were all normal. Computerized brain tomography (CBT) showed a hypodense appearance surrounding corpus callosum, consistent with a lipoma ruptured into left lateral ventricle, with no bony pathology. A neurosurgical consultation was obtained, which did not find an indication for surgery. He was given symptomatic supportive treatment. An ambulatory follow-up was scheduled with an intention to obtain a cranial magnetic rezonans imaging (MRI) to investigate other intracranial anomalies accompanying ICL.

Discussion: ICLs are rarely encountered in CBT and MRI sections taken for other indications. Although they typically have pericallosal location, they may also be located in the sylvian fissure, quadrigeminal system, interpeduncular system, cistern of cerebellopontine angle, cerebromedullary system, chiasmatic-suprasellar cistern, and choroid plexus of the atrium. They are usually silent; however, they rarely cause seizures, headache, and cranial nerve palsies. Presence of clinical symptoms depends on accompanying anomalies (most commonly corpus callosum dysgenesis), location, size, and mass effect of the lipoma. It may rupture both spontaneously and due to head trauma. They may particularly lead to false diagnoses by being related to trauma, when they are detected in CBT of patients presenting to emergency departments for head trauma. Other physical signs and CBT findings should be investigated in ICL ruptures considered to be secondary to trauma. Since CBT is commonly used in emergency departments as the imaging modality in patients with head trauma, they may be confused with pneumocephalus when viewed from parenchymal CBT window. However, disappearance of air-like image in bone window, absence of fracture in the neighboring bone, and absence of signs of trauma in physical examination or

CBT sections make diagnosis of pneumocephalus unlikely. In that case, the lesion may be lipoma or dermoid cyst.

Conclusion: It should be remembered that ICLs may be incidentally encountered in CBT, which is a frequently used method in emergency departments in patients presenting with head trauma; and they need to be confirmed with history, physical examination, and detailed analysis of CBT.

P382

Diagnostic Technology & Radiology

THE IMPORTANCE OF ULTRASOUND IN THE DIAGNOSIS OF ACUTE APPENDICITIS

NC Ören (1), YK Akpak (2), U Savaşçı (3), U Kaldırım (4)

1. Department of Radiology, Sarıkamış Military Hospital, Kars, Turkey
2. Department of Obstetrics and Gynecology, Sarıkamış Military Hospital, Kars, Turkey
3. Department of Infectious Diseases and Clinical Microbiology, Sarıkamış Military Hospital, Kars, Turkey
4. Department of Emergency Medicine, Gülhane Military Medical School, Ankara, Turkey

Corresponding author: Mr Akpak Yasam Kemal (yasamaster@gmail.com)

Key-words: Ultrasound ; Acute appendicitis ; Emergency department

Introduction

Appendectomy is still the most common procedure in general surgery practice but the process of diagnosis is still controversial. A diagnosis of acute appendicitis is generally made on the basis of a patient's clinical history in collaboration with physical examination. Ultrasound (US) has been popularly used in the diagnosis of acute appendicitis of late years. We aimed to analyze retrospectively the diagnostic efficiency of the US in the diagnosis of acute appendicitis.

Materials and methods:

This retrospective study was performed between December 2011 and April 2012 in Sarıkamış Military Hospital, Department of Radiology. 48 patients presenting with abdominal pain, who was performed US with pre-diagnosis of acute appendicitis, were included in the study. Hospital automation system, the hospital archives and clinical records were used as a database for demographic datas. Genders, ages, ultrasound assessment results and postoperative histopathological results of cases were evaluated retrospectively.

Results:

70.8% of patients were male, 29.2% of patients were female and the mean of patients' age was 28.4±3.6. No pathology was detected in 93.8% of patients' US results and 12% of them were operated with the diagnosis of acute appendicitis. The diagnosis was confirmed histologically in 70% of these patients. The US findings compatible with acute appendicitis were found in 6.2% of the patients. The diagnosis was confirmed histologically in 90% of these patients who were operated.

Discussion:

The diagnosis of acute appendicitis is mainly clinical but recently use of imaging studies is increasing. Although there are many imaging methods, US is a simple, easy and noninvasive one. The sensitivity and specificity of US were 89% and 100%, respectively as found in many studies. In one study, the negative appendectomy rate was found 9.8% of cases without preoperative US applied, on the other hand, this ratio was found 8.6% in US applied group. Effectiveness of ultrasonography in diagnosis depends on radiologist's experience and physical characteristics of the patient. US has a very important role in diagnosis but it is not a method that can eliminate acute appendicitis alone as observed in our study.

P383

Diagnostic Technology & Radiology

TRANSCATHETER EMBOLIZATION FOR THE TREATMENT OF BOTH VAGINAL AND LOWER INTESTINAL BLEEDING DUE TO ADVANCED PELVIC MALIGNANCY

B Karaman (1), NC Ören (2), C Andıç (1), B Üstünöz (1), YK Akpak (3), U Savaşçı (4), U Kaldırım (5)

1. Department of Radiology, Gülhane Military Medical School, Ankara, Turkey
2. Department of Radiology, Sarıkamış Military Hospital, Kars, Turkey
3. Department of Obstetrics and Gynecology, Sarıkamış Military Hospital, Kars, Turkey
4. Department of Infectious Diseases and Clinical Microbiology, Sarıkamış Military Hospital, Kars, Turkey
5. Department of Emergency Medicine, Gülhane Military Medical School, Ankara, Turkey

Corresponding author: Mr Akpak Yasam Kemal (yasamaster@gmail.com)

Key-words: Coil embolization ; Hemorrhage ; Lower gastrointestinal bleeding

Introduction

Although both rectal and vaginal bleeding can be caused by arterial hemorrhage, their etiologies are different. Colonic diverticulosis, angiodysplasia, neoplasms, infections, and inflammatory bowel disease are the most common disorders associated with rectal bleeding. Malignant tumor extension, infection, surgery and pelvic radiation are the most frequent etiologies of vaginal bleeding. In patients who admitted to the emergency department, with advanced pelvic malignancy, vaginal and lower intestinal bleeding can be observed simultaneously. Because the pelvic vascular anatomy of these patients can change due to the many dysplastic arterial structures, arterioarterial or arteriovenous fistulas and pseudoaneurysm formations can result from surgical treatments, tumor extension, infections and pelvic radiation. The angiographic approach is a noninvasive and safe treatment method for these clinic conditions.

Case Report

31-year-old woman with inoperable stage IIIB cervical carcinoma was admitted to our emergency department with an altered mental status and a history of rectal and vaginal bleeding. She had a blood pressure of 90/60 mmHg, a heart rate of 86 beats/min and a respiratory rate of 22 breaths/min. Her first diagnosis had been established two years prior to this hospital admission, and she had undergone total abdominal hysterectomy, bilateral oophorectomy, pelvic radiation and systemic chemotherapy. Six months later, a diverting colostomy was performed for the treatment of proctitis. She developed recurrent disease and received a second course of systemic chemotherapy three months prior to the current admission. After the first clinical evaluation, she was referred to our interventional radiology unit for possible arterial embolization. An abdominal aortogram and selective angiographies of the superior mesenteric artery (SMA) and the inferior mesenteric artery (IMA) were performed, all of which were negative for the source of bleeding. Then, we performed a pelvic arteriogram, and a pseudoaneurysm of the vaginal branch of the left internal iliac artery was observed. Additionally, a fistulous communication between lower intestinal structures and the pseudoaneurysm was observed during the angiography. Coil embolization to stop the bleeding was planned, and two pushable coils (5x20-30) (Cook's) were used to occlude the feeding vessel of the pseudoaneurysm. There was no contrast filling in the pseudoaneurysm on the control angiograms. In the following two weeks, there was no complaint of vaginal or rectal bleeding by the patient, and her vital signs were stable in this period. We discharged her two weeks after the inpatient admission.

Discussion

Lower intestinal bleeding that arises from the branches of the internal iliac artery (IIA) is very rare, and we typically see this kind

of hemorrhage in patients who have advanced pelvic malignancies. We must keep in mind that the IIA can be the source of the lower GI bleeding, and angiographic studies should begin with injections into the IIA in patients with advanced pelvic malignancy. We think that the management of lower gastrointestinal bleeding should also include selective angiography of the IIA, especially for patients with pelvic neoplasms or for patients who have had pelvic irradiation so that the diagnostic ratio of angiography can be increased. The transarterial embolization of pelvic and mesenteric vessels is not a perfect treatment method. It has some advantages and some disadvantages. It is a safe, minimally invasive technique that can be completed repeatedly. The disadvantages of this technique are with the use of ionizing radiation and the inability to identify extravasations under the rate of 1 ml/s. however, this technique can be life saving in patients who have massive bleeding due to advanced pelvic malignancy. We think that transarterial embolization is the treatment of choice for patients with pelvic neoplasms who have vaginal or intestinal bleeding.

P384

Diagnostic Technology & Radiology

THE DIAGNOSIS OF RIB FRACTURE WITH ULTRASONOGRAPHY: CASE PRESENTATION

M Ergin (1), AS Girisgin (1), T Acar (1), A Tuncar (1), k Kucukceran (1), M Tokur (2)

1. Emergency Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey
2. Thoracic Surgery Department, Sutcu Imam University Medicine Faculty, Kahramanmaraş, Turkey

Corresponding author: Mr Ergin Mehmet (drmehtemtergin@gmail.com)

Key-words: Rib fracture ; Ultrasonography ; Trauma

BACKGROUND: Ultrasonography (USG) is the most ideal imaging device in the emergency department (ED). It was told that USG could be used only by radiologists; however, emergency physicians should know how to use USG in the whole world today. Focused abdominal sonography of trauma (FAST) was the starting point of USG and ED relation but nowadays it isn't only issue. New fields of application have occurred during last years. We are presenting a case of floating rib fractures that was diagnosed with USG. **CASE:** MU, 50, F was admitted to ED due to left side flank and back pain after she dropped chair. Her pain was sharp and continuous. Its severity was increasing when breathing and moving. Her 'Modified Early Warning Score' was zero point. Physical exam showed that there was sensitivity on floating ribs of left side hemi thorax and between T12 – L2 vertebrates when palpated. Other physical signs were in normal range. She had no abnormality for laboratory results except minor hematuria. Any pathological findings couldn't be seen on chest and abdomen X-rays. FAST exam showed no abnormality but when ultrasonography probe was located on most painful point at her back, there was double line sign on 11th rib due to rib fracture. Contrast enhanced abdominal computed tomography demonstrated fracture of left transvers process of L1 and L2 vertebrates and 11 and 12th ribs. Patient was followed at observation unit of ED for 24 hour. She was discharged with analgesic medication regimen and directed to outpatient units. **CONCLUSION:** Basic USG curriculum must be necessarily in emergency medicine curriculum. Emergency physicians should be familiar with all fields of USG application in ED.

P386

Diagnostic Technology & Radiology

COMPUTED TOMOGRAPHY FINDINGS OF PATIENT UNDERWENT INTESTINAL RESECTION DUE TO ACUTE ABDOMEN

MF Inci (1), F Ozkan (1), S Bozkurt (2), M Yuksel (1), O Peker (3)

1. Radiology, Kahramanmaraş Sutcu Imam University Faculty of Medicine, Kahramanmaraş, Turkey
2. Emergency Medicine, Kahramanmaraş Sütçü Imam University School of Medicine, Kahramanmaraş, Turkey
3. General Surgery, Kahramanmaraş Sutcu Imam University Faculty of Medicine, Kahramanmaraş, Turkey

Corresponding author: Mr Ozkan Fuat (drfozkan@yahoo.com)

Key-words: acute abdomen ; intestinal resection ; computed tomography

Objective: The purpose of our study was to evaluate the diagnostic value of Multidetector CT in patients underwent acute intestinal resection due to acute abdomen.

Subjects And Methods: Between 01.01.2011 and 20.06.2012, 24 patients who admitted to our hospital's Emergency Service with acute abdominal pain and underwent acute intestinal resection were included. CT images were interpreted by an experienced radiologist retrospectively. All clinical datas and surgery notes also were evaluated. Patients had intestinal resection operation due to penetrating or blunt abdominal injury and primary surgical repair were excluded.

Results: A total of 24 patients' CT images were evaluated retrospectively. Of 24 patients 13 (54.2 %) were male and 11 (45.8 %) were female. Patients' ages ranged 29 to 64 and mean age was 47±3,4 years. The definitive diagnosis were divided into three main group.a) Intestinal obstruction; 1 patient with invagination, 1 patient with a giant mass adhesived to intestine, 2 patients with small bowel neoplasm and 2 patients with large bowel neoplasm; b) Intestinal ischemia: 6 patients with acute mesenteric ischemia and 4 patients with incarcerated hernia; c) Intestinal perforation: 1 patient with cecum perforation due to acute appendicitis, 1 patient with perforation due to adhesive ileus, 1 patient with perforation due to large bowel neoplasm and 8 patient with perforation of unknown cause.

Conclusion: Multiclice CT is a fast, effective and reliable method to diagnose acute abdomen related to intestinal pathologies with the advantages of multiplanar and three-dimensional reformatted imaging.

P387

Diagnostic Technology & Radiology

COMPUTED TOMOGRAPHY FINDINGS IN PATIENTS ADMITTED TO THE EMERGENCY SERVICE WITH ACUTE ABDOMINAL PAIN

F Ozkan (1), MF Inci (1), M Okumus (2), M Yuksel (1), EM Pircanoglu (3), S Bozkurt (2), MS Menzilioglu (4)

1. Radiology, Kahramanmaraş Sutcu Imam University Faculty of Medicine, Kahramanmaraş, Turkey
2. Emergency Medicine, Kahramanmaraş Sutcu Imam University Faculty of Medicine, Kahramanmaraş, Turkey
3. General Surgery, Kahramanmaraş Sutcu Imam University Faculty of Medicine, Kahramanmaraş, Turkey
4. Radiology, Kahramanmaraş Necip Fazıl State Hospital, Kahramanmaraş, Turkey

Corresponding author: Mr Ozkan Fuat (drfozkan@yahoo.com)

Key-words: Acute abdominal pain ; Computed tomography ; Emergency

Purpose

The purpose of our study was to evaluate the results of CT findings in patients admitted to the emergency service with acute abdominal pain.

Methods

In last one year, 270 patients who admitted to our hospital's emergency service with acute abdominal pain were included. Clinical datas and CT images were interpreted by an experienced radiologist retrospectively. Patients had penetrating or blunt abdominal injury were excluded.

Results: Clinical datas and CT images of 270 patients with acute abdomen (129 men and 141 women, 18-93 years-old) were analyzed retrospectively. In 81 patients (30%) no abnormal finding was found. The most common pathologic finding was urolithiasis in 54 patients (20%). The most common pathologic finding in gastrointestinal system and hepatobiliary system were intestinal obstruction in 14 patients (5%) and cholelithiasis in 10 patients (3%), respectively.

Conclusion: CT is a fast, effective and reliable diagnostic method to clear up the cause of acute abdominal pain. Because there is no pathological CT finding in one-third of the patients, diagnostic algorithm must be followed and CT examination should be performed with appropriate techniques, protocols and optimization of dose.

P388

Diagnostic Technology & Radiology

HOW EFFECTIVE PLEURAL SLIDING SOUND (PSS) WORKS TO DEMONSTRATE PNEUMOTHORAX

AS Girisgin (1), O Karaoğlu (2), G Calik (1), M Ergin (3), F Koyuncu (4), B Cander (1), S Kocak (1)

1. Emergency Medicine, NEU Meram Medical School, KONYA, Turkey
2. Emergency Medicine, Konya State Hospital, KONYA, Turkey
3. Emergency department, NEU Meram Medical School, KONYA, Turkey
4. Emergency Medicine, Mevlana University, KONYA, Turkey

Corresponding author: Mr Girisgin A. Sadik (sgirisgin@yahoo.com)

Key-words: Emergency ultrasonography ; Pneumothorax ; Imaging

Ultrasonography (USG) is widely used in emergency departments (EDs) to assist in the diagnosis and treatment of patients. Sliding lung sound (SLS) has been researched extensively during the last decade was accepted as a radiologic sign in 2008. However, determining SLS requires a certain degree of clinical experience since it is a subjective indicator. We have discovered the "pleural sliding sign (PSS)", which is as valuable as the SLS, but a more objective sign. A PSS is present at any time when a SLS is present; furthermore, it can be used as a diagnostic sign even when the SLS is doubtful. In this study, we present our views on PSS and in particular wish to share this information with clinicians who are interested in performing emergency USG. We also aim to stimulate further research on this subject.

There should be an emission frequency of 5 to 7 MHz and a small probe of convex tip to obtain optimal ultrasound visualization. Thorax USG is usually performed with the patient in supine or semi-supine position in the ED. The anterior chest wall is viewed from the mid-clavicular line and the lateral chest wall is observed from anterior axillary line. The pleural line is first visualized for the PSS. A Doppler marker is placed on this line and the PSS is obtained. In SLS, determining the motion of this line is subjective and user dependent. PSS is superior to SLS in this matter since it converts a subjective sign into an objective one using sound and vision technology

The study included 34 patients with pneumothorax and 32 patients in control group. PSS was measured at 4 points in both hemithorax. The level which doppler waves had highest depth was noted while measuring PSS. This was 95% CI; 14.4-17.1 in control group. So that PSS value which was <14 was accepted as pneumothorax. By this acceptance, there was 100% success for 24 patients with pneumothorax and 11 patients with partial pneumothorax. However, there were false –positive rate as 49% (15/32 patients). If this new ultrasonographic method was made more sensitive to differentiate normal case, its usage can be more wide spread.

P389

Diagnostic Technology & Radiology

THORAX DIFFUSION MAGNETIC RESONANCE IMAGING IN THE DIAGNOSIS OF PULMONARY EMBOLISM

MG Turtay (1), S Yumrutepe (1), M Dogan (2), H Oguzturk (1), C Colak (3), ZA Aytemur (4)

1. Emergency Department, Turgut Ozal Medical Center, Inonu University, Malatya, Turkey
2. Radiology Department, Turgut Ozal Medical Center, Inonu University, Malatya, Turkey
3. Biostatistics Department, Turgut Ozal Medical Center, Inonu University, Malatya, Turkey
4. Chest Diseases Department, Turgut Ozal Medical Center, Inonu University, Malatya, Turkey

Corresponding author: Mr Turtay Muhammet Gokhan (mgturtay@hotmail.com)

Key-words: Pulmonary embolism ; thorax diffusion magnetic resonance ; thorax computerized tomography

Background and Aim: Pulmonary embolism (PE) is a disease that physicians frequently encounter in emergency room. Early diagnosis is as important as treatment. Thorax Computerized Tomography (CT) is the most commonly used for diagnostic purpose in PE. In pregnant, patients with contrast allergy or kidney failure, thorax CT is contraindicated. MRI is an important imaging technique because it doesn't contain radiation and it has been more widely used in the last years. To investigate the usability of thorax diffusion MRI in patients with kidney failure, contrast agent allergy, pregnancy and instable patients that fast imaging is needed who are considered as PE.

Material and Methods: The prospective study comprised 29 patients that admitted to hospital emergency service and were diagnosed as PE with dynamic contrast-enhanced CT between 5 December 2010 and 31 November 2011. Afterwards, these patients were imaged by thorax diffusion MR.

Results: In 29 patients diagnosed as PE, dyspnea and chest pain were the most common symptoms. Mean apparent diffusion coefficient (ADC) value for all patients was $2.39 \times 10^{-3} \pm 4.5$ mm²/sc. Mean ADC value for infarcts was $1.98 \times 10^{-3} \pm 3.3$ mm²/sc. Mean ADC value for regions of atelectasia was $1.98 \times 10^{-3} \pm 3.3$ mm²/sc. Atelectasia and infarct was observed in 20 (59.1%) patients and 9 (30.9%) patients, respectively. Difference in ADC value was statistically significant between atelectasia and infarct ($p=0.0001$).

Conclusion: Diffusion magnetic resonance (MR) could be an alternative method of diagnostic examination for PE. Especially, in patients with kidney failure, contrast agent allergy, pregnancy and the situations in which fast imaging is needed, thorax diffusion-weighted imaging could provide very useful results in the diagnosis of PE. More detailed studies conducted in earlier period with larger patients are needed to use thorax diffusion MR as a tool in the diagnosis of PE.

P390

Diagnostic Technology & Radiology

THE PREVALENCE OF PULMONARY EMBOLISM ON COMPUTED TOMOGRAPHY PULMONARY ANGIOGRAPHY REQUESTED BY A TERTIARY CENTRE EMERGENCY DEPARTMENT.

E Francis (1), D Monks (1), E Quinn (1), D Brophy (2), D Barton (1)

1. Emergency Department, St Vincents University Hospital, Dublin, Ireland
2. Radiology, St Vincents University Hospital, Dublin, Ireland

Corresponding author: Mr Francis Eamon (francise@tcd.ie)

Key-words: Pulmonary Embolism ; CTPA ; PERC score

Background and Aims

A recently published meta-analysis reported the pulmonary embolism prevalence for Computed Tomographic Pulmonary Angiography (CTPA) was 2-12% in the United States and 21-25% in Europe .

A pulmonary embolism (PE) may present with non-specific clinical signs and symptoms, which if misdiagnosed may contribute to significant morbidity and mortality. This contributes to the increasing use of diagnostic imaging.

The Pulmonary Embolism Rule out Criteria (PERC) score in association with a low risk Well's classification has been demonstrated to be a valuable tool for clinicians identifying low risk patients, in whom further investigation may not be necessary. This study was undertaken to establish the prevalence of PE over a twelve month period from emergency department CTPA requisitions. The audit aims were Determine the incidence of PE following CTPA.

Review the clinical presentation of patients with a pulmonary embolus.

Determine the utilisation of the PERC and Well's scoring systems by the Emergency Department staff.

Based on these results our objective is to develop a rule out PE protocol utilising the PERC and Well's scoring systems. This may avoid unnecessary exposure to radiation and retain a low rate of misdiagnosis. A further audit will determine compliance, frequency of CTPA requests, and outcome in terms of PE prevalence.

Methodology

The Emergency Department records of all patients requiring CTPA investigation were retrospectively extracted over a one year period from 1st June – 31st December 2011.

Radiology reports were downloaded from the Picture Archive Computed System (PACS) Syngo system®.Data parameters analysed included- patients age, presenting signs and symptoms, d-dimer result, arterial blood gas analysis, Well's & PERC score documentation, radiology reports and patient management.

Sphinx software® was utilised to create and analyse the data collection forms which included the clinical parameters specified.

Results

In total there were 428 CTPA requests originating from the Emergency Department in 2011. 21 were excluded from analysis due to incomplete medical records, poor primary imaging or patients transferred from outside institutions for imaging. The number of patients analysed was 407. Of these 338 (83%) had a negative result for a PE. 61 (15%) had a positive study. 8 examinations (<2%) were inconclusive.

There was a considerable variety in the clinical presentations of patients who underwent a CPTA. In the patients who were diagnosed with a PE, dyspnoea was the most common presenting complaint in (n=48)78.87%. In the same cohort (n=32)52.52% reported having pleuritic chest pain. Almost more than half of

these patients (n=31) 50.8% of had an oxygen saturation on room air of less than 95%. Sinus tachycardia was recorded in (n=29) 47.5% of cases.

Patients with a diagnosis of PE presented with pleuritic chest pain (52.5%), dyspnoea (78.8%), sinus tachycardia (47.5%) and (50.8%) had an SpO₂ <95% on room air.

There were 323 (79%) D-dimer values recorded. 26 patients (6.3%) had a negative D-dimer result (<0.50). Of those with a negative D-dimer, 3 (4.91%) had a CTPA result that was positive for a PE.

There was poor utilisation of the Well's and PERC score on reviewing patients records. It should be noted that common risk factors for PE were listed and/or a Well's risk group assigned without a Well's score calculations.

Discussion and Conclusions

The PE prevalence rate for CTPA requested by the Emergency Department at ST. Vincent's University Hospital is 15%. While this result is above that of the United States, it is below the European reference range. This may suggest an over cautious investigative approach is being adopted.

The clinical presentation of those with a positive result for a PE demonstrated a high incidence of pleuritic chest pain, dyspnoea, tachycardia and SpO₂ <95%. The prevalence of these clinical signs and symptoms in those with a positive CTPA may help in the development of rule out PE protocol.

The incidence of tachycardia and low SpO₂ in particular in those with a positive result for PE reinforce the validity of the PERC score. The Well's and PERC scores were recorded in 13.3% and 3% respectively of patients who had a CTPA. This failure to apply these established scoring systems may contribute to the low prevalence of PE in this study population

P391 Diagnostic Technology & Radiology

GASTRIC OUTLET OBSTRUCTION SECONDARY TO PARAESOPHAGEAL HERNIATION OF ANTRUM

S. Coskun (1), L. Soylu (2), M. Sahin (3), T. Demiray (4)

1. Emergency Department, TOBB-ETU Hospital, Ankara, Turkey
2. General Surgery, Guven Hospital, Ankara, Turkey
3. Emergency Department, Guven Hospital, Ankara, Turkey
4. Radiology Department, Guven Hospital, Ankara, Turkey

Corresponding author: Mr Coskun Selcuk (scoskun_tr@yahoo.com)

Key-words: paraesophageal herniation of antrum ; antrum herniation ; Gastric outlet obstruction

Background: Although duodenal and type 3 gastric ulcers are the most common causes of acute gastric outlet obstruction, mechanical or functional causes may also lead to this condition.

Objectives: It is characterized with delayed gastric emptying, anorexia, or nausea accompanied by vomiting.

Case Report: Herein we reported a 56 year-old man diagnosed by gastric outlet obstruction secondary to paraesophageal hiatal antrum herniation.

Conclusions/Summary: Because of the rarity of this disease, common gastrointestinal complaints may mislead the emergency physician to diagnose a nonsurgical gastrointestinal disease if a detailed history and physical examination are not obtained.

P392 Diagnostic Technology & Radiology

UTILITY OF ABDOMINAL PLAIN FILM IN EMERGENCY ROOM.

D. ROUSSEAU (1), J. BOUGET (2), A. LE GUEN (3), A. BELLOU (1)

1. Emergency Department, University Hospital of Rennes, RENNES, France
2. Emergency Department, University Hospital of Rennes - FRANCE, RENNES, France
3. Radiology Department, University Hospital of Rennes - FRANCE, RENNES, France

Corresponding author: Mr Rousseau Damien (rousseau.damien@gmail.com)

Key-words: Abdominal imaging ; Abdominal plain film ; Alternative imaging examination

Introduction:

The abdominal plain film (APF) is a widely prescribed examination. Yet it seems that this imaging technique has become obsolete compared to other alternatives such as ultrasound or CT.

This retrospective study on the utility of the APF and compliance with current guidelines is the first large French series on the topic.

Materials and methods:

Over a period of four months, 1364 cases were collected and studied.

Every patients concerned were admitted in emergency room for a reason that could lead to the prescription of an APF.

Of these, 663 will be prescribed an APF against 701 who will not benefit.

Elaboration conditions, contributory and finally compliance with recommendations will be studied for each additional imaging examination requested (APF or alternative imaging examination).

Results:

The APF is an examination easy to get (62.7% complete within half an hour) but its low diagnostic contribution makes it irrelevant compared to ultrasound or CT.

Considering all the indications, 57.16% of the 663 APF prescribed were non-contributory, that mean they have been followed by an alternative imaging examination to reach a diagnosis.

Its sensibility varies from 3,7 to 45% according to indications against 76 to 100% for CT.

Moreover, the good practice recommendations for the prescription and non prescription are only partially adhered to by prescribers (35.3 to 46.4% of non-compliance with recommendations according to classes of prescribers), and despite a lack of relevance now beginning to be recognized, this examination continues to be prescribed as always.

Conclusion:

With our evaluation, we wish to draw attention to the fact that the APF has therefore become an examination with limited utility and we advise clinicians to limit their prescriptions or even to resort directly to more efficient imaging studies, if they consider it necessary.

The establishment of protocols and optimization of access to efficient abdominal imaging appears necessary to improve the care levels and compliance with recommendations.

P393 Diagnostic Technology & Radiology

BE CAREFUL: THIS IS 'MESENTERIC ANGINA' !

N ERDEM (1), M ERGIN (2), H GUVEN (3), C TASKIN (1)

1. EMERGENCY DEPARTMENT, GUMUSHANE STATE HOSPITAL, GUMUSHANE, Turkey
2. EMERGENCY DEPARTMENT, NECMETTIN ERBAKAN UNIVERSITY HOSPITAL, KONYA, Turkey
3. RADIOLOGY, GUMUSHANE STATE HOSPITAL, GUMUSHANE, Turkey

Corresponding author: Mme Erdem Nalan (okan.ozcubukcu.2011@gmail.com)

Key-words: abdominal pain ; mesenteric angina ; vascular disease

INTRODUCTION: In more than %95 of patients, the cause of mesenteric ischemia is diffuse atherosclerotic disease, which decreases the flow of blood to the bowel. As the atherosclerotic disease progresses, symptoms worsen. Usually, all 3 major mesenteric arteries are occluded or narrowed. **CASE:** GC, 61, F, was admitted to ED due to diarrhea, anorexia, weight loss, vomiting, epigastric pain, rectal bleeding. She was discharged from hospital with a diagnosis of peptic ulcer eight days ago. Her symptoms were not decreased with drug regimen including pantoprazole and antibiotic. Her vital signs were in normal range. Her physical exam revealed abdominal sensitivity of all quadrants on palpation. She had atrial fibrillation on ECG. There was no bleeding on digital rectal exam. During follow-up in the emergency department, epigastric pain resistant to treatment that is examined by computerized tomography. Contrast enhanced abdominal computerized tomography scanning demonstrated partial occlusion of superior mesenteric artery. **DISCUSSION:** Although the pathophysiologic mechanism by which ischemia produces pain is still not completely understood; current physiologic understanding of splanchnic perfusion suggests a key role for the splanchnic circulation in the regulation for cardiovascular haemostasis. Gastrointestinal perfusion is often compromised early relative to other vascular beds in situations including critical illness, major surgery, and exercise, all of which are characterized by increased demands on the circulation to maintain tissue oxygen delivery. Perhaps more importantly, this relative hypo perfusion often outlasts the period of the hypovolemic insult or low-flow state. Chronic mesenteric ischemia by itself does not represent an important cause of mortality. Complications, which include acute thrombosis or embolus, are significant causes of increased mortality and are the main reason to revascularize these patients. The average age at presentation is 60 years old. Patients typically present with a history of the following weight loss, postprandial pain (generally epigastric or periumbilical), fear of eating, history of vascular disease involving other organs such as myocardial infarction, cerebral vascular disease, or peripheral vascular disease. Other nonspecific symptoms include the following; nausea, vomiting, diarrhoea, constipation, flatulence. **CONCLUSION:** If the patient has history of vascular disease and greater than 60 years, abdominal pain together with non-specific symptoms make emergency physicians think about mesenteric angina in differential diagnosis.

P395 *Diagnostic Technology & Radiology*

ACCURACY OF DELAYED URINE ANALYSIS FOR DIAGNOSIS OF GENITOURINARY SYSTEM INJURIES FOLLOWING BLUNT ABDOMINOPELVIC TRAUMA WITH STABLE HEMODYNAMIC STATUS IN SHOHADAYE- HAFTOM-E- TIR AND HAZRAT- E- RASOOL HOSPITALS

N. Tavakoli (1), E. Rangyani (2)

1. Emergency department, Sina Hospital, Tehran University of Medical Science, Tehran, Iran
2. Emergency department, Hazrat_E_Rasul Hospital, Tehran University of Medical Science, Tehran, Iran

Corresponding author: Mr Tavakoli Nader (ntavakkoli@tums.ac.ir)

Key-words: Blunt Trauma ; Hematuria ; Renal Trauma

Introduction: Blunt Trauma consumes a lot of time, and personal energy in emergency departments. Health care systems charge expensive cost of trauma management. Researchers try to design approaches with lower costs and better effectiveness. Often, Renal Trauma is due to blunt abdominal trauma. We usually chose conservative management for treatment. Hematuria is important predictor of significant trauma. IV contrast enhanced CT scan is indicated in presence of hematuria. We have some patients with normal or low grade Renal Trauma who were undergone Radiologic evaluation. This study evaluates sensitivity and specificity of delayed urinalysis for Renal Trauma diagnosis and better judgment of indications for radiologic evaluation.

Material and Method: Via a cross-sectional study we checked all patients with blunt Trauma who were referred to our Emergency department. Admitting physician was blinded to study and patient care had been done according to updated protocols. After first urinalysis, delayed urine sampling was done. IV contrast enhanced CT scan were done in 41 patients. Four of them excluded because of inaccurate follow up or

37 patients had both Radiologic staging and urinalysis. 31 patients were normal, 4 patients had grade 1 Trauma, one of them presented with grade 2 and another one with grade 3. Delayed urinalysis showed 10 normal reports, 23 Microscopic hematuria and 4 patients' hematuria were reported in many level. Sensitivity of delayed urinalysis was 83.33 %, specificity was 29.02 %, and Negative predictive value was 90 %.

Conclusion:

In concordance of previous studies, our study showed significant Negative Predictive Value (NPV) in diagnosis of Renal Trauma. Delayed urinalysis can be used as a screen test to cancel indication of Radiologic evaluation.

P396 *Diagnostic Technology & Radiology*

SHOULD EVERYONE WITH MAJOR TRAUMA HAVE WHOLE BODY CT

V Gupta, J Kayani, M Majeed, U Salanke, D Yeo

ED, QEHB, BIRMINGHAM, United Kingdom

Corresponding author: Mr Majeed M Azam (azam.majeed@uhb.nhs.uk)

Key-words: Major Trauma ; CT ; Whole body

Hypothesis

All patients with multisystem blunt trauma (significant mechanism) must have whole body CT irrespective of their physical parameters.

Design

Retrospective observational study.

Setting

Level 1 Major trauma center (Queen Elizabeth Hospital, Birmingham).

Patients

All patients admitted following blunt multisystem trauma from April 2011- April 2012 were included in the study.

Intervention

Whole body computed tomography (CT of the head, cervical spine, chest, abdomen, and pelvis), with the following inclusion criteria: (1) motor vehicle crash at greater than 35 mph, (2) falls of greater than 15 ft, (3) car vs pedestrian, (4) assaulted with a depressed level of consciousness. (5) Ejection from vehicle. Radiological findings and changes in treatment based on these findings were recorded.

Main Outcome Measure

- Alteration in the normal treatment plan as a direct result of CT scan findings.

(These alterations include early hospital discharge, admission for observation, operative intervention, and additional diagnostic studies or interventions).

Results

452 patients with mean age of (55yrs) underwent whole body CT during the 12-month observation period, of which 336 (74%) patients had a positive scan. This had lead to change in their further management plan.

Conclusion

Improvements in CT scan technology have brought about new paradigms in the use of CT scans in trauma. It's faster and more accurate. Its use is more mechanism driven then just on physiological parameters. This method of CT scanning has been both welcomed and encouraged in current climate. By instituting a protocol of liberal scanning and studying the results of a mechanism-driven approach for CT scanning, we found that there were clinically relevant findings on the scans in up to 74% of cases and that the results of the CT scan changed the management of these patients.

P397

Diagnostic Technology & Radiology

HEMOSUCCUS PANCREATICUS-ENDOVASCULAR TREATMENT BY TRANSCATHETER EMBOLIZATION OF SPLENIC ARTERY PSEUDOANEURYSM

B Sayin, I Akmangit, B Dölek Akdal, N Yildirim, D Dede

Radiology Department, Numune Teaching and Research Hospital, Ankara, Turkey

Corresponding author: Mme Sayin Bige (bigesayin99@yahoo.com.tr)

Key-words: pseudoaneurism, pancreatitis ; CT, DSA ; splenic artery, transcatheter embolization

Hemosuccus Pancreaticus-Endovascular Treatment By Transcatheter Embolization Of Splenic Artery Pseudoaneurysm Abstract

Pancreatitis is associated with arterial complications in 4%-10%. Pancreatic pseudocyst presented as pseudoaneurysm of the splenic artery is a serious complication in patients with chronic pancreatitis. It may causes acute bleeding into the gastrointestinal tract (GIT), intraperitoneal or retroperitoneal cavity. This type of bleeding is referred as hemosuccus pancreaticus and belongs to a rare form of bleeding into GIT. It is a rare but fatal complication of pseudoaneurism and can occur irrespective of their size. Untreated mortality approaching 90 %. Early diagnosis and timely interventional treatment can reduce the mortality to 15 %. Transcatheter arterial embolization is the most reliable and the safest method to arrest the hemorrhage of a bleeding visceral artery aneurism and pseudoaneurysm in hemodynamically stable patient with low periprocedural morbidity. The urgent surgical repair of these lesions is still associated with elevated mortality rates.

We presented a patient with chronic pancreatitis and splenic artery pseudoaneurism rupture who treated selective transcatheter arterial embolization with steel coils and glue (N-butyl-2-cyanoacrylate). We reported this case with computed tomography (CT) and digital subtraction angiography (DSA) findings .

Case Report

A 61 years old female patient admitted to the Emergency Service with epigastric pain, hematemesis and melena. The patient had intermittent abdominal and back pain attacks with vomiting for 2 months. Cholecystectomy was performed 6 years ago. Clinical examination revealed abdominally tendency. The blood count

showed anemia (hemoglobin: 7.5 g/dl) and hyperleucocytosis (WBC:17,2/mm³). Laboratory tests demonstrated increased fibrinogen (5.5 g/dl) and positive C reactive protein (76 mg/dl). Hepatic enzymes and amylase were in normal values.

Ultrasonography (US) of the abdomen revealed well defined multilayered lesion with peripheral anechoic area in left hypocondrial region.

Dynamic enhanced computed tomography (CT) revealed, in the area of the pancreatic body, a round pseudocyst of 124x85 mm in which an oval eccentrically located pseudo aneurysm of 48x31 mm became dyed. There were air bubbles considering abscess in he pseudoaneurism also.

Esophagogastroduodenoscopy performed with negative findings. Colonoscopy revealed fistule formation at the site of the splenic flexura.

Aortography with selective celiac axis imaging confirmed the presence of a pseudoaneurysm of the splenic artery distal portion. A microcatheter was used to perform selective transcatheter arteriel embolization. Pseudoaneurysm was embolized combination with steel coils and glue. Technical success was defined as the successful deployment of coils and glue within the intended artery. After endovascular treatment we showed aneurismal arterial segment without evidence of contrast extravasation and cessation of hemorrhage.

Discussion

Pseudoaneurysm of the peripancreatic arteries are classic complications of pancreatitis, especially when pseudocysts are present . Pseudoaneurysms are caused by enzymatic digestion and pseudocyst induced pressure necrosis. Splenic artery is involved most frequently (30-50%) followed by gastroduodenal artery (10-15%), pancreaticoduodenal artery (10%). It is well established that rupture of pseudoaneurysms is unrelated to their size or severity of pancreatitis. The most common presenting symptoms of arteriel pseudoaneurism rupture are abdominal pain, vomiting, shock, upper gastrointestinal bleeding, jaundice and portal hypertension.

On US pseudoaneurism typically appears as multilayered lesion with central or peripheral anechoic area, which is continuous with arterial lumen and shows arterial pulsation on real time ultrasonography.

Contrast enhanced CT scan appears to be the most valuable method confirming the diagnosis of lesion, size and extent of pseudoaneurysm and showing bleeding into pseudocyst and pseudoaneurism. Multiplanner images can give 3D image of whole lesion. It is useful for surgeon.

If the patient is hemodynamically stable, performing a preoperative angiogram helps confirming diagnosis, the site of bleeding, defines character, anatomy and allows therapeutic planning.

Bleeding complications can be treated conservatively, surgically or through catheterization. Conservative treatment is burdened with 90 % mortality. Operative mortality rates of 10-50% have been reported in the literature with the initial hemodynamic state. Selective transcatheter embolization is first line choises to stop the bleeding in stable patients. Postembolization complications in peripancreatic arteries are very limited. When angiography fails to localize the source of bleeding, when radiological intervention fails, in hemodynamically unstable and hard to control bleeding surgical approach is an alternative tratment method.

Conclusion; Visceral artery pseudoaneurysms caused by pancreatitis can be successfully trated with endovascular means with low periprocedural morbidity; however the urgent repair of these lesions is stil associated with elevated mortality rates. Aneurism exlusion can be accomplished with transcatheter coil embolization and the selective use of glue (N-butyl-2-cyanoacrylate) by the expert interventional radiologics. It is a safe and effective method of management of visceral artery pseudoaneurysms in pancreatitis.

P398

Diagnostic Technology & Radiology

ULTRASOUND GUIDED DIAGNOSIS AT EMERGENCY DEPARTMENT: ABDOMINAL AORTA ANEURYSM

YE EYİ (1), AO YILDIRIM (2), SK TUNCER (3), U KALDIRIM (3), M EROĞLU (2), S ARDIÇ (3), M DURUSU (3), B KARSLIOĞLU (4)

1. Emergency department, Hakkari Military Hospital, Hakkari, Turkey
2. Emergency Department, GATA Haydarpaşa Training Hospital, İstanbul, Turkey
3. Emergency Department, GATA, Ankara, Turkey
4. Orthopedics and Traumatology Department, Hakkari Military Hospital, Hakkari, Turkey

Corresponding author: Mr Eyi Yusuf Emrah (dremrahey@yahoo.com)

Key-words: ABDOMINAL AORTA ANEURYSM ; ULTRASOUND ; EMERGENCY DEPARTMENT

INTRODUCTION

Abdominal pain, creates a significant portion of emergency cases. Vascular pathologies related to abdominal pain seen very rare, and rarely symptomatic. The abdominal aortic aneurysm (AAA) is usually not symptomatic and diagnosed by chance. Widespread usage of ultrasonography among emergency physicians is very beneficial for detecting many of emergency pathologies. Our purpose is to emphasize the importance of USG by sharing case that the patient who presented emergency department with abdominal and diagnosed as AAA by using ultrasound in the emergency department.

CASE

87-year-old male patient. He was complaining about pain at right side and continuing around the belly for approximately 3-4 days. Patient's temperature was 36.5 °C, tension arterial: 170/100, 74 beats / min, SatO₂: 94. Physical examination: abdominal tenderness at all of the quadrants. Rebound tenderness in the right upper quadrant and right costovertebral angle tenderness observed.

Laboratory values and x-ray standing completely normal. Riegraphy and direct abdominal radiography was unremarkable. With ultrasound at emergency department short-axis diameter of the abdominal aorta measured as 4.5 cm and contrast-enhanced abdominal computed tomography was planned. At tomography sequences, aneurysm that extends to the proximal iliac arteries which was 4.4x 3.6 cm in size appearance and revealed a plaque that causes narrowing of 80-85% of the right renal artery observed. After consulting with cardiovascular specialists the patient was not considered for operation and hospitalized for observation and medical treatment.

Conclusion:

AAA incidence increases with age. AAA is usually asymptomatic. When symptomatic AAA can cause, symptoms like flank pain, abdominal pain or back pain. The diagnosis is usually put into coincidence. With increasingly widespread use of ultrasonography in the emergency department by emergency medicine physicians diagnose of AAA becomes easier. In patients with abdominal pain, making abdominal aorta sonographic examination as well as FAST, will help diagnose a possible AAA.

B. Sen (1), P. Kesteven (2), P. Avery (3), A Arif (1)

1. Emergency Department, Royal Victoria Infirmary, Newcastle upon Tyne, United Kingdom
2. Haematology Department, Royal Victoria Infirmary, Newcastle upon Tyne, United Kingdom
3. Department of Applied Statistics, University of Newcastle, Newcastle upon Tyne, United Kingdom

Corresponding author: Mr Sen Basav (bas.sen@blueyonder.co.uk)

Key-words: D-dimer ; Point of care ; validation

A prospective study was carried out in the Emergency Department (ED), Newcastle upon Tyne from May to December 2010 to assess if quantitative point of care (POC) d-dimer test was accurate compared to standard laboratory testing. Main outcome measures were the statistical correlation of the two methods. Secondary outcome measures were, test turn around times, and correlation between d-dimer levels, Wells score and final diagnosis. The results showed that there was strong evidence of POC d-dimer being sufficiently accurate to be used as a screening device. The correlation between the two logged assay scores was good ($r = 0.922$, $p < 0.001$). Both logged scores correlated similarly with the Well's score ($r = 0.485$, 0.459 [both $p < 0.001$] for POC and lab scores respectively). Once an equivalent cut-off value for POC d-dimer (412ng/L) was established, there were only 4 of 100 discrepant cases (3 point of care and one laboratory) all of which were extremely close to the cut off. There was a saving of a mean of 75 minutes/case using the POC d-dimer device, median time 15 minutes, (range 5 to 31 minutes) compared to the laboratory results, median time 90 minutes (range 23 to 323 minutes).. Based on the d-dimer results twenty seven patients were scanned. The median Wells score in this group was 3.0 (range 2-10) median POC d-dimer levels of 2590 (412-5000) and median lab d-dimer levels of 864 (230-13,000). Seven patients had a positive scan. There was a significant difference in both logged d-dimer scores between the negative and positive groups but no significant difference in mean Well's score indicating that raised d-dimer levels correlate well with final diagnosis. In conclusion the POC device was comparable with the laboratory device and was sufficiently accurate to be used as a screening tool in the clinical diagnostic pathway used in the Emergency Department setting.

P399

Diagnostic Technology & Radiology

COMPARISON OF D-DIMER POINT OF CARE (POC) TESTING VERSUS CURRENT LABORATORY TESTS IN SUSPECTED VENOUS THROMBO-EMBOLISM (VTE) PRESENTING TO THE EMERGENCY DEPARTMENT

P400

Diagnostic Technology & Radiology

INFLUENCING FACTORS TO PERFORM COMPUTED TOMOGRAPHY IN PATIENTS WITH DIZZINESS IN A HUNGARIAN EMERGENCY DEPARTMENT

K Drubits (1), I Gaál (1), Gy Horváth (2), Zs Lelovics (1), F Nagy (3), G Nagy (4), A Sárkány (1), Cs Varga (1), K Varga-Györfi (1)

1. Center of the Emergency Health Services, "Kaposi Mor" Teaching Hospital, Kaposvár, Hungary
2. Department of Radiology, "Kaposi Mor" Teaching Hospital, Kaposvár, Hungary
3. Department of Neurology, "Kaposi Mor" Teaching Hospital, Kaposvár, Hungary
4. Department of Anaesthesiology and Intensive Care, "Kaposi Mor" Teaching Hospital, Kaposvár, Hungary

Corresponding author: Melle Sárkány Adrienn (lelovics@kmmk.hu)

Key-words: dizziness ; computed tomography ; influencing factors

INTRODUCTION: Dizziness is associated with a variety of neurological, otological, psychiatric and mainly cardiovascular condition. For the accurate diagnosis physical exam, lab test and computed tomography (CT) scan are often performed.

OBJECTIVES: Our aims were to examine which factors influence to perform CT scan of the brain in patients with dizziness.

METHODS: Between 1st January – 31st December 2010, 471 patients with dizziness arrived in the Emergency Department (ED) of a regional county Hospital (Kaposvár, Hungary). Main complaints, symptoms, medical history and results of imaging test were analyzed. Chi-square and Student-t test were used for comparison of variables.

RESULTS: Of all patients, in 43.9% was performed CT but only in 28 cases showed new and changed damages in the CT images. 9.3% of final diagnosis referred central neurological deficit. Older age ($p=0.016$), present of headache ($p<0.001$), neurological signs (hemiparesis, facial palsy; all $p<0.05$), pallor skin ($p=0.031$) significantly associated with performing CT, but not with abnormal CT images. Nausea and vomit as signs were not linked with indication of head CT by physicians. Gender, vital signs and abnormal lab results were not related to carry out of CT scan.

CONCLUSIONS: Most causes of dizziness are benign, but early recognition of a serious or life-threatening disease is important. Performing of neuroimaging test is rarely associated with serious conditions mainly in older patients with further neurological signs in ED. It should be performed a risk score to predict adequate indication of head CT scan in patients with dizziness.

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P401

Diagnostic Technology & Radiology

PERICARDITIS IN COMPUTED TOMOGRAPHY: PERICARDIAL THICKENING

AO. Yildirim (1), E. Eyi (2)

1. Emergency Department, GATA Haydarpaşa Training Hospital, İstanbul, TURKEY
2. Emergency Department, Hakkari Military Hospital, Hakkari, TURKEY

Corresponding author: Mr Yildirim Ali Osman (draliosmanyildirim@gmail.com)

Key-words: Pericarditis ; Pericardial thickening ; CT

Pericarditis in Computed Tomography: Pericardial thickening Pericarditis is the inflammatory disease of pericardium which is because of usually infectious agents. ECG, ESR, WBC, troponin follow-ups are significant in diagnosing pericarditis but the most essential diagnostic tests are the imaging tests. Echocardiography is the most frequently used method and good interpreted tomography is helpful to diagnose pericarditis.

Case Report:

A 25 years-old male patient admitted to ED complaining chest pain, vomiting, headache and fever. In his history, his complaint began a day ago, and admitted to another hospital, he was discharged without any treatment. Thoracic computerized tomography(TCT) and biochemical test results from yesterday were with the patient. Vital signs except body temperature were in normal ranges(Body temperature: 38,8°C). His physical examination was normal. ECG was normal sinus rhyme. His biochemical tests were as WBC: 9,6 e3/mikroL, Hgb:12.4 ESR:5 mm/h, troponin 0,04 ng/dl. When TCT from yesterday is reconsidered, pericardial thickening was seen and pericarditis was suspected. In his echocardiography, pericardial effusion was diagnosed. Medical treatment was planned and the patient was discharged after cardiology consultation.

Conclusion:

TCT is not a routine diagnostic test in diagnosing pericarditis and usually informs in sub acute cases. Although echocardiography is considered to be the gold standard to diagnose pericarditis, pericardial thickening and pericardial effusion in a good interpreted THT will help to diagnose pericarditis.

P402

Disaster Medicine

MEDICAL SUPPORT BY FUKUI PREFECTURAL HOSPITAL FOR FUKUSHIMA NUCLEAR POWER PLANT DISASTER AFTER THE GREAT EAST JAPAN EARTHQUAKE ON MARCH 11TH, 2011

S MAEDA (1), H HAYASHI (2), H ISHIDA (1), H MATANO (1), T NAKANISHI (2), M SERA (1), S YAMAMOTO (3)

1. Emergency department, Fukui Prefectural Hospital, FUKUI, Japan
2. Division of emergency medicine, University of Fukui Hospital, Eiheiji, Japan
3. Hospital director, Fukui Prefectural Hospital, FUKUI, Japan

Corresponding author: Mr Maeda Shigenobu (pxt01173@nifty.ne.jp)

Key-words: Medical support for nuclear plant disaster ; r plant disaster, The Great East Japan Earthquake ; Fukushima Daiichi Power Plant

Shortly after the unprecedented earthquake hit the east part of Japan on March 11th in 2011 followed by a nuclear power plant disaster, we dispatched medical support teams to the disaster site. I validate here how we responded to this crisis as a public hospital committed to public welfare and safety. Fukui Prefectural Hospital (FPH) is located in west Japan, 800km from Fukushima Daiichi Nuclear Power Plant in Fukushima Prefecture. FPH has 960 beds, including 200 for psychiatric patients. Also, FPH is the only hospital in Fukui capable of tertiary care and radiation emergency treatment. Facing this national crisis, total 303 personnel had been dispatched to the disaster site from our hospital since March 11th. (Box1)

Many of the teams have been dispatched particularly for the nuclear disaster in Fukushima Daiichi Nuclear Power Plant. After the earthquake, we dispatched DMAT (Disaster Medical Assistance Team) specialized for trauma care. And after the radiation accident at Fukushima Daiichi Nuclear Power Plant, we dispatched several

radiation emergency teams specialized for radiation survey and decontamination up to one year. Our activities are shown in detail in the Box 1. The scale of our operation was as follows. A general manager for radiation emergency medical team in J-village experienced eight dispatches as an emergency medical staff in Fukushima Daiichi Nuclear Power Plant Emergency Room. We could dispatch this many staff to the site because we have trained and educated our medical staff systematically since 2004, when a steam pipe explosion at Mihama nuclear plant, where five people were killed and six were severely injured. Our region has 15 nuclear reactors including Mihama plant and this leaves us with the highest number of nuclear plants in Japan. Almost 30% of the nuclear reactors in Japan are operating in Fukui Prefecture.

Our effort for education of radiation emergency medicine There was difficulty assembling survey teams from all over Japan because of the fear of radiation exposure and scarcity of accurate information in Fukushima. Upon the request by the Japanese government, 164 survey teams were supposed to gather in Fukushima on March 16th, but in reality only 20 did.

In FPH, three doctors attended radiation emergencies course at Radiation Emergency Assistance Center/Training Site (REAC/TS), Oak Ridge Institute for Science and Education TN USA. One of the doctors learned the treatment for patients injured by radiation exposure at Hôpital d'instruction des armées Percy Clamart France. To provide specialized care and avoid unnecessary panic from the fear for radiation, our trained staff had a crucial role in the disaster site and the nuclear plant.

Issues after the disaster support experience

Shortage of doctors and nurses is a common problem in Japan. Furthermore, the more rural the area is, the more serious this problem tends to be. Our hospital faced this reality during the support period. The large-scale rescue operation in distant area was challenging for the entire hospital organization. Throughout the operation period, we had to maintain normal hospital activities with fewer human resources. In addition, personnel in the disaster area needed mental assistance as well as enough medical care for themselves. Of course, protection against radiation exposure had to be as intensive as possible. Social and financial support was critical for both hospital and government administration to achieve these goals. Our experience now tells us what preparations are necessary for the faster, more effective, and more thorough emergency care in such a complicated situation.

P403

Disaster Medicine

MEDICAL SERVICE SYSTEM AND MEDICAL EXPERIENCE IN FUKUSHIMA DAIICHI NUCLEAR DISASTER - PARTICULARLY FOR EMERGENCY ROOM IN THE SERVES BUILDING OF REACTOR 5 AND 6

S MAEDA (1), H HAYASHI (2), T KINUGASA (3), Y ASARI (4), Y HASEGAWA (5), K MORI (6), C TASE (5), K TANIGAWA (7)

1. Emergency department, Fukui Prefectural Hospital, FUKUI, Japan
2. Division of emergency medicine, University of Fukui Hospital, EIHEIJI, Japan
3. Department surgery, Mitsubishi Kobe Hospital, Kobe, Japan
4. Emergency and Disaster Medicine, Hirosaki University School of Medicine & Hospital, Hirosaki, Japan
5. Department of Emergency, Fukushima Medical University Hospital, FUKUSHIMA, Japan
6. Department of business administration, industrial health, University of Occupational and Environmental Health, Japan, KITAKYUSHU, Japan
7. Department of Emergency and Critical Care Medicine, Hiroshima University Hospital, Hiroshima, Japan

Corresponding author: Mr Maeda Shigenobu (pxt01173@nifty.ne.jp)

Key-words: Fukushima Daiichi Nuclear Disaster ; 5/6 ER ; Radiation emergency medicine

Shortly after the unprecedented earthquake hit the east part of Japan on March 11, 2011, Fukushima Daiichi Nuclear Power Station (F1) lost its power completely, resulting in a severe nuclear accident. We report that how we built a medical support system for workers involved in the nuclear cleanup operations in F1 after the accident.

Medical support system for radioactive contaminated accident at Fukushima Daiichi Nuclear Power Station (F1)

After the Great East Japan Earthquake, the Japanese government established the Nuclear Emergency Response Headquarters in the Cabinet Office, as well as an off-site center in Fukushima Prefecture. Also, a medical support system had been established in the disaster area. They set up three medical facilities inside the 20 km radius evacuation zone around the F1, one is located outside F1, and other two facilities are inside F1. The first one outside F1 is called "J-village medical clinic". The other two facilities in F1 are "Emergency Clinic in the Main Office Building", and "Emergency Room in the Serves Building of Reactor 5 and 6". The last one is commonly called "5/6 ER". About 3000 cleanup workers are still working at F1 each day, and 5/6 ER serves initial triage, decontamination, and emergency first-aid for injured.

Emergency Medical Network of Fukushima Daiichi Nuclear Power Station

The Japanese government also established "Emergency Medical Network of Fukushima Daiichi Nuclear Power Station" in Hiroshima University, which consists of radiation medicine specialists. Because of its historical background, Hiroshima University has offered tertiary radiation emergency medicine service. The network mainly arranges staff for 5/6ER, and in charge of the first-aid for workers in the plant.

J-village Medical Clinic:

J-village originally is a national football training center operated by Japan Football Association. It located at just 20km south from F1 and the site has been the main operating base for the cleanup workers since the nuclear disaster occurred. About 4500 workers gather in this site each day, and they are dispatched to F1. J-village Medical Center is located inside this base.

Emergency Clinic in the Main Office Building :

Emergency Clinic in the Main Office Building is located in the head office for the plant cleanup operation. One doctor, mainly industrial physician had been assigned there in the early stages of the disaster(until September, 2011).

5/6 ER:

5/6 ER was established for the cleanup workers at F1 on July 1, 2011 by the Japanese government. Emergency Medical Network of Fukushima Daiichi Nuclear Power Station in Hiroshima University coordinates activities of 5/6ER with other institutes involved in the cleanup operation of the plant. Forty five medical doctors, 73 registered nurses, and 113 medical radiology technicians in total have been dispatched to F1 as of April 2012. A doctor's working hours are limited up to 48 hours to prevent overexposure beyond 100μSv.

The environment in 5/6 ER

Radiation level has been kept low (about 1μSv/h) in treatment space, even though the radiation level outside measures 5~100μSv/h. A ventilation system with charcoal filter keeps the positive pressure inside the emergency room and filters out radioactive materials in the air.

The contents of patients show in detail table.

Patients in detail

Fourteen to 22 patients visit 5/6 ER each month: 27% patients with common cold, 22% patients with wounds or injuries, 8.9% patients with heat illness, and 3.1% patients with infectious gastroenteritis. Notably, all the patients were male because high radiation zone is off limits to female workers. The number of patients with heat illness peaked in September.

We reported how medical support is provided in the center of the nuclear disaster.

P404
Disaster Medicine

CRITERIA FOR DISASTER PREPAREDNESS IN LEBANESE HOSPITALS ASSESSED BY HOSPITAL MANAGERS

M. Dagher (1), A Ruter (2)

1. Health department, International committee of the Red Cross, Beirut, Lebanon
2. Disaster Medicine, Sophiahemmet University College, Stockholm, Sweden

Corresponding author: Melle Sarkis Dagher Micheline (michelinedagher@gmail.com)

Key-words: Hospital plan ; Criteria ; Lebanon

Background

Disaster medicine is a new field that Lebanon till now has not adopted yet and in Lebanon, no academic specialization in disaster medicine exists. There is a lack of a national functioning disaster management plan and strategy in addition to a lack of a functioning authority actively working towards developing disaster risk reduction initiatives and linkages. Since 2000, the Lebanese government has started the process of accrediting the hospitals. Although hospitals do have existing disaster plans, there is no guideline or general agreement on what the content of as disaster plan should be.

The aim of this study was to define if a consensus could be reached on the criteria to be included in the hospital disaster plans in Lebanon.

Method

The Delphi technique in two rounds of surveys was used and the responders to statements given were hospital managers. Out of the 41 hospitals chosen, 14 hospitals participated in the two rounds. The first section was open-ended questions and comprised demographic data of the participants and the characteristic of the hospitals. The second part consisted of statements based on two WHO manuals. The statements included components that could be included in a disaster plan and the participants of the study were asked to what extent they agreed on a 5 point (STRONGLY DISAGREE, DISAGREE, NEITHER AGREE OR DISAGREE, AGREE and STRONGLY AGREE) Likert scale. The consensus level adopted was 80% on positive agreement (AGREE or STRONGLY AGREE). The number of statements was 31 divided into three categories: organization, communications & information and logistics.

Results

All of the statements reached the consensus on the set level (80% AGREE or STRONGLY AGREE) with the highest about the need to have a plan and to train the staff on that plan (93%) and the lowest for including funds in the hospital plan (42%).

Concerning the statements related to the organization, the responses were all composed of STRONGLY AGREE and AGREE statement except for the hospital command statement where 7% answered NEITHER AGREE OR DISAGREE, that is the neutral statement.. The level of STRONGLY AGREE was the highest (93%) for the need for a plan and the lowest for the need to review the plan (64.3%).

Concerning the statement related to communication and information, the responses also included the neutral statement of 7% for including the management of media. The level of STRONGLY AGREE was the highest for the internal communication (85.7%) and the lowest was for the public information (57.1%)

Concerning the statement related to logistics, the responses were all composed of STRONGLY AGREE and AGREE statement except for the pre-establish agreements with suppliers that included a neutral statement with a rating of 7%. The level of STRONGLY AGREE was

the highest (85.7%) for the need to stock medicines and supplies and the lowest for the pre-established agreements with suppliers (57.1%)

Limitation

This study included the opinions of hospital managers. If other healthcare personnel had been included the result may have been different.

Conclusion

The study has achieved a full consensus and an acknowledgement of the criteria for a hospital disaster plan, judged by hospital managers. These criteria could be included in the guidelines for the hospitals in their preparation and for the ministry of public health as a draft document to use. The results from this study may serve as a baseline for future studies related to this subject.

P405
Disaster Medicine

HIGHLY RESISTANT BACTERIA AMONG PATIENTS TREATED IN FOREIGN HOSPITALS AND REPATRIATED BY INTERNATIONAL INTERHOSPITAL AIR TRANSPORT

J. Josseume (1), L. Verner (2), M. Lestienne (2), H. Maas (2), A. Burnod (2), P. Bourguignon (2), M. Gouesbier (2), F. Duchateau (1)

1. Emergency Department, Hopital Beaujon, Paris, France
2. Mondial Assistance France-Allianz Global Assistance Group, Paris, France

Corresponding author: Mr Josseume Julien (jjosseume@gmail.com)

Key-words: Highly resistant bacteria ; Repatriation ; International interhospital air transport

Introduction: The repatriation of patients from foreign hospitals has been shown to favour the emergence and spread of highly resistant bacteria (HRB). This phenomenon dramatically affects the modalities and setup of international interfacility transfers although studies systematically screening repatriates from foreign hospitals are scarce and relatively old. We aimed to evaluate the incidence of HRB for patients treated in foreign hospitals and repatriated by international interhospital air transport in order to better manage these patients and adjust our procedures.

Methods: The records from all consecutive aeromedical evacuations and overseas repatriations carried out by Mondial Assistance France between December 2010 and November 2011 were reviewed for this study. Patients were allocated to one of two groups: those identified as HBR carriers at their arrival in France and those who were not identified as such (negative for HRB or non tested). Data were compared between the two groups.

Results: Among 248 patients who meet inclusion criteria, 7 patients were excluded because they were involved in armed conflicts with uncertain local facilities, which is a very specific setting. Mean age was 55±21 years and 54% were men. Main conditions were traumatology (40%), cardiology (15%), neurology (12%) and pneumology (7%). Locations were Europe (44%), North-Africa (22%), Sub-Saharan Africa (12%) and Asia (12%). Analysis was made on 223 patients: 16 patients (7%) were identified as HRB carriers and 207 as non-HRB patients. HRB carriers came more frequently from a high-risk unit (88% vs 41%, p=0.04), had a longer foreign hospital stay (13[3-20] vs 7[4-10], p=0.01), and received more frequently antibiotics during this stay (69% vs 31%, p=0.002).

Conclusion: HRB among repatriates from foreign hospital is frequent wherever they are transferred from. A long stay in a high-risk unit in the foreign hospital before the international interfacility transfer is more frequent in case of HRB colonization but the absence of these criteria cannot rule out an HRB colonization. It

will be then difficult to focus which patients should undergo specific measures or not, which calls for a systematic procedure.

P406 *Disaster Medicine*

LOOKING BACK TO THE FUTURE: LESSONS LEARNED AFTER A STORM STRUCK THE PUKKELPOP 2011 ROCK FESTIVAL.

OH Hoogmartens (1), MS Sabbe (2)

1. Department of Public Health, University of Leuven, Leuven, Belgium.
2. Department of Emergency Medicine, University Hospitals Leuven, Leuven, Belgium.

Corresponding author: Mr Hoogmartens Olivier (olivier.hoogmartens@gmail.com)

Key-words: Disaster Preparedness ; Social Media ; Event Medicine

Introduction: Each year in August, the three-day Rock festival Pukkelpop attracts thousands of visitors from Flanders and far beyond to the festival site near Hasselt, Belgium . About 200 acts are performing on one of the 8 stages. Due to a continuously increasing amount of visitors, a preemptive, multi-agency, rescue force is available on scene 24/7.

Incident: On Thursday 18th August 2011, the festival and campground was struck with a devastating rain and hail storm. Not only festival visitors were exposed to its impact, but also artists, crew members and rescue forces present at that time. The impact took about 15 minutes. After the intensity of the storm was decreased, several emergency calls reached the command and control center on the festival site and the regional emergency medical dispatch center. The information out of these calls, created a first impression of the consequences and the immediate needs for the responsible incident commander. The disaster (medical) response plan was activated and search and rescue teams were sent out on the festival site and campground. In addition to the impact on the festival and campground, there was also a lot of damage in the surrounding area. This caused even more challenges for rescue-workers to find their way towards affected areas. All casualties with life threatening injuries (n=13) were evacuated to Level 1 trauma centers within four hours after the impact. Remaining casualties (n=465) were treated on-site or evacuated with ambulances (n=60) to surrounding trauma centers (n=10), within five hours after the impact.

During the multi-agency evaluation meeting, interventions and emergency plans were discussed and lessons learned listed. A new age has arrived in communication with festival visitors after such an incident. Establishing and implementing social media strategies prior to an emergency event became a key factor in improving crisis communication afterwards. In addition, proactive collaboration with the media was proposed to be an important factor to minimize chaos and panic in such events for when a major health incident occurs during a mass gathering. Furthermore, the importance of preparing emergency plans with the same team members as the ones who are in charge when executing them, was emphasized. A final conclusion was about the phenomenon of festival visitors who voluntarily present themselves to aid rescue forces, in the immediate aftermath of the disaster. This issue should be considered during planning and preparing for the event.

Conclusions: Preemptive disaster and emergency plans have demonstrated to be imperative in order to mitigate the impact when a disaster strikes a Rock Festival. But when new and innovative technologies emerge, they should be analyzed and considered if appropriate to apply for the target audience and nature of the event.

P407 *Disaster Medicine*

DISASTER MEDICINE CAN BE RECOGNIZED AS A SCIENCE OR MEDICAL CARE? STUDY FROM THE ACADEMIC REPORTS OF THE EAST JAPAN EARTHQUAKE

H Nakao (1), Y Iwasaki (2), Y Maeda (3)

1. Disaster Medical Management Dept., Tokyo university Hospital, Tokyo, Japan
2. Emergency department, Iwasaki hospital, Mitoyo, Japan
3. Emergency department, Kansai Medical university, Moriguchi, Japan

Corresponding author: Mr Nakao Hiroyuki (nakaonakaokobe@yahoo.co.jp)

Key-words: the East Japan Earthquake ; abstracts ; scientific research

Purpose:

It is difficult for disaster medicine to verify scientifically for reasons reproducibility, accumulation of data or complexity of parameters. The purposes are verification the contents of the academic reports about the East Japan Earthquake, and we summarized the main points for which disaster medicine can be recognized as a science.

Methods and materials:

From abstracts related to the East Japan Earthquake in the general meetings of the 39th Japanese association for Acute Medicine and the 17th Japanese Association for Disaster Medicine, we investigated research methods, activity areas, and the contents of report.

Results:

We found 380 abstracts related to the East Japan Earthquake in both general meetings. 1) Research methods were 83.1% as experience reports, 6.3% as surveys and 4.5% as questionnaires. 2) Activities areas were 49.1% as Miyagi Prefecture, 17.2% as Iwate Prefecture, 12.1% as Fukushima Prefecture. 3) Themes of the report were 94 abstracts about contents of medical care, 93 abstracts about the home / shelter, 85 abstracts about stricken hospitals, and 72 abstracts related to DMAT. 4) There were reported to the conclusion that the need of making some system.

Conclusion:

Many reported experience of disaster medical care in the Japan East Earthquake. But most of reports didn't indicate what was discussed about the rules of disaster medicine and specific solutions which are able to exploit in future. The reports were characterized that little scientific researches were reported.

It is necessary to be established a full-time academic research team can be cross-sectional active in various fields over. And, it is necessary to integration of data recording in a consistent format in order to record to posterity a valuable experience.

P408 *Disaster Medicine*

MEDICAL DOCTOR DISPATCH BY THE JAPANESE RED CROSS SOCIETY AFTER THE GREAT EAST JAPAN EARTHQUAKE

T Hata (1), K Ueda (1), H Suzuki (1), T Shimizu (1), A Katsumi (2), S Suzaki (2), T Kawanami (3), M Kobayashi (4), S Ishibashi (4), H Tomita (5), Y Yaida (6), M Otuska (7)

1. Department of Medicine, Musashino Red Cross Hospital, Musashino, Tokyo, Japan
2. Emergency Center, Musashino Red Cross Hospital, Musashino, Tokyo, Japan
3. Emergency Center, Nagoya Daini Red Cross Hospital, Nagoya, Aichi, Japan
4. Emergency Center, Ishinomaki Red Cross Hospital, Ishinomaki, Miyagi, Japan
5. National Headquarter, Japanese Red Cross Society, Minato, Tokyo, Japan
6. Department of Anesthesiology, Himeji Red Cross Hospital, Himeji, Hyogo, Japan
7. Emergency Center, Kumamoto Red Cross Hospital, Kumamoto, Kumamoto, Japan

Corresponding author: Mr Hata Toshihiko (th0117@musashino.jrc.or.jp)

Key-words: The Great East Japan Earthquake ; Alternating Medical Doctor Dispatch ; The Japanese Red Cross Society

Introduction) The Great East Japan Earthquake (M 9.0) struck off the north-east coast of Japan on March 11, 2011, and the subsequent tsunami left almost 20,000 people dead or missing in Japan. The subsequent series of accidents at the Fukushima nuclear plant dealt a further blow to the region. The city of Ishinomaki suffered one of the highest casualty rates with almost 4,000 people left dead or missing. Fortunately, the Ishinomaki Red Cross Hospital (IRCH) was intact as it had been moved to a location away from the Pacific Ocean three years before the earthquake. However, other medical facilities closer to the coast suffered enormous damage.

Methods) With a goal of providing medical aid to the people of Ishinomaki, the Japanese Red Cross Society (JRCS) assembled volunteer doctors from across the country in Tokyo, where the headquarters are based, and transferred these teams to IRCH by big bus. The purpose of our mission was to support the provision of emergency medical care in the affected area and to assist the Accident & Emergency department of IRCH.

Results) As many as 81 doctors were dispatched by the JRCS to IRCH between April and August 2011. The medical team was made up of specialists in internal medicine (38), emergency medicine (12), surgery (6), pediatrics (3), orthopedics (3), anesthesiology (2), obstetrics and gynecology (2), and trainee doctors (15). At first, each team consisted of 3-8 medical doctors that worked for 6 days and slept makeshift beds at the meeting room in IRCH. On arrival of the next team, the previous team was transferred to Tokyo by bus. Volunteer doctors, who were meeting each other for the first time, worked together with volunteer nurses and medical clerks to set up temporary medical out-patient facilities (Yellow Area) in IRCH. They worked in shifts to support the provision of secondary care across all medical fields and also helped provide tertiary care when required (Red Area). The rubble and debris in the affected area resulted in many respiratory tract infections and cases of bronchial asthma. Internal medical cases included gastrointestinal bleeding, hepatitis, cerebral infarction, ischemic heart disease, anaphylaxis, and renal failure and so on. Majority of the orthopedic cases consisted of leg injuries or broken bones. Mental health was also an issue, due to the rise in the number of suicide cases by hanging after the disaster. Day after day, the volunteer doctors and physicians offered their support, and a form of complementary cooperation took shape.

Conclusion) The mission to help revive the medical system in Ishinomaki and provide emergency support was completed successfully.

P409 Disaster Medicine

PHYSICAL COMPLAINTS OF THE CONGOLESE CITIZENS IN AN IDP CAMP AFTER THE EXPLOSION OF THE AMMUNITION DEPOT IN BRAZZAVILLE ON MARCH 4, 2012

I Roggen (1), G van Berlaer (1), G Gijs (2), I Hubloue (1)

1. Department of Emergency Medicine, Universitair Ziekenhuis Brussel, Vrije Universiteit Brussel, Jette, Belgium

2. Crisismanagement, Federal Public Service Health, Brussels, Belgium

Corresponding author: Mme Roggen Inge (inge.roggen@vub.ac.be)

Key-words: IDP ; disaster ; complaints

Background

In the aftermath of the explosion of the ammunition depot in Brazzaville, Congo on March 4 2012, the Belgian First Aid and

Support Team (B-FAST) administered basic medical care to the inhabitants of a large internally displaced persons (IDP) camp in Brazzaville.

Aim

The aim of our study was to chart the complaints of the people allocated to IDP camps after an event.

Patients and methods

All patients seen and treated by B-FAST in one IDP camp in Brazzaville were registered. A unique patient number, age, gender and all complaints were registered on standard WHO forms.

Results

Out of 245 patients, only 3 forms were missing or incomplete. Out of 242 patients, 50% were children, male/female ratio was 50/50 in children and 28/72 in adults; median age was 3 years in children and 32.5 years in adults; 20% of the children were malnourished (weight-for-age standard deviation score below -2).

Signs and symptoms related to infectious diseases were present in 75% of the children and 53% of the adults. Trauma was present in 12% of the children and 21 % of the adults.

Conclusions

Of the people in IDP camps looking for medical care 50% are children, of which one in five is malnourished. Less than 20% of IDP residents presenting to a medical post shortly after a disaster, suffer from injuries directly related to the event. Infectious diseases among people relocated to IDP camps, appear as quick as one week after the event.

P410 Disaster Medicine

IS SELF REPORTING OF MEDICAL HISTORY A WAY TO FACILITATE INFORMATION COLLECTION IN THE RESPONSE TO MASS-CASUALTY INCIDENTS FROM FOOD-POISONING?

YI Hsu, YC Huang, SZ Lin, YS Chuang

Emergency Medicine, Chiayi Christian Hospital, Chiayi city, Taiwan

Corresponding author: Melle Hsu Ya-i (yai0630@gmail.com)

Key-words: mass-casualty incident ; history taking ; self reporting

Introduction: Medical response to mass-casualty incidents (MCI) represents one of the greatest challenges to every hospital. The emergency and related departments often have to care large numbers of casualties in a setting of limited resources, poor communication, insufficient information, and even damaged infrastructure and personal risks. In this chaotic environment, an efficient and reliable method of information collection is the fundamentals of a successful response. As the rapid development of information technology in recent two decades, information exchange improved exponentially. However, some part of the information transfer in disaster response remains in the medieval age. No matter how fancy the computer and communication technologies are, the medical history taking remains the pattern of one-medical-personnel-to-one-patient. This problem becomes tremendous when casualties number overwhelm the number of medical personnel. In some kinds of MCI, diversification of symptoms is limited and less severe illness preserved the capability of most victims to participate the medical cares for themselves. We undertook this study to examine can self reporting of symptoms facilitate the history taking in MCI response.

Methods: A questionnaire was designed by emergency medicine experts to elicit useful information about the symptoms commonly encountered in food poisoning. We invited hospital volunteers and non-medical colleagues to check its readability and made necessary modifications. Each question was then scored based on the

importance of clinical significance. After being approved by the Institutional review board, we invited K-7 students who had previous experience of gastroenteritis to join this study. They are instructed to recall the most impressed episode of bowel trouble to respond the doctor's questioning. Enrolled students were randomly divided into two groups. Students in the experimental group answered the questionnaire first. Then they were individually interviewed by the resident doctors to double check and complete the medical history. Students in the control group were interviewed individually by the resident doctor in a classical way to collect their medical history. Time of every interview was recorded by trained research assistants. Time and completeness of history taking in these two groups were compared by the student's t-test, and a p value less than 0.05 was thought to be statistical significance.

Results: There were 41 students enrolled into this study, 22 in the experimental group and 19 in the control group. There was no significant difference in time to complete history taking between the two resident doctors ($p = 0.415$). Time to complete history taking was shorter in the experimental group (163.0

than in the control group (198.7

was no difference in the completeness of medical history obtained between the experimental group (94.8

(94.2

good.
Conclusion: Self reporting of symptoms followed by double check by the physician was time-saving than classical history taking in response to MCI from food poisoning. The completeness of history was not sacrificed in the novel method of information collection.

P411 Disaster Medicine

NUCLEAR AND CHEMICAL INCIDENTS IN BELGIUM AND THE NETHERLANDS: ARE WE THERE YET?

LJ Mortelmans (1), AM Bakker (1), C Jacobs (1), GJ Dieltiens (1), MI Gaakeer (2), K Anseeuw (1)

1. Emergency Dept, ZNA Stuivenberg, Antwerp, Belgium

2. Emergency Dept, UMC, Utrecht, Netherlands

Corresponding author: Mr Mortelmans Luc (luc.mortelmans@zna.be)

Key-words: preparedness ; CBRN ; emergency physicians

Introduction: The recent Japanese nuclear disaster raised questions about the safety of nuclear energy. Belgium and Holland have multiple nuclear, Seveso and petrochemical sites in countries with a high population density. Industrial incidents and transport of related products have inherent risks for mass-casualty incidents. Apart from that terrorist attacks with nuclear or chemical weapons cannot be ruled out in this era. After worrying results evaluating hospital preparedness for these incidents, our hypothesis was that Belgian (B) nor Dutch (D) Emergency Physicians aren't able to adequately respond to these kind of incidents.

Material and methods: An online survey was sent to 1412 doctors on the mailing lists of the Belgian Society of Disaster and Emergency Medicine and the Netherlands Society of Emergency Physicians. It consisted of questions about training, how prepared they feel to deal with a nuclear or chemical event and a selection of theory questions to test the correlation between perceived preparedness and knowledge.

Results: The response rate was 45.2%. Responses show that both groups feel more prepared to deal with a chemical event although their estimated capability is limited. When it comes to a nuclear event they feel badly prepared (B 3.1/10 vs 2.05/10; D 4.41/10 vs 3.35/10) even though about 39 (D) to 57% (B) have had a course in

disaster medicine. Age, male sex, prior training, prehospital activity and vicinity of risk institutions are significant predictive factors for a higher preparedness. Despite this perceived lack of preparation, 87 (B) to 96% (D) of doctors are still willing to go to work in the emergency room and even pre-hospital if there is enough protection and radio-detection equipment available. However, many say they have not been trained for and do not feel capable to use this equipment. The theory questions confirm that in both groups there is a lack of knowledge when it comes to nuclear events. Some remarkable conclusions include the misplaced confidence that iodine tablets have a protective effect against external radiation and the belief that decontamination should be performed before the treatment of life threatening injuries. The score of the Dutch doctors is significantly lower than that of the Belgians (3.79/13 vs 4.46/13). This can be declared by the fact that their population is significantly younger (mean age of 34.7 years vs 42.9) with more females (65% vs 30%) and a lower disaster medicine education rate (38% vs 57%). Apart from that there's no prehospital tradition in the Netherlands.

Conclusion, even though a high percentage of doctors in both countries are active in the high-risk zone, there is a clear lack of theoretical and practical knowledge. There is a high willingness to work in disaster situations but the lack of knowledge and training puts them at high risk. The survey suggests a need for further training.

P412 Disaster Medicine

ARE BELGIAN EMERGENCY NURSES PREPARED FOR CHEMICAL AND NUCLEAR INCIDENTS?

LJ Mortelmans, GJ Dieltiens, K Anseeuw

Emergency Dept, ZNA Stuivenberg, Antwerp, Belgium

Corresponding author: Mr Mortelmans Luc (luc.mortelmans@zna.be)

Key-words: CBRN ; preparedness ; emergency nurses

Introduction: As one of Europe's densest populated regions with a high concentration of Seveso institutions, the world's second petrochemical port and several nuclear plants, Belgium bears an inherent risk for chemical or nuclear incidents. After a national survey on hospital - and physician preparedness we hypothesised that emergency nurses are not prepared for these risks either.

Material and methods: To evaluate their preparedness we sent an online survey to 923 nurses on the mailing list of the Belgian Emergency Nurses societies. It consisted of questions about training, how prepared they feel individually to deal with a nuclear or chemical event and a selection of theoretical questions to test the correlation between perceived preparedness and actual knowledge.

Results: There was a response rate of 56%. Mean age was 37 years with a M/F ratio of 53/47. 20% works in a university hospital and 73% is active in the prehospital setting. 66% works within 20 Kms of a Seveso installation and 35% within a 20 Kms range of a nuclear installation. The results show that Belgian nurses feel more prepared to deal with a chemical than a nuclear event (2.76/10 vs 2.01/10). When it comes to a nuclear event they feel badly prepared even though 27% have followed a training course in disaster management. Despite this perceived lack of preparation, 86% of nurses are still willing to go to work in the emergency room and even pre-hospital if there is enough protection and radio-detection equipment available. However, many say they have not been trained and do not feel capable to use this equipment (only 9% knows how to use radiodetection equipment and the self

estimated capability to use PPE's was only 2.14/10). The theory questions confirm that there is a lack of knowledge when it comes to nuclear events. Some remarkable conclusions include the misplaced confidence that iodine tablets have a protective effect against external radiation, and the belief that decontamination should be performed prior to treatment of life-threatening injuries. Comparing to the scores of the Emergency physicians (using the set of identical questions) the score was significantly lower: 2.94/9 vs 3.48/9.

In conclusion, even though a high percentage of nurses are active in the high-risk zone, there is a lack of knowledge. There is a high willingness to work in disaster situations but the lack of knowledge and training puts them at high risks. The survey suggests a clear need for further training and education.

P413

Disaster Medicine

BELGIAN SENIOR MEDICAL STUDENTS AND DISASTER MEDICINE, A REAL DISASTER?

LJ Mortelmans (1), GJ Dieltiens (1), K Anseeuw (1), MB Sabbe (2)

1. Emergency Dept, ZNA Stuivenberg, Antwerp, Belgium
2. Emergency Dept, UZ Gasthuisberg, Leuven, Belgium

Corresponding author: Mr Mortelmans Luc (luc.mortelmans@zna.be)

Key-words: disaster medicine ; education ; medical students

Introduction: Throughout history, medical students have been involved in patient care of large scale mass casualty incidents. From the Spanish flu pandemic over devastating earthquakes to the 9/11 massacre, they have been deployed in victim care. The Belgian Royal Academy of Medicine even mentioned them as an important player in the national H5N1 pandemic plan in 2005. Despite this, we know that training in Disaster Medicine has little to no place in regular medical curricula worldwide. How can we trust on their help if they aren't prepared? Our hypothesis is that, in Belgium, senior medical students have minimal preparation for Disaster Medicine in their curriculum.

Material and methods: Senior medical students of 5 medical faculties in Belgium were invited to complete an online survey on Disaster Medicine, training and knowledge. The survey consisted of demographic data, prior education and self estimated knowledge on, and capability to cope with several disaster scenarios. This reported knowledge was tested by a mixed set of 10 theoretical questions and practical cases.

Results: 272 students did participate in this survey. Mean age was 24,5 years with a M/F ratio of 43/57. 25% of the respondents said to have some knowledge on disaster management (15.7% through courses in the army, fire brigade, red cross or civil protection!). 29% supported the opinion that disaster education should absolutely be included in the regular medical curriculum, the rest found it extremely useful. None of the participants thought that it could be useless to do so. Self estimated capability to deal with disaster situations varied from 1.64/10 for nuclear incidents to 3.75/10 for an outbreak of very infectious diseases. Despite this limited self confidence there is a high willingness to assist in case these incidents should really occur (scores varied from 6.85/10 for nuclear incidents to 7.43/10 for outbreaks of very infectious diseases). The case/theoretical mix gave a mean score of 5.37 out of 10 questions with a significant higher score for males, Flemish students and those applying for specialist training. Some worrying reactions include the fact that 1/3 of the participants will place contaminated walking wounded in the waiting room and that 26% would use iodine tablets in decontamination of nuclear patients,

29% even believes that these tablets protect against external radiation. 31% believes that decontamination of chemical victims consists of antidote spray in special civil defence cabins. The limited number of participants is a weakness of the study. Probably our figures give a too optimistic view on the problem as mainly the interested ones did react. We fear that the overall situation in fact is a lot worse.

Conclusion: Belgian medical students do believe in the usefulness of teaching Disaster Medicine in the regular curriculum. Although knowledge and estimated capability are limited, there is a high willingness to assist. European guidelines could help to establish a basic training preparing them for a real incident.

P414

Disaster Medicine

APPROACHES OF HEALTH CARE PROFESSIONALS IN TURKEY-VAN EARTHQUAKES

S Sevimli (1), R Dursun (2), S Karadas (3), O Cetinkaya (4), S Güner (5)

1. Medical History and Ethics, Yüzüncü Yıl University School of Medicine, Van, Turkey
2. emergency department, Van Region Training and Research Hospital, Van, Turkey
3. emergency department, Yüzüncü Yıl University, Van, Turkey
4. Advisor to the undersecretary, Republic of Turkey Ministry of Health, Ankara, Turkey
5. orthopedy department, Yüzüncü Yıl University, Van, Turkey

Corresponding author: Mr Dursun Recep (drrecep@dursun@hotmail.com)

Key-words: earthquake ; disaster problems ; health professionals

INTRODUCTION

Van earthquake, the health services were presented to the earthquake victims and other patients. A lot of people including health professionals were injured in the earthquakes of Van. Although health professionals and their families feel earthquakes, health professionals went to hospitals and other health care institutions helped victims of the earthquake. But health care professionals expressed that they did not see same interest. After the earthquake, available unaffected personnel were employed, it was a good practice for this disaster, but this practice was only for health personals of government hospitals. Because after the earthquake, health personnel of Yüzüncü Yıl University hospital worked. The purpose of this study is to evaluate, studies of health care professionals and their problems to express before and after the earthquakes. Health professionals focused the other earthquake victims treating, other than their own traumas. Therefore, Health care workers choose problem focused solutions instead of emotion focused. Health care workers postponed problem solution for patients.

METHODOLOGY

Data of patients of the earthquake which was obtained from Van city health department, and crisis coordination center were received and three months data of same centers has been examined.

RESULTS

552 auxiliary medical personnel came to Van in the process of earthquakes such as paramedic emergency medical technician, laboratory technician, anesthesia technician, health officers, nurse, and midwife. In addition, 552 the national medical rescue team, 790 112 personals, 551 doctors, 25 medical psychologists, also worked at Van with other 477 Rescue Teams. The two aircraft from Ministry Health came for personnel transplantation. 11 health personals died. 13 health personnel were injured. 38 health personnel lost their relatives in the earthquake. 40 relatives of health personnel were injured.

CONCLUSION

Van earthquake, the health services were presented to the earthquake victims and other patients, but health care professionals expressed that they did not see same interest. All of the public employees who had earthquake trauma had to be sent to the different cities, whether temporarily or permanently, because earthquake trauma can lead some of the psychosocial problems. Implementation of temporary duty of Ministry of Health which took only 6 months from Van to the other cities is a positive and useful approach for health professionals and then Health of Ministry allowed health professionals to change continuously city, it is evaluated as right and useful practice. However, this procedure was not applied for Yüzüncü Yıl University employees, and University didn't allow its employees who wanted to go other cities because of their own and their relatives' trauma.

After Van earthquake, the problems of health care workers should be considered and disaster plans should include these solutions for future such as modified emergency call systems, education, plan and program about disaster medicine, search and rescue squadron, transport and rescue squadron. Health care workers experienced a severe trauma due to earthquake. Acute and chronic traumas of health care professionals experienced in period of earthquake are; dead colleagues, injury, damage houses, housing problems, heavy workload, and uncertainty of their future and others. Health workers came to the point of exhaustion due to these issues. Psychosocial supports were not given to health care personnel. They didn't have a shelter for their children, spouses and kin. Health professionals, without resolving some of basic needs (housing, nutrition, safety, etc.), served to their patients. Therefore, prefabricated houses or container which have bathroom, toilet, air-conditioned, rooms and well-protected had to be made immediately after the earthquake for all health care professionals. These structures should be built near medical institutions. For the solution of health problems, the undersecretary or deputy undersecretary of the Ministry of Health in the disaster area should serve as a coordinator. Health ministry undersecretary or deputy undersecretary can resolve disaster problems as soon as possible and prevent the discussion of the authority. Showing an example of *pacta sunt servanda*, authorities should give importance to health care professionals' relatives, some of them lost their lives, and they should stand next to health professionals and their families.

P415

Disaster Medicine

SATURDAY BLOODY SATURDAY: A REPORT OF MASS CASUALTY INCIDENT.

F. Della Rocca (1), M. Zoleo (1), G. Vettore (1), F. Tosato (1), S. Gregori (2), M. Battistioli (2)

1. Emergency Department, Azienda Ospedaliera di Padova, Padova, Italy
2. Postgraduate School of Emergency Medicine, Università degli Studi di Padova, Padova, Italy

Corresponding author: Mme Gregori Sara (saragregori@hotmail.it)

Key-words: MCI ; intra-hospital emergency plan ; disaster management

Introduction: Catastrophe or disaster can be defined any adverse event which causes a damage such as to exceed, at least temporarily, those resources available for aid. Particularly in emergency medicine we talk about a Mass Casualty Incident (MCI) when the number of patients who present to the emergency department (ED), in a defined period of time, overwhelms the ordinary operating capability to care for the victims, making it necessary for the timely activation of additional resources. In order to cope with a situation of MCI, answer plans must be arranged

beforehand, which shall be tested through training simulations. A MCI can be compared to a scale balance whose dishes return the more rapidly even the more efficient the first aid system is.

Materials and methods: We report here a case relating to a MCI which has involved the ED of the Azienda Ospedaliera in Padova (Italy). In this case, a plan has been activated to deal with the massive afflux of injured patients, which takes into consideration the participation of the whole ED and of the whole hospital to the management of the disaster victims, while delegating the ordinary activity management to the second hospital in town. According to this plan, the access of the casualties is regulated on the basis of a triage, specifically developed for MCI, different from the routine one. The medical treatment of the victims shall avoid any exceeding procedure, take into account the different risk priority of the patients, and follow a single line of conduct. As far as possible, a specialist intervention should be limited.

Results: On Saturday, the 5th of May 2012, at 7.50 am, in the vicinity of the motorway toll-gate "Padova Ovest", a tourist coach with 24 people on board went off the road capsizing into a river. Of the 24 passengers, 6 died immediately, 6 were transported by helicopter to nearby hospitals, the remaining 12 were conveyed by ambulance to our ED, which had been put on state of alert by the Pre-Hospital Emergency Operation Centre at 8.15. According to the emergency plan, 4 physicians were recruited by progressive telephone calls to be added to the 5 already on service, 5 nurses to be added to the 9 already on service and a social health worker to be added to the one already on service. Four registrars as emergency doctors were also present. The first patient arrived at 9.30, the last one at 10.39. The triage at the ED entrance assigned the 12 injured people 4 red codes and 8 yellow codes. After being evaluated and stabilized, 5 of the patients were conveyed to the surgery ward, 2 to the intensive care unit, 2 to the ED short observation unit and 3 were discharged. At 10.55 the MCI situation was declared finished. So far, all the patients have survived.

Discussion: The accident was quite serious, since the percentage of the deceased amounted to 25%. All those who survived received on admittance triage red or yellow codes. When the MCI was activated, ED was not overcrowded, since it was a Saturday and on the whole just 29 people were present, 9 waiting and 20 under treatment. ED was therefore able to dismiss them and to receive the road accident victims. Though their number was not too large, they presented complicated injuries and high risk situations: many were unstable, two had to be intubated and one, being under cardiac arrest due to hypoxia, required reanimation. Three patients requiring emergent surgical treatment arrived almost at the same moment; two operating rooms had therefore to be activated simultaneously.

Conclusions: The analysis of the way we dealt with this MCI event made clear both definite plus points and shortcomings. Self-sufficiency on part of most ED physicians on first evaluation and stabilization of poly-trauma, and the good coordination established with anaesthetists and general surgeons can be included among the plus points: these factors have made it possible to actualize the single line of conduct intended for the treatment course of the victims. Among the shortcomings, some difficulty on part of a few ED physicians to conform themselves to the strictly essential management of a poly-trauma required in a MCI situation.

P416

Other - Part 2

ROLES OF MILITARY IN THAILAND FLOOD DISASTER RELIEF

N Buayen, A Taotho, W Amornsongchai, W Sakunwiriychai

Department of Trauma and Emergency Medicine, Phramongkutklao Hospital, Bangkok, Thailand

Corresponding author: Melle Buayen Naruepat (naruepat_b@hotmail.com)

Key-words: roles of military ; Thailand flood 2011 ; disaster relief

In 2011, multiple tropical storms and heavy rains caused widespread flooding across Southeast Asia. In Thailand the flood inundated 65 out of 77 provinces with over 12.8 million people, damaged 560 healthcare facilities, and caused over 800 deaths.

Normally, the lead organization for disaster relief is the Ministry of Interior. The military plays a supporting role in pledging resources, personnel and equipment upon request. Due to the magnitude of the flood, the Royal Thai Government established a Flood Relief Operation Center (FROC) to coordinate the delivery of aid, enhance interagency collaboration, and unify command. However, even FROC headquarters had succumbed to the flood and forced to retreat closer in town, but still surrounded by water.

Royal Thai Army (RTA) became an organization with a vital role in this disaster. Capability in rapid deployment is RTA's strength culminating from readiness of equipments and well-trained and highly disciplined personnel. RTA mobilized a wide range of resources to the affected areas, including immediate relief provisions, search and rescue operations, medical care services, flood prevention barriers, excavation of canals, propelling of water into the sea, aircrafts and vehicles for relief items, and evacuees transportation.

Phramongkutklao Hospital (PMK), the largest military hospital in Thailand, is experienced in handling disaster events. PMK personnel have been trained to provide quality medical care under duress such as sleep deprivation, starvation, bare bones living condition. Austere environments are similar to the conditions in disasters. PMK disaster response is based on DISASTER paradigm principle: detection, incident command, safety and security, assessment of hazards, support, triage and treatment, evacuation, and recovery.

During Thailand Great Flood of 2011, PMK had important roles in all phases of disaster management: mitigation, preparedness, response, and recovery. Led by PMK personnel, the multi-modal (river, air, land) medical evacuation of 112 patients including 14 intubated patients from the flooded Ayutthaya hospital became a classic case study of best medical care delivery in bad conditions.

P417

Disaster Medicine

INJURIES AND MEDICAL ISSUES IN HAITIAN PATIENTS DURING THE FIRST 10 DAYS AFTER THE 2010 HAITI EARTHQUAKE.

G van Berlaer (1), T Staes (2), Y Somers (3), R Ackermans (4), G Gijs (5), I Hubloue (6)

1. Department of Emergency and Disaster Medicine, Universitair Ziekenhuis Brussel / B-FAST, Brussels, Belgium
2. Emergency Department, Ziekenhuis Netwerk Antwerpen - campus Jan Palfijn / B-FAST, Antwerp, Belgium
3. Department of Intensive Care, Universitair Ziekenhuis Antwerpen / B-FAST, Antwerp, Belgium
4. School for Paramedics and Disaster Management, Campus Vesta - Universiteit Antwerpen / B-FAST, Antwerp, Belgium
5. Crisis Management, Federal Public Health Service / B-FAST, Brussels, Belgium
6. Department of Emergency and Disaster Medicine, Universitair Ziekenhuis Brussel, Brussels, Belgium

Corresponding author: Mr Van Berlaer Gerlant (gerlant.vanberlaer@uzbrussel.be)

Key-words: 2010 Haiti earthquake ; field hospital ; injuries

Introduction

After the 12th January 2010 earthquake, leaving lots of Haitian families homeless, wounded or dead, the Belgian First Aid and

Support Team (B-FAST) was the first international medical team to mount a field hospital, and provided acute care to about 7000 patients during the first 4 weeks. During the first ten days there was a massive influx of fractures and trauma.

The objective of this study is to describe the types of injuries and physical complaints in Haitian children and adults.

Methods

All injuries and complaints of patients who presented to our medico-surgical medium type field hospital during the first 10 days after the earthquake were prospectively registered.

Results

Over 1000 patients were seen, but only from 814 patients the complete data form was filled out. Almost 39% of these patients were minors, 58% was female. Median age was 24 years (range 0 to 88 years).

From all registered problems, 89% were injury-related versus 11% medical issues. Most patients (42%) suffered from one single problem, but 31% presented with 2 problems, 12% with 3 issues and 7% with more than 3 complaints. Median was 2 complaints.

Of all patients, 41% presented with fractures (31% closed and 10% open fractures), 54% of patients presented with cutting or degloving wounds, 21% had lesions to the head (cranial trauma, facial wounds and/or lesions to the eye) and 3 patients were in coma.

From all 333 patients with fractures, 63% were to the lower limbs, 32% to the upper limbs and 4% to the spine. Earthquake-related extremity amputations were seen in 43 patients (5%).

Chief medical complaints were: fever (10%), diffuse pain not originating from trauma (9%), headache (8%), vomiting (7%). Divided into categories of complaints, 21% had a gastro-intestinal problem, 11% featured neurological problems, 9% had respiratory complaints, 3% had urogenital problems, 2% mentioned stress. Almost 40% of the patients had at least one complaint suggestive for infection.

Conclusions

During the first ten days after the Haiti earthquake, the medico-surgical medium type field hospital of B-FAST encountered mainly injuries caused by the earthquake itself (fractures, wounds, cranial injury), and only a small amount of medical issues (gastro-intestinal, neurological and respiratory problems; less than half from infectious origin). The composition of the WHO kits to assist caregivers in providing medical aid in disasters should take into account the actual injuries and diseases of the affected population.

P418

Disaster Medicine

PATIENT CHARACTERISTICS DURING ROCK FESTIVALS ON THE SCENE AND IN THE HOSPITAL

K Bronselaer (1), S Gogaert (2), M Sabbe (1), D Verdeyen (3)

1. Dept of Emergency Medicine, University Hospitals, Leuven, Belgium
2. General services, Red Cross Flanders, Mechelen, Belgium
3. Faculty of Medicine - Emergency Medicine, Catholic University of Leuven, Leuven, Belgium

Corresponding author: Mr Sabbe Marc (lea.vanroelen@uzleuven.be)

Key-words: mass gathering ; first aid ; disaster medicine

Introduction: Most studies on mass gatherings such as rock concerts are limited to the patients treated at the event. The purpose of this study was to analyze the numbers and type of trauma or illnesses during a rock festival treated on the scene and in the hospital.

Methods: A retrospective analysis of the database of all cases treated on the scene between 2009 and 2011 at a 4-day rock

festival (Rock Werchter) and a one-day concert was performed. In addition, all medical records of patients transferred to the hospital from these concerts were analyzed to evaluate the needed technical exams, length of stay and final treatment.

Results: During those three years, 18440 and 936 patients were taken care of on the scene during respectively the 4- and one-day festival. This results in a patient presentation rate of 18.95 (\pm 5.62)/1000 for the 4-day festival and 10.44 (\pm 4.06)/1000 for the one-day festival. The average age of patients treated on the scene was 25 (\pm 8.66) and 32.45 (\pm 11.22) years, respectively 55.05 % and 66 % was female. The majority were minor trauma and insect bites. During a warmer edition, significantly more patients were taken care of.

217 patients were transported to the hospital and 63.8 % was male. The transport-to-hospital rate was 0.2 (\pm 0.08)/1000 and 0.15 (\pm 0.03)/1000. 71.4 % needed X-rays and 31.6 % needed lab tests. 36.2 % received additional drugs in the hospital. The average LOS was 9.53 hours.

Conclusions: At these rock festivals, compared with other studies, significantly more patients are treated on the scene. However, transport-to-hospital rates are comparable. Patients needing medical attention remain relatively constant. During warmer days, more first aid is needed, indicating that the number of a medical staff is more predictable than the needed number of first aid helpers.

P419 *Disaster Medicine*

TRABZON NMRT'S VAN EARTHQUAKE EXPERIENCE

U Eryigit (1), Y Karaca (2), E Sarac (3), S Sayar (1), O Yetim (1)

1. Department of Emergency Medicine, Karadeniz Technical University Faculty of Medicine, Trabzon, Turkey
2. Department of Emergency Medicine, Kanuni Training and Research Hospital, Trabzon, Turkey
3. National Medical Rescue Team, Trabzon Health Directorate, Trabzon, Turkey

Corresponding author: Mr Eryigit Umut (umuteryigitacil@gmail.com)

Key-words: NMRT ; Van earthquake ; disaster

NMRT (National Medical Rescue Teams) are made up of health workers and were set up to provide medical rescue services to victims of disasters and emergencies of all kinds, both domestic and international. There are approximately 2400 NMRT personnel across Turkey who have received NMRT training and are ready to take part in active medical rescue operations. In the light of the Ministry of Health planning, a NMRT was established within the body of the Trabzon Health Directorate in 2005. The Trabzon NMRT completed basic training in May 2011, being constituted of a 30-member team providing planned medical training and field operations. In addition to its many previous activities, the Trabzon NMRT rescued a total of six Van earthquake victims, two of whom were children, alive from the rubble. The recent Van Erciş earthquake has demonstrated how essential organizations consisting of volunteers are in supporting official institutions in a country such as Turkey, which scientific data and statistics clearly reveal to be prone to disasters.

P420 *Disaster Medicine*

IS TURKEY AN EARTHQUAKE COUNTRY?

U Eryigit (1), A Gunduz (1), Y Karaca (2), S Turedi (1), S Turkmen (1)

1. Department of Emergency Medicine, Karadeniz Technical University Faculty of Medicine, Trabzon, Turkey
2. Department of Emergency Medicine, Kanuni Training and Research Hospital, Trabzon, Turkey

Corresponding author: Mr Eryigit Umut (umuteryigitacil@gmail.com)

Key-words: Turkey ; Earthquake ; Istanbul

It is important for the fact that Turkey is an earthquake country to be supported by scientific data. Research shows that major Turkish cities such as Istanbul, Izmir, Malatya, Erzincan, and Hatay have been struck by devastating earthquakes several times in the past. According to the earthquake catalogue for Turkey drawn up by the researchers Ambraseys and Finkel, 12 earthquakes causing very severe damage have taken place in Istanbul over the last 1500 years. The Marmara earthquake of 17 August, 1999 resulted in 17,479 deaths and 43,953 injuries. One hundred twenty-four earthquakes causing more than 1,000 deaths took place across the world during the 1900s. Seventeen of these were in Turkey. In 2000, Barka et al. calculated a 62%±15% probability of a powerful earthquake in the vicinity of Istanbul within the following 30 years. These findings clearly reveal that Turkey is one of the world's major earthquake countries. Turkey and Turkish emergency medicine must bear this reality in mind in all present and future planning

P421 *Disaster Medicine*

'CARE & SAFE'; A SIMPLE SYSTEM IN COMPOSING DISASTER ACTION TEAM

A. Haedar

Emergency Medicine, University of Brawijaya, Malang, Indonesia

Corresponding author: Mr Haedar Ali (haedaryahya@yahoo.com)

Key-words: disaster action team ; disaster medicine ; emergency medical assistance

Introduction:

Disaster Action Team (DAT) should use the key principle of disaster medical care which 'to do the greatest good for the greatest number of patients' in determining its Disaster Services Program, while the objective of conventional medical care is to do the greatest good for the individual patient.

Review:

The Faculty of Medicine - University of Brawijaya, Indonesia, has organized DAT called 'Team for Emergency and Disaster' (TED) to ensure that trained physicians and nurses can respond rapidly in a disaster event. TED provides immediate, identifiable emergency services to those affected by disaster. In addition to initiating rapid response team for disaster relief, TED determines the need for mobilizing additional resources for other institutions that may be needed. Disaster action teams are comprised of Rapid Response Team, Rapid Health Assessment Team, and Health Assistant Team, with a single leader and several members. TED concept is to conduct Coordination, Prepare Equipment & Tools, Build the System, and Arrange the Facilities (CARE & SAFE). We applied this concept during earthquake in West Sumatra (2009), flash flood in West Papua (2010), and volcano eruption in Central Java (2010).

Discussions:

This team is applicable in 3 different type of disasters; either in advanced medical service post (hospital & field hospital) or basic medical service post. Mission period of 14 days is considered effective to make the system runs, with or without substitution with fresh team with overlapping time. By empowering local capacities, we successfully carried on the established system and maintained system sustainability.

Conclusions:

Disaster medicine is clearly a marriage between emergency medicine & disaster management. Emergency department is the best learning ground to manage disaster care, by performing good daily emergency practice. Preparedness is essential to set up our mission during the disaster.

P422

Disaster Medicine

HELICOPTER TRANSPORT OF CRITICAL PATIENTS ISOLATED DURING STRONG SNOWFALL IN ROMANIA IN FEBRUARY 2012

V Ardelean (1), DC Cimpoesu (2), I Ciumanghel (1), A Pomohaci (1), O Popa (2), E Sandu (1), D Teodorovici (1)

1. Emergency Department, Hospital St.Spiridon, Iasi, Romania

2. Emergency Department, University of Medicine and Pharmacy Gr.T.Popa, Iasi, Romania

Corresponding author: Melle Cimpoesu Diana (dcimpoesu@yahoo.com)

Key-words: helicopter ; snowfall ; isolated patients

Introduction: In February 2012, Romania experienced the greatest wave of cold and snow in the last 50 years. Medical intervention in eastern Romania was basically aerial.

Objectives: Evaluation of transported patients' profile and study of the characteristics of helicopter operations conducted under conditions of strong snow.

Methods: Retrospective study of all the interventions of SMURD helicopter of Iasi in the north-east and south-east Romania, between 7th and 11th of February, 2011. North-East Romania represents an area of 30,949 km² and a population of 3.84 million inhabitants while the cities from south-eastern Romania cover an area of 20,192 km² with a population of 1.88 million inhabitants. The intervention was done with an MY 8 helicopter with mobile intensive care medical equipment, the crew consisted of 2 pilots, 1 technician, 2 physicians, 2 nurses.

Results: The study spanned over a period of 5 days with snow and strong cold wave, of which 3 were under orange code and 2 under yellow code. There were 49 requests received by 112 (only emergency number) or directly from the national coordinator, the Inspectorate for Emergency Situations. There have been solved 46 requests of which 38 medical interventions and therapeutic interventions (material transport for peritoneal dialysis at home) in 8 cases. The decision to send the helicopter was taken on medical criteria and depending on the inaccessibility of the roads blocked with snow. The distance to the localities where the intervention was needed, measured by land, was between 40 and 300 km, the average distance to the intervention place by air was of about 34.5 km and the greatest direct flight distance was of 81.7 km. Of the 38 patients, 42.11% were men and 57.89% were women aged between 85 years and 2 hours. Two patients were infants and 2 were children (one of seven months and the other of 7 years). The patients were transferred to hospitals of levels I and II. Only one of the 38 patients died being in cardiopulmonary arrest at the arrival of the team because of cardiac reasons. According to the medical

emergency classification, there were an emergent patient, 50% urgent and 47.36% non-urgent.

Conclusions: The helicopter was the only means of transport that could reach patients needing advanced medical care living in inaccessible areas by terrestrial means. The indications of the air medical interventions and their management in case of frozen cold and snow were different from the aero-medical daily interventions.

P423

Disaster Medicine

EVALUATING DISASTER MEDICINE TRAINING IN MEDICAL STUDENTS

J Lhost, J Svenson, M Walters

Division of Emergency Medicine, University of Wisconsin, Madison, United States

Corresponding author: Mr Svenson James (jes@medicine.wisc.edu)

Key-words: Disaster Medicine ; Medical Education ; Core Competency

Introduction: Emphasis on incorporating disaster medicine into medical school training has increased. Our school has developed a one day curriculum of core instruction introducing the topics of disaster medicine, preparedness, and media communications. Medical students participate in one of two core days offered during their senior year. However it is unclear as to how effective such brief curricula are.

Objective: The purpose of this study was to evaluate preparedness, confidence and interest in disaster medicine among medical students. Our hypothesis is that the one day workshop was insufficient to adequately prepare future doctors to respond to a disaster if called upon.

Methods: This was a cross sectional survey of current 1st and 4th year medical students at the University of Wisconsin School of Medicine. 4th year students had all participated in the core day. All students were invited to participate. Questions related to career goals, previous training in disaster or prehospital medicine, knowledge of basic disaster medicine, and willingness to participate in further training.

Results: There were 116 responses, 30 (20%) 4th years and 86 (50%) 1st years. Significantly more 1st years (20% compared to 3%) had had prior disaster training or experience as EMT/paramedics. As expected knowledge base among 4th years students was higher than 1st years with no clinical experience. But even so, correct responses varied from 60 to 90% (as opposed to 30-85% among 1st year students). 4th year students had reasonable confidence in their ability to participate in disasters, but this confidence had deteriorated in those who had taken core day training earlier in the year. There was universal agreement that disaster medicine should be taught in medical school (82%), but only 23% of 4th year and 34% of first year students expressed interest in taking a disaster medicine elective course.

Conclusions: This survey indicates that there is a need to teach disaster medicine to medical students and a one day curriculum may not be adequate. There is a high interest among medical students for disaster medicine training but unless it is incorporated into the curriculum, only a minority would be willing to pursue this training.

P424

Disaster Medicine

AN INVESTIGATION OF EPIDEMIOLOGICAL FACTORS INFLUENCING CLINICAL OUTCOMES IN GLOBAL FIRE AND EXPLOSIVE DISASTERS FROM 1940 TO 2012

M Debacker (1), JS Harrison (2)

1. Research Group on Emergency, Free University Brussels, London, United Kingdom
2. Emergency department, University College London Hospital, London, United Kingdom

Corresponding author: Mr Harrison James (drjamesharrison@hotmail.com)

Key-words: Burns ; Explosions ; Epidemiology

Introduction

Fire and explosive disasters result in two different types of injury profile – trauma and burns. Disasters inflict an unexpected and significant demand in healthcare resources and although they rarely occur, over recent history there have been sufficient reported occurrences to group and analyse these events together. The purpose of this investigation is to assess the factors influencing clinical outcomes from such disasters

Methods

A MEDLINE search was conducted in English searching for articles from 1966 to 2011 using the terms “disaster”, “burn”, “explosion”, “fire”, “terrorist”, “bomb”, “bombing”, “mass casualty” or “emergency medical services”. Reference lists were searched for relevant articles. Established Disaster Databases were also interrogated to identify events for inclusion. Manual searching using Google was performed to find non-indexed literature such as such as news reports and incident investigations. The following outcome measures were collected: The Medical Severity Factor (T1&T2/T3 victims), Immediate Mortality Rate (on-scene deaths/number of injured and dead victims) and In-Hospital Mortality Rate (In-Hospital deaths/hospital admissions). The Human Development Index Score was used to indicate country development, and although the scores are based on 2011 data, it is assumed that the relative scores have not changed significantly over the period of study.

Exclusion Criteria

Each report had to meet the following criteria: (1) the event occurred after 1940, (2) the event resulted in more than nine injured victims and the spread of injury severity is reported; (3) the primary cause of the event is identifiable as a fire or an explosion causing injury and is not an Act of War; (4) an author or publisher is identifiable; (5) the report is not subsequently discredited. In this case the correction was considered if it satisfied the previous four criteria

Results

The MSF, IMR, IHMR for Explosive Disasters are not correlated with either the year of the event or the HDI score of the country involved. Increasing numbers of total dead and severely injured are associated with increased Immediate Mortality ($R_s = 0.491$, $p < 0.0001$).

The MSF for Fire Disasters is not correlated with the year of the event or the HDI score of the country involved. However countries with a lower HDI score are associated with an increased IMR ($R_s = 0.288$, $p = 0.03$), irrespective of the date of event. As with explosions, increasing numbers of total dead and severely injured are associated with increased Immediate Mortality ($R_s = 0.372$, $p = 0.004$). Where there are a greater number of hospital admissions, the IHMR is increased ($R_s = 0.386$, $p = 0.02$), although the IHMR is not seen to vary with HDI score or change over time.

Conclusion

This analysis suggests that whilst the spread of injury (MSF) in surviving victims resulting from a fire or explosive disaster is

constant over time and unaffected by country development, the IMR for burn disasters is higher where development is lower. This association is not seen in explosive disasters - perhaps the ability to deliver life saving interventions to a trauma victim is constant across the world whereas the equivalent interventions in burn victims require a higher degree of medical resource. The IMR is also increased where the number of severely injured and dead victims is increased, reflecting a greater strain on resources. Similarly, this strain on resources may also explain the increased IHMR seen when the number of hospital admissions increases, although this is only observed in burn disasters, perhaps reflecting the limited amount of burn care capacity compared the that of trauma care. Of note, IHMR is unchanged over time or with HDI score which may be explained by changes in on-scene triage decisions where resources are limited; certainly the association of increased IMR in less developed countries supports this.

In general, the strengths of association, where found to be statistically significant, are relatively weak which suggests that these outcome measures are influenced by other factors not measured here: primarily, the nature of the event itself. Given that of all the outcome measures, only the IMR and IHMR for fires are influenced by the year of the event on the HDI score of the country where the event has occurred, more detailed sub group analysis of similar events occurring at different times and places may yield valid conclusions.

P425

Disaster Medicine

CRITICAL EVALUATION OF 2011 SOMALIA EMERGENCY HUMANITARIAN ACTION WEEKLY REPORTS

A Hamedanizadeh

European Humanitarian and Development Impact, Drammen, Norway

Corresponding author: Mr Hamedanizadeh AmirKambiz (akh@edmm.org)

Key-words: Critical evaluation ; World Health Organization ; emergency humanitarian action weekly reports

Introduction:

World Health Organization Somalia (WHO) has been publishing Emergency Humanitarian Action weekly highlight or Somalia emergency health update. WHO has a coordination role to collect data from health actors in Somalia, analysis and publish it. The reports are important part of humanitarian health interventions as it provides baseline data for further interventions, resource mobilization and delivery of health services to the affected population. Due to humanitarian context constrains (e.g access limitation, and urgency to respond) the accuracy and reliability of the provided information can be compromised.

Objectives:

This study examines the validity and reliability of information, its presentation.

Materials and Methods:

EHAWR reports that published on WHO website during 2011 are gathered. The reliability and accuracy of the content examined against epidemiological information (burden of disease in the area, communicable disease outbreak patterns) and health service utilization (number of health service per time and provider unites, estimation of health service needs of population per time unit).

Results:

There are misrepresentations of information existed in the reports, which leads to low impact health interventions, with high resource wastage and more focus on the short term activities.

Correction / adjustment of existing of collected data provide crucial information, which allows identification of shortage of health

services, and adaptation of strategic approaches, to improve health service delivery in Somalia.

Conclusion:

There is a need for a critical appraisal methodology for health service delivery reports.

P426

Disaster Medicine

DISASTER EXERCISES IN A HOSPITAL IN AN ISLAND REGION- ARE WE READY?

PEREIRA, IRENE, MD; MSC EMDM

DEPART. OF ANAESTHESIOLOGY

HOSPITAL DO DIVINO ESPIRITO SANTO DE PONTA

DELGADA, EPE

AZORES, PORTUGAL

I Pereira

Department of Anaesthesiology, Hospital do Divino Espirito Santo de Ponta Delgada, Ponta Delgada, Portugal

Corresponding author: Mme Pereira Irene (pereira.irene@gmail.com)

Key-words: hospital disaster exercises ; insular ; preparedness

Introduction

Hospital disaster exercises are considered as a mandatory measure for hospital disaster preparedness. Several studies have been published highlighting limitations and shortcomings in design and assessment methods of disaster exercises and drills. The main objective of this study is to analyse official reports of disaster exercises and drills carried out in a single hospital located in an ultra-peripheral, insular region.

Methods

Official reports of all hospital disaster exercises and drills performed during the last decade were reviewed and analysed. Based on relevant specific literature published, critical indicators of the hospital disaster response were identified and assessed.

Results

Most of the exercises targeted multiple sectors of hospital staff. Improvements in design and predefinition of criteria for further evaluation were noted in those hospital disaster exercises performed more recently. Several major weaknesses and strengths were identified.

Conclusions

Continuous evaluation of this type of professional training is essential to obtain a more effective and efficient hospital response. Particular considerations should be made in case of exercises carried out in single hospitals located in insular, remote regions. Furthermore, there is a need for further studies in this area.

P427

Disease & Injury Prevention

ACUTE RHABDOMYOLYSIS IN A MOROCCAN MEDICAL ICU: INVENTORY AND EVOLUTION

H EZZOUINE, A BENSLAMA, B CHARRA, S MOTAOUAKKIL

Medical intensive care unit, university teaching hospital Ibn Rushd, CASABLANCA, Morocco

Corresponding author: Mme Ezzouine Hanane (ezzouinehanane@yahoo.fr)

Key-words: acute rhabdomyolysis ; moroccan medical ICU ; inventory and diseases

Introduction

Non traumatic rhabdomyolysis is multifactorial. Pathologies associated with these

illnesses are essentially drug poisoning, metabolic disorders, malignant

hyperthermia, infectious diseases ..

The aim of our study was to evaluate the prevalence, etiological and possible

prognostic implications of the occurrence of rhabdomyolysis in intensive care

Materials and methods

We conducted a prospective single-center study in the medical The parameters

analyzed were demographic (age, sex, age), the condition of admission, hospital

stay, renal function (urea, creatinine), the rate of creatine phosphokinase (CPK),

mechanical ventilation.

Data analysis was done by the chi2 test (Variable (P) significant if p < 0.001)

Results

40 patients were included in the study. The average age is 43 years. The sex ratio M / F: 0.8. Reasons for admission were neurological (35%), an

infectious disease (32.5%), respiratory (12.5%), toxic (5%), metabolic disorder (5%)

and cardiac (2.5%). prognostic factors identified are represented in the table.

Discussion/Conclusion

The acute rhabdomyolysis is a frequent complication in intensive care unit. This is an

indicator of organ failure. In Medical intensive care unit, the prognostic factors

identified in our study are essentially the length of hospitalization and ventilation.

Medical conditions are essentially purveyors of rhabdomyolysis and neurological

diseases (35% and 32.5%). Hence the need for biological monitoring of this

parameter and a suitable support consistent.

P428

Disease & Injury Prevention

ACCIDENTAL NEEDLE STICKS OF HEALTH WORKERS IN EMERGENCY DEPARTMENT IN XATIVA-VALENCIA, SPAIN

A Beltrán Sánchez (1), J Millan Soria (2), JC Montalva Barra (3), C Oliver Martinez (4), FJ Salvador Suarez (5), CJ Tellez-Castillo (2), A Torregrosa Sanchis (2)

1. Emergencies department, Hospital Lluís Alcanyis, Xativa (Valencia), Spain

2. Emergency department, Hospital Lluís Alcanyis, Xativa (Valencia), Spain

3. Emergency department, Hospital Lluís Alcanyis, Xativa (Valencia), Spain

4. Medicine Preventive, Hospital Lluís Alcanyis, Xativa (Valencia), Spain

5. Emergencies Department, Hospital Lluís Alcanyis, Xativa (Valencia), Spain

Corresponding author: Mr Montalva Barra Juan Carlos (JcMontalva@comv.es)

Key-words: ACCIDENTAL NEEDLE STICKS ; EMERGENCY DEPARTMENT ; Risk of injury or exposure to blood

Introduction: After creation of the network European Biosafety with the aim of eliminating accidental needle sticks in the hospital and ensure maximum compliance and coverage for all health workers affected. It has been proposed to evaluate the risk in all situations where there is potential risk of injury or exposure to blood or other material that may be infectious.

Objective: To describe cases of accidental needle sticks in Emergency Department of the Lluís Alcanyis Hospital Xàtiva-Valencia, Spain from 2008-2011.

Methodology: We analyzed cases of accidental needle sticks between the years 2008-2011 in the emergency department of our hospital. In each case we described: sex, index case, occupation field of the workers, and anatomical area of the needle sticks and puncture technique in which the accident occurred

Results: 32 cases of accidental needle sticks: 6 cases in 2008, 10 cases in 2009, 10 cases in 2010 and 6 cases in 2011. Of these cases were 81,2 % women and 18.2 % men. Of these, 93.75% the index case was known. The percentage of needle stick injuries in the health workers was: 37.5% nurses, assistant nurses 25%, physicians 12.5% and students of nursing practice 12.5%. The anatomical area with greater exposure to needle stick injuries was: index finger 37.5% followed by the thumb by 25%. The technique performs the highest percentage in that occurred was the venipuncture procedure with a 50%, followed by collection of materials in a 25%

Conclusions: In the present study we observed a decrease in cases of accidental needle sticks in our emergency department during the years studied. Were more frequent accidental sticks on women staff, being known index case. The categories experienced professionals who have a higher percentage of exposures were: nursing. The area with highest number of exposition was index finger. In one case was given chemoprophylaxis with Hepatitis B vaccine. The venous extraction technique was the technique most at risk of exposure. After control of accidental needle stick cases, were not found case of infection

P429

Disease & Injury Prevention

REVIEW ABOUT OSTEOPOROTIC FRACTURES AND PREDISPOSING FACTORS IN THE HOSPITAL LLUIS ALCANYIS XATIVA. SPAIN

I manclus montoya (1), o martinez ferris (2), J Millan Soria (3), j minguez platero (4), JC Montalva Barra (5), CJ Tellez-Castillo (3), A Torregrosa Sanchis (3), J Esplugues Marrahi (6)

1. emergency department, csi sueca- h de la ribera, alzira, Spain
2. emergency department, csi alzira- h de la ribera, alzira, Spain
3. Emergency department, Hospital Lluís Alcanyis, Xativa (Valencia), Spain
4. emergency department, h de la ribera, alzira, Spain
5. Emergency department, Hospital Lluís Alcanyis, Xativa (Valencia), Spain
6. Emergency department, Hospital Lluís Alcanyis - Xativa, xativa, Spain

Corresponding author: Mr Montalva Barra Juan Carlos (JcMontalva@comv.es)

Key-words: Osteoporosis ; predisposing factors fracture ; drugs interaction

Osteoporotic fracture is related to the degree of osteoporosis, age and side effects of some drugs.

The aim of this study is to demonstrate the existence of some additional factors that determine the type of fracture and subsequent treatment of the patient after surgery by the trauma service. The specific objectives:

- 1 - osteoporotic fractures treated in our hospital in a year
- 2 - type of fracture and surgical treatment
- 3 - initial treatments preoperative and postoperative changes in the treatment
- 4 - ratio of concomitant chronic diseases as determinants of such fractures

Osteoporosis affects many women (can be considered disease of women) due to faster bone loss (2-4% annually over the 5 to 10 years post-menopausal), although it must be said that man is also age- dependent fracture causing about 10 years after women.

Different studies report that at age 90 to 17% of men have had hip fracture compared with 32% of women. According to the National Osteoporosis Foundation (NOT) has risen from 29.6 million women over 50 years osteoposis or low bone mass has spent in 2002 to 35.1 million in 2010 and future prospect in 2020 of nearly 41 million women in the world.

It is important to mention the personal situation, psychological, familiarly and social fractures associated or related to osteoporosis. It also represents a major cause of age-related disability which means chronic diseases.

Osteoporosis is defined as a metabolic disease where there is a decrease in bone mass and deterioration of the micro-architecture of the bone tissue and consequently a loss of connectivity causing a decrease in resistance, increase in bone fragility and susceptibility to increased fracture (WHO expert Panel, NIH IAMA 2001 and 2001).

Spain has estimated the direct cost of each hip fracture is about 6000 € and the impact it makes to hospitals in the Valencian community treatment of hip fractures (3235 fractures in 2005) led to a cost of 11 million euros.

Hospitalization is a measure of morbidity and cost of osteoporotic fracture. The average stay for hip fracture ranges from 8 to 25 days extending up to 56 days if done early rehabilitation treatment in hospital admission.

MATERIALS AND METHOD

This is a retrospective descriptive study in the emergency department of a hospital in Valencia, Spain. This hospital is located in Xativa, the patients were studied were all those attended the emergency unit with a diagnosis of osteoporosis-related fracture.

Alpha

Are considered candidates for inclusion in the study, majors of 50 years, of both sexes, diagnosed of fracture and osteoporosis like secondary factor.

We opted to collect fractures presenting to emergency department hospital from 1 January to 31 August 2011. Was analyzed both the type of osteoporotic fracture, such as type of treatment followed by traumatology as the time of hospitalization of the patient and the treatment of both the input and discharge of the patient.

The Hospital Lluís Alcanyis is located in the Costera with a core population of 210000 inhabitants with population pyramid of about 30% of population over age 50, female-dominated mostly from the 70. The hospital has 267 inpatient beds in addition to more than 12 observation in the emergency room and 10 more in short stay. Met in 2011 about 60,500 emergency.

They also consider concomitant chronic pathologies and previous treatments of patients in order to relate the data later. For this was used GAYA system health service of the Valencia region of medication for generalized electron prescripcion through ABUCASIS Alpha

and so the additional information obtained regarding the treatment of patients.

Statistical analysis of the data once collected have been analyzed using SPSS for Windows version 15.0 as a measure of association used the value of the odds ratio with confidence interval 95%

RESULTS

Descriptive analysis:

Of a sample of 25 patients with mean age of 85.64 years, of which 23 (92%) are women and 2 (8%) men

100% of patients have been diagnosed, prior to the fracture, densitometry and FRAX osteoporosis positive with this diagnosis

We analyzed also other chronic diseases related to principal diagnosis as arterial hypertension, diabetes mellitus and osteoarthritis. With results: 76% with hypertension (19 patients) 12% diabetic (3 patients) and 12% of both pathologies associated (3 women, no man).

Regarding the type of fracture produced: 100% (25 patients) was at hip level, where 52% of the left side (13 hip fractures) and all other rights. It adds one wrist fracture hip associated with a woman.

The number of patients admitted and operated on was 84% (21 patients) which was performed in 100% of men (2 patients) and in 92% of women (19 patients). Of these interventions in the 100% use a technique similar blade plate anchor.

The stay in the ward was in ranges between 3 and 15 days with average stay of 7.3 days. Discharged in 92% of cases with 2 deaths post-surgery

As for treatments prior to the fracture, noted:

Only 44% of patients had been treated with bisphosphonates, vitamin D and after surgery maintained the bisphosphonates for 36% of patients

Taking prior to the fracture, calcium in their various preparations for 44% of patients post-surgery while with calcium were 96% of patients.

Relate that 16% of the patients consumed oral corticosteroids, anticoagulants in 36%, proton pump inhibitors (omeprazole, lansoprazole or pantoprazole) in 64%, anxiolytics or antidepressants in 32% of cases and antidyslipidemics (simvastatin, atorvastatin) in 40% of patients.

DISCUSSION

According to the results determined in this study can prove a direct relationship of osteoporosis and related fracture with age in the cases studied saw an under-diagnosed and under treatment monitoring of osteoporosis. In addition it holds that the most common fracture in our population is subcapital hip fracture and surgical treatment is effective in most patients regardless of age. Also the average age of the intervention is high and results in the continuum of patient rehabilitation and improvement promotes the patient's life.

There is moreover a direct relationship of polypharmacy, and more specifically as could be seen in previously published studies, a relationship of osteoporotic fractures with oral glucocorticoids, inhibitors of proton pump, oral anticoagulants and statins.

P430

Disease & Injury Prevention

HIGH RISK PATIENTS COLONIZED WITH MRSA IN THE EMERGENCY ROOM, XÀTIVA (VALENCIA), SPAIN.

D Gonzalez-Granda (1), M Martinez Lugo (2), J Millan Soria (3), JC Montalva Barra (4), CJ Tellez-Castillo (3), M Valiente (2), C Oliver Martinez (5)

1. Microbiology Laboratory, Hospital Lluís Alcanyis, Xativa (Valencia), Spain
2. Emergency department, Hospital Lluís Alcanyis, Xativa (Valencia), Spain
3. Emergency department, Hospital Lluís Alcanyis, Xativa (Valencia), Spain
4. Emergency department, Hospital Lluís Alcanyis, Xativa (Valencia), Spain
5. Medicine Preventive, Hospital Lluís Alcanyis, Xativa (Valencia), Spain

Corresponding author: Mr Montalva Barra Juan Carlos (JcMontalva@comv.es)

Key-words: Staphylococcus aureus (MRSA) colonization ; Infection Control ; MRSA

Introduction: Recently it has documented a high MRSA colonization in patients admitted from emergency room, and a higher frequency of MRSA infections in the community.

Objectives: determine the percentage of meticillin-resistant Staphylococcus aureus (MRSA) colonization in high risk patients in Emergency room.

Material and Methods: We conducted a prospective survey February to May 2011 to determine the prevalence of MRSA among patients admitted to the emergency room/observation unit at hospital in Xàtiva (Valencia), Spain with specific comorbidity risk factors such as taking antibiotics prior, recent hospitalization,

immunosuppression, morbid obesity. Patients' data was collected using a previously-prepared questionnaire. The following data were collected: age, sex, personal history, prior antibiotic therapy, previous hospital admissions, origin (home, residence for the elderly, other hospital). The Medical doctors used moistened swabs (COPAN Transystems®) to collect material from patients' anterior nares. The swabs were inoculated directly onto BBL™ chromagar® MRSA II (BD). All isolates of Staphylococcus were identified on the basis of colony characteristics, a positive catalase slide test and coagulase positivity Slidex® Staph-Kit. (bioMérieux). If no growth was observed on the plate or in the broth after 48 hours, it was considered negative.

Results: a total of 100 patients at high risk of MRSA colonization were studied, 17 isolates were positive for MRSA. Of the positive cases were 41,2 % women and 58,8 % men. The mean age of patients was 69,82 years. The 35, 3% of cases had prior antibiotic therapy, 23,5 % previous hospital admissions, the patients came from home 64,7% and 35,3 % residence of the elderly. The 11, 7% cases were admitted to hospital.

Conclusions: The prevalence rate of colonization in patients with a high risk of MRSA colonization was 17 %. Active surveillance cultures should be considered in patients at high risk for MRSA colonization in patients admitted from emergency room.

P431

Disease & Injury Prevention

EFFECTS OF TACROLIMUS ON ENDOTHELIN-1, MELATONIN AND HEAT SHOCK PROTEIN-70 LEVELS IN EXPERIMENTAL BRAIN ISCHEMIA

O Guler (1), M Yildiz (2), F Dagli (3), A Kavakli (4), B Ustundag (5), M Guler (6), MN Bozdemir (7), CF Demir (8)

1. Department of Emergency Medicine, Adiyaman state hospital, Adiyaman, Turkey
2. Department of Emergency Medicine, Firat University, School of Medicine, Elazığ, Turkey
3. Department of Pathology, Firat University, School of Medicine, Elazığ, Turkey
4. Department of Anatomy, Firat University, School of Medicine, Elazığ, Turkey
5. Department of Biochemistry, Firat University, School of Medicine, Elazığ, Turkey
6. Department of Ophthalmology, Adiyaman University, School of Medicine Medical Faculty, Adiyaman, Turkey
7. Emergency Medicine, Antalya Training and Research Hospital, Antalya, Turkey
8. Department of Neurology, Firat University, School of Medicine, Elazığ, Turkey

Corresponding author: Mr Yildiz Mustafa (aciltip@gmail.com)

Key-words: Endothelin-1 ; Heat Shock Protein-70 ; Ischemic stroke

Stroke is the third major cause of death in the industrialized countries after cardiovascular disease and cancer. Despite the advents of the treatment of stroke it is still one of the major cause of disability worldwide. Neuroprotection may be an alternative strategy for the treatment of ischemic stroke and aims to limit the extent of irreversible damage that occurs to the neuronal cells surrounding the site of a stroke. Immunosuppressant Tacrolimus is neuroprotective in experimental models of cerebral ischemia, but the molecular mechanisms underlying this neuroprotection remain unknown. The aim of this study is to investigate the effects of Tacrolimus on plasma endothelin-1 and melatonin and brain Hsp-70 levels in experimental ischemic stroke

Three groups each one included seven Wistar albino rats were formed. Animals in group 2 (sham) and group 3 (study) were anesthetized and bilateral common carotid arteries were occluded with aneurysm clips for 10 minutes. Animals in group 1 (control) were not occluded and were not given any treatment. Rats in group 2 were received 1 ml saline and in group 3 were received 1 mg/kg Tacrolimus intraperitoneally. Injections were applied 1 hour before ischemia and at 6,24,48 and 72 th hours post ischemia. All

the animals were sacrificed on the 4th day and plasmas are obtained and brains were excised. Plasma endothelin-1 and melatonin levels were measured. Brain Hsp-70 immunostaining and neuron cell death were scored semiquantitatively.

The plasma endothelin-1 levels in group 3 was higher than group 2 and group 1, but was similar in group 1 and group 2. In group 1 plasma melatonin levels was lesser than group 2 and group 3. In group 2 plasma melatonin levels was higher than group 3. The mean neuron death in group 3 was lesser than in group 2. The mean Hsp-70 immunostaining intensity in group 2 was greater than group 3 and group 1. In group 1 the mean Hsp-70 immunostaining intensity was lesser than group 3.

Tacrolimus administration in ischemic stroke reduces plasma melatonin and brain Hsp-70 levels and increases plasma endothelin-1 levels and has neuroprotective effect.

P432

Disease & Injury Prevention

ASSESSMENT OF SECONDARY INSULTS (SI) IN HEAD INJURY (HI)

S OTHMANI (1), N MEGHAIETH (1), K MAJED (2), M BRAMLI (1), CH HAMOUDA (2), N BORSALI-FALFOUL (2)

1. emergency department,, la Rabta hospital, tunis, Tunisia
2. emergency department,, la Rabta hospital, Tunis, Tunisia

Corresponding author: Mme Borsali Falfoul Nebiha (nebiha.borsali@yahoo.fr)

Key-words: head trauma ; emergency ; secondary insults

OBJETIVES : Frequency evaluation of the secondary insults in head injury patients at arrival on Emergency Department (ED) and the early prognosis value.

DESIGN : A 3 years (January 1998 - December 2000) retrospective study.

SETTING : All the patients admitted to the ED with head injury (HI).

RESULTS : 824 patients with HI are admitted (38% of the traumatic patients). Mean age 37.2 ± 17.8 , Sex-Ratio 3.7, traffic accident is the etiologia of 73%, 37% are pedestrian. 21% of the patients have isolated HI and 38% have concomitant potentially life-threatening injuries. 184 patients (22%) have only one or many secondary insults (table).

SI	n	%	Mortality	Mortality in group without this SI	€*
PA syst \leq 90 mmHg	83	10.1	20 (24)	24 (3.2)	7.77
PA syst \geq 160 mmHg	31	3.8	2 (6)	42 (5.3)	0,16
PaO ₂ \leq 60 mmHg	14	1.7	4 (29)	40 (4.9)	3.86
PaCO ₂ \geq 45 mmHg	16	1.9	4 (25)	40 (4.9)	3.44
PaCO ₂ \leq 28 mmHG	12	1.5	3 (25)	41 (5)	2.97
Hb \leq 10g/dl	23	2.8	9 (39)	35 (4.3)	7.10
Glucose \geq 10.2 mmol/l	44	5.3	10(23)	34 (4.3)	5.22
Temperature $>$ 38°C	18	2.2	4 (22)	40 (4.9)	3.10

* If € \geq 2 : statistical difference is significant.

CONCLUSION : SI are frequent. All SI studied, except hypertension, increase significantly early mortality. Treatment of these SI during transport from the scene at the hospital can be an alternative to improve survival.

P433

Disease & Injury Prevention

THE EFFECT OF COMPREHENSIVE ANTIBIOTIC PROPHYLAXIS AND SPECIAL DRESSING FOLLOW UP ON POSTOPERATIVE INFECTION RATES OF NAIL INGROWING SURGERY AT SOLDIERS

A Atilla (1), U Savaşçı (2), U Kaldırım (3), O Coşkun (4)

1. Department of Orthopedia and Traumatology, Sarikamis Military Hospital, Kars, Turkey
2. Department of Infectious Diseases and Clinical Microbiology, Sarikamis Military Hospital, Kars, Turkey
3. Department of Emergency Medicine, Gülhane Military Medical School, Ankara, Turkey
4. Infectious Diseases and Clinical Microbiology, Gülhane Military Medical School, Ankara, Turkey

Corresponding author: Mme Savasci Umit (drumitsavasci@gmail.com)

Key-words: Nail Ingrowing Surgery ; Antibiotic Prophylaxis ; Special Dressing

Purpose:

Nail ingrowing is a common problem for the recruits and soldiers who are under a comprehensive training and sport activities within hard uncomfortable boots. Also postoperative infection of matrixectomy wounds is another serious problem because of the heavy bacterial and fungal load of this site. We assessed the postoperative wound infections with a comprehensive antibiotic prophylaxis and special dressing after partial matrixectomy of nail ingrowing at soldiers

Material method:

The postoperative infection rates in 64 nails with 72 matrixectomy site of 52 soldiers were reviewed by orthopedics, infection diseases and Emergency Medicine clinics in Sarikamis Military Hospital Kars-Turkey between December 2010 and January 2012. 8 (12.5%) nails which were diagnosed as paronischia were admitted oral ciprofloxacin 1gr per day for 3 days before the operation and 4 days after the operation. The ingrown nails which were classified as none infected were 56 (87.5%) nails. And the soldiers without infection were admitted 1 gram cephazoline-sodium intravenously 1 hour before the operation and 1gr ciprofloxacin per day for 3 days after the operation. All patients were applied betadine impregnated dressings just after the operation and at the first control in the second day of the operation.

Results:

One of the 8 (12.5%) nails which were infected before the operation was reinfected after the operation. Two of the 56 (3.5%) clean nails were infected after the operation. Both of these two infected groups were treated with lasted ciprofloxacin admission to 7 days and lasted betadine impregnated dressing. All wounds were healed after the protocol.

Conclusion:

Infected or non-infected nail ingrown are under high risk of postoperative infection after partial matrixectomy and instead of a clean wound protocol wide-ranging antibiotic prophylaxis protocol which except the wounds as infected seems to be effective for reducing postoperative infection rates of ingrown nails at soldiers.

P434

Disease & Injury Prevention

EARLY READMISSION TO THE EMERGENCY DEPARTMENT: CAUTION! THESE PATIENTS MAY DIE...

AC. Hocagil (1), F. Bildik (2), I. Kilicaslan (2), H. Hocagil (3), H. Karabulut (2), A. Keles (2), A. Demircan (2)

1. Emergency Department, Marmara University Faculty of Medicine, Istanbul, Turkey

2. Emergency Department, Gazi University Faculty of Medicine, Ankara, Turkey

3. Emergency Department, Kartal Training and Research Hospital, Istanbul, Turkey

Corresponding author: Mr Hocagil Abdullah Cüneyt (drhocagil@yahoo.com.tr)

Key-words: Emergency Department ; Early Readmission ; Reasons of Readmission

Background and Aim: Early readmission is defined as the admission of the patient to the emergency department within 72 hours after being discharged. The patients with early readmission increase the emergency department's workload and the healthcare costs. The aim of this study is to determine the demographic, sociological, and to clinical characteristics of the patients with early readmission, as well as the medical, the institutional and the individual the risk factors.

Materials and Methods: This is a two-stage study, consisting of retrospective cohort and telephone survey, conducted at Gazi University Hospital, Department of Emergency Medicine, in which the hospital information system was reviewed for the period between 01.06.2009 and 31.05.2010. Using the hospital records, the patients' complaints at the first admission and the readmission, admission and discharge times, comorbidities, interventions, diagnoses, vital signs, consultations, hospitalizations, and length of stay at the emergency department were determined. The complaints at the first admission and the readmission were classified as the same, different and related. The patients with readmission, according to the hospital information system were surveyed by telephone; and 11 questions were asked, including the prescribing during the first admission, the given advice, prescription compliance, reason for the readmission, and the access to the outpatient services. The reasons of readmission were evaluated as the disease-, the patient-, the physician- and the system-related factors. For the statistical analysis, Chi square and Fisher exact tests were used. $P < 0.05$ was considered significant.

Results: According to the hospital information system, of the 46 800 adult patients, who admitted to the Emergency Department during the study period, 779 (1.66%) had readmitted. 350 patients were excluded from the study due to the lack of the records, not reaching the patient by phone and the refusal of the patient to participate in the study. A total of 429 patients were included. 51.7% of patients were male and 48.7% were female ($p = 0.469$). The percentage of university graduates was 30.8% ($p = 0.001$). The patients with a first admission of less than three hours had a higher rate of readmission (59.0%) ($p = 0.001$). When the vital signs of the patients at the first admission and at the readmission were compared, there was a statistically significant difference only in terms of oxygen saturation ($p = 0.03$). The most common complaints at the readmission were of the gastrointestinal tract (20%), the respiratory system (12.4%), and the genitourinary system (11.9%). The first two of the most common diagnosis in both hospital visits were renal colic (10.3% - 10.7%) and urticaria (7.9% - 7.1%), respectively. At the readmission, 47.1% of patients had the same, 24% had a related, and 28.4% received a different diagnosis ($p = 0.001$). Sixty-four (15.1%) patients were hospitalized at the readmission, 29 of them had disease-related, and 22 had physician-related reasons. Of all the included patients, 5 (1.2%) died at the Emergency Department. The reasons of readmission were underlying disease-related in 60.4%, physician-related in 20%,

patient-related in 12.1% and system-related in 7.5% of the patients ($P = 0.001$). The rate of readmission was significantly higher in patients with readmission due to the physician-related reasons, with a related diagnosis, and in the elderly ($p=0.001$).

Conclusion: As the reasons of the early readmissions, physician-, patient- and preventable factors of the system were determined. It should be noted that the patients with early readmissions form a high-risk group and the early readmissions can be a second chance for both patients and doctors.

P435

Education and training

OVERCOMING THE MYTHS THAT PREVENT GOOD MENTORING RELATIONSHIPS AND CAREER DEVELOPMENT

M Haughey (1), L Moreno-Walton (2)

1. Emergency Medicine, Jacobi Medical Center/ Albert Einstein College of Medicine, Bronx, United States

2. Emergency Medicine & Research Genetics, Louisiana State University Health Sciences Center, New Orleans, United States

Corresponding author: Mme Moreno-walton Lisa (DoctorMoreno@gmail.com)

Key-words: Mentoring ; Career development ; Academic advancement

Background: Mentorship is a valuable resource for career advancement and satisfaction. It is well established in the business, educational and legal literature that having a productive mentorship relationship has significant benefits for both the mentee and the mentor. The benefits of mentoring naturally extend to academic medicine. Mentorship has been shown to be one of the most influential factors in determining how medical students select their career paths. As Emergency Medicine has aged, we now have multiple generations of physicians practicing our specialty contemporaneously. We are in a position to truly benefit from the wisdom offered by those who would be mentors and the energy brought by those who would be mentored. Unfortunately, there are myths that create barriers to the establishment of as many effective mentoring relationships as we might wish to cultivate within our profession. In approaching these myths and discerning the truths that lie beneath them, we hope to make it easier for faculty, residents and medical students to benefit from the valuable commodity that good mentorship presents.

Methods: The authors designed two original workshops on mentoring, and collaborated with emergency medicine colleagues to present these workshops at the Council of Emergency Medicine Residency Directors (CORD) Academic Assembly and at the Society for Academic Emergency Medicine. This work is informed both by research done to prepare for the workshops and issues raised by workshop participants about the role of mentorship in career development.

Results: We address the following myths:

- 1-The career benefits of a mentoring relationship do not justify the significant amount of time required to develop that relationship.
- 2-A mentor is the same as an advisor is the same as a role model.
- 3-All of one's mentoring needs should be met by a single mentor.
- 4-One should have the same mentor for one's entire career.
- 5-The mentor should do most of the talking.
- 6-The mentee should wait to be approached by the mentor.
- 7-"I don't know what I want. It's my mentor's job to tell me."
- 8-The mentor has to be an Emergency Physician to "get it", or must be from the mentee's academic institution.
- 9-My mentor must be the most senior person I can find.
- 10-Mentors should be the same (gender, race, specialty, academic institution, religion, political persuasion...) as their mentees.

Conclusion:

Good mentorship has been shown to have important, measurable benefits for the mentee, with professional advancement being a demonstrated metric of improvement. The “softer” signs of professional success- career satisfaction, learning the “hidden curriculum of professionalism”, work/ life balance and reduction in stress can all be improved by having a supportive mentor. Given the benefits of mentorship, it behooves all Emergency Physicians who are interested in achieving a successful and satisfying career to move beyond the myths and to establish and maintain supportive mentoring relationships.

P436

Education and training

THE CURRENT STATE OF WELLNESS OF EMERGENCY MEDICINE RESIDENTS IN THE US

G Buller (1), JF Engle (1), L Moreno-Walton (2), A Nakamoto (1)

1. Emergency Medicine, Louisiana State University Health Sciences Center, New Orleans, United States
2. Emergency Medicine & Research Genetics, Louisiana State University Health Sciences Center, New Orleans, United States

Corresponding author: Mme Moreno-walton Lisa (DoctorMoreno@gmail.com)

Key-words: Post graduate education ; Residents ; Wellbeing

BACKGROUND: The American College of Emergency Physicians policy statement says, “The Emergency Physician’s well being is of fundamental importance to success and longevity in their field.” The concept of physician wellness acknowledges that multiple stressors related to the practice of medicine threaten this balance. Our study gathers information from residents in certified EM programs in the United States (US) in order to determine how residents feel about their own wellness.

METHODS: A comprehensive survey consisting of 46 questions was developed based on current literature on resident well-being. Using Survey Monkey TM, this survey was administered to current US EM residents as a convenience sample via email and in person. A total of 194 surveys were collected and autonomously entered into a data collection Excel spreadsheet by Survey Monkey Software.

RESULTS: 31.4% felt that patient care was compromised due to lack of sleep. 57.2% did not believe that decreasing work time would affect education. 34.0% need alcohol to relax. For those in significant relationships, 39.2% did not feel they had enough time to maintain the relationship and 48.4% feel the relationship has suffered. 71.3% know someone who was divorced due to being a resident. 61.0% of residents do not have time to maintain friendships. 58.9% of those with children do not have enough time to spend with them. An alarming 59.7% feel depressed and 52.1% are lonely.

CONCLUSIONS: Residency Review Committee requirements for resident work hours have been aimed at improving overall resident wellness which in turn should produce more productive, professional physicians. From the data collected, we can see that there remains work to be done for this goal to be realized. A larger study encompassing a larger population of training emergency medicine physicians should be performed to determine if these trends are present in the overall resident population.

P437

Education and training

AN INTERACTIVE, LEARNER DRIVEN, FACULTY GUIDED CURRICULUM TO TEACH PROFESSIONALISM TO RESIDENTS

JA Slick (1), A Pizza (1), L Moreno-Walton (2)

1. Emergency Medicine, Louisiana State University Health Sciences Center, New Orleans, United States
2. Emergency Medicine & Research Genetics, Louisiana State University Health Sciences Center, New Orleans, United States

Corresponding author: Mme Moreno-walton Lisa (DoctorMoreno@gmail.com)

Key-words: Graduate medical education ; Professionalism ; Interactive learning

The core competencies of professionalism and interpersonal and communication skills (PICS) have proven the most difficult to teach, measure and evaluate. One critical measure of success in clinical practice is patient satisfaction (PS), which reflects the degree to which these two core competencies have been successfully mastered. PS surveys (PSS) are increasingly implemented in many community EDs, and ABEM now requires documentation of a PICS activity as part of the assessment of practice performance component of continuous certification. PSS are recommended as an assessment tool for demonstrating achievement in communication and professionalism.

Many residents are not concerned with PS as a training goal. Historically, PS in a public hospital setting has not been encouraged, measured or rewarded. Residents not adequately trained in PICS may be unprepared and may perform poorly on PSS when starting their careers.

Project Professionalism (PP) is a “resident friendly and resident approved” curriculum. Resident volunteers were solicited through an e-mail from the faculty advisor. Respondents were evenly distributed among the four years of residency. A PGY-4 developed a PSS administered at discharge, consisting of 6 questions on patients’ perception of care provided by their doctor. PP compiled and prioritized a list of PICS topics and developed them into workshops on roles and responsibilities, mutual respect for team members, communicating with patients and families, ethnic and cultural competency, social media and consultations, dealing with difficult people, multi-tasking, leadership, the resident as teacher, breaking bad news and the art of consultation. Through the workshops, residents have been able to teach and learn PICS. Through use of the PSS, residents have been able to identify areas that they would like to improve on, and have used members of the committee as liaisons to communicate this with faculty.

P438

Education and training

A SINGLE-SITE SURVEY INVESTIGATING PATIENT SATISFACTION OF CARE PROVIDED BY EMERGENCY MEDICINE (EM) RESIDENTS BEFORE AND AFTER DIDACTIC TRAINING IN PROFESSIONALISM.

A Pizza (1), JA Slick (1), L Moreno-Walton (2)

1. Emergency Medicine, Louisiana State University Health Sciences Center, New Orleans, United States
2. Emergency Medicine & Research Genetics, Louisiana State University Health Sciences Center, New Orleans, United States

Corresponding author: Mme Moreno-walton Lisa (DoctorMoreno@gmail.com)

Key-words: Graduate medical education ; Patient satisfaction ; Professionalism

Background: Press Ganey™ surveys have been implemented in many community emergency departments (ED) and residents may not be prepared for patient satisfaction scores early in their careers. To date, there have been no studies in the literature that prospectively evaluated residents' patient satisfaction scores.

Objectives: To investigate patient satisfaction of care provided by EM residents before and after didactic training in professionalism.

Methods: This is a single site ambispective cross sectional study conducted at a level 1 trauma center during the months of May through December 2011. A convenience sample included patients □ 18 years who were treated and discharged from the ED. Excluded patients were those admitted, prisoners, and those who declined to participate. Touchscreen Blackberry Playbooks were given to patients at the time of discharge by survey collectors who had not been involved in their care. 6 questions evaluating resident performance regarding patient care were displayed (physician greeting and courtesy, listening, comfort, discharge diagnosis, discharge instructions and overall performance). 310 surveys were collected pre-didactic professionalism training and residents were blinded to their performance scores. Following a didactic session on professionalism, 297 more surveys were collected and residents were able to view their performance scores.

Results: "Physician courtesy" improved from 91% to 95%. "Physician listening" improved from 91% to 95%. "Physician concern for comfort" improved from 90% to 94%. "Physician explaining the diagnosis" improved from 89% to 93%. "Physician explaining discharge instructions" improved from 88% to 93%. "Physician's overall performance" improved from 93% to 95%.

Conclusion: When residents receive didactic training in professionalism and are given feedback on their performance, they have higher patient satisfaction scores than when they have not trained in professionalism and are not able to view their scores.

P439

Education and training

THE HISTORY OF DISPARITY IN MEDICAL EDUCATION: WHY THE END OF RACISM MAY NOT MARK THE END OF INJUSTICE

SH Bowman (1), UA Ezenkwele (2), SL Heron (3), L Moreno-Walton (4)

1. Emergency Medicine, John Stroger Hospital, Chicago, United States
2. Emergency Medicine, Woodhull Medical and Mental Health Center, Brooklyn, United States
3. Emergency Medicine, Emory University, Atlanta, United States
4. Emergency Medicine & Research Genetics, Louisiana State University Health Sciences Center, New Orleans, United States

Corresponding author: Mme Moreno-walton Lisa (DoctorMoreno@gmail.com)

Key-words: Medical education ; Disparities ; Policy

Objectives: While a history of racism influenced medical education in the United States in the past, today even well-meaning medical school officials may be affected by an unconscious bias that could be the cause of the paucity of underrepresented minorities (URM) admitted to US medical schools and residency training programs. Implicit bias significantly impacts the kind of healthcare options that are offered to patients of color, and this result in poor healthcare outcomes for minority populations. Almost ten years ago, the Institute of Medicine (IOM) reported on the flagrant inequality of healthcare accorded to disparate populations in the US and mandated that, as part of the solution, physicians should be racially and ethnically reflective of the populations that they serve. These benchmarks have still not been achieved.

Methods: A comprehensive review of the medical education literature going back for about 250 years was undertaken. The history of diversity in medical training and the reasons for lack of diversity in medical training were reviewed. Expert consensus regarding possible causes for said lack of diversity was explored.

Results: IOM benchmarks have not been achieved. The physician population is not representative of the patient demographic, nor is this likely to happen soon, since the percentage of URM medical students is inconsistent with their percentage in the US population. While overt racism was the cause of the small number of minority physicians in the past, implicit bias appears to be the principle factor now, and it is present even in majority physicians and educators who abhor racism.

Implicit bias also contributes to inferior healthcare options offered to patients of color by many majority physicians.

Conclusion: Physicians and educators must understand the power of implicit bias. Awareness alone will make behavioral change possible. Appropriate mentoring and role modeling must be provided for URM medical students and residents to insure success in the face of implicit bias. Physicians must continue to challenge the limited healthcare choices offered to their patients based on language, housing, transportation and financial constraints.

P440

Education and training

IS THERE A GENDER BIAS IN DESCRIPTIONS OF APPLICANTS IN STANDARD LETTERS OF RECOMMENDATION FOR EMERGENCY MEDICINE RESIDENCIES?

R Merritt, V Tucci, P Cheung, K O'keefe, T Sanson

Emergency Medicine, University of South Florida, Tampa, FL, United States

Corresponding author: Mr Merritt Raymond (raymond.merritt4@gmail.com)

Key-words: gender bias ; residency selection ; reference letter

Objective:

An integral part of the application process, the Standard Letter of Recommendation (SLOR) distinguishes EM from other medical specialties. The SLOR was designed to objectively measure a student's qualifications and potential. Within the SLOR is a paragraph where evaluators can include comments with respect to the applicant. The potential exists for lapsing into the same habits and biases as seen in the traditional LOR. Anecdotal reports indicated that men were more likely to be described as intelligent and aggressive and women were more likely to be described as compassionate empathetic, team player, descriptions that conform to traditional gender roles. We expected that our analysis of the SLOR would confirm these reports.

Method:

We reviewed all applications to an allopathic Emergency Medicine residency program during the 2008-2009 year. Files without SLORs removed and composite SLORs, written by multiple physicians, were removed. The remaining 778 SLORs were reviewed and we developed 39 categories for comparison. These categories included all synonyms for a given term (e.g. intelligent=smart, bright, apt, genius, sharp, intellectual) and ranged from star quality to knowledge base to work ethic to various personality traits (e.g. enthusiasm, low maintenance). Pearson Chi-Square Test was used to analyze larger categories. Smaller categories less than $n < 5$, the Fisher Exact Test was used. All analyses were performed using SAS 9.2 by SAS Institute.

Results:

Star potential, intelligence, compassion/empathy, aggressive/assertive qualities, enthusiasm and team player showed no significant gender difference or bias. We uncovered three statistically significant differences. Those areas which differed amongst genders were in the area of work ethic, reserved personality, and solid achievement.

Conclusion:

Male applicants are more likely to be described as hardworking as their female colleagues. The perception of men as solid candidates may be neutral or favorable depending on how solid is interpreted by the residency program. Curiously, in a field known for its more proactive members, men were more likely to be perceived as shy or reserved. In the end, there does not seem to be an overall negative or positive bias but differences dependent on specific characterizes, which may be valued differently by various residency programs.

P442

Education and training

ULTRASONOGRAPHY COURSES OF EPAT

AS Girisgin (1), M Ergin (2), B Cander (1), F Koyuncu (3)

1. Emergency Medicine, NEU Meram Medical School, KONYA, Turkey
2. Emergency department, NEU Meram Medical School, KONYA, Turkey
3. Emergency Medicine, Mevlana University, KONYA, Turkey

Corresponding author: Mr Girisgin A. Sadik (sgirisgin@yahoo.com)

Key-words: Ultrasound ; Emergency Medicine ; Course

If someone wants you to dream an ideal imaging machine for emergency departments (ED), majority of its properties exist on ultrasonography (USG) machine. While USG makes its position clear in all fields of medicine, it has top location in emergency medicine. Whereas USG machine was said to be used only by radiologists in the past, it is now an obligation for emergency physicians to know how to use USG.

USG in ED have become widespread in the whole world for last 20 years. Education about how to use USG in ED is very important. As Emergency Physicians Association of Turkey (EPAT), we have organized 'Basic Ultrasonography Courses' to spread USG use in all EDs during last 7 years. We also established 'Emergency Imaging Study Group' in 2010. In addition, there have been lessons and discussions about USG and its importance in congress and symposiums organized by EPAT.

EPAT started USG courses in 2005 and 'Basic USG Courses' became more systematic and organized after 2007. Up to now, there have been 17 courses and 461 participants in different cities, 10 of which was workshop before National EPAT Congresses.

We have 4-6 trainers per each course, one of who has been an experienced radiologist and others are emergency physicians. Courses have one day - schedule including 4 theoretical and 4 practical lessons. Participants are divided into 4 groups for practical education which is done with healthy live models. Abdominal USG, cardiac USG, FAST and other fields of use are demonstrated and practiced by each participant. Each group is formed by 4 to 8 participants.

USG education should be included in education curriculum of emergency medicine in Turkey. EPAT has goal by Basic USG Courses to educate emergency physicians who haven't had any education and experience before. EPAT has recommended and encouraged to use USG in emergency medicine to cope with increasing numbers of patients at emergency departments.

P443

Education and training

THE FORMATION OF TRIAGE NURSE IN EMERGENCY DEPARTMENT: THE EXPERIENCE OF THE TRIAGE TRAINING GROUP OF PINEROLO

M. Civita (1), E. Mana (1), MC Sfasciamuro (1), C. Odetto (1), E. Laurita (1), A. Cosola (2), P. Esposito (2), V. Voi (3), C. Masoero (3), GA Cibinel (1)

1. Emergency Department, Ospedali Riuniti di Pinerolo, Pinerolo (TO), Italy
2. Formation Department, asl to 3. Ospedali Riuniti di Pinerolo, Pinerolo (TO), Italy
3. Pediatric Department, Ospedali Riuniti di Pinerolo, Pinerolo (TO), Italy

Corresponding author: Mr Laurita Emanuela (emanuela.laurita@alice.it)

Key-words: triage training ; nurse training ; emergency department

In an Italian Emergency Department (ED) overcrowding is one of the most priority problems: for this reason it is essential to distribute the available resources according to the clinical needs of patients. The triage programs are the only recognized as suitable for this task.

The aim of this study was to assess the short-and long-term effectiveness of a triage course for ED nurses, taking into account what was performed by the Triage Training Group of Pinerolo.

The course is divided into 3 days for a total of 24 hours, according to the Presidential Decree 43 -15 182 Piedmont Region of 23/03/2005. The program includes:

- Day I: The historical and theoretical aspects of triage, the triage process in adults and children;
- Day II: psychological aspects, in particular the management of relationship in the triage context;
- Day III: triage in trauma patients, work group and practical exercises, presentation of our protocols).

A peculiarity of the course is the enhancement of the relational aspect through an interactive methodology using the technique of role playing.

Between 2006 and 2010 were performed 19 editions of the course (270 nurses participated): 28.5% from our hospital, 70.4% from other hospitals in Piedmont and 1.1% from other regions.

METHODS

In the first phase of the study a questionnaire divided into 30 questions was handed out to participants during the course (245) to assess the organizational and scientific contents (evaluation scale: from poor to excellent). In the second phase of the study a second questionnaire was sent by e-mail to the same participants to assess the impact of long-term course on their professional activities (70 responses).

RESULTS

At the end of the course, 97% of participants assessed the training event as "relevant" or "very relevant", 96% of interviewed judged educational quality "good" or "excellent".

It has been highlighted the existence of multidisciplinary groups in most of the ED, sharing common guidelines in the activity of triage (55%). Furthermore, the service responsible sensitivity on the functions of nurse triage has increased only in the last period (in the first questionnaire: 28% "sensitive", 48% "fairly"; in the second questionnaire, 57% "sensitive", 26% "enough")

It is notable that the course, in the first period, provides additional tools to modify and improve one's own activity (48% "very useful", 40% "enough useful") with a significant deflection with the time (63% "sufficient", 19% "very").

Almost all respondents (73%) has neither attended any up-dating course on triage or on other issues.

CONCLUSION

The course for triage nurses is sufficiently effective in the short and long-term. Point of strength are the formation of heterogeneous classes with learners from different realities that encourage discussions and debates. It emerges the need of a continuous training, which can be a stimulus to share experiences and protocols into their professional reality and to maintain a high level of motivation.

P444 *Education and training*

EVALUATION OF THE IMPACT OF IMPLEMENTING COMPUTER-ASSISTED TEACHING SYSTEM FOR POSTGRADUATE YEAR-1 RESIDENCY TRAINING ON CLINICAL EFFICIENCY IN THE EMERGENCY DEPARTMENT

MT Chiu

Emergency department, Chang Gung Memorial Hospital, Taoyuan county, Taiwan

Corresponding author: Mr Chiu Ming Ta (miltonch777@yahoo.com.tw)

Key-words: Computer assisted teaching ; postgraduate year-1 ; residency training

Objectives:

Emergency department (ED) overcrowding has considerable impact on efficiency of clinical workflow. In order not only to accomplish the mission of teaching the postgraduate year-1 (PGY1) residents efficiently but also to maintain patient safety in EDs, we introduced the computer-assisted teaching system (CATS) in the EDs of a tertiary hospital in Taiwan. We further analyzed the impact of implementing CATS for PGY1 residency training on clinical efficiency in the ED.

Methods:

This was a retrospective observational study in a non-trauma urgent treatment area of the ED of a tertiary hospital. This area was for treating patients triaged as level III to V in the 5-level Taiwan triage and acuity scale. Physician A was in charge of the PGY1 resident training and part of the clinical workload (physician A1). If there was no PGY1 resident to be trained in the treatment area, physician A2 would be responsible for clinical workload only. The CATS aided the attending physicians in executing charting and confirming orders of PGY1 residents. Between October 2010 and January 2011, 54 PGY1 residents were enrolled. The number of patients treated by the physician A1 and A2 were recorded to compare the impact of CATS for PGY1 residents training in workload. PGY1 residents' satisfaction was evaluated in 5-point Likert scale. It included evaluation for teaching environment, clinical workload, comprehensive course content, practical perspective of the course, faculty professional knowledge and incorporation of courses.

Results:

The average number of daily patients triaged into the non-traumatic urgent area during the day (8am-4pm) and evening shifts (4pm-12pm) were 66.0 (SD: 12.9) and 70.8 (SD: 16.1), respectively. Among the patients presented during the day shift, 27.1 (SD: 7.5) patients were seen by the attending physician A1, compared to 29.3 (SD: 7.4) patients seen by the attending physician A2 ($p=0.114$). A similar result was observed during the evening shift with 32.8 (SD: 10.8) patients seen by the attending physician A1 and 31.7 (SD: 8.5) patients by the attending physician A2 ($p=0.528$). The average satisfaction scale was 4.6 (SD: 0.5) among the 505 PGY1 satisfaction records obtained from CATS.

Conclusions:

CATS is contributive to minimize the impact of PGY1 residency training on clinical workload in the urgent treatment area in the ED. We also observed high satisfaction level among PGY1 residents

for this teaching model. Implementing CATS in PGY1 residency training can maintain clinical efficiency without compromising satisfaction in ED.

P445 *Education and training*

SURVEY ON CLINICAL REASONING IN EMERGENCY MEDICINE FROM THE PERSPECTIVE OF MEDICAL STUDENTS

S Laribi (1), C Durand (2), M Boudaa (2), A Bakkouch (2), P Plaisance (3)

1. Emergency Department, APHP, Lariboisière Hospital and INSERM Unit 942, Paris, France, Paris, France

2. Emergency department, APHP, Lariboisière hospital, Paris, France, Paris, France

3. Emergency Department, APHP, Lariboisière hospital, Paris, France, Paris, France

Corresponding author: Mr Laribi Said (said.laribi@lrb.aphp.fr)

Key-words: Clinical reasoning ; Medical education ; Emergencies

Introduction: The learning of clinical reasoning is an alternative to traditional forms of teaching. Its objective is to enable students to find an appropriate diagnosis using clinical reasoning skills. The aim of our study is to evaluate the usefulness of these clinical reasoning sessions in our Emergency Department (ED).

Method: A survey was anonymously submitted to medical students who completed an internship in our ED during their fourth year of medical school. During their internship, students received one session of clinical reasoning daily for three months.

Results: Of the 85 students who answered the survey, 82 (96%) believe that clinical reasoning has a legitimate and important place in medical education. 81% favour the clinical reasoning sessions as teaching method for the optimal storage of medical information. Indeed, 81 (95%) students say that the clinical reasoning sessions have improved their medical knowledge with certainty. 70 students (83%) believe that clinical reasoning is of some help in the synthesis of diagnostic hypotheses.

Discussion: Students require new forms of teaching, forms with more interactivity in small groups. Learning clinical reasoning seems to be an alternative to traditional forms of teaching such as lectures.

Conclusion: This form of small group learning seems to have legitimacy in the teaching of emergency medicine.

P446 *Education and training*

AN EMERGENCY MEDICINE AND OTOLARYNGOLOGY COLLABORATION TO TEACH ADVANCED AIRWAY MANAGEMENT SKILLS TO EM RESIDENTS

V Zuzukin (3), MJ Haydel (1), L Moreno-Walton (2)

1. Emergency Medicine, Louisiana State University Health Sciences Center, New Orleans, United States

2. Emergency Medicine & Research Genetics, Louisiana State University Health Sciences Center, New Orleans, United States

3. Otolaryngology, private practice, New Orleans, United States

Corresponding author: Mme Moreno-walton Lisa (DoctorMoreno@gmail.com)

Key-words: resident education ; endoscopy ; collaborative teaching

BACKGROUND:

Emergency airway management is one of the principle skills in the skill set of emergency physicians. Today, this involves mastery of many adjuncts, including fiber optics. Most graduates of Emergency Medicine (EM) residency programs go on to community practice where subspecialty consultation, especially otolaryngology (ENT), is often not readily available. So the ability to perform upper airway endoscopy to evaluate angioedema, foreign bodies and inhalation injuries is valuable, if not essential.

OBJECTIVE: To establish collaboration between EM and ENT faculty for the purpose of teaching advanced airway skills to EM residents.

METHODS: Two years ago, we jointly developed an ENT rotation for our interns, during which their Anesthesia month is divided between Anesthesia days in the OR (2 per week) and ENT days (3 per week) in the ENT clinic where they perform endoscopies under supervision. They also have one ENT call per week during which they respond to all ENT consults in the ED under ENT faculty supervision. In addition to the intern rotation, we have two ENT lab days per year for all residents. We initially began by teaching cadaveric endoscopy, and currently have the residents perform supervised endoscopy on each other. We include both upper airway endoscopy and gastroscopy.

RESULTS: The rotation is extremely popular with the interns, who are much more confident than their more senior peers in endoscopy and airway management with adjuncts. The more senior residents have frequently elected to take the ENT rotation during their elective time, and have rated it highly. The twice yearly labs are also very well received and better attended than any other labs sponsored by the Program.

CONCLUSIONS: Much as ultrasound moved from the domain of radiologists to the skill set of EPs because of difficulty in obtaining adequate night and weekend radiology availability, we envision the possibility that airway evaluations for ENT emergencies can emerge as part of the EP skill set.

recognition that issues of empowerment, autonomy and access are integral to the delivery of patient centered emergency care. This staff education model includes a primary emphasis in areas of communication, patient rights, the culture of the workplace, power dynamics, cultural sensitivity and participation in multidisciplinary, collaborative partnerships with patients and emergency medicine clinicians. These experiences realistically demonstrate the complex range of skills required to identify and overcome barriers to the delivery of patient centered care. Exploration of case-based, problem solving tutorials illustrating ethical/legal dilemmas encountered in the emergency setting help to expand the scope and diversity of knowledge. Instruction in understanding the broad social forces which shape patterns of health, medicine, disease and illness, the implications of power inequities, new technology and scientific research, the legislative and regulatory systems relevant to emergency medicine reveal how such systems affect the healthcare of individuals and can drive institutional change. This education program has effectively improved patient/staff satisfaction and facilitated communication in a way which ensures a patient-centered dynamic the emergency department.

P448

Education and training

TEMPERATURE MEASUREMENT TECHNIQUES USED IN EMERGENCY ROOMS AND THEIR EFFICIENCY

U Savaşçı (1), YK Akpak (2), U Kaldırım (3), A Karakaş (4)

1. Department of Infectious Diseases and Clinical Microbiology, Sarıkamış Military Hospital, Kars, Turkey

2. Department of Obstetrics and Gynecology, Sarıkamış Military Hospital, Kars, Turkey

3. Department of Emergency Medicine, Gülhane Military Medical School, Ankara, Turkey

4. Department of Infectious Diseases and Clinical Microbiology, Gülhane Military Medical School, Ankara, Turkey

Corresponding author: Mr Akpak Yasam Kemal (yasamaster@gmail.com)

Key-words: Hyperthermia ; Temperature measurement techniques ; Mercurial and digital thermometers

Introduction

Taking a patient's temperature does not only constitute an important skill, which is often underestimated by the medical staff, but it also provides clinically significant findings. Measuring immunocompromised patients' temperature accurately is critical in evaluation of the patients' vital symptoms, in differential diagnosis of infectious diseases, in evaluation of the hospitalization process and using the temperature findings as criteria for this, and in correct use of antibiotics. Various methods have been developed for measuring body temperature. Normal body temperature is $36.8 \pm 0.4^\circ\text{C}$ in healthy individuals. Hypothalamus temperature is equal to the temperatures of aorta blood, eardrum and esophagus. Armpit temperature is 0.9°C less than the aorta blood temperature. This study has been designed in order to emphasize the importance of temperature measurement and its techniques.

Materials and methods:

This descriptive study was conducted on temperature measurement methods applied to 62 patients that arrived in the emergency room of Sarıkamış Military Hospital on the same day in January 2011. Body temperature of each patient was initially taken with palpation from patients' foreheads by the same medical personnel. Subsequently, their axillar temperatures were measured by a digital thermometer. Thirdly, a mercurial digital thermometer was used to take axillar temperatures. Finally, central measurement was conducted from the foreheads with the help of a digital thermometer. Measurements were recorded and statistically evaluated by SPSS 15.0 software program.

P447

Education and training

ARTICULATING AN ADVOCACY EDUCATION MODEL TO CREATE A PATIENT-CENTERED ENVIRONMENT IN THE EMERGENCY DEPARTMENT

C. Peterson

Emergency Department, New York-Presbyterian Hospital Weill Cornell Medical Center, New York, United States

Corresponding author: Melle Peterson Constance (cpeterso@nyp.org)

Key-words: patient advocacy ; patient satisfaction ; communication

In the US environment of healthcare system restructuring, emergency departments are challenged to adapt to changing models of care delivery while maintaining controlled processes which contribute to the achievement of measurable efficiencies. Economic incentives and legal considerations are significant in the delivery of US emergency care and may indirectly contribute to an erosion of emphasis on patient centered care. The case for implementation of an emergency department staff education program utilizing a patient advocacy model is based on two important considerations: A healthcare system comprised of complex bureaucracies organized more for the benefit of providers than consumers and the unequal power relationships that exist within the healthcare system, where providers hold the knowledge and power and patients are ill, vulnerable and lacking requisite skills to effectively negotiate this complex system. Central to the development of a patient advocacy education model for emergency department staff is attentiveness to patient voice and

Results:

The mean score of the digital body thermometer axillar temperature for the 62 patients that arrived in the emergency rooms (ER) was 37.9 ± 1.03 ; and that of mercurial digital body thermometer axillar temperature was 38.1 ± 0.9 . When the body temperatures of the patients were evaluated according to their clinical tables, it was determined that mercurial digital body thermometer axillar measurement produced statistically more accurate results than digital body thermometer axillar measurement ($p < 0.05$). The mean score of the digital central thermometer temperature measurement for the same group of patients was 38.3 ± 1.00 ; and that of the measurement with palpation from forehead came out 38.7 ± 1.5 . Consequently, digital central thermometer body temperature measurement produced statistically more specific and accurate results ($p < 0.05$).

Discussion

As the results of this study suggest, significant temperature differences may occur according to the place where body temperature is taken and the equipment used in the process. Results obtained from palpation are undoubtedly misleading. This may result from the fact that the temperature people feel is usually more than it actually is; moreover, this kind of measurement is highly subjective. In axillar measurements, mercurial digital thermometer has still proved to be the most reliable method. According to the results of the study, central body temperature measurement by digital thermometer can be recommended due to its practicality, rapidity and the accurate results it produces.

P449

Education and training

THE ACCURACY AND SUFFICIENCY OF APPROACHES TO INFECTIOUS DISEASES USED BY PHYSICIANS OTHER THAN THE EMERGENCY PHYSICIAN IN EMERGENCY DEPARTMENT

U Savaşçı (1), YK Akpak (2), H Yıldız (3), U Kaldırım (4), O Coşkun (5)

1. Department of Infectious Diseases and Clinical Microbiology, Sarıkamış Military Hospital, Kars, Turkey
2. Department of Obstetrics and Gynecology, Sarıkamış Military Hospital, Kars, Turkey
3. Department of Otolaryngology, Sarıkamış Military Hospital, Kars, Turkey
4. Department of Emergency Medicine, Gülhane Military Medical School, Ankara, Turkey
5. Department of Infectious Diseases and Clinical Microbiology, Gülhane Military Medical School, Ankara, Turkey

Corresponding author: Mr Akpak Yasam Kemal (yasamaster@gmail.com)

Key-words: Infectious diseases ; Emergency department ; Night shift

Introduction

A considerable proportion of the patients that apply to the emergency department have either commonly seen or life-threatening infections. Infections can be determined by localized infection findings that point out a system (dysuria, cough, mucus, shortness of breath, sore throat, etc.), by physical examination findings that support an infection (rales, rhonchus, murmur, costovertebral angle sensitivity, neck stiffness, abdominal sensitivity, etc.), and by radiological and laboratory tests that support these findings. The approaches to infectious diseases adopted by the physicians who work continuously for 24 hours at the emergency department is significant in terms of morbidity, mortality and the cost they bring to the health system. Therefore, this study aims to determine the accuracy and sufficiency of approaches used by physicians other than the emergency physician to infectious diseases in emergency department.

Materials and Method:

Polyclinic records of patients who applied to Sarıkamış Military Hospital Emergency Department with infectious diseases complaints in December 2011 have been studied retrospectively by relating them to the branches of the physicians. Gathered data has been statistically evaluated.

Results:

Of the 402 patients that applied to the emergency department, 226 were diagnosed to have infection. 204 (90.3%) were male, 22 (9.7%) female, and the mean of patients' age was 21.5 ± 7.2 . 130 (57.5%) of the patients had sore throat, 41 (18.1%) had hyperthermia, 26 (11.5%) had cough, 12 (5.3%) had diarrhea, and the rest applied prioritizing one of the following complaints: earache, headache, muscles/joint ache, and exhaustion. The minimum body temperature was 35.6°C , and the maximum 40.2°C ; thus, the mean score for the body temperature was found 37.6°C . As to the infectious diseases diagnosed in the patients, the most frequently seen disease was acute pharyngitis (110 patients - 48.7%). Antibiotic use rate was 85.8%, whereas paraneural antibiotic use rate was 33.2%. It was found that physicians from 12 different expertise fields treated patients at the emergency department. The data also revealed that the physicians who use antibiotics the most are experts of otorhinolaryngology, infectious diseases, and general surgery. As to the paraneural antibiotic use rate, physicians from the following fields constitute the first three: biochemistry (60.6%), anesthesia (59.3%) and otorhinolaryngology (55.6%). Results indicated that the psychiatrist did not prescribe any antibiotics to any patient.

Discussion

Results of this study, which aims at determining the accuracy and sufficiency of approaches used by physicians other than the emergency physician to infectious diseases in emergency department, demonstrated that a very high percentage of physicians (85.8%) prescribed antibiotics. Since physicians from various branches work at emergency departments on a duty principle causes them to fail to embrace this unit to the fullest extent. Moreover, their insufficient knowledge on infectious diseases and inadequate emergency skills give rise to an increase in rates of morbidity, mortality and the economic cost.

P450

Education and training

INTERNATIONAL PEDIATRIC EMERGENCY MEDICINE: CURRICULUM FOR A NEW FELLOWSHIP

ML Niescierenko (1), J Nagler (1), SR Kayden (2)

1. Pediatric Emergency Medicine, Boston Children's Hospital/Harvard Medical School, Boston, United States
2. Emergency Medicine, Brigham & Women's Hospital/Harvard Medical School, Boston, United States

Corresponding author: Melle Niescierenko Michelle (michelle.niescierenko@childrens.harvard.edu)

Key-words: Pediatrics ; International Emergency Medicine ; Fellowship

The subspecialty of Pediatric Emergency Medicine (PEM) is young, offering its first fellowship and board certification in 1992. Since that time, many PEM providers have worked abroad caring for children in a variety of settings. In countries where the field of Emergency Medicine (EM) is still developing, emergency rooms or casualty wards are staffed primarily by surgeons, internists or nurses alone. Not surprisingly, the even younger field of PEM does not yet formally exist in these regions. As a result, pediatric emergency care in many parts of the world is provided with limited consideration of the unique vulnerabilities of acutely ill or injured

children. This article outlines the curriculum of a novel fellowship in International Pediatric Emergency Medicine (IPEM).

The need for specialized training in International EM has been realized by the EM community, as exemplified by the growing numbers of International EM fellowship programs being offered, currently at more than 30 academic institutions. In contrast, the very recent development of IPEM as a new subspecialty is mirrored by a relative dearth of formalized training opportunities. There are currently only 2 IPEM fellowships with no shared, formal curriculum available. Given the demonstrated growing interest for integrating pediatric emergency medicine and international/global health, there is a recognized need for establishment of a resource to guide development of further training opportunities. A curriculum that will provide a standardized approach to training and practice in this new field is needed. The fundamental competencies of a fellow completing an IPEM fellowship include ability to match those expected of a board certified pediatric emergency medicine physician, as well as the ability of providers to conduct needs assessments, develop programs, integrate programs into the existing health care framework and evaluate projects across multiple knowledge and skill areas. To provide effective care, high impact knowledge areas for the application of these competencies include emergency medical systems, humanitarian relief, disaster management, public health, travel and field medicine, program administration and academic skills. There are diverse opportunities to achieve these competencies and acquire the knowledge and skills necessary to be an effective IPEM provider across humanitarian, conflict, emerging and stable economy settings. This novel IPEM fellowship will develop leaders in the field of global pediatrics and pediatric emergency medicine by combining clinical expertise, practical field experience, formal public health training, research and education in international health.

This article outlines the curriculum of an established fellowship in IPEM, provides an overview of the goals and objectives of the program, and proposes a model for use by other existing or developing fellowships in IPEM. Physicians completing this novel IPEM fellowship will be uniquely prepared to work with national health systems and non-governmental organizations to develop, integrate, and evaluate health care programs on an international scale for the most vulnerable acutely ill and injured children.

P451 Education and training

THE ASSESSMENT OF 4TH GRADE STUDENTS IN MEDICAL SCHOOL ABOUT INTERNSHIP IN EMERGENCY DEPARTMENT

M Ergin (1), B Cander (1), S Kocak (1), AS Girisgin (1), M Gul (1), Y Durduran (2), MR Ozer (1)

1. Emergency Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey
2. Public Health Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

Corresponding author: Mr Ergin Mehmet (drmehtemergein@gmail.com)

Key-words: Medical education ; Emergency Medicine ; Undergraduate training

BACKGROUND: Emergency medicine education is very important concept before graduation from medical school. There is two step model at Necmettin Erbakan University Meram Medicine Faculty Emergency Medicine Department. In fourth grade, there is 8-day internship in emergency medicine which included 29 hour theoretical and 27 hour practical lessons. In the 8th day, the

students have written and oral exams. Theoretical lessons includes basic and advanced life support protocols; triage; ECG; airway management; management of chest pain, arrhythmias, abdominal pain, multiple trauma, dyspnea, seizure, shock, coma and change in consciousness level; diabetic emergencies, orthopedic emergencies, hypertensive emergencies. Practical lessons include basic life support, resuscitation (with manikins), airway management, ECG and defining arrhythmias, suturing techniques and wound care, invasive procedures in ED (showing videos). The second is in sixth grade in medical school and two-month internship program. **MATERIAL - METHOD:** The survey was conducted 4th grade students in medical school who completed 8-day internship program in emergency medicine. The questionnaire included four sections. There were demographic data (except name) in the first section, questions related with theoretical and practical lessons in the second and third sections. Finally general evaluation of emergency medicine applications was asked in the fourth section. 5-point scoring system was used so that 1 point meant 'I don't agree any more' or 'I don't satisfy any more' whereas 5-point meant 'I certainly agree with you' or 'I am satisfied certainly'. **RESULTS:** Our study included 109 students. The median age was 22 year old (min-max; 20-32). There was 52.3% female. The rate of satisfaction for medicine education was 68.8%. Most of students didn't decide about medical branch to be specialization in future. Emergency medicine was the second most common department to be chosen. The most implicated theoretical lessons were 'Basic life support' and 'Protocols in ACLS'. The most implicated practical lessons were also 'Basic life support' and 'Resuscitation' lessons. 78% of students thought that the 8 day - internship for EM was short. Most of the students (84.4%) said that the data they had will be useful in their medical future. 60.5% of them agreed that EM internship program will affect them when deciding the branch of specialization in medicine. 90.9% of students were grateful to have EM internship at fourth grade of medical school. **CONCLUSION:** Starting EM education at fourth grade in medical school is very important step to introduce EM and make easier for students to understand management of emergent cases.

P452 Education and training

IN-HOSPITAL BASIC LIFE SUPPORT TRAINING FOR ALL NURSES: IS THIS STILL POSSIBLE?

B Lesaffre (1), T Schissler (2)

1. Emergency Department, AZ St Jan Brugge Oostende, Oostende, Belgium
2. Emergency department, AZ St Jan Brugge Oostende, Oostende, Belgium

Corresponding author: Mr Schissler Thierry (thierry.schissler@gmail.com)

Key-words: Resuscitation ; Nurses ; Education

OBJECTIVE: The first 2 links in the "Chain of survival", and thus cardiopulmonary resuscitation training, are mandatory for a good patient outcome. Poor knowledge and skill retention following resuscitation training has been documented over the past 25 years. We developed a basic life support training program for clinical nurses and we composed a six-stage plan based on the ERC algorithm for in-hospital resuscitation.

We defined two quality standards (which we modified, as the guidelines changed in 2010) to measure if there was an improvement in the resuscitation skills after four sessions.

METHODS: The whole nursing staff (ca. 400 individuals) in our hospital had to register for a fourth obligatory basic life support session, with the consent of the Board of Directors. The first two

sessions were organized with 'opting out', the last ones with 'opting-in'

The first two sessions consisted of 45 minutes course, followed by a 45 minutes during test session. The nursing staff was divided in groups of six persons. During this course of 45 minutes, based on the 4-stage approach, the ERC algorithm for in-hospital resuscitation was instructed as a six-stage plan on a manikin placed in a hospital bed (fig. 1). Emphasis was put on early recognition of cardiac arrest (e.g. gasping), and depth and rate of compressions (illustrated by the song "Stayin' Alive" by the Bee Gees). This training course was immediately followed by a test session.

The third and fourth session were short sessions of 20 minutes and consisted of a test session, preceded by a short overview of the 2010 ERC guidelines. For those two sessions, the nurses had to enrol themselves.

The performance of the nurses was recorded on an Ambuman manikin (with Ambu CPR software version 2.3.9), lying in a hospital bed.

Several variables were recorded, e.a. the correct execution of the sequence of the six-stage-plan, the compression rate, the compression depth and the ventilation volume. Using two quality 'standards', we compared the results.

RESULTS: The attendance to those sessions is significantly lower when the nursing staff had to enrol themselves. This opting-in system is clearly not sufficient. (fig. 1)

We defined two standards of performance to evaluate the progress in time. We had to change those standards as the guidelines changed in 2010 (vs 2005). For the first and second session, we defined optimal resuscitation as a combination of compression depth 40-50mm, compression rate 80-120/min and ventilation volume between 400ml and 700ml. We defined satisfying resuscitation as a combination of a compression rate between 70/min and 130/min, a compression depth more than 35mm and a ventilation volume more than 300ml.

For the third and fourth, we defined optimal resuscitation as a combination of compression depth >50mm, compression rate 100-120/min and ventilation volume between 400ml and 700ml. We defined satisfying resuscitation as a compression depth >45mm, compression rate 90-130/min and a ventilation volume more than 300ml.

The fraction of the nursing staff achieving an optimal level stays around 10%, but we marked a significant increase of the fraction achieving the level of satisfying resuscitation (ca. 30% in the first vs. ca. 70% in the last session)

CONCLUSION: The overall result is satisfying. We have some problems to reach the whole nursing staff. The opting-in system is superior.

The standards 'optimal resuscitation' and 'satisfying resuscitation' are useful to evaluate the progress in time.

Thanks to the members of the instructors team and to the Board of Directors.

P453

Education and training

ROMANIAN MODEL FOR EDUCATIONAL SYSTEMS IN EM - BENEFITS, VULNERABILITY AND LIMITS

C Ciulu (1), L Rotaru (2)

1. disaster medicine, General Inspectorate for Emergency Situations, Bucharest, Romania
2. emergency department, Medical University, County Hospital Craiova, Craiova,, Romania

Corresponding author: Mme Rotaru Luciana Teodora (lucianarotaru@yahoo.com)

Key-words: education in emergency medicine ; residency program in emergency medicine ; emergency medicine systems

EM education systems , disaster management and resource management followed in terms of structure in general, the same developments that have had the intervention systems and in particular the medical world, working concepts, designed to develop knowledge, skills, guidelines and protocols in accordance with specific requirements for each category of personnel involved in emergency care in these regions.

Thus, the basic training in EM largely reflects North American point of view that the action remains confined within professionalized medical ED is only punctual and exceptional field and is limited to the development of guidelines, protocols and recommendations paramedical teams work. In turn, the latter are concentrated outside the hospital and dispatch both in-hospital intervention crews (derived very extensive training paramedical long durations of time -1-3 years). With regard to residency training programs in EM, this particular feature was not practical at all stages of pre-hospital training, to be extremely advanced in terms of investigative laboratory in the hospital ED

In Europe - 2 models for educational systems in EM

- English system - emphasis on developing specialty of EM and optimizing the most appropriate curriculum for emergency physicians to conduct a highly specialized activities in EM in the hospital. Both, developed for out of hospital curriculum for training paramedical and dispatching (professional dispatchers);

- Franco-German system has evolved in the delivery of advanced medical care outside the hospital by having teams composed of medical staff and also for dispatch coordination. Element of weakness of these systems is that hospital EM is often practiced by the specialists of different clinical specialties following a overspecialization generally lasting one year, doctors professionalized for emergency is keep out of hospital. So that for example France and Germany don't have now an emergency medicine residency as a specialty. In exchange France has developed over the last decade in addition to EM competence, a competence catastrophe duration of 6 months traineeship, asimulating dispatching programs development and management of disaster situations and continuous training of firefighters

Romanian model for the organization of EM residency programs in conjunction with certified EM physicians, ambulance services and ED who are not emergency specialists, nurses, plus first aid training programs skilled paramedics and firefighters professionalization is an embodiment of an integrated program of training in EM Current weakness elements that lack a single program of training in disaster management situations and dispatching which are all potential lines of action for system optimization.

Strengths of Romanian model are represented primarily by the existence of a residency program in EM (EU directive- whose specialists are recognized without any need for equivalence in the EU) by training centers, program directors residency, trainers, curriculum and methodology of training and evaluation unit, recognized by the Ministry of Health and the College of Physicians in Romania.

Other important elements are the integrated medical intervention in the UPU-SMURD structures which provides training and emergency specialists from the ED practice in both hospital and prehospital situations in common with the paramedics of the firefighters services (ISU) and implementation of telemedicine as a key element remote case management, resource management and routing management

Also stratification crews operating during the pre-hospital levels of competence creates opening for development of communication and interpersonal cooperation, institutional management or complex situations with multiple victims, the coordination of many skills and resource management teams via dispatch medical (the medical supervisor).

Perhaps the most important element in the educational system is its involvement in a complex structural and functional legal and medical practice

P454

Education and training

THE DEVELOPMENT OF AN INNOVATIVE WEB-BASED TRAINING COURSE FOR FUTURE HUMANITARIAN AID WORKERS.

PL Ingrassia, M Foletti, L Ragazzoni, E Giovagnoni, A Ripoll, L Carenzo, F Della Corte

Research Center in Emergency and Disaster Medicine, CRIMEDIM, Novara, Italy

Corresponding author: Mr Ragazzoni Luca (luca.ragazzoni@med.unipmn.it)

Key-words: Blended Learning ; Resident Education ; Humanitarian Medicine

Background

As global healthcare awareness has raised, the number of aid workers involved worldwide in humanitarian response has significantly increased and NGOs lead the way in this trend. Despite the well-acknowledged progresses, data analysis still reveals a critical situation in many low-income countries. This unfortunately led to several issues such as poor coordination among different actors involved in humanitarian response, inadequate training and the lack of universally shared minimum standards of care. Our research center has developed a blended learning training program dedicated to students that wish to take part in healthcare missions in resource-constrained environments. The aim of this study is to describe the scientific development of such course as part of the Anesthesia and Intensive Care residency at the University of Eastern Piedmont in Novara, Italy.

Methods

Between January and November 2011 a team composed by 5 anesthesiology residents and 2 research managers from the University of Eastern Piedmont developed the main framework of the aforementioned course. In order to select the subjects to be included, the team performed a systematic literature review of the documents published in the last 10 years using PubMed-Medline with the keywords: (Education AND Competency) AND (Humanitarian OR Disaster), Humanitarian AND Training (search limited to reviews and meta-analysis). The team also performed an analysis of the key policy and the strategy documents published by the Inter-Agency Standing Committee (IASC), the internationally recognized cluster deputed to improve the effectiveness, predictability and accountability of humanitarian health action and the results of the Humanitarian Response Review 2005. Contents for each module was then written taking as reference guidelines provided by IASC-member organizations and Doctors without borders (MSF).

Results

The Medline literature review provided a total of 29 results; 7 papers were selected according to the following criteria: relevant with medical health care providers, dealing with the development of training frameworks, related to Developing Countries and directed to non-military personnel. The team identified 3 GHK key policy and strategy documents relevant with the matter. Analysis of the selected papers resulted in the identification of 3 common topics for health care providers' humanitarian training: safety during operations; increased professionalization relevant to the operational setting (technical skills); appropriate coordination with the main framework of humanitarian response. According to the above topics the team developed the following subjects to be included in the training course: security in the field; sanitation,

vaccinations and prophylaxis in tropical settings; knowledge of the operational setting; tropical medicine and anesthesia in resource-constrained setting; foreign languages; psychological matters during Disasters and Humanitarian Interventions. Contents for each module were then written based on reference guidelines provided by both WHO and MSF, UN Basic Training in the Field course, ATLS manual, recommendations offered by the Italian Ministry of Health and Foreign Affairs. The course was then created using Moodle, a Modular Object-Oriented Dynamic Learning Environment and hosted in the university server.

Conclusion

The literature review effectively pointed out three key topics for standardizing the training of healthcare workers in low-resource environments. The three key aspects are safety, technical skills and appropriate coordination. These key aspects have been implemented in a blended learning training program for residents willing to work in resource-limited settings. Further study will evaluate the course impact on participants self confidence and objective mission performance in low-income countries.

P455

Education and training

THE USE OF GELATINE MODELS IN ULTRASOUND GUIDED INTRAVENOUS CANNULATION

NP Oveland (1), SG Lunde (2), L Knudsen (3), E Sloth (3), L Clemmesen (3)

1. Research and Development, Norwegian Air Ambulance Foundation, Stavanger, Norway
2. Communication Department, Stavanger University Hospital, Stavanger, Norway
3. Anesthesiology and Intensive care, Aarhus University Hospital, Aarhus, Denmark

Corresponding author: Mr Oveland Nils Petter (nils.petter.oveland@norskluftambulans.no)

Key-words: Ultrasound ; Gelatine model ; Intravenous cannulation

Background:

Intravenous cannulation (IVC)

1. Is difficult due to hypovolemia, cold extremities, body habitus, vascular disease and injection drug use.
2. Commercial IVC ultrasound (US) training models exists.
3. One of the most important skills in emergency medicine.
4. The models are expensive and their substance material is patented.
5. Cheaper homemade training phantoms for different US procedures, such as biopsies and cannulation of fluid filled spaces and vascular structures have been developed.
6. The recipes of homemade models vary in complexity.
7. No video presentation on how to make your own US training model for IVC has previously been

Research Question:

OBJECTIVE

To present a video showing how to make a gelatine training model for US guided IVC.

To evaluate the phantoms usefulness in vascular access training sessions.

Method:

We made a gelatine training model for each of the 52 participants at our WINFOCUS Scandinavian Course in Prehospital US. After attending a 30 minutes lecture on US vascular access techniques, each participant practiced on the gelatine models. Overall, on a Likert scale of 1-5, they rated the usefulness of the phantom training. (1=bad and 5=excellent)

A 4 minutes video tape on how to make your own model was recorded.

Results:

The participants rated the usefulness of their phantom training to 4.5 points (SD±0,5) out of a total of 5 points.

The video is available at YouTube : http://www.youtube.com/watch?v=u9_1md1f-NM

Discussion:

Conclusion:

1. US guided IVC is a skill that multiple medical specialities will need to add to their armamentarium.
2. Our low cost training model for IVC is easy to make by following the video demonstration.
3. The gelatine model can be punctured multiple times.
4. When needed the model can be melted in the microwave and reused in new models.
5. The usefulness of the model in hands- on vascular access sessions proved very promising.
6. See the video at YouTube?

Conflicts of interest:

None

P456

Education and training

A PORCINE PNEUMOTHORAX MODEL FOR TEACHING ULTRASOUND DIAGNOSTICS

NP Oveland (1), E Sloth (2), G Andersen (3), HM Lossius (1)

1. Research and Development, Norwegian Air Ambulance Foundation, Stavanger, Norway
2. Anesthesiology and Intensive care, Aarhus University Hospital, Aarhus, Denmark
3. Radiology, Aarhus University Hospital, Aarhus, Denmark

Corresponding author: Mr Oveland Nils Petter
(nils.petter.oveland@norskluftambulans.no)

Key-words: Ultrasound ; Porcine model ; Pneumothorax

Objectives

Ultrasound (US) is a sensitive diagnostic tool for detecting pneumothorax (PTX), but methods are needed to optimally teach this technique outside of direct patient care. In training and research settings porcine PTX models are sometimes used, but the description of the PTX topography in these models is lacking. Our purpose was to define the distribution of air using the reference imaging standard computer tomography (CT), to see if pleural insufflation of air into a live anaesthetized pig truly imitates a PTX in an injured patient.

Methods

PTX model: A unilateral catheter was inserted into the pleural cavity of 20 pigs and 500 ml of air was insufflated.

Diagnostic tests: After a complete thoracic CT scan, the anterior, lateral, medial, basal, apical and posterior components of the PTXs were compared. The amount of air in each location was quantified by measuring the distance from the lung margin to the chest wall. A supine anteroposterior chest radiograph (CXR) was taken from all models, interpreted by a senior radiologist and the image results compared to CT.

Results

All 20 hemithoraces with PTX were correctly identified by CT, while six remained occult after interpreting the CXRs. The PTXs were anterior (100%), lateral (95%), medial (80%), basal (60%), apical (45%) and posterior (15%). The major proportion of the insufflated 500 ml volume was found in the anterior, medial and basal recesses.

Conclusions

We found the distribution of the intrathoracic air to be similar between our porcine models and that to be expected in human

trauma patients, all having a predominantly anterior PTX topography. In a training facility the model is easy to set up and can be scanned by the participants multiple times. To acquire the necessary skills to perform thoracic US examinations for PTX, the use of porcine models could be useful.

P457

Education and training

ULTRASOUND DETECTION OF PNEUMOTHORAX: ANIMAL LABORATORY TRAINING IMPROVES DIAGNOSTIC PROFICIENCY AND SPEED

NP Oveland (1), HM Lossius (1), R Aagaard (2), J Connolly (3), E Sloth (4), L Knudsen (4)

1. Research and Development, Norwegian Air Ambulance Foundation, Stavanger, Norway
2. Institute of Clinical Medicine, Aarhus University, Aarhus, Denmark
3. Emergency Department, Royal Victoria Infirmary, Newcastle, United Kingdom
4. Anesthesiology and Intensive care, Aarhus University Hospital, Aarhus, Denmark

Corresponding author: Mr Oveland Nils Petter
(nils.petter.oveland@norskluftambulans.no)

Key-words: Ultrasound ; Pneumothorax ; Animal laboratory training

Background:

Animal laboratory training (ALT) improves performance of surgical skills, but uncertainty exists with similar training for emergency diagnostic procedures. Lung ultrasound (US) is very accurate in diagnosing pneumothorax (PTX), but the training requirements and methods to perform these US examinations need to be defined.

Objective

To test whether ALT improves diagnostic competency and speed for US detection of PTX.

Method:

20 medical students without prior US experience attended a one-day course at an animal laboratory. Didactic, practical and experimental lectures covered the basics of US physics, US machines and lung US, followed by hands-on scanning of normal lungs and PTXs. The student's diagnostic skill level was tested in three subsequent exams (day one, day two and 6-months follow-up) using experimentally induced PTXs in porcine models. The outcome measures were sensitivity and specificity for US detection of PTX, self reported diagnostic confidence and scan time.

Results:

The students improved between the initial two exams from a sensitivity from 81.7% [69.1-90.1] to 100.0% [94.3-100.0] and specificity from 90.0% [82.0-94.8] to 98.8%[92.3-99.9] which sustained 6 months later. There was a significant positive learning curve of correct answers throughout the study (p=0.018), an increase in self-reported diagnostic confidence of 1.0 point (7.8 to 8.8 in on a 10-level scale; p<0.05) and one minute reduction in mean scan-time per lung (p<0.05).

Conclusion:

ALT imparts a high level of long-term diagnostic proficiency for lung detection of PTX.

P459

Education and training

SHORT TERM POST GRADUATING EMERGENCY MEDICINE COURSE FOR GENERAL PRACTITIONERS AND ITS OUTCOMES ON PATIENTS' CARE IN EMERGENCY DEPARTMENTS

K Golshani (1), R Azizkhani (2), Sh Tajadin (3), M Esmailian (2)

1. Emergency Department, Alzahra General Hospital, Isfahan University of Medical Sciences, Isfahan, Iran, Islamic Republic of

2. Emergency Department, Isfahan University of Medical Sciences, Isfahan, Iran, Islamic Republic of

3. Emergency Department, Kerman university of Medical Sciences, Kerman, Iran, Islamic Republic of

Corresponding author: Mr Golshani Keihan (k_golshani@med.mui.ac.ir)

Key-words: Post graduating emergency medicine course ; Mortality and mismanagements in emergency department ; Teaching emergency medicine

Introduction

Since 2001, Emergency Medicine as a specialty is started in Iran and now there are about 250 Emergency Medicine Specialists and 6 universities with residency training program through the country. At the present, according to the number of Hospitals and their Emergency Departments (EDs) (about 820 active departments) there is a large gap between the number of EM specialists and the number of EDs in the country and many EDs (urban and rural) are managed yet by General Practitioners under supervised of other specialties as like as general Surgeons or Internal medicine specialists.

Isfahan University of Medical Sciences started Emergency Medicine residency program, it is about 2 years with about 23 Emergency Medicine residents (11 PGY1 and 12 PGY2). In this research, according to the gap between the number of Emergency Medicine specialists and the number of EDs, we designed a short course (2 months) of training (theoretical and practical) for those General practitioners practicing in EDs of Isfahan province that is one of the largest province in IRAN and we measured the efficacy of this course on the outcomes of patients' managements.

Methods

This was a prospective interventional study comparing the effect of a short term (2 months) course of theoretical and practical Emergency Medicine for General Practitioners on the outcomes of patients' care in EDs.

Study setting and Population

General Practitioners that worked in the EDs of the province (n=120) participated in this course and the annual results of death committee before and after the course were compared. According to the CIPP evaluation model checklist, the educational course and materials was planned. The general practitioners were obliged to participate in this course to receive the certification for practicing in EDs of the province. The practitioners assessed by a two-step examination (writing as multiple choice questions and practical in skill lab), at the end of the course. The certification delivered for the practitioners who not only have been participating in the classes but also passed the two component of the examination. The results of the evaluation and investigation of provincial mortality committee about the results of patients' mortality before and after the course was analyzed and compared.

Data analysis

Data was analyzed and values were expressed as number (%). Two sample T- test (between percents) was employed to compare

whether there is a difference between the percent of general practitioners mismanagements that lead to any morbidity or mortality of patients in the province during a year before and after the course. Statistical significance was accepted at values less than 0.05.

Results

120 General practitioners participated in this program during 2010 and 110 of them received certification for working in the EDs of province.

The results of provincial death committee opinion about the causes of medical errors lead to mortality in 2009 (one year before starting the course) and the results in 2011 (one year after starting the course) was evaluated:

Discussion

The comparison of the results shows that mortality rate because of medical errors or mismanagements by general practitioners decreased significantly after 2 months of Emergency Medicine training course. The t-statistic was significant at the 0.05 critical alpha level, p=0.0017.

Conclusions

Short term post graduating Emergency Medicine training courses for General Practitioners could be a good alternative when the number of Emergency Medicine Specialists is not enough for covering all the EDs in the country.

P460

Education and training

A NEW CHANCE FOR SAVING LIVES -TEACHING BLS TO HIGH SCHOOL CHILDREN

DC Cimpoesu (1), M Corlade-Andrei (2), AO. Petris (3), O Popa (1)

1. Emergency Department, University of Medicine and Pharmacy Gr.T.Popa, Iasi, Romania

2. Emergency Department, Hospital St.Spiridon, Iasi, Romania

3. Cardiology, University of Medicine and Pharmacy Gr.T.Popa, Iasi, Romania

Corresponding author: Melle Cimpoesu Diana (dcimpoesu@yahoo.com)

Key-words: resuscitation ; school-children ; training

Introduction: In 2010 in Iasi, the capital of the north-eastern Romania, a group of trainers (seniors and medical students) under the leadership of an ERC instructor started to teach courses in schools. In 2011 we presented the first results of the Road Safety project and we continue the training in schools. **Objectives:** To analyze the impact of resuscitation training of students aged 11-15, identify the age at which students show maximum responsiveness to BLS, to assess the quality of training and trainers. **Material and method:** in April 2012, throughout four days we organized BLS + AED courses in three colleges in Iasi. The students were trained by eight trainers (4 Seniors and 4 medical students) following the ERC course structure, using the 4-step method for the practical skills. The students had to pass a theoretic test and a practical evaluation after 8 hours of practical and theoretical training. We followed the BLS steps according to ERC 2010 Guidelines. **Results:** There were a total of 184 high school students, divided as follows: 37% of fifth grade, age group 11-12 years, 34.8% of sixth grade-12 -13 years, 14.7% of the seventh grade-13-14 years and 13% of eighth grade- 14-15 years. All the students pass the final evaluation. The best results were obtained with the sixth grade students (8.01 vs 6.98, 7.54, 7.89) with one exception, item airway desobstruction, where also eighth graders achieved the correct answers in greater extent than others (75% vs 70.3%, 47.2%) with a significant correlations between the year of study and correct airway desobstruction (p < 0.001). Course evaluation

was made on a scale of 10: 71.2% of students gave a 10, 15.7% a 9, and 4.3% did not answer. Conclusions: The results seem promising and indicate class VI as the ideal candidate to introduce a first BLS course. The training was appreciated by the children. This type of training should begin at the age of 11-12 years and must be later resumed. This type of training could be include in educational programme for Schools by the Ministry of Education.

P461 Endocrine / Diabetes

JAW DISLOCATION RESULTING FROM TETANY: CASE REPORT

E Akinci (1), E Atayik (2), A Erkek (3)

1. Emergency department, Konya Training and Research Hospital, Konya, Turkey
2. Department of Allergy and Immunology, Cumhuriyet University School of Medicine, Sivas, Turkey
3. Emergency department, Ankara Training and Research Hospital, Ankara, Turkey

Corresponding author: Melle Akinci Emine (emineakinci@yahoo.com)

Key-words: Jaw dislocation ; tetany ; hypocalcemia

Calcium plays a critical role in cellular functions, neural transmission, membrane stabilization, bone structure, blood coagulation and intracellular signaling. The condition in which the ionized calcium level in the plasma is below 4.2 mg/dl is called hypocalcemia. Tetany is one of the most important clinical presentations of severe hypocalcemia. Temperomandibular joint dislocations can result from various causes including drugs, trauma, dental and airway related interventions. We present a case of jaw dislocation resulting from a hypocalcemia related tetany, which developed as a late complication of a thyroidectomy operation.

P462 Endocrine / Diabetes

SEVERE HYPOKALEMIA INDUCED MYOPATHY AND CARDIAC ARREST AS FIRST MANIFESTATION OF CONN'S SYNDROME: A CASE REPORT

V Gavrilă (1), RD Gavrilă (2), G Filip (1), CL Bartha (1)

1. Emergency Department, Emergency County Hospital, Timisoara, Romania
2. Department of Family Health Care Providers, Romanian National Society of Family Medicine, Timisoara, Romania

Corresponding author: Mr Gavrilă Vasile (gavrilă_vasile@yahoo.com)

Key-words: primary aldosteronism ; Conn syndrome ; hypokalemia

Introduction

Primary aldosteronism, a clinical syndrome characterized by an excessive secretion of aldosterone from the adrenal gland, is manifested by hypertension, hypokalemia, and hyporeninemia. Patients of all ages may be affected, but the peak incidence is between 30 and 60 years. Primary aldosteronism is most commonly caused by an adrenal adenoma (aldosteronoma or Conn syndrome).

Case report

We present the case of a 53 years old woman with a history of hypertension, diabete mellitus and atrial fibrillation who called the Emergency Medical Service (EMS) for severe muscle weakness of all limbs, profuse sweating, headache, fatigue, paresthesia, progressively installed three days ago. The emergency service personnel mentioned that she had suffered cardiopulmonary arrest (ventricular fibrillation) during the transport to the hospital.

After the succesfull defibrillation in the ambulance, she was intubated and transported to our emergency department (ED). On admission in the ED: the patient was intubated, breathed spontaneously, GCS=10/15 (M6, V1, E3), SpO₂=98%, HR=40 b/min, BP=140/70mmHg, with tetraparesis. Electrocardiography : a third degree atrioventricular block, 40 b/min. Laboratory: severe hypokalemia (K=1,1 mEq/l) and metabolic alkalosis. The patient was immediately treated with intravenous KCl 7,4 % solutions and spironolactonum and was admitted in Intensive Care Unit (ICU). In ICU: electrocardiographic monitoring- sinus rhythm, HR=43/min, U wave, prolonged PR and QT. Biochemical results: hypokalemia (K=1.9 mEq/l), low plasma renin activity, increased plasma aldosterone concentration, and high urinary aldosterone levels. The abdominal computed tomography (CT) showed a left adrenal mass. The patient had a good clinical and biochemical response to KCl supplementation, spironolactonum, irbesartanum and calcium blockers. On the fifth day, muscle weakness disappeared completely, together with normal ranges of the arterial blood pressure and further improvement of laboratory tests (normal K level).

Conclusion

The association of hypertension, hypokalemia, and an adrenal tumor suggested a diagnosis of Conn's syndrome. This report presents a rare case of an elderly patient taking antihypertensive treatment for the last four years for essential hypertension, who was admitted to our emergency department with hypokalemia induced myopathy and cardiac arrest as first manifestation of primary hyperaldosteronism due to unilateral adrenal hyperplasia.

P463 Endocrine / Diabetes

MYXEDEMA COMA

S Karaman (1), C Şen Tanrikulu (1), E Acar (1), A Bayramoğlu (2)

1. Emergency Department, Erzurum District Training and Research Hospital, Erzurum, Turkey
2. Emergency Department, Atatürk University Medical Faculty,, Erzurum, Turkey

Corresponding author: Mr Karaman Serhat (drserhatkaraman@hotmail.com)

Key-words: hypothermia ; hypothyroidism ; coma

The most serious complication of hypothyroidism is myxedema coma. Hypothyroidism, alveolar hypoventilation, hypoxia, hypothermia, fluid and electrolyte imbalance, confusion and coma in the patients may occur. Frequency of myxedema incidence has been increased by applications such as thyroidectomy and radioactive iodine therapy, although it is rare.

Hormone replacement treatment was begun hearing-impaired 30-year-old female patient because of hipotiroidi three years ago. The patient stopped the treatment because of reduction in her complaints and did not go to her controls. The patient, being abdomen, swelling of the eyelids and extremities, headache, and respiratory distress has come to hospital because of increased complaints. The patient was incubated because she was unconscious patient and breathing shallow when she came to Emergency Department. Heart rate was 46 per minute; TA was 70/40mm Hg, and skin was dry and cold. Edema, not left gode when pushed, was present in the eyelids, face, hand and foot ridges, and much more pretibial areas of the body. Fever could not be measured due to hypothermia. Myxedema coma was considered. There was found that, WBC, Hgb Hct, BUN, creat, TSH, FT4, FT3, cortisol were 20000, 8.5, 32% , 87, 2.3, 261.623, 0.35, 1.10, and 72.84 according to laboratory findings, respectively. Thyroid hormone replacement and corticosteroids was started to

the patient by nazogastric catheter. The patient was transferred to intensive care for better follow-up and treatment. Cessation or forgetting of thyroid replacement therapy is the most common cause for myxedema coma. The most important predisposing to exposure to cold in patients with hypothyroidism is myxedema. When unheated environments, cold winters, obesity, hypothermia, and edema, not left alone when pushed were exist, myxedema coma should be considered.

P464

Endocrine / Diabetes

SECONDARY ACUTE PARATHYROID CRISIS, PARATHYROID ADENOMA: CASE REPORT

A Duran (1), O Dikbas (2), T Ocak (3), H Tekce (4), N Sengül (5)

1. Emergency Medicine, Abant İzzet Baysal University, Medical Faculty, Bolu, Turkey
2. Endocrinology Department, Abant İzzet Baysal University Faculty Of Medicine, Bolu, Turkey
3. Emergency department, Abant İzzet Baysal University, Medical Faculty, Bolu, Turkey
4. Nephrology Department, Abant İzzet Baysal University Faculty Of Medicine, Bolu, Turkey
5. General Surgery Department, Abant İzzet Baysal University Faculty Of Medicine, Bolu, Turkey

Corresponding author: Mr Duran Arif (drarifduran@gmail.com)

Key-words: hypercalcemia ; acute parathyroid crisis ; parathyroid adenoma

Introduction: Severe hypercalcemia most commonly results from malignant tumors, but also can result from primary hyperparathyroidism. We present this case to emphasize the importance of early diagnosis and treatment of an acute severe hypercalcemic syndrome due to primary hyperparathyroidism as a consequence of an undiagnosed adenoma of the parathyroid gland.

Case Presentation: We report the case of 38 years old caucasian women with hypercalcemic hyperparathyroid crisis secondary to parathyroid adenoma. She admitted to emergency department with the complaint of polyuria, polydipsia, lethargy. Her laboratory were calcium 20,6 mg/dl, parathyroid 1813 pg/dl. Following intensive hemodialysis, intravenous hydration, furosemide and calcitonin treatment; calcium levels were still high. Intravenous 4 mg pamidronate was given to the patient that effectively reduced calcium to normal laboratory reference level. Parathyroid ultrasonography revealed 11x18x21 mm thyroid left inferior pole located mass compatible with parathyroid adenoma. Parathyroidectomy was performed to the patient which revealed parathyroid adenoma. Post surgical hypocalcemia was treated with calcium supplementation, which was probably caused by hungry bone syndrome and bisphosphonate treatment.

Conclusion: Acute primary hyperparathyroidism, also known as parathyroid storm is a rare but potentially life threatening condition if unrecognized. It's mortality is generally still high. Intravenous calcitonin and bisphosphonate reduce calcium level by interfering with calcium release from skeleton. Postoperative persistent hypocalcemia should have not to be forgotten following parathyroidectomy in patients who have taken bisphosphonate treatment before surgery.

P465

Endocrine / Diabetes

HYPOGLYCEMIA: A DIAGNOSTIC CHALLENGE IN EMERGENCY DEPARTMENT

A Alkan (1), A Karaosmanmemet (2), E Kaya (3), A Yozgat (1), Z Ceylan (1), A Yurtseven (3), N Danlı (3), S Özdemir (1)

1. Internal Medicine, Sincan State Hospital, Ankara, Turkey
2. Anesthesiology and Reanimation, Kecioren Research and Educational Hospital, Ankara, Turkey
3. Emergency Medicine, Sincan State Hospital, Ankara, Turkey

Corresponding author: Mr Alkan Ali (alkanally82@yahoo.com)

Key-words: Hypoglycemia ; Factitious ; Exogenous insulin

Hypoglycemia: A Diagnostic Challenge In Emergency Department
Introduction: Hypoglycemia is always a diagnostic challenge for clinicians. Hypoglycemic patients usually admits to emergency departments and diagnostic work up is planned according to initial diagnostic clues. Here we present a patient evaluated in our emergency department with hypoglycemia and diagnosed with factitious hypoglycemia.

Case: A 36 year old male unemployed male patient presented to the emergency department with new onset of fatigue and palpitation. On the last 2 days, he had been anorectic and sleepy all day long. He had been complaining of palpitation and chest pain. Previous medical records and history were clear. On physical examination tachycardia, tachypnea and profuse sweating were notable. He was hemodynamically stable. Capillary glucose was undetectably low. After glucagon 1mg and 50cc 10% dextrose infusion, capillary glucose was 52. Glucose was 24mg/dl in the biochemical testing. Renal and hepatic functions were normal. Electrocardiography revealed sinus tachycardia and thorax x-ray was normal. Patient's symptoms progressively resolved with euglycemia. However, close monitorization of blood glucose showed resistant hypoglycemia refractory to dextrose infusion. After 8 hour dextrose infusion and follow-up, euglycemia could be sustained. Further diagnostic workup for hypoglycemia revealed normal insulin and c-peptide levels while glucose was 78mg/dl. TSH: 0.84mIU/L, Cortisol: 18.9mg/dl (4.6-22.8), Growth hormone: 0.476, IGF-1 254ng/mL (109-284). Patient was discharged with unexplained hypoglycemia. After that episode patient readmitted several times with hypoglycemia in 1 week period. After an asymptomatic period, patient readmitted to emergency department with similar symptoms and again hypoglycemia down to 17 mg/dl was documented. After treatment, patient reevaluated for etiopathogenesis of hypoglycemia and laboratory showed insulin: 80U/mL (2.6-24.9U/mL) and c-peptide:0.147ng/mL (0.9-7.1) while glucose level was 37 mg/dl. Despite the denial of exogenous insulin injection, patient was diagnosed with factitious hypoglycemia and consulted with psychiatry. Afterwards patient have not readmitted to our emergency department with hypoglycemia.

Discussion/ Conclusion:

Hypoglycemia is an important clinical pathology, difficult to diagnose and approach. Symptoms and signs are nonspecific and it's crucial to document the hypoglycemia during these puzzling symptoms. After hypoglycemia is diagnosed and confirmed with Whipple triad (history of hypoglycemia symptoms, glucose<45mg/dl and immediate recovery after glucose administration), further diagnostic workup is started. Differential diagnosis includes a broad range of diseases.

Factitious hypoglycemia secondary to exogenous insulin or drug usage should always be kept in mind especially in patients with psychological problems and inconclusive diagnostic study. The literature suggests that the profile of patients diagnosed with this

disorder is more likely to be a female with access to insulin taken by a diabetic member of the family or associated with the medical profession. Diagnosis is based on the finding of high insulin levels and suppressed C-peptide levels during documented hypoglycemia. The long-term management of these patients requires a multidisciplinary approach that includes the psychiatrist, the general practitioner and the social worker. Psychiatric consultation is an essential part of the workup and of subsequent treatment and follow-up strategies.

In our patient diagnosis was challenging similar with the cases in the literature. Diagnoses could be done after several attempts. The clues that directed us to factitious cause was patient's depressed mood and having no social support during emergency department follow up. Patient questioning and confrontation with the clinical and laboratory findings was inconclusive. After confrontation, patient haven't readmitted to our department. Our experience reminds us how hypoglycemia can be challenging in the emergency department and gives important clues for diagnostic workup of hypoglycemia.

P466

Endocrine / Diabetes

ANAPHYLACTIC SHOCK AND DIABETIC FOOT ENFECTION DUE TO SNAKE BITES

A. Karakus (1), M Ozkan (2), M. Karcioglu (3), R Ozden (4), I Ustun (5), K Caliskan (1), C Gokce (5)

1. Department of Emergency Medicine, Mustafa Kemal University, Faculty of Medicine, Hatay, Turkey
2. Department of Plastic Surgery, Mustafa Kemal University, Faculty of Medicine, Hatay, Turkey
3. Department of Anesthesia, Mustafa Kemal University, Faculty of Medicine, Hatay, Turkey
4. Department of Orthopedy, Mustafa Kemal University, Faculty of Medicine, Hatay, Turkey
5. Department of Endocrinology, Mustafa Kemal University, Faculty of Medicine, Hatay, Turkey

Corresponding author: Mr Karakus Ali (drkarakus@yahoo.com)

Key-words: snake bites ; anaphylactic shock ; diabetic foot

Diabetic foot infection (DFI) occurs due to different causes and have different pathogenesis. It causes a different clinical course. Snake bites, a rare cause of DFI, we report a case advanced foot amputated due to snake bite which have been reported in the literature one.

78 years old man patient was admitted because of snake bites, he was bitten one hour ago by a gray snake. Health background: he has diabetes for over twenty years, using insulin for ten years and diagnosed with prostate cancer a year ago. Physical examination: blood pressure: 80/40, temp: 36,5°C, puls: 120, breathe rate: 25, he appeared pale and sweaty, There were two teeth marks the lateral of the left leg and his leg was edematous. His laboratory: glu: 181, Na: 141, SGOT/SGPT: 19/11, K: 4,63, cre: 0,97, urea: 39, aPTT : 38,2, inr: 1,43, PTT: 16,2 trp I: 0,01, arterial blood gas ph: 7,31 pco2: 29, so2: 93, base deficit: -10,1, lactate: 3,6, ECO: ejection fraction was normal but he has mild pulmonary hypertension (the second day of following-up), ECG: sinus arrhythmia

He has felt difficulty in breathing during the second hour of observation. The patient had hypotension and oropharyngeal edema because of this he was diagnosed anaphylaxis and used 0,5 mg intra-muscular adrenalin. His observation was continued in intensive care unit. Insulin for the regulation of diabetes, snake antivenin, methyl prednisolone, ranitidine, antibiotic for cellulitis prophylaxis, 300 mg acetyl salicylic acid used in his treatment. liquid was loaded for hypotension but Could not get an adequate

response and rales occurred because of this he was treated with dopamine and diuretic. His cardiac instability interpreted as snake venom induced myocardial depression. Due to prolongation of bleeding time two units of fresh frozen plasma were infused. 5x10 cm necrotic wound was occurred and was sterile dressing. Gradually reducing the dose of dopamine was stopped fourth day. The seventh day of following-up he was referred to the endocrine service because of his DFI. Debridement of necrotic wound was made by plastic surgery physician. He did not accept second surgical treatment and he was discharged at his own request.

Systemic symptoms such as anaphylaxis or cardiac exposure can occur also should be noted that DFI may occur in people with diabetes mellitus. The older patients should be treated and followed appropriate conditions for this complications. Snake bite can result in limb amputation if wound care is not done on time.

P467

Genitourinary

SELENIUM HAS A PROTECTIVE EFFECT ON ISCHEMIA/REPERFUSION INJURY IN A RAT OVARY MODEL: BIOCHEMICAL AND HISTOPATHOLOGIC EVALUATION

S. Bozkurt (1), DC Arikan (2), EB Kurutas (3), H. Sayar (4), M. Okumus (1), A. Coşkun (2), V. Bakan (5)

1. Emergency Department, Kahramanmaraş Sutcuimam University, Medical Faculty, Kahramanmaraş, Turkey
2. Department of Obstetrics and Gynecology, Kahramanmaraş Sutcu Imam University, Faculty of medicine, Kahramanmaraş, Turkey
3. Department of Biochemistry, Kahramanmaraş Sutcuimam University, Medical Faculty, Kahramanmaraş, Turkey
4. Department of Pathology, Kahramanmaraş Sutcuimam University, Medical Faculty, Kahramanmaraş, Turkey
5. Department of Pediatric Surgery, Kahramanmaraş Sutcuimam University, Medical Faculty, Kahramanmaraş, Turkey

Corresponding author: Mr Bozkurt Selim (selimbozkurt01@yahoo.com)

Key-words: selenium ; ischemia-reperfusion injury ; ovary

Background/Purpose: The aim of the study was to evaluate the effects of selenium (Se) on ischemia/reperfusion (I/R) injury in rat ovaries.

Methods: Thirty-five female Sprague-Dawley rats were randomly divided into 5 groups (n = 7): sham (S), I/R1, I/R2, Se1, and Se2. In the I/R1 and Se1 groups, 4 hours of ischemia were followed by 6 hours of reperfusion; and in the I/R2 and Se2 groups, 4 hours of ischemia were followed by 12 hours of reperfusion. In the Se groups, 30 minutes before reperfusion, a single dose of 0.2 mg/kg Se was administered intraperitoneally. The ovarian tissue levels of malondialdehyde (MDA) and nitric oxide (NO), and the activities of superoxide dismutase (SOD), catalase (CAT) and glutathione peroxidase (GPx) were measured biochemically. Tissue damage to ovarian tissue was scored by histopathologic examination.

Results: The I/R groups had significantly higher MDA levels and lower CAT, SOD and GPx activities than the sham group (p<0.05). Although NO levels were significantly higher in the I/R1 group than in the sham group (p<0.05), the NO levels in the I/R2 and sham groups were similar. Selenium pre-treatment significantly lowered tissue MDA and NO levels, and increased tissue SOD and GPx activities in the Se groups, compared to those in the I/R groups (p<0.05). CAT activities were significantly higher in the Se2 group than in the I/R2 group (p<0.05). CAT activities were higher in the Se1 group than in the I/R1 group, but the difference was not statistically significant. Treatment with Se significantly decreased the ovarian tissue damage scores in the Se2 group compared to those in the I/R2 group (p<0.05).

Conclusion: Selenium is effective in preventing tissue damage induced by I/R in rat ovaries.

P468

Genitourinary

TRAUMATIC UNILATERAL TESTICULAR DISLOCATION

MW Oostenenk (1), L van Bindsbergen (2)

1. Emergency department, UMCN St. Radboud Nijmegen, Nijmegen, Netherlands
2. Radiology, UMCN St. Radboud Nijmegen, Nijmegen, Netherlands

Corresponding author: Melle Oostenenk Maritza (m.oostenenk@seh.umcn.nl)

Key-words: Trauma ; Urology ; Testis

Introduction

Testicular dislocation is a rare clinical presentation that occurs most commonly as a result of blunt scrotal injury.¹ It is important to prevent any delay in diagnosis as this can lead to loss of spermatogenic function of the testis and increases the risk of orchiectomy.

Case description

A 52-year-old man fell during bicycling. Afterwards he complained of pain at the right side of his lower abdomen and left elbow. The patient was treated according to ATLS® guidelines. The left elbow was clinically fractured. An X-ray revealed a comminuted fracture of the olecranon which had to be treated operatively. Secondary survey also showed an empty right hemiscrotum and the testis was palpable as a small abdominal swelling in his right lower abdomen. Ultrasound of the swelling was performed. The radiologist concluded that the swelling was indeed the dislocated testicle with normal blood flow and a viable aspect according to Doppler.

A closed reduction of the testicle was performed. After relocation an ultrasound was performed and demonstrated a viable testicle in the right position.

On follow up at the outpatient clinic the patient was without any complaints. He has had an uneventful recovery.

Discussion

The diagnosis of a dislocated testicle is rare and only case reports can be found. The most common mechanism is an accident with motorcycle, with the patient hitting the seat of the bike with his scrotum. The diagnosis can be made by physical exam and ultrasound can be used to see if the testis is viable. There are a few possible locations of a dislocated testis. The differential diagnosis includes undescended testis, retractile testis or trauma-induced testicular torsion with high position of the testis.¹ When a dislocated testicle is recognized on time, early intervention with a closed reduction of the testis can be performed. Once normal blood flow during Doppler ultrasound is seen, the prognosis of testicular function is excellent. If reduction is unsuccessful, exploration with open reduction and orchiopexy can be performed.

Conclusion

Although a dislocated testicle after blunt perineal trauma is rare, the emergency physician has to perform an examination of the scrotum as fast reduction of the dislocated testicle is of the most importance for a good prognosis of testicular function.

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P469

Genitourinary

BILATERAL RENAL INFARCTION IN A YOUNG WOMEN

MA Dokuzoglu, MT Gokdemir, F Gungormez, H Kaya, O Sogut, L Solduk

Emergency Department, Harran University, Sanliurfa, Turkey

Corresponding author: Mr Kaya Halil (drhalilkaya@gmail.com)

Key-words: renal infarct, ; atrial fibrillation, ; young women

INTRODUCTION

In the last 30 years, Spain has turned from an emigrant country to a huge receptor of migratory flows. According to the I.N.E., in January 2011 almost 6.7 million foreigners were living in our country. At present, net immigration rate only reaches 0,99%, occupying the 15th position of the European Union.

In Spain, most foreigners are Latin American. In Andalusia, the majority are Moroccans.

AIMS

To determine the frequency of attendance and the type of pathology due to which foreigners attend the E.R., as well as the prescriptions done with electronic prescriptions.

MATERIAL AND METHODS

This is a descriptive, retrospective study of the foreigner population living in Spain in a legal situation, that attends the E.R. during the month of November, 2011.

We analyzed 849 records. The information was obtained from the medical records registered in the computerized system Digitalized Citizen's Health Records of the Andalusian Health System «DIRAYA». We collected data such as affiliation, hours of attendance, priority during triage, specialty, cause of consultation, complementary tests, clinical opinion on discharge and prescriptions as well as the number of cases attended during the year, exporting them to a calculation sheet for a further analysis.

RESULTS I

- ATTENDANCES 5'28% (849/16081)
- WOMEN:MEN 59'36% : 39'81%
- MEAN AGE 31'84 años
- ATTENDANCES/YEAR/PAC 2'47
- DIGITAL PRESCRIPTIONS 677
- BANAL PATHOLOGY 50'4%
- IMMEDIATE ATTENTION 5,54%

RESULTS II

- ROMANIA: 14.72%
- MOROCCO : 12.84%
- BOLIVIA. 9.66 %
- ECUADOR: 8.48%
- COLOMBIA:6.24 %
- PERU: 5.89%
- PARAGUAY: 4.12 %

RESULTS III

- INTERNAL MEDICINE: 39.34 %
- TRAUMA-SURGERY: 27.44%
- GYNECOLOGY 14.84%
- PEDIATRICS:6.71%
- OFTALMOLOGY: 5.89%
- OTOLARYNGOLOGY: 2.83%
- ESCAPE. 2.24 %
- PSYCHIATRY: 0.71 %

RESULTS IV

- INTERNAL MEDICINE

–Abdominal Pain 7,07%
 •OBGYN
 –Labor 4,36%
 •TRAUMATOLOGY
 –Contusions 4,12%
 RESULTS V
 COMPLEMENTARY TESTS
 •RX: 36.63%
 •LABORATORY TESTS. 27.44%
 •EKG: 7.66%
 •VAGINAL ECO:6.60 %
 •ABDOMINAL ECO: 4.36%
 •CRANIAL CAT: 1.18%
 •ABDOMINAL CAT :0.35%
 •ECO DOPPLER: 0.12 %
 •ECOCARDIOGRAPHY: 0.12 %
 RESULTS VI
 DISCHARGE DERIVATION
 •DISCHARGE: 87.99%
 •ADMISION 7.18 %
 •NOT STATED: 4.83%
 CONCLUSIONS

Foreigner patients that attend our E.R. are mostly young women. One third of these are originary from Latin America, mostly presenting banal pathologies with abdominal pain accounting for most of the cases and discharge from the hospital as the most frequent outcome.

P470

Genitourinary

FOLEY CATHETER IN THE WRONG WAY

E Basaran (1), BV Boz (2), M Candar (3), M Cikman (2), H Kandis (4), A Kayikci (1), A Saritas (5)

1. Urology, Duzce University, Duzce, Turkey
2. Emergency department, Duzce University, Duzce, Turkey
3. Emergency Medicine, Duzce University, Duzce, Turkey
4. Emergency department, Duzce University Medical Faculty, Duzce, Turkey
5. Emergency department, Duzce University School of Medicine, Duzce, Turkey

Corresponding author: Mr Saritas Ayhan (a_saritas@hotmail.com)

Key-words: Catheterization ; urinary tract ; complication

Introduction: Urinary tract infections are commonly seen in elderly. Urinary tract anatomy changes and gets worse in years and becomes vulnerable to infections. Male patients are mostly affected by the complications of prostatic hypertrophy and females are usually affected by prolapse of genitourinary tract. The patient is usually an elder hospice woman or a male with a hypertrophic prostate. But there are always exceptions which ruin these generalizations.

Case: A 71 year old man admitted to our emergency clinic with a fever of 39.60C. He had 105/65 mmHg blood pressure, 26 respirations/min and 120 heart beats/min. In his medical history, there was a period of time that he was observed in critical care unit for four months after return of spontaneous respiration (ROSC) following anterior myocardial infarction. He was severely affected in the hypoxic period of time until ROSC achieved. He was neurologically disabled and had no control of urination. He was discharged from hospital with some existing neurological disability. His urinary output was collected and measured by foley in the critical care unit. But there was no problem with that. Five months after discharge, the relatives noticed that he had a swollen sac just under the penis and above scrotum. With increasing fever they brought him to the hospital. General physical examination showed

no signs of infection except the swollen sac under penis. The patient was urinating when we squeeze the sac. A foley catheter was inserted through penile orifice. The catheter was seen as circling around itself under the skin but not going deep inside urethra. Urinary system ultrasonography was performed and a hyper-echoic collection was seen in the bladder. Complete urinary examination showed lots of bacteria, leucocytes in urine and it was nitrite positive. The patient had iatrogenic urinary tract infection caused by wrong catheterizations. Most probably it caused by early swelling of the balloon of the foley catheter before correct replacement of it in the critical care unit.

Conclusion: Urinary tract catheterization is a simple way of detecting renal functions and controlling urinary output. But if it is performed wrong, this simple mistake may cause chronic and complicated urinary tract infections. As always mentioned, there is nothing better than a detailed history and a good examination. This is the basis of the art of medicine. A detailed general examination will give us enough information about the origin of a fever which is hard to guess where it originates from.

P471

Genitourinary

CORRELATION OF VOLUME, POSITION OF STONE AND HYDRONEPHROSIS WITH MICROHEMATURIA IN PATIENTS WITH SOLITARY UROLITHIASIS

F Ozkan (1), MF Inci (1), B Altunoluk (2), S Bozkurt (3), M Yuksel (1)

1. Radiology, Kahramanmaraş Sutcu Imam University Faculty of Medicine, Kahramanmaraş, Turkey
2. Urology, Kahramanmaraş Sutcu Imam University Faculty of Medicine, Kahramanmaraş, Turkey
3. Emergency Medicine, Kahramanmaraş Sütçü İmam University School of Medicine, Kahramanmaraş, Turkey

Corresponding author: Mr Ozkan Fuat (drfozkan@yahoo.com)

Key-words: Hematuria ; Multidetector Computed Tomography ; Hydronephrosis

Abstract

The aim of this study is to determine the relationship between hematuria and volume, position of stone and hydronephrosis in patients with solitary stone on the unenhanced multidetector computed tomography (MDCT). This retrospective study evaluated the clinical and radiological records of 83 patients undergoing MDCT for the evaluation of renal colic who also underwent a microscopic urinalysis at the emergency department of our hospital during the one- year period. Including criteria of MDCT study was solitary urolithiasis and cumulative stone diameter must be under 1 cm. A total of 83 patients were finally included in the study, with a mean age of 42.1 years (48 (57,8%) females and 35 (42,2%) males). Detecting 5 or more red cells on urinalysis were regarded as microscopic hematuria and positive in 46 patients (55,4%). There was a positive correlation between the position of the stone (especially upper two-thirds ureteric stone) and microhematuria rate (r:0.28, p=0.009). The presence of hydronephrosis between the microhematuria and non-microhematuria groups were statistically different, 36 patients (78%) and 12 patients (32%), respectively (p<.001). The median stone volume between the microhematuria and non-microhematuria groups were not statistically different, 37.5 (range 5–425) and 28 (range 4–412), respectively (p=0.39). Although stone volume is one of the best methods for reflecting of stone burden, microhematuria was not correlated with stone volume. However, microhematuria must lead to perform ultrasound examination whether hydronephrosis and ureteric stone are present or not in

patients with renal colic. Further studies are warranted with larger sample size.

P472 Genitourinary

LOIN TO GROIN PAIN- IS IT RENAL COLIC?

A El-Gammal, L Mahoney, D Shields
emergency department, St James's hospital, Dublin, Ireland

Corresponding author: Mr El Gammal Ayman (Draymangelgammal@hotmail.com)

Key-words: renal colic ; flank pain ; CT urogram

Introduction

Acute flank pain is a common presenting complaint to the emergency department (ED), requiring a broad differential diagnosis and work-up. Nephrolithiasis appears to be the most frequent cause of flank pain, affecting 3% to 5% of the population in industrialized countries.

This is an audit for the management of patients with suspected renal colic in a busy emergency department.

Methods

All patients presenting in 2011 to St James's Hospital Dublin Emergency department with flank/loin pain who required CTU (CT urogram) were included.

Results

The review included 157 patients in total. All patients had a pain score documented. 145/157 (92%) had a urine dipstick performed. 106/145 (73%) of urine was positive for blood, of which 57/106 were positive for calculus on CTU. 89% of patients had baseline investigations performed. However only 41% had a calcium level documented. 66/157 (42%) had a positive scan for renal calculus, with a further 5% showing evidence of a recent passage of stone. 38/157 (24.2%) had other findings including small bowel obstruction, bowel cancer, pyelonephritis, cholecystitis and cysts disease. Patients who were fit for discharge home were either followed up by their GP or urology OPD after discussion with the urology team.

Conclusions

CTU has been the investigation of choice for suspected renal colic in our institution for 10 years. Its ability and importance in identify other significant pathology has been highlighted. An electronic referral pathway for patients suitable for outpatient management has been created to enable early discharge and ease of follow of patients.

P473 Genitourinary

EVALUATION OF PATIENTS WITH RENAL COLIC THAT PRESENT TO AN EMERGENCY DEPARTMENT DURING THE MONTH OF RAMADAN

G Pamukcu Gunaydin (1), NO Dogan (1), Y Cevik (1), H Korkmaz (2), A Savrun (2), G Cikrikci (1)

1. Department of Emergency Medicine, Etlik İhtisas Training and Research Hospital, Ankara, Turkey
2. Department of Emergency Medicine, Etlik İhtisas Training and Research Hospital, Ankara, Turkey

Corresponding author: Mr Dogan Nurettin Ozgur (nurettinozgurdogan@gmail.com)

Key-words: Ramadan ; renal colic ; dehydration

Background: Our goal was to study the effects of fasting and mean weather temperature on blood biochemical parameters and urine test results in a group of patients that present with renal colic to a training hospital emergency department during the month of Ramadan.

Methods: Patients, who presented to our emergency department during August 1 - 29, 2011; and were diagnosed with renal colic were included in the study. Patients' demographic characteristics, major complaints, laboratory values and average temperature of the day they presented were recorded.

Results: During 29 days period, 61 patients were diagnosed with renal colic. 35 patients were fasting, while 26 of them were not. Comparing fasting and non-fasting patients; there was no statistically significant difference regarding age, arterial blood pressure, body temperature, blood glucose level, serum urea and creatinin levels, urine erythrocyte - leukocyte, urine ketone, urine density; and chief complaint.

Conclusion: Low urine volume, reflects low fluid intake or excessive fluid loss, and directly increases stone risk by increasing urinary saturation of stone-forming salts. Fasting may cause limited fluid intake and increase in renal colic presentations by affecting blood chemistry and urine concentration. In this study no significant difference was observed between fasting and non fasting patients in terms of mechanisms that can cause renal colic.

P474 Genitourinary

RENAL ARTERY EMBOLISM

DR. ÖZLEM UZUN*, DR. HATICE TOPÇU DOĞAN*, DR. CANER ÇELİK*, DR. MUSTAFA YALIMOL*, DR. ENGİN COŞKUN ASLAN*

1: BAĞCILAR TRAINING AND RESEARCH HOSPITAL
EMERGENCY DEPARTMENT, İSTANBUL

O UZUN, H TOPÇU DOĞAN, C ÇELİK, M YALIMOL, EC ASLAN
Bağcılar Training and Research Hospital Emergency Department, Istanbul, Turkey

Corresponding author: Mme Dogan Hatice (haticetopcu2000@yahoo.com)

Key-words: Renal artery embolism ; Renal colic ; back pain

Summary: Renal artery embolism is a case which is seen rarely and diagnose hardly in emergency services. Introductions about patients and suspicion is very important to diagnose this illness. Because there is no specific biochemical tests and findings. Arteriyel embolis usually develop after cardiac pathologies. These cardiac pathologies are atrial fibrillation and other arrhythmic cases, embolism which is seen after myocardial infarction, rheumatic heart disease. In this patient's history there is no cardiac pathology, surgery operation and embolism.

CASE REPORT

A 36 year old man patient who has vomiting, perspiration and left side pain admitted to our emergency service. Sudden onset of severe pain then perspiration and vomit started 1 hour ago. Patient's Glasgow Coma Scale (GCS) was 15. Blood pressure was 130/90 mmHg, arterial pulse was 90/minute, fever:37.0 C. Abdominal examination was normal, there was no defance-rebound, there was left costovertebral angle tenderness and other organ examination was normal. There was no chronic disease, the story of the surgical, renal pathology and trauma in patient's history. Hemogram and biochemical analyzes were normal, two positive (++) leucocyte were seen in urinalysis. Patient firstly was evaluated renal colic and started examination but patient's symptoms didn't recuperate. Contrast abdominal CT was taken. It was recognized that there was no the proximity of contrast

enhancement in almost all the left kidney in Contrast abdominal CT. Patient is considered as renal artery embolism

RESULT

A lot of patients with left side pain and renal colic admit to emergency services. On the other hand, renal artery embolism is not an usual case so if doctors don't suspect and evaluate carefully, it is possible that renal artery embolism can't recognize. Our aim is to attract attention rare renal artery embolism cases and possibility of renal artery embolism in renal colic patients.

P475

Geriatrics Imaging / Ultrasound / Radiology

TRAUMA? FOREIGN BODY? CALCIFICATION?

E Akıncı (1), NB Akıllı (1), MO Gonen (1), R Köylü (1), E Atayık (2), B Cander (1)

1. Emergency department, Konya Training and Research Hospital, Konya, Turkey
2. Department of Allergy and Immunology, Cumhuriyet University School of Medicine, Sivas, Turkey

Corresponding author: Melle Akinci Emine (emineakinci@yahoo.com)

Key-words: Spleen ; Calcification ; trauma

83 years old male patient was brought to the emergency service because of being beaten by unknown persons., In his history, the patient was assaulted by fists and sticks with his wife 2 days ago. There was no pain except his left chest pain. In physical examination, left lower costas precision but bilateral respiratory is normal and equal. There is no subcutaneous emphysema and crepitation. Another physical examination is normal. The patient's wife was assault in addition to make to drink something that she and her family don't know. In the background he was the Alzheimer Disease so he don't remember safety and history is taken from his family. In chest X-ray there is no pneumothorax, hemothorax or costa fracture but in left upper abdominal region there was multiple, smooth-edged, different size radio-opacities were seen. These opacities gave rise to thought to make drink something. Therefore, non-contrast abdominal CT and endoscopy was planned. The patient's endoscopy no foreign body, drug etc. in stomach. In abdominal CT spleen scan was normal size but have multiple calcification. Follow-up of the patient in two days was no problem to discharged. Outpatient visits were offered to patient.

Splenic calcification may be noted on conventional imaging techniques, and may or may not be associated with splenomegaly. The causes of splenic calcification are numerous; histoplasmosis, tuberculosis, brucellosis, candidiasis, Pneumocystis jiroveci and sickle cell disease (1). Single or smaller numbers of calcified lesions can also be seen following trauma, ischaemia/infarction. Calcification can also be associated with splenic haemangiomas and cysts. Rarely, splenic calcification can be associated with non-Hodgkin lymphoma of the spleen (2).

Multiple splenic calcification is seems rarely, in imaging methods incidentally like our patient.

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P476

Geriatrics Imaging / Ultrasound / Radiology

GLIOMATOSIS CEREBRI: A RARELY SEEN DISEASE IN THE EMERGENCY DEPARTMENT

E Akıncı (1), Y Yüzbaşıoğlu (2), E Atayık (3)

1. Emergency department, Konya Training and Research Hospital, Konya, Turkey
2. Emergency department, Atatürk Training and Research Hospital, Ankara, Turkey
3. Department of Allergy and Immunology, Cumhuriyet University School of Medicine, Sivas, Turkey

Corresponding author: Melle Akinci Emine (emineakinci@yahoo.com)

Key-words: Gliomatosis ; cerebri ; emergency

A thirty year old male patient presented to the emergency department (ED) complaining of a headache. The patient's history revealed he had started experiencing a headache two days prior to attending ED and he had experienced an episode of aphasia that lasted 10 to 15 seconds four hours prior to arrival at the ED.

A physical exam revealed a conscisous, fully oriented and cooperative patient with pupils equal bilaterally reactive to light. The patient presented with left sided facial paralysis. The patient did not have any pathological findings in motor and sensory exam, and he had natural deep tendon reflexes without any pathological reflexes. A cranial computed tomography (CT) which was performed for facial paralysis revealed a 8 cm x 6 cm x 5 cm heterogeneous hypodense region in the left temporal lobe .Cranial magnetic resonance imaging (MRI) was performed and revealed a T1 hypointense, a T2 hyperintense large mass and an edematous area all of which primarily affects the subcortical area and extending from left temporal to parietooccipital region. The patient underwent brain surgery. The pathological results showed a diffuse astrocytoma grade II. The patient, did not experience any post-surgery neurological problems continued to receive radiotherapy for 3 weeks.

Gliomatosis cerebri (GC) is a rarely seen central nervous system lesion. The clinical symptoms and radiologic characteristics of GC are non-specific and the condition may be confused with other central nervous system diseases (1). Diagnosing GC is achieved by radiological and histopathological exams. Autopsy was required for diagnosis before the MRI was made available. Prior to the introduction of MRI, GC would only be diagnosed after death following an autopsy. The term GC was first used by Nevin in 1938, and since then there have been over 300 cases reported in the literature (2). The most commonly areas affected by the GC are thalamus (75%), corpus callosum (50%) and brainstem (10-15%). GC can be classified in two types. Primary GC does not appear with a primary neoplastic lesion and is the more commonly seen type. In secondary GC, a primary cerebral lesion develops and infiltrates the other lobes of the brain (3). Clinical manifestations are nonspecific and include headache, seizures, visual disturbances, corticospinal tract deficits, lethargy, and dementia (4). The cranial CT can be normal in some cases. A homogeneous infiltrating lesion in the cranial MRI can be seen as in our case. Although rarely seen, intracranial pathologies, such as GC, should be considered in patients presenting to the ED complaining of chronic headache.

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P477 *Geriatrics Imaging / Ultrasound / Radiology*

ANOTHER USE OF ULTRASONOGRAPHY IN THE EMERGENCY DEPARTMENT: RETINAL DETACHMENT

Y Yüzbaşıoğlu (1), E Akıncı (2), S Yüzbaşıoğlu (3), F Coşkun (4)

1. Emergency department, Atatürk Training and Research Hospital, Ankara, Turkey
2. Emergency department, Konya Training and Research Hospital, Konya, Turkey
3. Ophthalmology department, Ankara training and research hospital, Ankara, Turkey
4. Emergency department, Ankara training and research hospital, Ankara, Turkey

Corresponding author: Melle Akinci Emine (emineakinci@yahoo.com)

Key-words: bed side ultrasonography ; retinal detachment ; emergency department

Introduction

Retinal detachment occurs when sensory retina peels away from the retinal pigment epithelium once fluid fills the subretinal space (embryonic intraretinal or optic ventricle). It can result from various conditions, including congenital disorders, vascular disease, metabolic conditions and trauma (1). Retinal detachment is an eye emergency that requires a rapid diagnosis and treatment. The clinical signs of acute retinal detachment include photopsia and seeing small dark colored flying objects and rarely, there is a complete loss of vision (2). In this paper we present a patient who had a previous visual loss and suffered a retinal detachment resulting from trauma to his eye. This patient did not present any clinical signs and we diagnosed his condition with an ocular ultrasound exam.

Case Presentation

The 55 year old man presented to our ED after injury from a fall complaining of pain in the right eye. The patient stated he suffered a mechanical fall and hit his face on the ground. The patient history revealed that he had suffered a chemical injury to the left eye resulting from a splash of powdered lime four years ago. which resulted in cloudiness in his cornea. He also received a splash of hot cooking oil in the same eye 2 years ago and his vision gradually decreased in this eye. The patient stated he did not seek medical care following those two traumas. His physical exam revealed an oriented and cooperative patient with GCS of 15, blood pressure of 130/85 mmHg, pulse of 90 beats per minute, respirations of 15 per minute. Upon inspection, he was noted that he a cataract in the left eye secondary to a trauma suffered during childhood, as well as conjunctival hyperemia and a subconjunctival hemorrhage. The orbital rims were intact on palpation and the bilateral eye movements were free over the full normal range with no pain due to eye movement. A near visual acuity test resulted in a J1 level in the right eye with no light sensation in the left. His right pupil was reactive to light but no reaction to light was noted in the left pupil, which was fully dilated. His fundus exam was normal on the right but could not be evaluated on the left eye due to corneal opacity. His intraocular pressures were evaluated to be normal bilaterally. The rest of the physical exam was normal. Following bedside ocular ultrasound in the ED using Mindray DC-3 (China) a 7.0 linear probe and vitreous hemorrhage and retinal detachment was noted in the right eye. Orbital computed tomography was performed and the heterogeneous increase in the vitreous density of the left ocular bulb consistent with retinal detachment and hemorrhage. The orbital magnetic resonance imaging study showed a 21 mm x 9 mm, regular shaped image in the posterolateral section of the left ocular bulb consistent with detachment and hematoma. The patient was consulted to the ophthalmology clinic with the initial diagnoses of retinal detachment and vitreous hemorrhage. These diagnoses were confirmed by the ophthalmologist and the patient was admitted for follow-up treatment.

Conclusion

Critical eye pathologies could be missed in the ED evaluation when patients were suffering from other major trauma and not presenting any clinical signs and symptoms. We think that emergency service ultrasound is a useful tool not only to evaluate critical trauma patients, but also for the rapid diagnosis and treatment of conditions affecting many organs including the eyes.

P478 *Geriatrics Imaging / Ultrasound / Radiology*

ULTRASOUND-GUIDED SUBCLAVIAN CATHETERIZATION IN PEDIATRIC PATIENTS WITH AN LINEAR PROBE

YH Kim, SI Park, SY So

anesthesiology and pain medicine, Chungnam national university hospital, Daejeon, Korea, (South) Republic of

Corresponding author: Mr Park Sang Il (goodlebang@gmail.com)

Key-words: pediatric subclavian catheterization ; ultrasound-guided ; premature patients

Background: Central venous catheterization (CVC) is difficult and can be problematic, especially in pediatric critical care patients. Accessing the subclavian vein (SCVC) is even more difficult, causing serious complications such as pneumothorax, arterial puncture, and hemothorax. Recently, the ultrasonographic(USG) technique is used, but its efficiency is not confirmed. Some authors have performed SCVC through the supraclavicular approach(SCA) through USG or by accessing the brachiocephalic vein through the infraclavicular approach(ICA). We successfully conducted SCVC through the ICA by using a 40 mm linear probe at our first attempt without complications.

Case report: We conducted SCVC in 11 pediatric patients. Ages ranged from 2 days to 24 months, body weight 1120 gm to 12.4 kg, and height 34.3cm to 91.7 cm. Using a linear probe, first we confirmed the ipsilateral internal jugular vein (IJV) and move the probe caudally to confirmed the confluence of the vein and clavicle and its acoustic shadow. By in-plane technique, we inserted the needle lateral to the clavicle, passing the acoustic shadow of the clavicle to place the tip in the venous confluence. After confirming its location through blood aspiration, the catheter was inserted. All first attempts were successful in puncturing the vein without any complications.

P480 *Geriatrics Imaging / Ultrasound / Radiology*

COMPARISON OF SENSITIVITY AND SPECIFICITY OF BEDSIDE THORACIC ULTRASOUND AND PLAIN ANTERO-POSTERIOR CHEST RADIOGRAPHY FOR THE DETECTION OF PNEUMOTHORAX IN BLUNT THORACIC TRAUMA

ZL Béres, HL Borcea

Emergency Department, Bihor County Emergency Hospital, Oradea, Romania

Corresponding author: Mr Béres Zsolt-levente (dr_beres_zsolt@yahoo.com)

Key-words: thoracic ultrasound ; pneumothorax ; blunt thoracic trauma

Diagnosing a posttraumatic pneumothorax can be really challenging taking account of the possibility of clinically silent presentations and the limitations of plain chest radiography (especially in supine position). The golden standard for diagnostic imaging remains the computed tomography of the chest, but these radiologic examinations have several disadvantages: cost, duration,

irradiation, availability. Beyond these limitations we can face situation when performing radiological imaging is impossible and you have to be thrown upon the clinical examination in less optimal conditions (natural disasters, mass-casualty incidents, etc.) Technical advances in ultrasonography enabled the usage of these devices wherever you need. Bedside ultrasound became a golden-standard in many fields of medicine (although emergency medicine). Ultrasound devices decrease continue in size, weight and cost; facts that promotes this kind of examination more and more for emergency situations: it is non-invasive, can be performed bedside and repeated any time you need; requires less training (measuring in hours).

Objectives:

We proposed to compare the sensibility and sensitivity of bed-side thoracic ultrasound effectuated by emergency physicians without great experience in ultrasound examination and antero-posterior plain radiography of the chest interpreted by radiologists, for detection of pneumothorax in blunt thoracic trauma patients.

Methods:

After a short training in bed-side thoracic ultrasound (with video exemplification) the emergency physicians (also residents) were leaved to exercise during a month this technique. In the study were enrolled all adult patients (over 18 years old) presented in our emergency department who suffered a blunt thoracic trauma (or suspicion of this in unconscious victims). Each patient underwent thoracic ultrasound as an addition to the focused abdominal sonography for trauma examination effectuated by the trained personnel. The presence or absence of the lung-sliding sign and/or the comet-tail artefact was recorded. The absence of these signs corresponds for the suspicion of pneumothorax and depending on the patient clinical status they underwent either tube thoracostomy (in unstable patients) or plain chest radiography (in case of stable victims) followed by computer tomography of the thorax. Clinical signs of instability were recorded: shock, respiratory failure or mechanical ventilation. The patients who showed no sonographical signs of pneumothorax were followed up with chest radiographies. The final outcome was the presence of posttraumatic pneumothorax proved by tomography and/or evacuation. Were also noted on the study records: age, gender, duration between the trauma and the presentation in the emergency department and the finality of the case (admitted or not). The ROC curves for the two imaging methods were calculated and compared.

Results:

There were 101 subjects enrolled in the study over a 6-month period. Only patients who arrived when a properly trained emergency physician was present were included for analysis. Thoracic ultrasound evaluation added approximately 30 to 60 seconds to the FAST evaluation. The average age was 48.6 ± 20 years. A number of 8 patients were diagnosed with pneumothorax, one of them having bilateral pneumothorax.

The ultrasound examination recorded only 1 false negative result and 3 false positive exams (sensitivity=87.5% and specificity=96.77%, PPV=72.73%, NPV=99.5%). The plain radiography showed 2 false negative results and no false positive exams (sensitivity=71.4% and specificity=100%, PPV=100%, NPV=98.9%).

Comparison of the two ROC curves resulted in no significant difference between the two imaging method for detection of pneumothorax after blunt chest trauma: for ultrasound AUC=0.912 (95% CI: 0.839-0.960) and for radiographies AUC=0.857 (95% CI: 0.773-0.919), with $p=0.4426$.

Conclusions:

The thoracic ultrasound examination showed comparable sensitivity and specificity with the plain antero-posterior chest radiography for detection of pneumothorax after blunt thoracic trauma. Taking account of this conclusion and of the advantages of

ultrasound towards radiological examinations we recommend the introduction of thoracic ultrasound examination in the standard sonographical assessment of trauma patients.

P481

Geriatrics Imaging / Ultrasound / Radiology

CASE REPORT: SPONTANEOUS HEMOPNEUMOTHORAX IN A YOUNG BOY: AN ULTRASOUND DIAGNOSIS

G Ruggiano (1), P Sonni (2), E gurrini (3), R camajori tedeschini (3)

1. Emergency Department, Ospedale S. Maria Annunziata, Florence, Italy

2. emergency department, Ospedale s. maria annunziata, florence, Italy

3. emergency department, ospedale s. maria annunziata, florence, Italy

Corresponding author: Mme Ruggiano Germana (germana.ruggiano@asf.toscana.it)

Key-words: spontaneous hemopneumothorax ; bed side ultrasound ; chest X ray

Hemopneumothorax is present in 12% of spontaneous pneumothorax. It is a life-threatening condition and prompt diagnosis is essential to right therapeutic approach.

A 16 years old boy was admitted to our Emergency Department for spontaneous chest pain lasting 3 days; pain was continuous and was exacerbated by deep breathing and cough, it was progressively worsening before hospital presentation. Vital signs were normal but he had sinus tachycardia (110 bpm). He had never had any health problem.

The physical examination found asymmetrical breath sounds with decreased left breath sounds; blood gas analysis was normal. A bed side ultrasound examination was performed (25' after hospital presentation) that showed severe echogenic pleural effusion and apical pneumothorax. The chest X Ray showed only mild pleural effusion and minimal apical pneumothorax. A contrast enhanced chest CT scan was then performed: it confirmed the diagnosis of hemopneumothorax with abundant hemothorax and active bleeding and small apical pneumothorax. A tube thoracostomy was then performed and 1200 ml of blood were drained. The patient always remained hemodinamically stable and after 24 hours a video assisted laparoscopic thoracotomy was performed with demonstration of active bleeding from an apical lacinial artery.

Bed side ultrasound examination is a simple, extremely useful tool in the emergency physicians' hands a sit extends clinical examination. In case of pleural effusion ultrasound examination is much more sensible than chest X Ray. Ultrasound examination is very useful in determining the amount of fluid and the type of pleural effusion. It can also guide bed side chest tube insertion.

We believe that ultrasound examination should be widely performed and become part of emergency physician clinical examination.

P482 *Geriatrics Imaging / Ultrasound / Radiology*

RELATIONSHIPS BETWEEN MEDICATION USE AND FUNCTIONAL STATUS OF THE OLDER PATIENT ADMITTED TO THE EMERGENCY DEPARTMENT.

I Beyer (1), M Diltoer (2), I Hubloue (3), T Mets (1), T Verhamme (3)

1. geriatric department, UZ Brussel, Brussels, Belgium
2. Intensive Care, UZ Brussel, Brussels, Belgium
3. emergency department, UZ Brussel, Brussels, Belgium

Corresponding author: Melle Verhamme Tine (tineverhamme@gmail.com)

Key-words: geriatrics ; medication ; functional status

Objective

To determine the existence of relationships between medication use and the functional status of the geriatric patient admitted to the emergency department.

The number of older patients admitted in the emergency department rises each year. On average older patients take more medication than younger patients and their prognosis is more often determined by their functional status rather than the actual reason for their admission.

Design

Prospective descriptive study

Method

Patients admitted in the emergency department of UZ Brussel between 01/12/2011 and 31/12/2011 from the age of 70 years old and older, were submitted to a questionnaire (gender, age, medication, origin, reason for admission, comorbidities, orientation in time and space, falls, Katz Index) and were tested on grip strength.

Data were statistically analyzed with Excel version 2003 and with IBM SPSS Statistics version 20.

Relationships were investigated between medication use [number of medicines, class of medicines, STOPP (Screening Tool of Older Person's Prescriptions) medication and START (Screening Tool to Alert doctors to Right Treatment) medication] and functional status (Katz Index and grip strength).

Results

Data were collected from 200 patients. The average age was 80,82 years with 80% of the patients travelling from their home to the emergency department. Falling was the most common reason for admission (23%). The most important comorbidity was arterial hypertension (63%). 58% of patients had fallen at least once during this year. The number of medicines varied from 0 to 21 medicines per patient with an average of 6,79 medicines per patient. 80,5% of patients took cardiovascular medication. 65,5% of patients were physically and psychologically independent (Katz Index O). 67% of patients had a grip strength considered as weak for their age and gender. 36% of patients took STOPP medication and 16,5% of patients were advised to take START medication.

Patients scoring O on the Katz Index take fewer medicines than patients scoring A, B, C, Cd on the Katz Index. Patients with weak grip strength do not take more medicines than patients with normal grip strength. Patients taking STOPP medication score worse on the Katz Index and have a weaker grip strength than patients who do not take STOPP medication. Patients advised to take START medication do not score worse on the Katz Index and do not have weaker grip strength than other patients.

Conclusion

There is a relationship between the number and the type of medication prescribed and the functional status of the older patient admitted to the emergency department. Patients with a

worse functional status take more medicines than those patients with a good functional status. Patients taking STOPP medication have worse functional status than patients who do not take STOPP medication.

P483 *Geriatrics Imaging / Ultrasound / Radiology*

WHICH SIGN IS MORE IMPORTANT; SLIDING LUNG SIGN VS STRATOSPHER SIGN?

AS Girisgin (1), G Calik (1), O Karaoğlu (2), M Ergin (3), B Cander (1), E Dogan (4), A Dur (5), M Gul (1)

1. Emergency Medicine, NEU Meram Medical School, KONYA, Turkey
2. Emergency Medicine, Konya State Hospital, KONYA, Turkey
3. Emergency department, NEU Meram Medical School, KONYA, Turkey
4. Emergency Medicine, Antalya State Hospital, Antalya, Turkey
5. Emergency Medicine, Bezmialem University, Istanbul, Turkey

Corresponding author: Mr Girisgin A. Sadik (sgirisgin@yahoo.com)

Key-words: Ultrasound ; Pnomothorax ; Emergency medicine

BACKGROUND: An important progression in the field of radiological imaging technologies have come true, which contributed the diagnosis and care of thoracic diseases. A few years ago, Ultrasonography (USG) has been accepted to have limited importance in the field of diagnosis of thoracic diseases. The thoracic cavity consisting of pulmonary air content and solid structures doesn't let progression of ultrasound beams, which in turn produces artifacts and has prevented the application of USG in the field of diagnostic procedures of lung. However, there is a growing body of data supporting a number of new field of application of sonography as a real-time bed-side clinical tool in emergency settings. Likewise, scientific evidence in the chest medicine have been recommending chest USG as a new tool to evaluate lung status in ventilated patients. Chest ultrasound can easily be used at the bedside to assess initial lung morphology in severely hypoxemic patients and can be easily repeated, allowing the effects of therapy to be regularly monitored. The sliding lung sign (SLS) and stratospher sign which are especially useful when diagnosing pneumothorax, is recognized in the American College of Emergency Physicians (ACEP) Emergency Ultrasound Guide and is widely used in emergency medicine practice. **METHODS:** The study included 34 patients with pneumothorax. SLS could describe pneumothorax for 30 of all patients whereas stratosphere sign could diagnose it only for 19 patients. In the subgroup of 11 patients with partial pneumothorax, it was diagnosed by SLS for 8 patients whereas diagnosis was made by stratosphere sign only for one patient. **CONCLUSION:** It was thought that stratosphere sign wasn't successful in diagnosing partial pneumothorax. When all patients were considered, SLS was more successful than stratosphere sign.

P484 *Geriatrics Imaging / Ultrasound / Radiology*

A REVIEW OF DEATHS IN THE ED

F Cummins (1), R McNamara (1), G Ni Mhaille (2)

1. Emergency Department, University Hospital Limerick, Limerick, Ireland
2. Geriatric Medicine, University Hospital Limerick, Limerick, Ireland

Corresponding author: Melle McNamara Rosa (rosamcnamara@gmail.com)

Key-words: Elderly ; Death ; Mortality

Introduction

Mortality rates within Emergency Departments vary for a number of reasons. We wished to review the deaths which occurred in the department in 2011, a period of high inpatient boarding. We were specifically interested in the characteristics of older adults who died in the ED.

Methods

We used the electronic patient tracking system, Maxims to identify those who had died in the department. Review of the scanned ED notes was then undertaken.

Results

The ED at University Hospital Limerick saw 57845 patients in 2011. 9986 (17.26%) were aged over 64 years old. 70 deaths occurred in the department during 2011, including 33 patients aged ≥ 65 years. The majority of patients aged ≥ 65 (22 (66.6%)) who died in the department presented in cardiac arrest. The remainder presented with; headache 2, abdominal pain 3, respiratory failure 3, sepsis 1, stroke 1, chest pain 1. In seven patients an early decision regarding the appropriate ceiling of treatment was made.

For those patients who did not present in cardiac arrest (15 patients) or who recovered spontaneous circulation (1 patient) the average time spent in the ED was 454.94 minutes (range 8-1,707 minutes). For the patients aged ≥ 65 in this group the average time spent in the ED was 423.27 minutes (range 8-1437).

Six patients aged ≥ 65 and one patient aged 60 were nursing home residents. Three of these patients presented in cardiac arrest pre-hospital. The remaining 4 patients suffered arrest in the ED (average time in ED 242.3 minutes).

Conclusions

Time spent in the ED was unacceptably long. Although beyond the scope of this study to examine if these deaths were preventable, the impact of inpatient boarding on mortality has been previously well documented. Further efforts need to be made to streamline care to avoid potential adverse outcomes.

P485

Geriatrics Imaging / Ultrasound / Radiology

APPROPRIATE TRIAGE OF OLDER ADULTS IN THE ED

F Cummins (1), R McNamara (1), M Moses (2)

1. Emergency Department, University Hospital Limerick, Limerick, Ireland
2. Geriatric Medicine, University Hospital Limerick, Limerick, Ireland

Corresponding author: Melle McNamara Rosa (rosamcnamara@gmail.com)

Key-words: Elderly ; Triage ; Screening

Introduction

Elderly patients comprise an increasingly large portion of cases presenting to Emergency Departments worldwide. Aged 65 years and over they account for 12% to 24% of Emergency Department presentations, with a dramatic increase in attendance by 34% between 1993 and 2003. With a greater likelihood of arrival by ambulance and of having an increased number of tests, they are 2.5 to 4.6 times more likely to be hospitalised. However, due to atypical presentations, it is not uncommon for frail, elderly patients to be under-triaged.

Aims

We wanted to establish which triage tool has is most effective for use with older patients presenting to the emergency department.

Methods

Six electronic databases were searched using the terms [[elderly.mp.OR aged.mp] AND triage.mp] AND [emergency department.mp] limit to humans and English language.

Results

Six triage tools were which had specifically been studied with regard to their utility in elderly patients.

3 were commonly used triage systems: the Manchester Triage (MTS), Emergency Severity Index triage instrument (ESI) and the Canadian Triage and Acuity Scale (CTAS). Both the MTS and ESI have been shown to under-triage older adults, while the CTAS had a higher ability to predict need for immediate life-saving interventions.

The remaining screening tools were identified the "Identification of Seniors at Risk" tool (ISAR), the Triage Risk Screening Tool (TRST) and the Variable Indicative of Placement risk (VIP). Both the ISAR and TRST tools showed good sensitivity and a high negative predictive value, but with low specificity and low positive predictive value. The sensitivity of VIP has been shown to be low.

Conclusions

Traditional systems of Triage have been shown to under-triage older adults. Further research is needed to identify triage tools to correctly identify older people who require immediate medical care and those who may require additional support after ED attendance.

P486

Other - Part 1

OMENTAL HERNIATION IN CONSEQUENCE OF OPEN THORACIC INJURY AND DIAPHRAGMATIC LACERATION: AN INTERESTING CASE

G. Gulbahar (1), A. Gokhan Gundogdu (1), N. Danli (2), E. Kaya (2), S. Babaroglu (3)

1. Division of Thoracic Surgery, Dr. Nafiz Korez Sincan City Hospital, Ankara, Turkey
2. Division of Emergency Medicine, Dr. Nafiz Korez Sincan City Hospital, Ankara, Turkey
3. Division of Cardiovascular Surgery, 29 Mayıs Hospital, Ankara, Turkey

Corresponding author: Mr Danli Nihat (fendanli@yahoo.com)

Key-words: thoracic injury ; ;

Summary: Diaphragmatic rupture dependent on blunt injury is a rare entity. Also the herniation of the abdominal organs out of the thoracic wall through the diaphragmatic and the thoracic defect is very rare.

Case Report: Twenty-seven years old male patient who is coming motor vehicle accident and has open pneumothorax on his left hemithorax and omental herniation from the thoracic wall through the diaphragmatic laceration near to the displaced fractured 7th rib, taken to the operating room urgently and performed primary repair to the defects. This phenomenon discussed in respect of surgical approach and presented because of its rarity.

Conclusion: Trans-thoracic access is a proper surgical approach in the foreground thoracic injuries.

P487

Other - Part 1

A RARE CAUSE OF HEART FAILURE – HYPOPARATHYROIDISM

U. Arslantaş (1), N. Danlı (2), A. Yurtseven (2), S. Yıldız (3), M. Kaynakçı Bayram (3)

1. Division of Cardiology, Dışkapı Yıldırım Beyazıt Teaching and Research Hospital, Ankara, Turkey
2. Division of Emergency Medicine, Dr. Nafiz Korez Sincan City Hospital, Ankara, Turkey
3. Division of Emergency Medicine, Dışkapı Yıldırım Beyazıt Teaching and Research Hospital, Ankara, Turkey

Corresponding author: Mr Danli Nihat (fendanli@yahoo.com)

Key-words: Cardiomyopathy ; hypocalcemia ; hypoparathyroidism

Background and aim:

Dilated cardiomyopathy (DCM) is a common cause of heart failure. However, hypocalcemic cardiomyopathy due to hypoparathyroidism is a very rare cause of DCM2-3. We here described a case of DCM that caused by hypocalcemia after total thyroidectomy. Purpose of the this case report, to remember the hypocalcemic cardiomyopathy in the etiological assessment of a young patient presenting with heart failure.

Case report:

A 22-year-old woman presented to the emergency room with a 5-day history of exertional dyspnea that rapidly progressed to orthopnea and paroxysmal nocturnal dyspnea. She had no history of pre-existing cardiac illness. Only she had a history of total thyroidectomy 2 years ago due to goitre. She had taken daily synthroid as a daily medication after thyroidectomy.

Review of systems was negative for fever, symptoms of upper respiratory tract infection, or retrosternal chest discomfort. On physical examination, She was in moderate respiratory distress with an oxygen saturation of 88% on room air that increased with oxygen support. Heart rate was 118 bpm, and her pulse was regular. Blood pressure was 90/60 mmHg. Chest examination revealed diffuse bilateral crackles. Cardiac exam revealed marked jugular venous distension, bilateral peripheral pitting edema. Heart sounds S1, and S2 were normal. There was presence of S3, and grade 3/6 systolic murmur was audible in the mitral area.

Laboratory investigation revealed a calcium level was 4,0 mg/dl and all other electrolytes, renal function, white blood count and haemoglobin were within normal limits. Her ECG revealed a T wave inversion in the precordial leads and prolonged QT interval (0,55sec). Chest x-ray revealed cardiomegaly (cardiothoracic ratio - 0,59) with bilateral hilar congestion. Echocardiogram showed global hypokinesia of the LV with 30% of LV ejection fraction (EF). The left ventricular (LV) end-diastolic dimension was 6,7 cm. Mitral regurgitation was observed due to incomplete coaptation of both leaflets. After the resistance of furosemide treatment, we diagnosed as a DCMP due to severe hypocalcemia. We prescribed the oral calcium, vitamin D3, thyroxine and ramipril and intravenous furosemide. Two weeks after these medications, calcium level were raised to normal range. She became free of symptoms such as dyspnea and edema. In the follow up echocardiographic evaluation, LV ejection fraction (30% to 40%) were increased.

Conclusion:

Calcium plays an important role in myocardial contractility and severe hypocalcemia impair cardiac contractility because the sarcoplasmic reticulum is unable to maintain sufficient amount of calcium content to initiate myocardial contraction4. We believe that systolic dysfunction was secondary to hypocalcemia because of there was no apparent cause of DCM and ejection fraction was improved with correction of calcium. Hypocalcemia is a rare but reversible cause of DCM2-3 and must be remembered in the etiological assessment of young patient presenting with heart failure.

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P488

Other - Part 1

RIGHT-SIDE DIAPHRAGMATIC RUPTURE AFTER BLUNT THORACOABDOMINAL TRAUMA. CASE REPORT.

G. Gulbahar (1), A. Gokhan Gundogdu (1), N. Danli (2), A. Yurtseven (2)

1. Division of Thoracic Surgery, Dr. Nafiz Korez Sincan City Hospital, Ankara, Turkey

2. Division of Emergency Medicine, Dr. Nafiz Korez Sincan City Hospital, Ankara, Turkey

Corresponding author: Mr Danli Nihat (fendanli@yahoo.com)

Key-words: ; ;

Traumatic diaphragmatic injuries are unusual and generally appears on the left-side. Although early surgery is necessary, early diagnosis of the right-side rupture is relatively difficult. Various iatrogenic complications, especially severe liver injuries can be occur after tube thoracostomy in misdiagnosed patients. We report a case of blunt thoracoabdominal trauma with right diaphragmatic rupture that required urgent surgical treatment for hepatothorax.

P489

Other - Part 1

SYMPTOMATIC EFFECT OF NEOSTIGMIN ON MYOTONIC DYSTROPHY IN EMERGENCY SERVICES

S. Ozkan (1), U. Ocak (1), M. Fatih Yetkin (2), P. Durukan (1), F. Ferda Erdogan (2)

1. Department of Emergency Medicine, Erciyes University Faculty of Medicine, Kayseri, Turkey

2. Department of Neurology, Erciyes University Faculty of Medicine, Kayseri, Turkey

Corresponding author: Mr Durukan Polat (polatdurukan@gmail.com)

Key-words: Neostigmin ; Myotonic Dystrophy ;

Introduction:

This case is reported to discuss the possible symptomatic effects of Neostigmin on the patient established a diagnosis of Myotonic Dystrophy, applying to the Emergency Service complaining of shortness of breath and benefited from applied Neostigmin being thought that he was a patient with Myasthenia Gravis.

Case Presentation:

A 43 years old male patient applied to the hospital complaining of shortness of breath and fatigue. It is learned from the anamnesis of the patient that he did not have any diseases until he was 30, after the age of 30 shortness of breath on occasion even taking a rest and eyelid ptosis clarified especially in the evenings. The patient having an increase of his respiratory distress for a few months, applied to the hospital due to his performance status is worsened. Presenting symptoms were as follows: Blood Pressure 118/76 mmHg, Respiration Rate 24/minute, Pulsation 68/minute, Body Temperature 36 °C. During the examination of cardiovascular system; heart sounds were natural and pulsate, there were no murmurs and extracardiac sounds. During the respiratory system examination there were no rales and rhoncus, respiratory sounds in base of lungs were low. During the abdominal examination there were no defenses and rebounds, intestinal sounds were low and there was no costovertebral point sensibility. During the extremity examination there were no dimensional differences, pulses were palpable, pretibial edema were +/- . During the neurologic

examination his consciousness was somnolence, co-operation was weak, he had bilateral ptosis, light reflex +/+, his pupils were isochoric, deep tendon reflexes were generalized hypoactive and there was no pathologic reflex. In the blood gas analysis of the patient with respiratory distress the results were pCO₂ 79, pO₂ 96, SO₂ 95, pH 7.21, HCO₃ 31.6. In his whole blood analysis WBC 6000/μL, Hgb:17 g/ dL, Platelet 118.000/ μL. His biochemical data were glucose 81 mg/ dL, liver and kidney function tests were normal, D-Dimer:640 μg/ L, Troponin (-), INR:1.17, CPK 182. On the patient's chest radiography cardiothoracic index was increased, in the sinus there was a clear blunting on the left, and there was a significant flattening on the pulmonary conus. On the patient's thorax CT, in the thickest part of it there was pericardial fluid to the extent of 3cm, pulmonary artery dimension was increased due to the pulmonary hypertension, esophageal lumen is followed as dilate, in both lower lobes of the lungs and apicals there was an increase in density compliance with atelectasia. During the patient's ECG, ECG was normal at sinus rhythm, heart rate was 68/ minute and there were no acute changes followed. During his ECHO, EF 60%, PAP: 60 mmHg, and right lumens were followed as minimal dilate. By means of the presenting clinical outcomes, Neostigmin Ampoule 0.5mg was performed as test therapeutic to the patient with the prediagnosis of Myasthenia Gravis. After Neostigmin there was significant improvement of the clinical outcomes. In his control of blood gas CO₂ retention was decreased. NIMV (Noninvasive mechanical ventilation) was performed to the patient. After ensuring the stabilization of the patient, neurology consultation was requested because of the fact that myotonic facial appearance, frontal baldness and myotonic phenomenon were followed during his repeated neurologic examination. The patient was hospitalized in the neurology service with the prediagnosis of Myotonic Dystrophy as a result of the neurology consultation. During his EMG of the patient hospitalized in the neurology service, symptoms in compliance with Myotonic Dystrophy were followed. Conclusion:

In (a group of) the patients applying to the emergency service with respiratory distress, Neuromuscular Diseases must be taken into consideration and Myotonic Dystrophy must be kept in mind. Although the positive symptomatic effect of Neostigmin on myotonic Dystrophy was not proven in literature, the limitation of the studies done in this area presents the necessity of the studies that prove the symptomatic effect of Neostigmin on Myotonic Dystrophy.

P490

Other - Part 1

AUDIT OF RISK STRATIFICATION IN ACUTE CORONARY SYNDROME

V. Jessop (1), S. Green (2), P. Shah (1), J. Pott (1), T. Harris (1)

1. Emergency Department, The Royal London Hospital, Barts and The London NHS Trust, London, United Kingdom
2. Barts and The London School of Medicine and Dentistry, Queen Mary University of London, London, United Kingdom

Corresponding author: Mr Pott Jason (Jason.Pott@bartshealth.nhs.uk)

Key-words: Acute Coronary Syndrome ; Risk Stratification ; Troponin

Objectives:

The burden of Coronary Artery Disease is well recognised, and patients with acute chest pain represent a large proportion of acute medical admissions in Europe. (1)In order to risk stratify the

high volume of patients presenting with chest pain to the Emergency Department at The Royal London Hospital three pathways have been developed based on the national guidelines 'Chest Pain of Recent Onset' (2): low-risk chest pain, possible ischaemia (Green), NSTEMI or probable unstable angina (Orange), and STEMI (Red).

Assignment to each of these pathways is by history, examination, GRACE score, ECG and a triple panel of troponin, myoglobin and CKMB. Patients assigned to the 'Low Risk' pathway are managed in accordance with national guidelines receiving aspirin on arrival, an ECG within 15 minutes of arrival, two near-patient Triple Panel tests at 120 minutes apart and a repeat ECG. Those with a normal ECG and negative triple panel tests are discharged to outpatient follow up at the Low Risk Chest Pain Clinic (LRCPC).

Patients assigned to UA/STEMI pathway are admitted and treated with triple therapy, with troponin

Positive patients referred for urgent angiography, while patients with STEMI are referred for immediate angiography.

Two audits were conducting 6 months apart. Data for approximately 400 patients was collected on adherence to the pathway with the following standards:

- ECG within 15 minutes of arrival
- Correct treatment by assigned pathway
- Correct assignment by pathway.

In particular we looked at the patients referred to the in-patient (orange) pathway to identify those who could potentially be treated as low risk (green pathway), and, to assess safety of the low risk (green) pathway, we reviewed all patients assigned to this to determine if any should have been admitted, auditing attendance at the outpatient LRCPC and following up all patients by telephone at 6 months.

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P491

Other - Part 1

RAPID SEQUENCE INDUCTION PERFORMED BY A RURAL AND SUBURBAN AIR AMBULANCE SERVICE: A 16-MONTH AUDIT OF PRACTICE

A. Chesters, N. Keefe, J. Mauger, T. Harris
East Anglian Air Ambulance, United Kingdom

Corresponding author: Mr Harris Tim (Tim.Harris@bartshealth.nhs.uk)

Key-words: Pre-Hospital Care ; Rapid Sequence Induction ; Helicopter Emergency Medical Services

Introduction

This poster describes the first 16 months experience of pre-hospital RSI in a rural and sub-urban helicopter-based doctor-paramedic service after the introduction of a standard operating procedure already proven in an urban trauma environment.

Method

A retrospective database review of all missions between October 2010 and January 2012 was carried out. Any RSI or intubation carried out was included, regardless of age or indication. Patients who were intubated by Ambulance Service personnel prior to the arrival of the EAAA team were excluded.

Results

The team was activated 1156 times and attended 763 cases. A total of 88 RSIs occurring within the study period were identified as having been carried out by the EAAA team. There were no failed intubations that required a rescue surgical airway or the placement of a supraglottic airway device. For RTCs, the overall on scene time for patients who required an RSI was 40 minutes (range 15-72 minutes). For all other trauma, the average on scene time was 48 minutes (range 25-77 minutes) and for medical patients, the average time spent at scene was 41 minutes (range 15-94 minutes).

Conclusion

We have demonstrated the successful introduction of a pre-hospital care standard operating procedure, already tested in the urban trauma environment, to a rural and suburban air ambulance service operating a full-time doctor-paramedic model. We have shown a zero failed intubation rate over 16 months of practice during which time over 750 missions were flown with 11.5% of these resulting in an RSI.

P492

Other - Part 1

GHB ACUTE INTOXICATION IN ITALY: RECREATIONAL DRUG INTOXICATION OR MEDICATION OVERDOSE?

A GIAMPRETI (1), E KESER (1), CA LOCATELLI (1), D LONATI (1), L MANZO (2), VM PETROLINI (1), C ROGNONI (1), S VECCHIO (1)

1. CENTRO ANTIVELENI - CENTRO NAZIONALE DI INFORMAZIONE TOSSICOLOGICA, IRCCS FONDAZIONE SALVATORE MAUGERI, PAVIA, Italy
2. CENTRO ANTIVELENI - CENTRO NAZIONALE DI INFORMAZIONE TOSSICOLOGICA, IRCCS FONDAZIONE SALVATORE MAUGERI E UNIVERSITA' DI PAVIA, PAVIA, Italy

Corresponding author: Mr Locatelli Carlo Alessandro (carlo.locatelli@fsm.it)

Key-words: GHB ; RECREATIONAL DRUG ; INTOXICATION

Objective: Gamma-hydroxybutyrate (GHB) and analogues are worldwide known as substances of abuse and rape drugs. In Italy GHB is also a medication used in the treatment of alcohol dependence. This study evaluate a case series of GHB overdoses referred to Italian emergency departments (EDs) in order to identify the characteristics of this intoxication in our country. Methods: A retrospective analysis of all cases of GHB intoxication referred to the Pavia Poison Center over a four-year period (2007-2010) was performed: all cases of admission to EDs for a confirmed and voluntary GHB poisoning were evaluated, while accidental or malicious intoxications (i.e. administration by another person as rape-drug) were excluded. Characteristics of the poisoned patients and clinical features were evaluated. Results: 178 of the 237 cases of GHB intoxication met the inclusion criteria (M/F ratio 1.6; median age 38.4 +/- 8.9): 28% of the patients were admitted to the EDs during the weekend. Ninety-two per cent of the patients (164/178) ingested GHB in the trade pharmaceutical formulation (Alcover®). Eighty-two patient ingested only the street-GHB or the Alcover®, while other agents were co-assumed in 96 cases (53.9%): medications (78/96), substances of abuse (13/96) and ethanol (40/96) (more than two type were co-assumed in 34 cases). Severe neurological impairment (GCS<9) was present in 56.7% of all the cases (101/178) and in 56.1% of the GHB/Alcover® pure intoxications (46/82). Agitation or seizure were present respectively in 12.4% (22/178) and in 15.8% (13/82 pure intoxications) of the cases, severe respiratory failure in 7.9% (14/178) and 6.1% (5/82). The 37.8% (62/164) of all the patients who had ingested Alcover® was in treatment with GHB for alcohol addiction. One patient died. Conclusion: Compared to the previously published studies on GHB intoxication, this case series

shows some peculiarities such as higher average of age, high percentage of co-assumption of medications and ethanol, lower percentage of excitatory symptoms, homogeneous distribution of the cases during the week. The use of GHB in Italy for the treatment of alcoholism addiction should result in an easier availability for patients at risk of abuse and could explain the peculiarities of our case series.

P493

Other - Part 1

EVALUATION OF TOXIC EFFECTS AFTER ACCIDENTAL ORAL ADMINISTRATION OF METHYLERGOMETRINE IN INFANTS

E BUSCAGLIA, A GIAMPRETI, CA LOCATELLI, D LONATI, M MAZZOLENI, VM PETROLINI, C ROGNONI, G SCARAVAGGI, S VECCHIO

CENTRO ANTIVELENI - CENTRO NAZIONALE DI INFORMAZIONE TOSSICOLOGICA, IRCCS FONDAZIONE SALVATORE MAUGERI, PAVIA, Italy

Corresponding author: Mr Locatelli Carlo Alessandro (carlo.locatelli@fsm.it)

Key-words: Methylergometrine ; Newborns ; Therapeutic error

Objective: In October 2011 Methergin® 0.25 mg/ml oral drops (methylergometrine) was withdrawn worldwide due to the large number of therapeutic errors involving children. Methergin® was often administered to the baby instead other medications (i.e. vitamins, simeticone, acetaminophen). However, the toxic dose has not been established. All cases referred to the Pavia Poison Centre (PPC) of methylergometrine erroneous administration to infants were evaluated in order to identify any toxic effects. Methods: A 5-year retrospective study (2007-2011) was performed: all cases of erroneous administration of methylergometrine in infants younger than 5 months, in which the administered dose was known, were evaluated and assessed for sex, age, dose/weight, signs/symptoms. According to pharmacokinetic parameters, the presence of symptoms was evaluated over at least 2 hours after ingestion. Results: Seventy-six cases were analyzed (38 M,38 F; mean age 26.3 days): 14 patients were asymptomatic at least two hours after ingestion (dose ingested 0.035+/-0.019 mg/kg; mean age 30.7 days) and 19 patients developed symptoms (dose 0.039+/-0.019 mg/kg; mean age 15.1 days). Signs and symptoms recorded were unexplained crying (13/19;68%), abdominal pain (10/19;52.6%), peripheral vasoconstriction/paleness (4/19;21%), tachycardia (2/19;10%), and bradycardia (1/19;5.2%). Severe symptoms (seizures, coma, apnea) were not observed and all patients fully recovered. Analysis of our cases does not show a statistically significant correlation between presence of clinical effects and dose ingested (p = 0.45 Wilcoxon test) or age (p = 0.70 Wilcoxon test). Forty-three patients were asymptomatic at admission (mean time since ingestion: 0.52 hours, range 0.08-1.50 hours - dose 0.026+/-0.019 mg/kg) but their outcome resulted unknown. Conclusion: Severe clinical manifestations, even fatal event, has been described for accidental parenteral administration of methylergometrine in newborns or after erroneous oral doses administration. In our case series, serious effects were not observed (all patients were hospitalized). Withdrawal of oral drops formulation should avoid exposing patients to serious toxic effects such as those described in published case reports and prevent intoxications. References: Tovo S. Avvelenamento mortale da Methergin® in un neonato. Min. Leg. 1961;81(1):1-2; Aeby A, Johansson A, De Schuiteneer B, et al. Methylergometrine poisoning in children: review of 34 cases. Clin Toxicol 2003;41: 249-253.

P494

Other - Part 1

DRUGS ABUSE IN PEDIATRIC AGE: INCREASING TREND IN THE 15 YEARS EXPERIENCE OF PAVIA POISON CENTRE

M ALOISE (1), E BUSCAGLIA (1), F CHIARA (1), A GIAMPRETI (1), CA LOCATELLI (1), D LONATI (1), L MANZO (2), M MAZZOLENI (1), VM PETROLINI (1), C ROGNONI (1), S SIRI (1), S VECCHIO (1)

1. CENTRO ANTIVELENI - CENTRO NAZIONALE DI INFORMAZIONE TOSSICOLOGICA, IRCCS FONDAZIONE SALVATORE MAUGERI, PAVIA, Italy
2. CENTRO ANTIVELENI - CENTRO NAZIONALE DI INFORMAZIONE TOSSICOLOGICA, IRCCS FONDAZIONE SALVATORE MAUGERI E UNIVERSITA' DI PAVIA, PAVIA, Italy

Corresponding author: Mr Locatelli Carlo Alessandro (carlo.locatelli@fsm.it)

Key-words: Drugs abuse ; Pediatric patients ; Recreational drugs

Objective: To evaluate the abused substances in different age-groups during a 15 years period in a selected pediatric case series. **Methods:** A retrospective analysis of selected pediatric patients (age 10-17) referred to Pavia Poison Centre (PPC) from 1996-2010 was performed: patients with a positive history of substance abuse were included. The substances involved has been correlated with two age groups (10-13 and 14-17 years-old) during three time periods (period-1:1996-2000; period-2:2001-2005; period-3:2006-2010). Case series: From 1996-2010, among 5.322 aged 10-17, 349 (6.5%) presented a positive history of abuse (31 in period-1, 116 in period-2, 202 in period-3). The substances of abuse involved were ethanol (143; 41%), THC (70; 20%), hallucinogens/LSD/ketamine (27; 7.7%), amphetamines (21; 6%), cocaine (12; 3.4%), opiates (9; 2.6%), other substances (8; 2.3%), unknown substances (59; 17%). A progressive increase in THC consumption (3.2%, 16.4% and 24.8%), hallucinogens (3.2%, 5.2% and 10%) and cocaine (0%, 3.4% and 4%) was observed through the periods 1, 2 and 3 respectively. A decrease in ethanol (56% versus 33%) and opiates abuse (3.4% versus 2.5%) was registered through period 2 and 3 respectively. A decrease in PPC admission for unknown substances was evidenced from period 1 to 2 (55% versus 8.6%), followed by an increase in period 3 (15.8%). Among 349 consumers, those aged 10-13 and 14-17 represented 13% (45/349) and 87% (304/349) respectively. Patients 10-13 years-old increased from 6.4% to 15.3% from 1996 to 2010; among these a particular elevation in THC consumption during the last 5 years was observed. **Conclusion:** In our experience drugs of abuse consumption has been increased during the last 15 years in patients aging 10 to 17. Patients aged 14-17 represent the major part of consumers for all the evaluated substances; however an increase in THC abuse was observed in 10-13 years-old consumers during the last five years. The increase of unknown substances at PPC admission in the last five years may be related to the availability of the new drugs of abuse.

P495

Other - Part 1

REMOTE BOTANICAL IDENTIFICATION IN THE MANAGEMENT OF PLANTS POISONING: A USEFUL TELEMEDICINE EXPERIENCE

VM PETROLINI (1), S VECCHIO (1), F BRACCO (2), M ALOISE (1), D LONATI (1), A GIAMPRETI (1), F CHIARA (1), M MAZZOLENI (1), O MAYSTROVA (1), L MANZO (3), CA LOCATELLI (1)

1. CENTRO ANTIVELENI - CENTRO NAZIONALE DI INFORMAZIONE TOSSICOLOGICA, IRCCS FONDAZIONE SALVATORE MAUGERI, PAVIA, Italy

2. DIPARTIMENTO DI SCIENZE AMBIENTALI, UNIVERSITA' DEGLI STUDI DI PAVIA, PAVIA, Italy
3. CENTRO ANTIVELENI - CENTRO NAZIONALE DI INFORMAZIONE TOSSICOLOGICA, IRCCS FONDAZIONE SALVATORE MAUGERI E UNIVERSITA' DI PAVIA, PAVIA, Italy

Corresponding author: Mr Locatelli Carlo Alessandro (carlo.locatelli@fsm.it)

Key-words: Plants poisoning ; Telemedicine ; Botanical identification

Objective: Plants identification is crucial for an adequate management and treatment in several cases of vegetable poisoning. The recognition of the plants can be ensured by a botanist through the evaluation of a good quality picture jointly with some information on the characteristics of the plants. The utility and efficacy of this procedure was evaluated in all the cases of plants poisoning managed by the Pavia Poison Centre (PPC) when associated to picture(s) transmission, in order to (i) optimize the botanist evaluation, (ii) identify factors that can prevent the plants identification, (iii) define the useful information about the plants and the characteristics that the image must have to allow recognition. **Methods:** All cases of plants poisoning referred to PPC during 5-year (2007-2011) in which almost one image (picture obtained by mobile or camera) was sent us for the vegetable identification were retrospectively analysed. Data on the plants, the taken picture, and the clinical manifestations were considered. Reasons that prevented the recognition of certain plants were evaluated. **Results:** In the considered period, PPC registered 1050 cases of plants poisonings. In 105 cases (10%) the plant resulted undefined, and in 45 of these (43%) an image was sent to PPC. The image allowed the plants recognition in 28 cases (62%): in 9 the recognition of a non-toxic plant allowed the immediate patient discharge. In 17 cases (38%) the identification of the plants resulted not possible because of lack of image details useful for recognition (8 cases), poor image quality (7 cases) and insufficient information on the plants characteristics (2 cases). Based on these critical issues, a procedure to optimize the effectiveness of remote recognition has been developed establishing the useful information for plant identification (some characteristics of plants and leaves) and how best to capture the image (i.e. parts of the plant to be photographed, type of background, how cutting berries and bulbs). **Conclusion:** The study demonstrate the usefulness of telemedicine tools and remote expert botanical recognition in the management of plants poisonings, and allowed to improve procedures to optimize the transmission of pictures with a consequent improvement of the clinical management.

P496

Other - Part 1

DOSE ADJUSTMENT OF TRIVALENT EQUINE ANTITOXIN IN THE TREATMENT OF INFANT BOTULISM

F ANNIBALLI (1), E BUSCAGLIA (2), L FENICIA (3), A GIAMPRETI (2), CA LOCATELLI (2), D LONATI (2), L MANZO (4), VM PETROLINI (2), S VECCHIO (2)

1. Department of Veterinary Public Health and Food Safety, National Reference Centre for Botulism, Istituto Superiore di Sanità, ROMA, Italy
2. CENTRO ANTIVELENI - CENTRO NAZIONALE DI INFORMAZIONE TOSSICOLOGICA, IRCCS FONDAZIONE SALVATORE MAUGERI, PAVIA, Italy
3. Department of Veterinary Public Health and Food Safety, National Reference Centre for Botulism, ISTITUTO SUPERIORE DI SANITA', ROMA, Italy
4. CENTRO ANTIVELENI - CENTRO NAZIONALE DI INFORMAZIONE TOSSICOLOGICA, IRCCS FONDAZIONE SALVATORE MAUGERI E UNIVERSITA' DI PAVIA, PAVIA, Italy

Corresponding author: Mr Locatelli Carlo Alessandro (carlo.locatelli@fsm.it)

Key-words: Infant botulism ; Trivalent Equine Antitoxin ; Botulism treatment

Objective: Infant botulism (IB) results from absorption of neurotoxins produced in situ by Clostridia colonizing the intestinal lumen in infants less than one-year. Currently, different antitoxin formulations are available and administered in different doses in IB in Italy, Argentina and US. In Italy and Europe, a 500 ml standard dose of a Trivalent-Equine-Antitoxin (TEqA) (750 IU-anti-A, 500 IU-anti-B, 50 IU-anti-E per ml) is registered for all the botulism forms. US-FDA licensed the intravenous Human-derived Immune-Globulin preparation (at least 15 IU-anti-A, 2 IU-anti-B per ml) at the dose of 2 ml/kg for IB; a Bivalent-Equine-Antitoxin (750 IU-anti-A, 550 IU-anti-B per ml) is used in IB in Argentina at the dose of 0.66 ml/kg. So, the antidote type and the appropriate dose for IB are not yet internationally standardized. We report two recent cases of IB in which two different doses of TEqA were administered trying to assess the minimal effective dose. Case series: Among the cases of IB referred to the Pavia Poison Centre in 2009-2011, two cases in which TEqA was administered were included. Case 1. A 3-month-old male (5 Kg b.w.) presenting acute abdomen underwent urgent explorative laparotomy that excluded volvulus: 24 hours later, mydriasis and diffuse hypotonia appeared, requiring endotracheal intubation. C.botulinum (enema) and toxin type-B (enema and serum) were detected. TEqA (125 mL) was administered intravenously. Case 2. A 7-month-old male (7 Kg b.w.) presented a 7-day history of stipsis, ptosis, mydriasis, drowsiness, weak cry, urinary retention and floppiness. C.botulinum and toxin type-B were detected in stools. TEqA (75 mL) was administered intravenously. Transient erythematous-rash appeared. Both babies fully recovered. Conclusions: IB remains a rare disease, and in selected cases may require antidote. In both our cases TEqA did not cause serious adverse reaction and improved the clinical picture. The optimal dose probably should be related with the circulating toxins levels, that in IB is known to be low: in our cases 10-25 ml/kg of TEqA (less than the producer recommended dose) resulted effective, but remain bigger than those used in Argentina and US. A further reduction is probably needed.

P497

Other - Part 1

ABSORPTION OF ELEMENTAL MERCURY BY INHALATION FROM BROKEN CLINICAL THERMOMETERS IN HEATING SOURCES: EVALUATION OF A CASE SERIES

M ALOISE (1), F CHIARA (1), A GIAMPRETI (1), CA LOCATELLI (1), D LONATI (1), L MANZO (2), VM PETROLINI (1), C ROGNONI (1), A RONCHI (3), S VECCHIO (1)

1. CENTRO ANTIVELONI - CENTRO NAZIONALE DI INFORMAZIONE TOSSICOLOGICA, IRCCS FONDAZIONE SALVATORE MAUGERI, PAVIA, Italy
2. CENTRO ANTIVELONI - CENTRO NAZIONALE DI INFORMAZIONE TOSSICOLOGICA, IRCCS FONDAZIONE SALVATORE MAUGERI E UNIVERSITA' DI PAVIA, PAVIA, Italy
3. DIPARTIMENTO DI MEDICINA AMBIENTALE E OCCUPAZIONALE, IRCCS FONDAZIONE SALVATORE MAUGERI, PAVIA, Italy

Corresponding author: Mr Locatelli Carlo Alessandro (carlo.locatelli@fsm.it)

Key-words: Mercury inhalation ; Elemental mercury intoxication ; Medical thermometers

Objective: Elemental mercury (Hg0) is absorbed primarily via inhalation of vapors. Hg0 is moderately volatile at room temperature but significantly evaporates when heated or aerosolized. A case series with blood/urine mercury levels after accidental Hg0 inhalation from broken mercury-in-glass medical thermometers in heating sources is described. Case series: A retrospective analysis (2004-2011) evidenced 16 cases (age 0.5-75 years) referred to the Pavia Poison Centre (PPC). All patients inhaled Hg0 vapors from broken thermometers in heating sources such as boiling water (n=6), boiling soup (n=6), heated

homogenized baby food (n=2), gas stove (n=1) and boiled stew (n=1). The average time of exposure was 35 minutes (10-60 minutes). All patients were asymptomatic. Urine and blood or plasma samples were collected and analyzed after an average time of 6 hours (range 1-24 hours) from exposure. In 8/16 patients mercury levels were normal either in urine (normal value 0.1-4.5 micrograms/L) and in blood (normal value 1-4.5 micrograms/L) or plasma (normal value 0.1-1.5 micrograms/L). The remaining 8/16 patients had a minimal increase in mercury levels. Among these, 2 patients exposed to Hg0 in boiling water presented a minimal increase either in urine and blood levels (11.3, 5.4 and 9, 4.9 micrograms/L respectively). Mercury plasma levels resulted slightly elevated in 2 other patients (3 and 2.1 micrograms/L) exposed to Hg0 in boiling water and soup respectively. In the last 4 patients only urine levels resulted elevated (range 6.1-6.5 micrograms/L) and 3 of these inhaled Hg0 in boiling water. Conclusion: Toxicity from Hg0 most commonly arises in occupational setting. Hg0 vapors may develop from broken thermometers in or near heating sources or from improper handling in the home setting (1). In our case series mercury levels obtained during the first hours after short term exposure resulted normal in half patients (8/16). Slight elevation in mercury levels mainly occurred from broken thermometers in boiling water but did not result in acute toxicity. References: 1. Baughman TA. Elemental mercury spills. Environ Health Perspect 2006; 114:147-52.

P498

Infectious Disease / Sepsis

CHARACTERISTICS OF URINARY TRACT INFECTIONS IN THE EMERGENCY DEPARTMENT OF A REGIONAL HOSPITAL

C Baena (1), J De Oleo (1), MD Gonzalez (2)

1. Family Medicine Resident, Hospital Virgen del Castillo, Yecla, Spain
2. Emergency department, Hospital Virgen del Castillo, Yecla, Spain

Corresponding author: Melle Baena Carolina (Carobaenab@hotmail.com)

Key-words: Urinary tract infections ; bacterial drug resistance ; comorbidities

Objective.

Analyze the characteristics of urinary tract infections with positive urine culture seen in the emergency department of a regional hospital
Method

This is an observational, descriptive and transversal study. A total of 456 cases seen in the emergency department during 2010 diagnosed of urinary tract infection (UTI), complicated urinary tract infection (CUTI) term that includes – UTI's in men, pielonephritis and prostatitis – and urinary sepsis were recruited. 122 met our inclusion criterion of positive urine culture, age higher than 14 and non pregnant women. First an excel sheet was designed to organize the information and then a strict recruitment protocol to follow in order to avoid bias. Statistical data was analyzed with SPSS 15 program.

Results.

Of the 122 patients 34.4% of patients were males and 65.5% females. The mean age was 68.26 for men and 49.76 for females. 32.8% of patients didn't have any comorbidity but in 11.5% of cases, no reference on this aspect in the clinical history was noted. The most frequent risk factor for CUTI was urinary tract anatomic malformation in 21%, following recent urinary tract surgery 17.2%. 28.7% of the presenting cases had had a previous episode of UTI of these 20.5% had risk factors for acquiring a urinary tract infection being : 76.1% permanent vesical catheter, 14.53% discharge from hospitalization in the last 48h and 9.3% living in a nursing home . 94.3% were UTI's acquired in the community (defined as UTI's with

no associated risk factors) from which the most frequent diagnosis was: lower urinary tract infection and cystitis (76.2%) pielonephritis (15.2%), prostatitis (3.3%) and urinary sepsis (4.9%). Of the 92.6% of discharged 65.6% received the correct empirical treatment verified with the urine culture result.

The genre variable had a statistical significant correlation with the variables: comorbidity ($p=0.000$), past history of surgery compromising the urinary tract ($p=0.000$), type of surgery involving urinary tract ($p=0.000$), risk factor for CUTI ($p=0.000$), community acquired UTI ($p=0.013$), correct diagnosis made in the emergency department ($p=0.002$), correct selection of empirical treatment prescription ($p=0.002$).

The variable for age had a statistical significance with: CUTI ($p=0.029$) positive linear correlation, proper diagnosis made in the emergency department ($p=0.023$), prescribed empirical antibiotic ($p=0.02$) and antibiotic resistance from urine culture result ($p=0.000$).

Conclusions

When the time comes to prescribe an empirical treatment patient characteristics like age, genre, comorbidities, recent or passed urinary tract surgery and risk factors for high risk urinary tract infections should be taken into account.

P499

Infectious Disease / Sepsis

MYELITIS LATE ONSET COMPLICATING BACTERIAL PNEUMOCOCCUS MENINGITIS (IN A CASE REPORT AND LITERATURE REVIEW)

H EZZOUINE, A BENSLAMA, B CHARRA, S MOTAOUAKKIL

Medical intensive care unit, university teaching hospital Ibn Rushd, CASABLANCA, Morocco

Corresponding author: Mme Ezzouine Hanane (ezzouinehanane@yahoo.fr)

Key-words: late myelitis ; meningitis complications ; pneumococcal meningitis

INTRODUCTION

The spinal cord is a rare complication of pneumococcal meningitis. Complications best known because of their frequency are encephalic complications: cerebral edema, encephalitis, hydrocephalus, systemic complications: severe sepsis, septic shock and failure multiviscérale. Nous report the case of a patient aged 60 years admitted to intensive care for pneumococcal meningitis and whose evolution complicated by flaccid tetraplegia revealed myelitis.

CASE REPORT

60 years old patient with a medical history in otitis purulent untreated evolving two weeks earlier, was admitted to intensive care for disorders of consciousness and fever.

Physical examination on admission Glasgow score an unconscious patient without deficit to 12. Blood pressure is 145/85 mmHg and heart rate 87 beats / min. It polypnéique to 24 cycles / min and arterial oxygen saturation to 97% in the open air. The temperature is 38 ° C. 9 The rest of the clinical examination is without faults. The blood test, urea 0.78 g / l, creatinine 11.41 mg / l glucose 1.2 g / l, potassium 3.93 mmol / l, serum sodium 137.8 mmol / l. Hemoglobin 15.3 g / dl, WBC 19500/mm³; 174000/mm³ platelets. Prothrombin time 85%, fibrinogen 4.2 g / l. Lumbar puncture found 780 items. 90% neutrophils. Direct Examination: Gram-positive diplococcus. Culture: pneumococcus. Glycorrachia 0.01 g / l; proteinorrachia 20.62 g / l; chlorurachie 112.31 mmol / l. The brain CT rating exaggerated contrast uptake without other signs associés. Le treatment consisted of antibiotics: ceftriaxone 100 mg / kg / day + vancomycin 3gr/jour and mechanical ventilatory support. The evolution was marked at day 10 hospital by a

difficulty of weaning, a flaccid tetraparesis with areflexia osteotendinous. The CT scan is normale. A lumbar puncture cerebrospinal fluid is sterile. The MRI appearance of spinal cord myelitis notes with hyperintensity on T2

DISCUSSION

The spinal cord complicating bacterial meningitis may cover different mechanisms alone or entangled, or compression by an abscess or extramedullary spinal, or epidural hematoma (unique mechanism) or direct toxicity of the pathogen on the cord with a high rate of germ in the cerebrospinal fluid and blood at the time of infection or toxicity inappropriate indirect immunological host against the pathogen in question or cross-reactivity between surface antigens of the pathogen and antigens of myelin. Another possible mechanism is vascular ischemic, ischemia may be related to a shock with low speed, a global hypoxia by ventilatory disorders (of central origin or metabolic), thrombotic phenomena, vasculitis, infection with vascular inflammation and perivascular, cerebral edema and decreased blood flow in the vascular territory affected and spinal cord thrombosis. Ischemic spinal cord on the anterior vascular network are predominant: the anterior spinal artery at the cervical level, the radicular artery single back through the floor, the Adamkiewicz artery in the lower thoracic and lumbar levels. These arteries anastomose with each other and the system irrigates 4/5 prior to the marrow. The spinal cord ischemic injury of the posterior system are exceptionnels. Si ischemia is prolonged, it induces a spinal cord infarction or necrosis. In the longer term, atrophy or spinal cord cavitations and secondary spinal cord compression. The intense inflammatory response in bacterial meningitis is responsible for a chronic arachnoiditis which alters the flow of cerebrospinal fluid and the gene of the spinal vasculature. In the long run, this may lead to the development of syringomyelia. The first examination to be conducted before a cord syndrome complicating acute bacterial meningitis must be MRI bone marrow. His interest is to seek a compression mechanism, the diagnosis of myelitis, assess the location and extent. Hyperintense on T2, enhanced by gadolinium show a spinal pain.

CONCLUSION

Myelitis is a rare complication of bacterial meningitis. Several pathophysiological mechanisms are entangled. The spinal MRI examination is the key to diagnostic. Le prognosis is guarded. A medullary syndrome complicating or accompanying acute bacterial meningitis evokes myelitis confirmed by spinal MRI.

P500

Infectious Disease / Sepsis

PROJECT FOR THE OPTIMIZATION OF THE PATH OF THE PATIENT IN INFECTIOUS DISEASES CRITERIA FOR FIRST AID AND ITS ISOLATION IN HOSPITAL SANDRO PERTINI OF ROME

PG Bertucci (1), MT Proietti (2), FR Pugliese (2), A Revello (2), A Simone (2), MT Traversa (2), D Livoli (2)

1. Emergency Department, Civic Hospital Chivasso, Chivasso, Italy

2. Emergency Department, Hospital Sandro Pertini, Rome, Italy

Corresponding author: Mr Livoli Donatella (donalivoli@yahoo.it)

Key-words: Emergency ; Infections ; Appropriateness of the isolation and therapy

Introduction

The infectious illnesses represent a remarkable part of the several illnesses that are observed at the Emergency Department. These kind of sicknesses, in a considerable percentage of circumstances, require the hospitalization. Also when the hospitalization is considered as an unnecessary procedure, it's vital to place the

potentially contagious patient in an appropriate isolation, as well as to apply an appropriate and well-timed therapy.

The objective of the work

The Sandro Pertini Hospital, originally lacking of a Unit of Infectious Illnesses and internal consultants, developed in May 2010 a particular itinerary for the handling of the infectious patients connected to the Emergency Department.

The current work has the will to implement that medical itinerary through some steps:

1) Definition of the standards of appropriateness for the displacement in "short intensive observation", where is provided a room of isolation.

2) Modality and times of isolation of the patient in hold of diagnostic definition and of the subsequent and possible displacement in the specialistic department of Infectious Illnesses.

3) Optimization of the patient's handling through the correct use of an empiric and critical therapy of antibiotics, both in terms of clinic outcome (considering the local epidemiologic reality and the relating antibiotic resistance), both in terms of economic aspect.

Materials and methods

-The draft of an "itinerary" aimed at the definition of standards related to the admittance in isolation at "short intensive observation", estimating the several modalities of transmission of the most common illnesses.

-An adequate staff training through several formative days and subsequent clinical audit about subjects related to infectiology (Infectiology connected with the Emergency Department). This staff training is accomplished by several infection experts.

-Institution of a 12h telephonic Help Desk related to the Infectious Illnesses. This Help desk will be activated from the 1st June 2012.

Outcome indicators

As outcome indicators we have considered:

- Appropriateness of the isolation and the pertinence of the displacements in specialized hospitals.
- Appropriateness/homogeneity of the anti-infective therapy.
- Impact on pharmaceutical cost.
- Monitoring of the number and the quality of questions posed to the Help Desk operators.

The outcome of the work will be analyzed through a particular kind of retrospective/perspective study that will compare the patients in isolation in the second half of the year 2011 and in the second half of 2012.

Inclusion criteria: potentially contagious patients, older than 14 years, with hemodynamic stability and without respiratory support.

Conclusions

In authors' opinion this project, based on iso resources, will notably improve the operators' autonomy in Emergency Department, in relation to the patient's handling. Although that, the operators won't substitute the specialist (Infection expert), whom will maintain his importance as second consultant.

P501

Infectious Disease / Sepsis

PROBABILITY TREATMENT OF URINARY TRACT INFECTIONS IN EMERGENCY DEPARTMENTS

F. Amira, M. Ben Lassoued, O. Djebbi, I. Bennouri, M. Ben Salah, A. Ali, K. Lamine

Emergency department, Military Hospital of Tunis, Tunis, Tunisia

Corresponding author: Mr Ben Lassoued Mehdi (mehdi.benlassoued@gmail.com)

Key-words: probability treatment ; urinary tract infections ; emergency department

Introduction : Patients often present to emergency departments with urinary tract symptoms. The adopted probability treatment in such cases is essentially based on leucocyturia evaluated by urine test strips or on midstream urine tests (MSU) findings before any culture and sensitivity. The purpose of this study is to verify the agreement of the urine tests findings (leucocyturia and culture and sensitivity) with the probability treatment prescribed in emergency departments.

Material and methods :

This is a prospective study carried out over a period of 2 months. It included all patients presenting to the emergency department with urinary tract symptoms and a suspicion of infection. Leucocyturia evaluation and MSU analysis were performed systematically in all patients in accordance with the rules of asepsis in collaboration with the medical laboratory. We noted the leucocyte urine cornet on which the probability antibiotic treatment was based. All patients were put on fluoroquinolones in compliance with the recommendations of French agency for health safety of health products. Culture and sensitivity results were collected later. Frequencies were compared with a chi-squared tests.

Results :

Midstream urine tests were performed in 176 patients. Urine culture was positive in 24.4% of patients. Urine strip tests for leucocytes and nitrites were positive in 76.7% and 46.5 % of cases respectively in patients with positive urine culture against 20.3% and 9 % respectively in patients with negative culture ($p < 0.05$). Patients treated for cystitis and pyelonephritis had negative culture in 12 % and 13.5% of cases, respectively ($p < 0.05$). Eighteen percent of patients with positive culture did not receive treatment for urinary tract infection.

E. Coli was isolated in 74.4% of cases of positive MSU results followed by klebsiella and enterobacter cloacae (4.7% each) and protens mirabilis (2.3%). Resistance to fluoroquinolones was observed in 18.6% of cases. E. Coli was responsible for 87.5% of cases of resistance.

Conclusion :

In spite of positive culture, 18.6% of patients did not receive a probability antibiotic treatment. Antibiotics were wrongly given in 25.5% of cases. Treatment with fluoroquinolones did not take into account the resistance that was observed in 18.6% of patients. A better follow-up would be necessary to rectify the diagnosis and adjust the treatment.

P502

Infectious Disease / Sepsis

DOES LENGTH OF STAY IN ED ASSOCIATE WITH LENGTH OF STAY IN HOSPITAL OR MORTALITY?

J Mattila (1), J Tolonen (1), VP Harjola (2)

1. Emergency department, Helsinki University Central Hospital, Helsinki, Finland

2. Emergency department, HUS, Helsinki, Finland

Corresponding author: Mr Mattila Juho (juho.mattila@hus.fi)

Key-words: pneumonia ; length of stay ; mortality

Background

Pneumonia is a common cause of emergency department (ED) visits and often leads to hospitalization. It is also one of the most frequent causes of death in the elderly. Effects of length of stay in ED have been studied for long. Most of the studies, however, cover wide range of patients and diagnoses and separate patient group could behave atypically. The aim of this study was to evaluate existing relationship between ED length of stay (LOS), inpatient length of stay and mortality rates (hospital vs. 90 day) of pneumonia especially for the elderly.

Methods

We conducted a retrospective study (1.1.2011-31.12.2011) of emergency department patients in Jorvi hospital (Helsinki District University Central Hospital, Espoo, Finland) whose discharge-diagnosis from ED was bacterial pneumonia (ICD-10 J15) or unspecified pneumonia (ICD-10 J18). Data was obtained from hospital information system and consisted of 1554 ED visits (1360 patients). In addition, we compare different age-groups to each other. The 90-days mortality was obtained from population register. We performed Cox regression analysis and correlation analysis to study association between length of stay in ED and length of the stay in hospital, hospital mortality rate, and mortality rate during 90 days period following ED discharge. Age groups were compared to each other by nonparametric tests, Kruskal-Wallis or Wilcoxon Rank. In all analysis the point of statistical significance was set at $p < 0.05$.

Results

Median ED LOS was 4.8 h (interquartile range 3.5–6.8). Median inpatient LOS was 4.7d (interquartile range 2.9–7.8). LOS was significantly longer for elderly patients. 54% (834/1554) of diagnosed pneumonia cases were admitted to hospital, 32% (503/1554) of the cases were discharge to out-patient care, of which 127 needed frequent follow-up. 13% (197/1554) of pneumonia cases were admitted to primary care ward and 16 to nursing home. Younger patients were mainly admitted to hospital or discharged to out-patient care, where as only 15% of the patients ≥ 80 years discharged to out-patient care and 40% were admitted to primary care ward or nursing home. 4 patients died in ED, 36 patients died during followed hospital treatment and further 70 died during 90 days time period. Average hospital mortality rate was 4.9%. Mortality rates raised with age; no hospital mortality in patients < 40 -y, 0.8% in patients 40-60-y, 3.4% in patients 6-70-y, 3.9% in patients 70-80-y and 5.6% in patients ≥ 80 -y. 90 day mortality rates were; no mortality in patients < 20 -y, 0.4% in patients 20-40-y, 1.0% in patients 40-60-y, 6.4% in patients 60-70-y, 11.8% in patients 79-80-y and 21.3% in patients ≥ 80 -y. LOS in ED did not show any effect on LOS in hospital, hospital mortality nor 90 day mortality.

Conclusion

We were unable to demonstrate relationship between LOS in ED and LOS in hospital or LOS in ED and mortality. Nevertheless, the present data strongly suggests that process of care of elderly patients differs from process of care of younger patients.

P503

Infectious Disease / Sepsis

FEVER OF UNKNOWN ORIGIN IN A PREGNANT PATIENT

HM Durgun, M Icer, O Kaçmaz, E Ozcete, A Ozhasenekler
Emergency Department, University of Dicle, Medical School, Diyarbakir, Turkey

Corresponding author: Mr Ozhasenekler Ayhan (drhasenek@hotmail.com)

Key-words: pregnancy ; fever ; brucellosis

INTRODUCTION:Brucellosis is primarily a zoonosis found in both domestic and wild animals and is transmissible to humans through direct contact with such infected animals, consumption of their infected dairy products, or inhalation of aerosols. Although aggressive public health measures have dramatically reduced the number of brucellosis cases in developed countries, the disease remains endemic in many parts of the world, especially in Latin America, Africa, Asia, and Mediterranean countries. Maternal bacteremia, acute febrile reaction, toxemia, and disseminated intravascular coagulation are postulated to be the mechanisms by

which brucellosis may cause spontaneous abortion and intrauterine fetal demise in pregnancy.

CASE:A 20-year-old 20-week pregnant patient presented to emergency service with fever and generalized body ache which had started 5 days ago. Her blood pressure was 100/60 mmHg, pulse rate was 120 bpm, respiratory rate was 25 bpm, and body temperature was 38.5°C. On physical examination her general appearance was moderately deteriorated, she was conscious, and cooperated. Her oropharynx had hyperemia and other systems were normal. She had a previous 3-day course of Amoxicillin 1 gr BID due to upper respiratory infection. Her laboratory test results were as follows: WBC 3,6 K/uL Hb 8,61 g/dL Hct:25,5 % (MCV:77,8 fL) Glu:109 mg/dL Urea:13 mg/dL Cre: 0,55 mg/dL Na:130 mmol/L Cl:109 mmol/L K:2,5 mmol/L, ECG: Sinus tachycardia without ST-tramadol changes. Chest X-ray revealed open sinuses, a normal mediastinum and no parenchymal pathology. Her abdominal USG was normal. A cranial MRI obtained to rule out a central pathology was normal. A Rose Bengal Test was obtained from the patient with fever of unknown origin. Rose Bengal test was positive (1/640) and she was admitted to the infectious diseases clinic with the diagnosis of Brucella.

DISCUSSION:Acute illness usually consists of the insidious onset of fever, night sweats (with a strong, peculiar, moldy odor), arthralgias, myalgias, low back pain, weight loss as well as weakness, fatigue, malaise, headache, dizziness, depression, and anorexia. A significant percentage of patients may have dyspepsia, abdominal pain, and cough. Physical findings are variable and nonspecific. Hepatomegaly, splenomegaly, and/or lymphadenopathy may be observed. The fever in untreated acute brucellosis can be high or slightly elevated and usually lasts for days to weeks. Irregular undulation has been described. Brucellosis can be a cause of fever of unknown origin.

One study showed that 6.14% of the Brucella cases occurred in pregnant women. This rate is much lower than the value of 17% found by Khan et al. in Saudi Arabia. Cumulative incidences of pregnant brucellosis cases per 1,000 deliveries were 2.64 over a 5-year period and 0.42 over a 3-year period at our tertiary center hospital and maternity hospital, respectively. The cumulative incidence of brucellosis per 1,000 delivered discharges was 1.3 in the study by Khan et al. Consumption of unpasteurized dairy products was also found to be a significant risk factor for infection in the study by Sofian et al.

CONCLUSIONS:Brucella infection should be remembered in differential diagnosis of pregnant patients presenting with fever and malaise.

P504

Infectious Disease / Sepsis

A CASE OF PNEUMONIA THAT LED TO SEPSIS IN CHILD UNDER 5 YEARS OF AGE

U Savaşçı (1), YK Akpak (2), U Kaldırım (3)

1. Department of infectious diseases and clinical microbiology, Sarıkamış Military Hospital, Kars, Turkey

2. Department of obstetrics and gynecology, Sarıkamış Military Hospital, Kars, Turkey

3. Department of emergency medicine, Gülhane Military Medical School, Ankara, Turkey

Corresponding author: Mr Akpak Yasam Kemal (yasamaster@gmail.com)

Key-words: Pneumonia ; Childhood diseases ; Emergency department

Introduction

As all the world, children's diseases are important health problems in our country. Lower respiratory tract infections are seen in all age groups particularly in children. Especially, a heavy course of the disease is important in pediatric age group. According to data from

the World Health Organization, each year 2-5 million children younger than 5 years old die from lower respiratory tract infections. These deaths are slightly more common in boys. Low birth weight, prematurity, malnutrition, crowded living conditions, smoking status, the winter season, inadequate immunization and have an underlying chronic disease are the major risk factors for serious lower respiratory tract infections. Tachypnea is the most sensitive and specific symptom of pneumonia in children younger than 5 years old.

Case Report

The patient was 4 years old boy that has lived in the mountain village of the town of Kars. His symptoms include the following; sore throat, fever, cough and loss of appetite for 3 days. His family did not bring to the hospital hoping to he would heal. After that family applied to the emergency department of Sarikamis Military Hospital when began to drowsiness. His vitals signs were: temperature 39.5 °C; blood pressure: 90/60 mmHg; oxygen saturation 92%; respiratory rate 32/m; heart rate: 130/m. Physical examination findings were toxic and dehydrated appearance, lack of orientation, hypertrophic tonsils, postnasal drainage, tachypnea, the presence of rales in the upright seated position and bronchial breath sounds. The patient had a chest radiograph consistent with pneumonia. Complete blood count revealed a leukocyte count of 17.200/μL (present 92% dominance of neutrophils). The patient were given cefuroxime axetil 30 mg/kg, paracetamol 10 mg/kg and fluid administration (20-30 ml/kg of isotonic sodium chloride 0.9%) by intravenous as an emergency for sepsis secondary to pneumonia. Patient were hospitalized. Then intravenous ceftriaxone and clarithromycin were used for treatment after emergency treatment. He was discharged from hospital two days later.

Discussion

Sepsis is a major health problem among children in both developing and industrialized countries. However, sepsis is both preventable and treatable. Most types of bacterial pneumonia can be cleared with treatment. Sepsis most often occurs with untreated bacterial pneumonia. Children who have clinical signs of pneumonia (cyanosis, inability to feed, chest indrawing, or tachypnoea) should be given antibiotics in the emergency department immediately. Actually vaccination is effective for preventing certain bacterial and viral pneumonias in both children and adults.

P505

Infectious Disease / Sepsis

AN ACUTE BACTERIAL MENINGITIS CASE THAT APPLIED TO EMERGENCY SERVICE WITH CONVULSION

U Savaşçı (1), YK Akpak (2), U Kaldırım (3)

1. Department of Infectious Diseases and Clinical Microbiology, Sarikamis Military Hospital, Kars, Turkey
2. Department of Obstetrics and Gynecology, Sarikamis Military Hospital, Kars, Turkey
3. Department of Emergency Medicine, Gülhane Military Medical School, Ankara, Turkey

Corresponding author: Mr Akpak Yasam Kemal (yasamaster@gmail.com)

Key-words: Febrile convulsion ; Acute bacterial meningitis ; Ceftriaxone

Introduction

Meningitis, which results from the inflammation of membranes that surround the brain and the spinal cord, is a highly-mortal clinical picture that causes neurological disability if not treated urgently. 95 percent of the patients are children under 5 years of age. In 1-24 months old children, most frequently encountered agents are H.influenza, S.pneumoniae and N.meningitis. Meningitis that develops due to H.influenza is commonly seen in breastfed

children. It is not seen in the first three months of life thanks to the antibodies transmitted from the mother. It has been proven that breastfeeding protects the babies against meningitis. Nearly 40 percent of the patients with acute bacterial meningitis have respiratory tract infection history. In meningitis clinic, hyperthermia, severe headache, nausea, vomiting, skin rash and convulsion are commonly observed. There exists a vaccine against H.influenza, pneumococcus and meningococcus, and it is 95 percent preventive.

Case Report

The two-year-old male patient had previously been brought to the emergency department of another hospital due to hyperthermia in the morning of the same day. Since he was not believed to have benefitted from the previous treatment and contractions had already begun later in the afternoon that day, the patient applied to the emergency department of our hospital, suffering from a seizure. Body temperature was measured 40.5 °C. The patient was monitored with febrile convulsion prediagnosis. It was patient's first seizure, but also his sibling had an epileptic history. Initially, rectal 5 mg diazepam was injected. Since the patient's seizure did not stop, rectal diazepam was given for the second time. As the seizure continued, 0.3 mg/kg diazepam was injected intravenously. In order to keep the high body temperature under control, rectal 10 mg/kg paracetamol was given and a cool compress was applied. Secretions were aspirated. The patient, whose seizure still continued, was given 15 mg/kg phenytoin infusion. The patient with continuing seizure and high body temperature was additionally given 10mg/kg paracetamol intravenously and 0.1 mg/kg/hour dormicum infusion was applied. The patient, whose seizure continued over 30 minutes, was diagnosed status epilepticus. Patient's seizure came to an end after dormicum application. Shortly, however, the patient developed respiratory depression. The patient was intubated. As a result of examination and with meningitis prediagnosis, the patient was given 750 mg intravenous ceftriaxone. As the general condition of the patient stabilized, he was transported to Erzurum University Hospital with spontaneous respiration, accompanied by an anaesthetist and a pediatrician. According to the results of the lumbar puncture (LP) obtained from the advanced examination of the patient conducted at the Erzurum University Hospital, the patient was treated in the intensive care unit with meningitis diagnosis.

Discussion

Acute bacterial meningitis is an urgent clinical picture which requires immediate intervention and which can be fatal if treated belatedly. The patients that apply to the emergency department with hyperthermia, especially those in the childhood period, should be examined in terms of central nervous system infections. Brain tomography and lumbar puncture (LP) should be done, and if the patient needs to be transported to another medical institution, it is recommended that the first doctor to examine the patient should give the patient ceftriaxone intravenously prior to transportation.

P506

Infectious Disease / Sepsis

THE FREQUENCY OF PEDICULUS HUMANUS CAPITIS IN ELDERLY INDIVIDUALS LIVING IN AN AGED CARE FACILITY AND REHABILITATION CENTER

O AYCAN KAYA (1), B HAMAMCI (2), M INCI (3), E YULA (4), V KÖKSALDI MOTOR (5), A. Karakus (6), S KAYA (7), C KILINC (4)

1. Parasitology, Mustafa Kemal University, Faculty of Medicine, HATAY, Turkey
2. Hatay Vocational School of Health Services, Mustafa Kemal University,, Hatay, Turkey
3. Department of Medical Microbiology, Mustafa Kemal University, Faculty of Medicine ,, Hatay, Turkey

4. Department of Medical Microbiology,, Mustafa Kemal University, Faculty of Medicine, Hatay, Turkey
5. Infectious Diseases and Clinical Microbiology,, Mustafa Kemal University Faculty of Medicine,, Hatay, Turkey
6. Department of Emergency Medicine, Mustafa Kemal University, Hatay, Turkey
7. Children's Service, Antakya State Hospital, HATAY, Turkey

Corresponding author: Mr Karakus Ali (drkarakus@yahoo.com)

Key-words: Pediculus humanus capitis ; aged care facility ; elderly people

Objectives: The aim of the study is to determine frequency of Pediculus humanus capitis (P.h.capitis) in elderly people living in an aged care facility and rehabilitation center.

Material and Methods: The study was performed on 169 individuals aged between 61 and 100 years, 106 (62.7%) was male and 63 (37.3%) was female. Elderly persons' hairs especially on the neck and the back of the head were investigated to detect the egg, nymph and adult stages of the parasites.

Results: P.h.capitis infestation detected in 2 (1.18%) individuals and the frequency was found 0.9% in males and 1.6% in females.

Conclusion: It is found that infestation rate is low due to effective caring of elderly people by health personnel and caretakers. Also, proper treatment, prevention and control of elderly persons are effective factors for pediculosis.

P507

Infectious Disease / Sepsis

THE PRACTICE OF EMERGENCY MEDICINE RESIDENTS REGARDING THE USE OF PERSONAL PROTECTIVE EQUIPMENTS FOR PROTECTION AGAINST INFECTIOUS DISEASES

T Cimilli Ozturk (1), O Guneyssel (2), A Tali (1), T Topal (1)

1. Emergency Department, Umraniye Education and Research Hospital, Istanbul, Turkey
2. Emergency Department, Kartal Lutfi Kirdar Education and Research Hospital, Istanbul, Turkey

Corresponding author: Mme Cimilli Öztürk Tuba (tcimilliozturk@gmail.com)

Key-words: emergency medicine ; personal protective equipment ; infectious disease

Introduction: Health institutions are potential sites for dissemination of infectious diseases. The risk is higher among health care workers especially in emergency departments. Centers for Disease Control and Prevention published a guideline specifically for health care workers to protect themselves against infectious diseases. Usage of personal protective equipment is an important component of the preventive measures. The aim of this study is to demonstrate the attitudes and practices regarding the use of personal protective equipment among emergency medicine residents in Turkey.

Material and Methods: In this cross-sectional survey study, emergency medicine residents who had attended the 6th Emergency Medicine Resident's Symposium were included. In the first part of the survey, demographic characteristics, duration of residency, total duration of medical career and the institution were asked. In the second part the attitudes and practices of using the personal protective equipment were asked. And also the physical status of the emergency rooms regarding the existence of these equipment and isolation rooms was assessed.

Results: 67 emergency medicine residents surveyed and 16.4% of them were working at university hospitals and 83.6% at education and research hospitals. The question about the existence of personal protective equipment was responded "yes" by only the 28.4% of the participants. The statistical comparison between the presence of isolation rooms and the type of the institution was not significant. 26.9% of the participants took lessons about protection

from infectious diseases during their residency training. There was no statistically significant difference between the type of institution and being trained about personal protection against infectious diseases. 31.3% of participants thought that using personal protective equipment during medical interventions interferes effective working.

Conclusion: The emergency medicine residents, who make the first medical intervention to patients, do not use personal protective methods effectively. It seems that there are also some defects of the medical institutions in preparing the physical conditions of the emergency rooms and resident education programs. For more accurate results the survey can be applied with more participants working at different emergency rooms.

P508

Infectious Disease / Sepsis

FEVER RESULT; CEREBRAL ABSCESS

M. Avcil, S. Coskun, K. Karaman, E. Ozluer

Emergency Department, Adnan Menderes University Medical Faculty, Aydın, Turkey

Corresponding author: Mr Coskun Sedat (doktor_sedatcoskun@hotmail.com)

Key-words: Fever ; Vomit ; Ampicillin-Sulbactam

Introduction: fever is one of the most emergency department admission. Adequate investigation and treatment of patients with fever often can not be applied due to the constraints of time.

Case: Thirty-three years old female patient admitted emergency department due to fever, nausea, vomiting and weakness in 09.12.2011. She has inpatient therapy in another hospital due to same complaint. Then she has discharged with diarrhea prescription. When she admitted our emergency department fever was 37 °C, physical examination was normal, white blood cell: 10980, CRP: 280 measured. She has treatment by 1000 cc saline and metoclopramide IV infusion. after her conditions were improved she had discharged. The next day she admitted emergency department again due to complaints repetition. But this time her relatives complaints of her somnolence and oversleep oneself. Her fever was 40 °C, bowel sounds was hyperactive on physical examination, neck stiffness was vague, white blood cell: 16360, CRP: 247, procalcitonin:1.50, urinalysis: 16 leukocyte, stool sample: 2-4 leukocyte detected. She has admitted to critically care unit in emergency department for etiology of fever. Then blood culture sample were taken and ceftriaxone 1x2 gr IV infusion was applied. She was consulted with infection diseases department. She has admitted to infection diseases services in 21.02.2011. A few hour after admission suddenly degradation of the general situation, loss of consciousness occurred and neck stiffness added. she were taken intensive care unit. Multiple abscess focal points in the right hemisphere, intraventricular abscess and ventriculitis compatible with findings detected after MR imaging. Metronidazole 4x500 mg, Ampicillin-Sulbactam 4x3 gr and Mannitol 3x100 cc therapy was added. She was intubated and applied CPR result of cardiac and respiratory arrest in 26.12.2011. She was transferred to the anesthesia department after cardiac problems. Brain death was detected in 29.12.2011 and cardiac arrest detected in 30.12.2011. She didn't respond to all interference and patient died .

Conclusion: Lack of serious findings such as the neck stiffness and accompanying gastroenteritis at the patient's arrival caused a delay in diagnosis. However, deteriorating second reference to the emergency room is the proof of need to keep the patient. Similarly, above 40 degrees fever should be investigate and follow in all age groups.

P509

Infectious Disease / Sepsis

DEMOGRAPHIC FEATURES OF PATIENTS DIAGNOSED AS SEPSIS AND SEVERE SEPSIS IN EMERGENCY DEPARTMENT

B Cander, O Karaoglan, F Savran, M Ergin, S Kocak, M Gul, K Yavuz

Emergency Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

Corresponding author: Mr Ergin Mehmet (drmehtemergein@gmail.com)

Key-words: Sepsis ; Severe Sepsis ; Emergency Department

INTRODUCTION: Sepsis is defined as a systemic inflammatory response of the host against infection. It's an important cause of mortality and morbidity especially in elderly, immunocompromised and critically ill patients. Unless early diagnosis and treatment is achieved, its mortality increases as well. Our study is to evaluate characteristics of patients with diagnosis of sepsis and severe sepsis. **MATERIALS-METHODS:** The patient who presented Emergency Service of Selcuk University Meram Medicine Faculty Hospital were included in our study. Definitions related with infection and sepsis were accepted as criteria of International Sepsis Conference. So that 12 patients with sepsis, 31 with serious sepsis, 17 with septic shock were included in our study. **RESULTS:** The mean age was 64.04±15.83 year old and 61.6% of patients were female. The rate of graduating from primary school was 68%. There were 80% of patients with comorbidity which 33% was malignity, 25% was diabetes mellitus, 20% was hypertension, 10% was chronic obstructive lung disease 8.3% was coronary artery disease, and 6% with other diseases (Graphic 1). The sources of infection were found as 43.4% with pulmonary infections; 26.6% with urinary tract infections; 16.6% with soft tissue infections; 6.6% with intra-abdominal infections; 5% with central nervous system infections and only 1.6% with cardiac related infections (Graphic 2). There were 32 patients who discharged whereas 28 patients died. **CONCLUSION:** There is increased risk of sepsis for patients with comorbidity, low socio-cultural level and advanced age.

P510

Infectious Disease / Sepsis

A RARE CAUSE OF MASS IN NECK: TULAREMIA

M Yanilmaz (1), U Gulacti (2), C Ustun (3)

1. Ear, Nose and Throat Department, Ministry of Health Harput State Hospital, Elazig, Turkey
2. Emergency Department, Ministry of Health Harput General Hospital, Elazig, Turkey
3. Infectious Diseases and Clinic Microbiology, Ministry of Health Harput General Hospital, Elazig, Turkey

Corresponding author: Mr Gülaçti Umut (umutgulacti@gmail.com)

Key-words: neck ; mass ; tularemia

Introduction: Tularemia is a zoonotic infection caused by *Francisella tularensis*. The microorganism is transmitted to humans by contact with, or ingestion of, infected animal tissues, by insect bites, consumption of contaminated food or water, or from inhalation of aerolized bacteria. Tularemia has six different clinical forms. In Turkey, the most common type is the oropharyngeal form.

Case report: Thirty-one-year-old female patient was admitted to emergency department because of swelling in the neck. For this complaint which continued for three months primary care health

facility had been prescribed penicillin group of antibiotics. Because of the swelling of the neck did not reduce first-generation cephalosporin was given to patient in ENT clinic but the mass in neck continued to growth. In physical examination, there was a 3x4 cm fistulous wound with induration and erythema on right neck area. ENT and Infectious Diseases Clinic were consulted with the diagnosis of tularemia. Tularemia was determined in serological tests. Patient was treated with oral ciprofloxacin and mass in neck area reduced in polyclinic control after two week.

Conclusion: Tularemia is rare diagnosed in emergency department and if it can be determined, epidemics of tularemia can prevent. In cases of neck mass not improvement with nonspecific antibiotherapy tularemia must be kept in mind.

P511

Infectious Disease / Sepsis

REGISTRATION AND ANALYSIS OF INFECTIONS AFTER THE IMPLEMENTATION OF A DIABETIC FOOT UNIT INVOLVING THE EMERGENCY WARD IN A TERTIARY HOSPITAL AND ITS REFERRAL AREA

E Arana-Arri (1), E Bereciartua (2), S Carbajo (1), L Corton (1), A García de Vicuña (1), T Iglesias (3), M Montejo (1), B Vilar (4)

1. Emergency department, Cruces University Hospital, Osakidetza, Barakaldo, Spain
2. Infectious Diseases Unit, Cruces University Hospital, Osakidetza, Barakaldo, Spain
3. Diabetic Foot Unit, Cruces University Hospital, Osakidetza, Barakaldo, Spain
4. Microbiology department, Cruces University Hospital, Osakidetza, Barakaldo, Spain

Corresponding author: Mme Eunarte Arana-arri (eunarte.aranaarri@osakidetza.net)

Key-words: Diabetic Foot ; Infection ; Ulcer cultures

Introduction: Diabetes is the seventh leading cause of direct death in developed countries, regardless of their role in cardiovascular mortality, which is the main cause of early death in diabetics. The major late complications of diabetes (arteriosclerosis, neuropathy, retinopathy, etc.) had vascular etiology. Ulcers in the lower extremities, especially in the foot, are other common complications of diabetes, as they appear during the course of the disease in approximately 15% of the cases. Its overall annual incidence is 2% to 3% and 7% in patients with neuropathy, its prevalence ranges between 2% and 10%. Foot infections affecting the skin and soft tissue and bone, with or without systemic repercussions, are the most frequent cause of hospitalization of diabetics, with extended stays.

Objective: To standardize the process of education and prevention, diagnosis and treatment of diabetic foot in a multidisciplinary manner with the aim of reducing the number of admissions through the emergency room, the number of amputations and the average stay. Describe and analyze the infections of foot ulcers treated in our unit.

Results: During the period from 01/02/2011 to 31/12/2011, 202 patients were attended in the Diabetic Foot Unit (DFU). Attention was given to 114 patients referred from primary care and emergency department without hospital admission. In total 94 patients were admitted to hospital. 70.2% (n=66) of patients were admitted from the emergency department (82.8% critical ischemic and 17.2% infection). The average stay in hospital of the patients admitted from the emergency ward was 14.04 days. There have been 16 major and 65 minor amputations. Among patients treated in the DFU, 47.5% (n=96) required a ulcer culture, being positive in 93.7% (n=90). 75.3% (n=67) of patients with an infection in the foot had a single episode, 19.1% (n=17) two episodes, 4.5% (n=14) three episodes and 1.1% (n=1) 4. 51.7% (n=46) of cultures had a polymicrobial result, with 48.3% growth in cultures of a single

germ. The most frequent bacterias were *Staphylococcus aureus* 23.6%, *Pseudomonas Auruginosa* 21.8%, *Escherichia coli* 12.7%, *Staphylococcus aureus* Methicillin-resistant 8.5%, *Proteus mirabilis* 6.2% and *Morganella Morgagnii* 5.4%. 25% (n=24) of patients requiring a ulcer culture an MRI / CT of the foot was requested, osteomyelitis was found in 70.8% (n=17) of a requested tests. Conclusions: The creation and implementation of a DFU, with the involvement of different health professionals aims to improve diagnosis and treatment and comprehensive care culture centered on the patient as subject to empower. The analysis and knowledge of the infection data of these patients improve its handling, working in a multidisciplinary team, focusing attention on an early referral to the unit for proper diagnosis and treatment.

P512

Infectious Disease / Sepsis

USE OF A RAPID IMMUNOASSAY IN TETANUS PROPHYLAXIS.

W Boer, S Heemskerk, F Jans, S Van Poucke

Department of anesthesiology, intensive care, emergency care and pain therapy, Ziekenhuis Oost Limburg, Genk, Belgium

Corresponding author: Mr Heemskerk Steven (stevenheem@gmail.com)

Key-words: Tetanus prophylaxis ; tetanus quick stick ; clostridium tetani vaccination

In Belgian emergency medical practices, tetanus prophylaxis for patients with skin wounds is currently based on wound characteristics and clinical history related to vaccination, provided by the patient or relatives. Based on the current lack of mandatory and centralized registration, the actual state of immunization is often questionable. The use of an easy, quick and reliable test could help in the assessment of the immunization state of tetanus. Patient with skin wounds, with increased risk for clostridium tetani infection were asked to complete a questionnaire related to their immunization history. The immunization of all patients with high risk wounds (scored by the emergency physician), were tested with the TQS (a rapid immunochromatographic test for the visual detection of anti- tetanus antibodies in human serum, plasma or whole blood). Based on the outcome of the test, patients were administered tetanus antitoxin + tetanus vaccination or vaccination alone.

Of the 244 patients that were included, 54% could not provide accurate information about their immunization status. More than a third of the patients who claimed their vaccination was up to date tested negative using the TQS, almost 33% of the patients mentioning their vaccination was not up to date demonstrated to have antitoxin antiglobulines. 67% of the female, compared to 41% of the male patients were insufficiently vaccinated based on the TQS test. Patients with a profession where manual labor was involved were found to have higher percentage of immunization for tetanus, 67% were protected versus 37% not protected.

Clinical history alone is not a reliable tool to define the vaccination state of patients. Using the TQS, our group managed to save 100 unnecessary doses of tetanus antitoxin in patients with adequate immunization and defined 12 patients that, without TQS, would not have received tetanus antitoxin.

P513

Infectious Disease / Sepsis

EVALUATION OF CASES WITH RABIES RISK PRESENTING TO EMERGENCY DEPARTMENT

F Yilmaz, C Kavalci, ED Arslan, M Sonmez, A Demir, S Akbulut, M Tas

Emergency department, Numune Training and Research Hospital, Ankara, Turkey

Corresponding author: Mr Yilmaz Fevzi (fevzi_yilmaz2002@yahoo.com)

Key-words: Rabies ; Post-Exposure Prophylaxis ; Public Health

Introduction

Rabies is an acute fatal viral infection of the central nervous system and is one of the oldest zoonotic diseases in human history (1). The microorganism responsible from rabies is a neurotrophic RNA virus from the Lyssa virus genus of the Rhabdoviridae family (2). The virus has the ability to infect all warm-blooded animals, and in almost all cases of infection, results in fatal encephalitis. The disease is frequently transmitted by an animal bite that is infected with rabies but cases after organ transplantation have also been reported, due to transmission of the injured skin and mucosa (3-5). The most frequent cause of contact with patients at risk of rabies is domestic animals, and dogs in particular (6).

Materials and Methods

In this study, a retrospective chart review of patients admitted to the Emergency Room of Diyarbakir State Hospital with a chief complaint of suspicious contact with and/or animal bites. Post-exposure prophylaxis was applied according to 'Rabies Protection and Control Directive' announced by Ministry of Health General Directorate of Basic Health Services, on 09/05/2001, numbered B100TSH01/0002/7755. Data analysis was performed by SPSS software (V16.0). The charts were reviewed with emphasis on the age, gender, place of residence of the patients, the body contact region, the depth of the wound, the time period between the moment of contact and application to the vaccination center, species of the animal, the ownership status of the animal and finally the fate of the biting animal and the prophylaxis status of the patient (whether prophylaxis was given or not). The data was expressed as mean \pm standard deviation (SD), median and percentages. P-values below 0.05 were accepted as significant.

Results

The mean age of 1429 patients admitted to Diyarbakir State Hospital Emergency Room with animal bites and contacts between January 2007 and January 2010 was 21.75 ± 16.9 (6 months- 87 years). Among the admitted patients, 651 (45.5%) were below 18-years of age. The most populated pediatric group was those between 6- and 11-years of age and the most populated adult group was those between 19- and 49-years of age.

There were 1055 (73.8%) male and 374 (26.2%) female patients. The distribution of contact area at first admission was as follows: 83 (5.8%) in head and neck area, 604 (42.3%) in upper extremities, 641 (44.9%) in lower extremities, 57 (4%) in the chest area, 36 (2.5%) in the body and 8 (0.5%) in the genital area.

Among the attacking animals, 1013 (70.9%) had owners and 416 (29.1%) were stray animals. The distribution of attacking animals was as follows: 957 (67%) dogs, 401 (28%) cats, 16 (1.1%) horses, 35 (2.4%) donkeys, 10 (0.7%) cows and 10 (0.7%) other animal species. The injuries occurring after contact were classified as superficial in 873 (61%) and deep in 556 (39%) cases. In this study, the causes of injury for being taken into prophylactic vaccine program was bites in 808 (56.5%), scratches in 597 (41.8%) and indirect contact in 24 (1.7%) cases. The time between contact and hospital admission is shown in Table 2 and 1001 (70%) patients received 3 doses and 428 (30%) patients received 5 doses of

human diploid cell culture vaccine (Human diploid cell vaccine-HDCV). Human rabies immunoglobulin (human rabies immune globulin-HRIG) was given to 475 (33.3%) cases in addition to the vaccine.

No rabies infection was noted among the patients taken into rabies vaccination program in this two-year period, but a 5-year-old male patient who was admitted 40 days after a dog's bite in the head and neck region with high fever, generalized weakness, sound and light discomfort, hypersalivation and difficulty with swallowing was intubated and referred to Dicle University Medical Faculty Hospital. This patient deceased with the diagnosis of rabies after 10 days of treatment in the intensive care unit.

Discussion

Rabies is a fatal zoonosis which is endemic all over the world. Rabies is preventable by vaccination and is especially the problem of underdeveloped and developing countries (8). In a report by World Health Organization (WHO) in 2004, deaths due to rabies is estimated around 55 000 and nearly ten million people receive post-exposure prophylaxis throughout the world (9). A study from Turkey reported post-exposure vaccination in 143,915 people in 2006 and a total of 247 rabies-related death cases between 1980-2006 (10). Appropriate wound care with human diploid cell vaccination and rabies immunoglobulin virtually prevents 100% of human rabies-related deaths (11).

In a Şanlıurfa-based study, Söğüt et al found that patients between 6-15 years of age (43.7%) and between 16-30 years of age (24.8%) were more prone to animal bites than patients above 46 years (9.0%) and children between 0-5 years of age (9.3%) (6). In a Diyarbakir-based study by Akkoç et al, ages 6-15 (38.4%) had the highest exposure rate of animal bites, compared to ages between 0-5 (11.2%) and above 46 (10.4%) (10). In this study, ages between 6-11 (23.6%) and between 19-49 years (39.2%) had higher exposure rates than ages above 65 (5.8%) and between 0-5 (% 1) years.

Among all applications to Diyarbakir State Hospital Emergency Room, 69.7% were from urban and 30.3% were from rural areas. These similar rates compared to prior studies mainly stems from the difficult control of stray animals in urban areas and lack of consciousness of contact with a rabies vaccination center in the rural areas (6, 10, 12). Difficulty to reach urban rabies vaccination centers may necessitate additional rural rabies vaccination centers. A study from Istanbul reported an increase in cases during summer months. This seasonal increase in cases of rabies-risk contact may stem from more outdoor activities of children due to summer vacation (13, 14). Similarly, the rate of contacts carrying rabies risk was found highest in spring and summer months in this study. More strict measures to prevent rabies-risk contacts in these seasons deem necessary to drop case counts.

In developing countries, rabies is more likely to be transmitted through stray animals, most commonly dogs, whereas in developed countries where canine vaccination is made on a regular basis, wild animals are more commonly reported as a source of rabies (15). Dogs are by far the most common cause of rabies in the world (91%), compared to cats (2%), other pets (3%), bats (2%) and other wild animals (less than 1%) (16). Dogs are responsible for 90% of reported cases of human rabies in countries like Turkey, where pet rabies has not been fully under control. Özsoy et al reported that among all cases admitted to Ankara Refik Saydam Hygiene Center Rabies Vaccine Station in 2000, dog bite was the cause in 68% of the cases and cat bite was the cause in 25% (17). These percentages were similar to other reports from Asia and Africa (18, 19). In the current study, 67% of cases had contact with dogs and 28% of cases had contact with cats. In another study from Turkey, the most common contact in human rabies cases between 1992 - 2007 was with dogs (20). Since the most common cause of rabies and contacts carrying rabies risk is dogs in our country, rabies protection measures must be directed to this animal, in particular.

The probable cause of contact rate of 4.2% from the bites of other animals such as horse, donkey or cow is the higher rate of people living in rural areas in this study, compared to other studies. In addition, the high rate of contact with stray animals (in one-third (29%) of cases) and the high percentage of cases reported from urban areas (almost two-third (69.7%)) in this study deserves consideration that the local municipalities may be neglecting the tasks that they have to fulfill.

The most important way of transmission of both the human and the animal rabies is direct contact with infected saliva through bites, scratches or licking. In most cases, there is a history of animal bite. In other cases, there is a history of contact of infected saliva with the wounded skin or mucosa, or there is a history of licking or scratching (21). The percentages of bites, scratches or indirect contact are 56.5%, 41.8% and 1.7%, respectively in the current study.

In cases with a history of dog and cat bites, the body region injured depends on the type of the animal and the age of the victim. However, the most frequently injured body regions are usually expressed as the extremities. According to a survey by Ostanello et al., the injury is in the head and neck area in 9.5%, in the lower extremities in 36.1% and in the upper extremities in 30.4% of cases (22). This study reports similar rates of injury of the head and neck region in 83 (5.8%) cases, injury of the upper and lower extremities in 604 (42.3%) and 641 (44.9%) cases, respectively.

The rabies post-exposure prophylaxis is given to 10-12 million people worldwide, annually. Although rabies has been eradicated in England, Japan, Belgium, Finland, France, Norway, Portugal, Spain, Switzerland and Sweden, the annual rate of human rabies is 40000-70000 cases in Asia and Africa. The highest incidence rate is seen in India, Bangladesh, Pakistan and Nepal (23). There is a trend of decrease in the human rabies cases in our country and only 27 cases have been reported between 1995- 2004. However, there seems to be no decrease in the rate of contacts carrying rabies risk and the annual rate of post-exposure prophylaxis is approximately 100,000 people. The incidence of contacts carrying rabies risk was reported as 211,36 in 100,000 cases (152 317 cases) in 2005. Immediate local wound treatment is vital after contact with rabies. Immediate wash of the wound with soap and water is the most effective measure in preventing rabies (24). All cases in this study underwent immediate cleaning of the wound site with soap and water, to prevent the entry of the virus to neural tissues. The second important step is immunization (25). Cases in this series underwent three and five-dose vaccination programs. In 70% of the cases where follow-up of the biting animal was possible, three doses of vaccine were found sufficient. In 30% of the cases, the biting animal could not be followed and five doses of the vaccine were implemented. Application of rabies immunoglobulin along with rabies vaccine is of vital importance (26). It is estimated that rabies immunoglobulin is given in less than 10% of cases in underdeveloped countries (27). The rate of immunoglobulin application for rabies was lower in prior studies in Turkey (6, 10, 13). In this study, 475 (33.3%) patients were given human rabies immunoglobulin (HRIG Human rabies-immune globulin) together with rabies vaccine. This finding is consistent with other data from our country. In the series of Söğüt et al., dogs and cats were responsible from the bites in 94.3% of the cases and 68.7% of the animals had owners but all cases underwent vaccination (6). The high rate of contacts carrying risk and the high rate of immunization of cases with contact brings an economical dimension to this problem, together with its public health dimension (28,29).

In a study by Göktaş et al., the application rate on the first day of contact was 73.9% between 1993- 1995 and was 80.8% between 1995- 1999 (13). In this study, the application rate on the first day of contact was 86.3%. Although the shortest incubation period reported was 4 days and the longest was 19 years in human rabies,

the average incubation period is 20-90 days in the vast majority of patients (75%) (2, 3). In our case, the incubation period was relatively short (approximately 40 days), most probably due to the bites in head and neck region. Furthermore, vaccine and immunoglobulin was considered and applied in this case, despite pronounced and delayed neurological signs during admission. The case coming from the rural area in this study was bitten by a former stray dog that was later owned by the patient and this case refused medical care and vaccination after contact. Authors of this study believe, this is the result of serious lack of awareness and of low socio-cultural level of the patient.

The most common side effect of rabies vaccine is allergic reaction (30). No side effect was reported in this study, after application of rabies vaccine and immunoglobulin.

P514 Infectious Disease / Sepsis

WHAT IS THE BEST ANAMNESTIC CLUE TO A LOWER URINARY TRACT INFECTION?

F. Amira, M. Ben Lassoued, O. Djebbi, M. Ben Salah, I. Bennouri, I. Chermiti, K. Lamine

Emergency department, Military Hospital of Tunis, Tunis, Tunisia

Corresponding author: Mr Ben Lassoued Mehdi (mehdi.benlassoued@gmail.com)

Key-words: lower urinary tract infection ; anamnestic clue ; emergency department

Introduction :

Patients frequently present to emergency departments with symptoms of urinary problems though they are not specific of lower urinary tract infections, for they can be due to a nephritic colic or a prostatic disease. This leads to excessive prescription of MSU tests. This study aims at determining the best anamnestic clue to a lower urinary tract infection.

Materiel and methods :

Prospective study carried out over a period of 2 months. Included patients were those presenting with lower urinary tract symptoms in the absence of any clinical or biological inflammatory sign. A detailed history was taken in each case. MSU tests were prescribed in all cases. Results of cultures were collected and a chi-squared test was used to compare frequencies.

Results :

One hundred and twenty-two patients were included. Sixteen percent of them had confirmed lower urinary tract infections (positive MSU culture).

Urgency of urination and lower abdominal pain were equally frequent in lower urinary tract infections (36.8%) against 14.5% and 16.5% respectively with absence of urinary tract infection ($p < 0.05$).

Burning urination, pollakiuria and cloudy urine were noted in respectively 73.7% , 57.9% and 78.9% of patients with lower urinary tract infections against 53.4% , 35.9% and 45.6% in patients without urinary tract infection ($p > 0.05$)

Conclusion :

Urgency of urination and lower abdominal pain are the best anamnestic clues to a lower urinary tract infection.

P515 Infectious Disease / Sepsis

BLOOD CULTURES IN ED, PROCEDURE RENTABILITY

H Alonso Valle (1), M Andres Gomez (1), L Cadelo (2), L

Garcia-Castrillo (1), N Odriozola Romillo (1)

1. Emergency Department, Hospital Marques de Valdecilla, Santander, Spain

2. Primary Care, SCS, Santander, Sri Lanka (ex-Ceilan)

Corresponding author: Mr Garcia Castrillo Luis Gerardo (urggrl@humv.es)

Key-words: Blood Cultures, ; Clinical impact ; Sepsis

Blood Culture in Emergency Department has been consider a procedure with low clinical impact, due to reduce number of positive results that have been estimated between 1,6- 6%, a high rate of false positives generated by contamination, and low impact in clinical decision. This had been the reasons for a more conservative recommendation in blood cultures in the ED setting. Objective: The study was done too evaluate rentability of blood cultures in our ED.

Design: We review the results of blood cultures taken during two year period 2006-07)in a general emergency department of a terciarian university hospital. Cultures where categorized as negative, true positive, or false positive, when contamination was suspected. Patients where evaluated for sepsis status; classifying patients using the standard definition of: Sepsis, Severe Sepsis, Septic Shock, and absence of any of the previous. Correlation was analysed on a sample of all positive cultures, and 1/5 of all negative cultures.

Table 1. Results of true positives

Germen cultured	Nº	%
E. Coli	61	40,6
Klebsiella	11	7,3
Pseudomona	16	10,6
Streptococoo Peumoniae	32	21,3
Bacteroides	4	2,6
Neisseria	5	3,3
Proteus	3	2
Staphilococcus	7	4,6
Streptococcus	3	2
Salmonella	3	2
Enterococcus	3	2
Other	2	1,3

Results: 3164 blood cultures where done with(1,4 per 100 patients), 150 (4,7%) where true positive, and 54(1,7%) where false positive. Table 1 represents isolated specimens. Selected sample include 796 cases; 151 Non Septic, 575 Septic, 272 Severe Sepsis, and 31 with Septic Shock. True positives where similar 18, 20% in non septic and septic patients, while in patients with severe sepsis and septic shock values 24, 45% are statically higher. False positives have no differences between groups.

Discussion: Blood culture rentability is the same in patients with no sepsis o non severe sepsis. In this group only less than 20% will have a positive culture. Bacteriemia is not the only reason to develop a septic situation. Changes on the antibiotic treatment can be the only reason for blood culture

Limitations: of this review is the evaluation of the impact on clinical modifications after blood culture results, this aspect is difficult to evaluate due to the retrospective nature of the study.

Conclusions: Results are similar to other publications. A less enthusiastic use of Blood Cultures is recommended. Due to the high rentability in severe sepsis and septic shock blood cultures are mandatory.

P516 Infectious Disease / Sepsis

CUTANEOUS ANTHRAX: A CASE REPORT

M. İÇER, Y. ZENGİN, H.M. DURGUN, M. YAMAN, C. GULOĞLU

Emergency department, Dicle University, Diyarbakir, Turkey

Corresponding author: Mr Zengin Yilmaz (yilmazzengin79@myynet.com)

Key-words: animal products ; cutaneous anthrax ; hands

Introduction:

Anthrax is a zoonotic infection that presents in 3 forms: cutaneous, inhalational, and gastrointestinal. Caused by *Bacillus anthracis*, anthrax is an aerobic, spore-forming, gram-positive rod found throughout the world. Human is an incidental host and infected as a result of direct or indirect contact with contaminated animals or animal products. In cutaneous anthrax, the organisms portal of entry is a cut or an abrasion on the skin. The areas at the greatest risk of exposure are hands, arms, face, and the neck. One to five days after inoculation, a small, slightly pruritic, red papule appears at the site. Intense, nonpitting edema then rims the base of the papule. By the second or third day, tense vesicles or even bullae filled with serosanguineous fluid arise on the edematous plaque. The central papule then becomes necrotic, ulcerates, and forms a brown to black eschar. The pathognomonic picture of anthrax, a black eschar ringed by vesicles or pustules on an edematous base, is seen after 5–7 days. The lesion continues to evolve for 12–14 days, at which time the eschar eventually separates, leaving a shallow ulcer that heals by secondary intention in 2–3 weeks.

Case Report:

A 50-year-old female housewife presented at the emergency department (ED) with bullous, swelling, and painless on the left hand and forearm and the right hand. She reported cutting a sheep 7 days previously. After a few days, she noticed a painless vesicles on her right hand, followed by new lesions on her right hand and forearm that extended to the left hand, associated with extensive edema. Despite her general practitioner had prescribed antibiotic therapy with ciprofloxacin for 48 hours, her complaints increased and she presented to ED. Dermatologic examination revealed a necrotic wound on the right hand with extensive erythema, edema, and lymphangitis involving the medial right arm, which also showed a bulla and a serous discharge. On the left arm, there was a bullous wound of 3 cm on the forearm and a necrotic wound of 2 cm on the right hand. The blood count and other laboratory tests were normal. She was admitted from the ED to infection department with the diagnosis of cutaneous anthrax.

Conclusion:

Cutaneous anthrax should be considered as a possible diagnosis in cases with a painless ulcer with vesicles, edema, and a history of exposure to animals or animal products. Early diagnosis and treatment of the disease is important for prognosis.

care guidelines: to ensure an adequate environment (individual room, ventilated, with natural light, temperature at 22°C); rigorous hygiene and season appropriate clothing; age appropriate nutrition (ideally, a natural diet or suitable milk powder); emotional comfort; to administer prophylactic nutrition (in order to prevent rickets) and to respect the immunization schedule.

Exfoliative diseases in newborns are relatively rare, but when they do occur, it is necessary to get them diagnosed, to initiate the appropriate treatment and to provide intensive care in order to decrease morbidity and mortality within this category.

Material and method: We are presenting the case of a 2 month old baby who has been brought to the Pediatric Emergency Department for a diaper erythema, watery diarrheal stool, refusing to eat, severe inappetence. From a biological point of view, the following have been observed: severe metabolic decompensation acidosis; hyperlactacidemia; hyposodemia, severe hypoglycemia, anemia, leukopenia, thrombocytopenia; inflammatory syndrome, hepatic cytolysis syndrome, severe hypoproteinemia.

Particulars of the case: The nursing measures involves the management of temperature, wounds care, child protection, iv access and prevention of infection dissemination.

Therapeutic attitude included transferring the patient to the preheated resuscitation table; administering oxygen via non rebreather mask; monitoring the patient's vital functions.

A hydro-electrolytic and acido-basic, antibiotic and immunoglobulines balancing procedure was started. Evolution has been generally favorable, with improvement of the general state, the neurologic state (the child begins to cry spontaneously), the haemodynamic status (AV 100/min, RR 28/min, SpO2 sub O2 100%, T 36°C, TRC 3 sec). In evolution, after approximately 8 hours, the general state is progressively deteriorating, with hemodynamic and respiratory destabilization, with an onset of hematuria, acute renal insufficiency and recurrence of acidosis. Resuscitation measures did not yield a response and non-resuscitable cardiorespiratory arrest appeared. Death diagnosis 8 hours following hospitalization: Septic shock. Severe sepsis. extended staphylococcal. Protein calorie malnutrition.

Conclusions: 1. Emergency hospitalization and administering intensive therapy measures and medication treatment increase survival rates and prevent complications associated with morbidity and mortality. 2. Unsuitable living conditions, precarious hygiene, parental ignorance (hypoproteinemia, severe hypoglycemia) and late admission (pancytopenia, severe acidosis) into a specialized ward have led to the drastic decrease of the child's survival rates, resulting in his death. 3. Nursing assessment and monitoring need experience and dedicated time.

P517

Infectious Disease / Sepsis

LOW PARENTAL EDUCATION AND INAPPROPRIATE CARE OF THE INFANT, TRIGGER OF THE EXFOLIATIVE DISEASE CASE PRESENTATION

A Golea (1), LM Horea (2), RS Roman (2)

1. Emergency Medicine Discipline, Iuliu Hatieganu University of Medicine and Pharmacy, Cluj Napoca, Romania
2. Emergency department, Pediatric Emergency Hospital, Cluj-Napoca, Romania

Corresponding author: Mme Horea Liana-maria (liana_horea@yahoo.com)

Key-words: Exfoliative disease ; nursing emergency assessment ; infant

The importance of the topic: The newborn baby needs special care from the family. It is mandatory to observe the following aid and

P518

Infectious Disease / Sepsis

THE NEWEST ANTI-MICROBIAL RESISTANCE PATTERNS IN URINARY TRACT INFECTIONS.

B. Giménez, J. Armas, E Valero, S Diéguez, JC. Real, P. Martin

Emergency Department, Hospital del Vinalopó, Alicante, Spain

Corresponding author: Mr Armas Julio (jarmas@vinaloposalud.com)

Key-words: Microbiological resistance ; E. Coli ; Urinary tract infections.

Background: The urinary tract infections (UTIs) are the common cause of bacterial infections in patients in all age ranges. Knowledge of local anti-microbial resistance patterns is essential for evidence-based empirical antibiotic prescribing and to reduce

incidence and prevalence. Many studies during the last few years have revealed changes in the patterns of microbiological resistance resulting in higher health costs and hospitalization.

Objectives: The primary goal is to obtain information on the microbiology workload, etiology and anti-microbial susceptibility of urinary tract infection (UTI) pathogens isolated in the Emergency Department of Hospital del Vinalopo. Its secondary goal is to identify the main pattern of microbiological resistance in *E. Coli* isolated samples.

Patients and Methods: A retrospective analysis of the 551 urine samples from 421 patients was performed. The samples were obtained in Emergency Department and tested microbiologically by standard procedure. The testing included antibiotic sensibility of positive samples with one or two isolated species according to three different diagnostic cut-off points, and number of positive samples according to microbiology laboratory criteria. The period of study was from December 2011 to May 2012.

Results: The number of micro-organisms isolated from significant community acquired bacteriuria episodes on the study was 601 from 421 patients. The five most commonly isolated micro-organisms were, in decreasing order: *Escherichia coli*, *Klebsiella* sp, *Enterococcus* sp, *Proteus* sp. and *Pseudomonas aeruginosa*. Overall, 10.6% of the episodes were polymicrobial (mostly *Escherichia coli* and *Proteus* sp). In the case of *E. coli*, 62.1 % of isolates were resistant to ampicillin, 52.7% were resistant to cefalotin (P=0.01) and 53.1% were resistant to ciprofloxacin. Imipenem-resistant *P. aeruginosa* was reported in 4.5% of the isolates; ciprofloxacin resistance occurred in 40% and *P. aeruginosa* isolates presented high rates of aminoglycoside resistance: 3.36% to gentamicin and 31.8% to tobramycin (p<0.001). The highest rates of resistance in all isolated positive samples were for ampicillin (60.7%), levofloxacin (51.2%) and amoxicillin-clavulanate (42.03%). The study showed low ESBL (extended spectrum β -lactamases producers) in *E. coli*. (10% p>0.05).

Conclusions: *E. Coli* remains the commonest infecting uropathogen in the population study of our emergency department with its incidence climbing from 65-75%. The fluoroquinolone resistance remains very high and the rate in case of penicillin was over 50% and *P. aeruginosa* isolates presented high rates of aminoglycoside resistance.

P519

Infectious Disease / Sepsis

A DIFFERENT PRESENTATION OF URINARY TRACT INFECTIONS: EMPHYSEMATOUS CYSTITIS

M Ergin (1), E Atabey (1), E Atabey (2), IE Gokmen (2), FE Visneci (1), B Cander (1)

1. Emergency Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey
2. Urology Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

Corresponding author: Mr Ergin Mehmet (drmehtemergein@gmail.com)

Key-words: Urinary tract infection ; Emphysematous cystitis ; Critical care

BACKGROUND: Emphysematous cystitis is tended to be seen in geriatric population. Half of patients have diabetes mellitus. It is two times more common on females. Other predisposed factors are urinary retention, steroid and other immune suppressive treatments. **CASE:** 75 year old – female patient admitted to ED with complains of abdominal pain and hematuria. She had diabetes mellitus type 2 and amputation below knee of right leg. His vital signs were in normal range. His physical exam revealed abdominal sensitivity and mass with 8*8 cm by palpation. His laboratory

results showed pyuria and hematuria, leukocytosis and high level of procalcitonin. Contrast enhanced abdominal tomography reported gas images on the wall and air-fluid level within the lumen of urinary bladder, which was pathognomonic for emphysematous cystitis. **CONCLUSION:** there is a great variability in clinical presentation and prognosis in case of emphysematous cystitis. Emergency physicians should know radiological images and associated pathologies of other abdominal organs to prevent progression of infection.

P520

Infectious Disease / Sepsis

IDENTIFYING AND TREATING SEPSIS - HOW LONG IS TOO LONG ?

N Akthar (1), V Gupta (1), A Majeed (1), F Shahzadi (1), SM Vazhappilly (2), D Yeo (3)

1. Emergency Department, University Hospital Birmingham, Birmingham, United Kingdom
2. Emergency Department, University Hospital Birmingham, Birmingham, United Kingdom
3. Emergency Department, University Hospital Birmingham, Birmingham, United Kingdom

Corresponding author: Mr Yeo David (daveyeo@gmail.com)

Key-words: Sepsis ; Assessment ; Antibiotics

Introduction : The recognition and early treatment of sepsis is a challenge that all Emergency Departments aspire to achieve. In the UK, there is a key performance indicator of time to assessment (basic set of observations, including physiological parameters and GCS) of 20 mins for patients triaged to majors or resuscitation. This should allow for earlier recognition and treatment of patients with severe illness, and this KPI should translate into clinical benefit.

Methods : A retrospective study of patients presenting to the Emergency Department of the University Hospital Birmingham in the first five months of 2012 who have been coded with the diagnosis of sepsis, SIRS or septic shock.

Results : 209 patients were initially identified from retrospective analysis of the in-hospital computer system. Of these, 27 were excluded as further review showed they did not fulfill the criteria of SIRS, sepsis, severe sepsis or septic shock.

Of the remaining 178 patients, 132 (74.2%) were found to have been assessed within 20 minutes of arrival, 45 (25.3%) taking longer than 20 minutes. One patient did not have the time recorded. 17 patients (9.5%) had a delay of 50 minutes or before an initial assessment as made.

In these 178 patients, they were further reviewed to determine the time when the first antibiotic dose was administered. 27 patients were excluded, although they met the criteria for sepsis, they could not be analysed as the time of antibiotic administration was not recorded. Only 52 (34.4%) patients received their first dose of antibiotics within one hour. However, when subgroups of septic patients were further analysed, in patients with septic shock and raised lactate >4, 55% received an antibiotic dose within one hour of recognition. When based only on SIRS criteria, only 25.9% received an antibiotic dose within one hour.

Discussion : The recognition of sepsis and early treatment remains challenging. When patients are seriously ill with shock and raised lactate, this group of patients are easier to identify and consequently benefit from earlier treatment and intervention. When patients only fulfill SIRS criteria, but do not show signs of shock it remains a challenge to identify and treat this group of patients. Further work needs to be done in individual departments to identify and streamline the care for these patients.

P521

Infectious Disease / Sepsis

THE EFFECTS OF C-REACTIVE PROTEIN AND PROCALCITONIN LEVELS ON MORTALITY IN SEPSIS

M Gul (1), A Harmankaya (1), B Cander (1), AS Girisgin (1), M Ergin (1), A Aribas (2), H Kaya (3), A Duran (4)

1. Emergency Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey
2. Cardiology Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey
3. Emergency Department, Harran University Medicine Faculty, Sanli Urfa, Turkey
4. Emergency Department, Izzet Baysal University Medicine Faculty, Bolu, Turkey

Corresponding author: Mr Ergin Mehmet (drmehtergerin@gmail.com)

Key-words: Sepsis ; C-reactive protein ; Procalcitonin

BACKGROUND: Sepsis is a life-threatening disease with high mortality and morbidity. Inflammatory response is early phase reaction in the pathophysiology of sepsis. The effective rapid manner in diagnosis and starting treatment are important in the early hours of septic patients.

MATERIAL - METHOD: This prospective study included patients with >18 year old who were diagnosed as sepsis at Emergency Service or Intensive Care Unit of Necmettin Erbakan University Meram Medicine Faculty Hospital between 1 August 2011– 30 May 2012. Patients were grouped according to Guideline 2008 sepsis. Patients were grouped in two which were sepsis (N: 24) and severity sepsis-septic shock (n: 31) in terms of severity of disease. There were also three subgroups in terms of mortality and morbidity. The group 1 (n: 11) included patients who had died during the first 3 days after admission; the group 2 (n: 16) with ones who died between the 4th and 28th day and the group 3 (n: 28) with ones who live more than 28 days. CRP and procalcitonin levels in blood were measured and recorded at the time of presentation and 72 hours later.

RESULTS: In our study, 55 patients were included and their median age was 72 years old (min – max: 21 – 96). There were 26 (47%) women. In the study, we made a comparison between sepsis patients and severe sepsis-septic shock patients in terms of CRP and procalcitonin levels. Also comparison between survival and non-survival group in terms of CRP and procalcitonin levels was performed. The highest median value of CRP found in the second group. When CRP levels didn't diminish, it was found that CRP were closely associated with mortality in all sepsis groups. In severe sepsis-septic shock group, we found that when the median level of procalcitonin at presentation didn't decrease at 72. hour, it was thought to be closely related mortality.

CONCLUSION: CRP and procalcitonin levels had an important role in diagnosis, treatment follow up and prediction of mortality. However, there is need for further advanced research.

Corresponding author: Mr Ergin Mehmet (drmehtergerin@gmail.com)

Key-words: Sepsis ; Critical Care ; Tissue Doppler

BACKGROUND: Sepsis is a life-threatening disease with high mortality and morbidity. Cardiac depression, has an important role in sepsis mortality. The effective rapid manner in diagnosis and starting treatment are important in the early hours of septic patients.

MATERIAL - METHOD: This prospective study included patients with >18 year old who were diagnosed as sepsis at Emergency Service or Intensive Care Unit of Necmettin Erbakan University Meram Medicine Faculty Hospital between 1 August 2011– 30 May 2012. Patients were grouped according to Sepsis Guideline-2008. Patients were grouped in two which were sepsis (n=24) and severity sepsis-septic shock (n=31) in terms of severity of disease. There were also three subgroups in terms of mortality and morbidity; group 1 (n=11) including patients who had died during the first 3 days after admission; group 2 (n=16) with ones who died between the 4th and 28th day and group 3 (n=28) with ones who live more than 28 days.

RESULTS: In our study, 55 patients were included who has not cardiac failure in story and their median age was 72 years old (min – max: 21-96). There were 26 (47%) women. Also, 28 people were included in the control group who had not a sepsis and cardiac failure. Patients with sepsis, left ventricular Sm, Em and Am values were mentoined as median values. In the study, we made a comparison between sepsis patients and severe sepsis-septic shock patients in terms of left ventricular Sm, Em and Am values. Also comparison between survival and non-survival group in terms of left ventricular Sm, Em and Am values was performed. We found that values of left ventricular Sm, Em and Am, decreased in patients with sepsis. In all sepsis groups, we found that when the median level of left ventricular Sm, Em and Am, it was thought to be closely related mortality.

CONCLUSION: Left ventricular Sm, Em and Am values closely associated with heart failure and predicting mortality. However, there is need for further advanced research.

P523

Infectious Disease / Sepsis

ACUTE PYELONEPHRITIS IN EMERGENCY

MM Portillo Cano, F Oltra Hostalet, E Salamanca Rivera, MO Garcia Sanchez, C León-Salas Rabadan, J Ramirez Seoane, MC Navarro Bustos, R Vera Cruz

Emergency department, Hospital Virgen Macarena Sevilla, Seville, Spain

Corresponding author: Melle Garcia Sanchez Maria De La O (mariolags@gmail.com)

Key-words: Acute Pyelonephritis ; Urine culture ; Miccional symptoms

INTRODUCTION

Acute pyelonephritis is an infection of renal parenchyma and urinary excretory system that supposes 3% of the urologic evaluations in the emergency department with a consumption of sanitary resources in emergencies. It is the most frequent cause of bacteriemia and septic shock in elderly patients.

OBJETIVES

To determine the incidence of acute pyelonephritis (APN) in our catchment area, the presentation, associated factors and complications.

METHODS

Linear Retrospective descriptive observational cohort of patients who were treated in the Emergency Department of our Hospital from March to April 2012.

P522

Infectious Disease / Sepsis

ARE MEASUREMENTS OF TISSUE DOPPLER LEFT VENTRICULAR SM, EM AND AM VALUES ASSOCIATED WITH SEPSIS MORTALITY?

M Gul (1), A Harmankaya (1), H Akilli (2), T Abdukhalikov (2), B Cander (3), S Kocak (1), M Ergin (1), A Aribas (2)

1. Emergency Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey
2. Cardiology Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey
3. Emergency Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

RESULTS

We registered 62 patients, 69.35 % female and 30.65% male. The medium age was 45.5 years. A 32.26% presents arterial hypertension, diabetes 13 %, EPOC 6.5%, chronic hepatopatia 1.6%, neoplasia 11.3%, alteration of the urinary tract 13%, pregnant 6.5%. The classification of Charlson's index were 79 % at score 0, 9.68 % at score 1, 4.84 % score 2, 3.23% at score 3, 1.61 % at score 4, 1.61 % at score 5. Stratification of not fatal McCabe index 87,1%, rapidly fatal 1.61%, lately fatal 1.61%.

A 1.61% presented vesical sounding, 14.5 % had suffered previous manipulation of the urinary tract, 17.7 % had received antibiotics previously. A 96,77 % was PNA of community adquisition and a 3.23% from hospitalary adquisition. Showed fever a 79%, backache 63%, miccional symptoms 42 %, confussional syndrome 5 %. A 11.3% suffered sepsis and a 5% severe sepsis. We found Nitrites positive in urine in 42 % of the cases. The C-reactive protein (CRP) intervals were: 0-50 mg/l 37.10 %, 50-100mg/L 9.68 %, 101-200 mg/L 22.5 %, 201-300mg/L 17.7 % and > 300mg/L 13 %.

As empirical antimicrobial treatment: 48.35 % amoxicilin-clavulanic acid, ciprofloxacin 8 % the cefixime, cefuroxime, norfloxacin 5 % each one respectively, cefotaxime, piperacilin-tazobactam and ertapenem 3.23 % respectively, amoxicilin, ceftriaxone and levofloxacin 1.61 % each one.

Blood cultures were extracted in 35.5% of cases, of which 18.8% were positive for *E. coli* and 4.55% for *Klebsiella pneumoniae*. Urine culture was performed in 46.77% cases, 27.59% being positive. Control Urine culture was performed 32.26%, positive 25% of those performed.

Only a 9.6% of established empirical treatment was adequate to the antibiogram. In 11.3% the treatment was modified according to this. There were no APN deaths within 14 days after initiation of treatment. The monitoring of the cases are divided into 43.5% at Primary Care, Urology 13%, an 11.3% at Short Stay Unit and admission at other services 30.6% (Internal Medicine, Infectious Diseases ...).

DISCUSSION The APN has a significant prevalence in the ER. More common in female patients with diabetes, malignancy or pregnancy in our series. However a 79% of them presents a Charlson Index status 0. Alteration of the urinary tract and previous antibiotic therapy often occur as extrinsic risk factors. Most were of community adquisition. The most common presentation is with fever, backache and miccional symptoms. Only a 5% presented severe sepsis. The CRP was higher than 200 mg/L in 53.2% of patients and positive nitrite in urine in 42%. Empiric antibiotic therapy was performed in most cases with amoxicillin-clavulanic acid followed by ciprofloxacin. The infectious agent most frequently isolated in blood cultures was *E. Coli* followed by *Klebsiella multisensibile*. Urine cultures were done in 46.7% of patients being positive in 27.59%. Over 50% of the patients required hospitalization. Only 43% were outpatient treatment alternative. There was no fatal event within 14 days.

P524

Infectious Disease / Sepsis

AN OROPHARYNGEAL EMERGENCY: OROPHARYNGEAL EMERGENCY

AO. Yildirim (1), E. Eyi (2), M. Eroglu (1), İ. Arziman (3), A. Acar (3)

1. Emergency Department, GATA Haydarpaşa Training Hospital, İstanbul, TURKEY
2. Emergency Department, Hakkari Military Hospital, Hakkari, TURKEY
3. Emergency Department, GATA Medical Faculty, Ankara, TURKEY

Corresponding author: Mr Yildirim Ali Osman (draliosmanyildirim@gmail.com)

Key-words: OROPHARYNGEAL EMERGENCY ; OROPHARYNGEAL EMERGENCY ; AUTOIMMUN

AN OROPHARYNGEAL EMERGENCY: PEMPHIGUS VULGARIS INTRODUCTION:

Pemphigus vulgaris is a chronic autoimmune vesiculobullous disease of the skin and mucous membranes with a potentially fatal outcome. Mediated by antibodies directed against proteins present on the surface of keratinocytes that provide mechanical structure to the epidermis. Mortality from pemphigus vulgaris before the development of effective therapies was as high as 90%. Today, with treatment, it is closer to 10%. Involvement of the oral mucosa is common and in most cases precede skin lesions; in our patients, the oral lesions preceded the development of extraoral disease in 75% of cases. Pemphigus vulgaris was more frequent among women (9:3), and there was a tendency for the severity and frequency of disease to decrease with time. We aimed to share a pemphigus vulgaris case presenting with an upper respiratory tract infection.

CASE REPORT:

A 30 years old man was admitted to emergency department with a sore throat for 20 days. He was complaining also gingival bleeding, malaise, dysphagia, and hoarseness. In this period different medications were prescribed by different physicians as mouthwash, antibiotics, pain killers, oral steroids. However, his complaints has been progressed. He was also examined for an immune deficiency and any pathology was detected. He has no comorbidities and familial history. In physical examination, widespread ulcerative and aphtous lesions detected in buccal mucosa, palate, tongue, gingiva, lips, and floor of mouth. There was no skin or conjunctival lesions. Heart and lung sounds were normal. Abdominal examination was normal. Erythrocyte sedimentation rate was 30 mm/h. The patient was hospitalized in dermatology department for definitive diagnosis. After one week prednisolone iv treatment he was discharged with cure.

CONCLUSION:

Pemphigus vulgaris is a rare autoimmune disorder characterized by bullae appearing upon normal skin or mucous membranes. Skin lesions of pemphigus vulgaris present clinically typical bullae formation and ulceration. Most of the lesions start initially in the oral mucosa. Other mucosal involvements are conjunctiva, pharynx, larynx, esophagus, urethra, vulva and cervix. Is not a disease often seen in the emergency department. Disturbs the comfort and welfare of patients, delayed diagnosis of the cases. For this reason the complaint, particularly upper respiratory tract infections should be suspected in patients with pemphigus vulgaris.

P525

Information Technology

A NOVEL HANDHELD STREAMING VIDEO TRANSMITTER FOR PREHOSPITAL TELEMONITORING

T Kanchanarin (1), S Panasuriyasombat (2), ST Chitpatima (2)

1. Department of Trauma and Emergency Medicine, Phramongkutklo Hospital, Bangkok, Thailand
2. Trauma and Emergency Medicine, Phramongkutklo Hospital, Bangkok, Thailand

Corresponding author: Mr Kanchanarin Tavatchai (tavat222@yahoo.com)

Key-words: prehospital ; telemonitoring ; IP network camera

Background

Real-time telemedicine on scenes and in moving ambulances significantly improve prehospital care and increase the emergency

department preparedness. Although we have successfully accomplished mobile biosignal monitoring, video monitoring in moving vehicles is technically challenged in Thailand and many countries due to lack of higher bandwidth and fixed IP address support.

Methods

Phramongkutklo Hospital has developed a wireless audio-video transmission system based on cellular networks. The single-unit, 0.8 kg, transmitter comprises an IP network camera, a personal mobile WiFi (MiFi), and a Lithium-ion mobile power charger.

The Pan/Tilt IP camera has a plug and play action, without the need of the fixed IP address, offering maximum 640x480 pixels, 30 frames per second (fps), and MPEG4 image compression. The camera is connected to the internet through MiFi. The 12000 mAh Lithium-ion power supports IP camera and MiFi to remain online up to 6 hours.

A series of 30 real-time and actual event tests was conducted over a period of two months with a total distance of 950 km, transmission time of 40 hrs, maximum velocity of 160 km/h.

Results

The transmission was good in terms of telecommunication parameters (latency, image quality, video fluidity, and frame losses). Physicians can discern the real-time events and control the camera remotely with any PC, iPad, or 3G mobile phones. A viewer can access multiple devices and multiple viewers can access the device simultaneously. The camera provides the recording of the video and snapshot files.

The device bandwidth requirement, depending on resolution and frame rate settings, ranges from 64 kbps to 512 kbps. In 3G links, delay time was less than 2 seconds at optimum setting (320x240 pixels, 4 fps).

Discussion

The innovation demonstrated excellent theoretical and practical results in term of user-friendly solution, data compression ability, video streaming, and bandwidth optimization. Multipoint features allows for multiple specialties to view the real-time scenarios for multidiscipline real-time case consulting. In dangerous scenes or mass casualties situations having real-time video being monitored by the far-end physicians are highly valuable. Lower cost allows for installation on all ambulances and volunteer EMS.

Conclusion

EMS telemonitoring can greatly benefit the outcome and prognosis of the treatments.

physical to design the initial management. However, it is difficult to obtain a good history in emergencies, especially when the story is long or complicated. The EHR system can provide rapid access to all records. It becomes possible to understand the medical condition before greeting the patient. However, too much information can overwhelm the human brains. An EHR system that can provide relevant information efficiently is helpful; however, a poor-function system can turn down the efficiency and productivity, threaten the patient safety, result in the electronic chasm, and contributed to implementation failure.

Objectives: To understand the amount of electronic medical information in ED patients, we measured essential data in the EHR system. We also analyzed risk factors that predict abundance of information.

Methods: This is a 1000-bed, tertiary referral, acute-care hospital. We serve about 100 thousands emergency visits annually. The EHR system was implanted since January 2008, and the ED was online since May 2011. We conducted a retrospective observational study in ED patients, who visited on the first seven days in June, September, December, 2011, and March 2012. We collected their sex, age, type of emergencies, triage levels, and measured the volume of relevant medical data in four categories: 1) elementary medical information; 2) image studies; 3) laboratory examinations; and 4) physiological examinations. We included time-sensitive data within 6 months before the visit, or up to 3 times when none within 6 months. Medical information with prolonged influence was included without time limits. Summary statistics were constructed using frequencies and proportions for categorical data. Means, medians, and inter-quartile ranges were calculated for continuous variables. We compared the amount of data in patients visiting in different months, of various types of emergencies, of different triage levels, and of different age groups. One way analysis of variance or Mann-Whitney U test was used to check differences. All significance tests were 2-tailed, with a 0.05 significant level. We developed a simple logistic regression model to assess the independent effect of various characters of patients to abundance of medical information.

Results: There were 7,621 ED visits retrieved with male/female ratio of 1.12 and age of 39.9±27.0 years old. Medical emergencies contributed 55.4% visits, followed by pediatric (21.7%), traumatic (20.2%), gynecologic/obstetric (1.7%), and miscellaneous (1.1%). In triage, there were 2.3% needed immediate resuscitation (triage I), 20.8% critical (triage II), 73.1% emergent (triage III), 2.1% urgent (triage IV), and 1.8% not urgent (triage V). There was no continuous growth of selected medical data. Grossly, medical patients had most data, followed by traumatic, and then pediatric patients (all $P < 0.001$). Critical emergency patients (triage I & II) had more data than the stable counterpart (triage III & IV) (all $P < 0.001$). The old olds had most data, followed by the young olds, the adults, and the children (all $P < 0.001$), but there was no significant difference between the children and the toddlers ($P = 0.695$). In multiple variable analysis, we identified several factors that predicted abundant medical data: triage I (OR: 5.278; 95% CI: 2.191~12.710), previous hospitalization (OR: 3.576; 95% CI: 3.224~3.966), old olds (OR: 3.056; 95% CI: 2.294~4.072), previous ambulatory care (OR: 2.331; 95% CI: 2.183~2.490), previous ED visits (OR: 2.310; 95% CI: 2.078~2.568), young olds (OR: 2.096; 95% CI: 1.643~2.673), triage II (OR: 1.931; 95% CI: 1.073~3.474), and previous in-patient surgery (OR: 1.920; 95% CI: 1.749~2.107).

Conclusion: Implantation of the EHR system has brought us from information scanty to booming. Critical, old, multi-morbid, and medical patients brought abundant medical data. We can understand the contextual condition of emergent patients before greeting them only when we have an efficient EHR system that can provide concise, essential, easily expandable and comparable information.

P526

Information Technology

INFORMATION BOOMING COMES WITH IMPLEMENTATION OF ELECTRONIC HEALTH RECORDS, THE IMPACT THE EMERGENCY PHYSICIAN ENFACED, POSSIBLE RESOLUTION AND PERSPECTIVES.

YC Huang (1), CT Chen (1), JJ Lu (1), CC Lai (2)

1. Department of Emergency Medicine, Chiayi Christian Hospital, Chiayi city, Taiwan
2. Department of Medical Informatics, Chiayi Christian Hospital, Chiayi city, Taiwan

Corresponding author: Mr Huang Ying Chieh (Galaxy.bear@msa.hinet.net)

Key-words: electronic health records ; hospital emergency services ; information science

Background: Physicians must understand contextual information of the patient to make appropriate diagnoses and managements. Before the era of electronic health record (EHR), it was difficult to review the medical record before encounter in the emergency department (ED) because we often saw the patient before the paper record was available. We could only rely on the history and

P527

Information Technology

EMERGENCY DEPARTMENT DISCHARGE SUMMARIES - DO WE REALLY NEED THEM?

B Ramasubbu, L Yap, U Kennedy

Emergency Medicine, St James's Hospital, Dublin, Ireland
2. Emergency Medicine, St James's Hospital, DUBLIN, Ireland

Corresponding author: Mr Ramasubbu Benjamin (ramasubb@tcd.ie)

Key-words: Discharge ; Summaries ; Necessary

Background

Studies carried out in the Emergency Department (ED) setting have demonstrated that the provision of discharge information via a discharge summary in conjunction with verbal instructions improves patient management of their medical issue. Discharge summaries should also be provided to the patient's General Practitioner (GP) in order to facilitate continuity of care.

Aims

The aim of this audit was to evaluate the documentation of discharge information and follow-up care in ED notes in our institution.

Methods

Records of 46 patients, who presented to the ED on an arbitrarily chosen day (22.05.12), and discharged to self care or to the care of their GP, were reviewed. The documentation of relevant information regarding the patient's diagnosis, prescribed medications, additional instructions upon discharge, and planned follow-up care was recorded.

Results

20/46 patients (43%) were discharged back to their GP and 26/46 (57%) to self-care. No copies of discharge letters were filed with patient notes. A differential diagnosis was documented in 40/46 (87%) and 38/46 (83%) of cases respectively. Documentation that a prescription was provided to the patient was present in 10/20 (50%) and 10/26 (38%) of cases respectively. Documentation of appropriate follow-up care and self-care instructions was demonstrated in 27/46 (59%) and 22/46 (48%) of cases respectively. 8/46 (17%) had record of advice given regarding suggested follow-up in the event of symptoms persisting.

Conclusion

Good clinical practice involves comprehensive documentation relating to a patient's discharge diagnosis, discharge prescription, self-care instructions, follow-up care, and communication to their GP. Furthermore comprehensive documentation may prevent medico-legal action. A pre-formatted computerised discharge summary is to be introduced to our ED in the near future in order to facilitate consistent record keeping. Following this, and an education programme for our medical team, we intend to re-audit our discharge documentation.

P528

Information Technology

MEDICAL JOURNAL SOCIAL MEDIA ACTIVITY: THE NEW IMPACT FACTOR?

M Mulkeen, T Smith

Emergency Department, Ealing Hospital NHS Trust, London, United Kingdom

Corresponding author: Mr Mulkeen Matthew (matthew.m@cheerful.com)

Key-words: Social Media ; Impact Factor ; Twitter

Objectives & Background :

Social media, including web and mobile based technologies, enable real time interactive dialogue among organizations, communities, and individuals. Many prominent medical journals recognise the inherent potential of social media and maintain an online presence. As of May 2012 Facebook and Twitter had 901 & 140 million users respectively worldwide. We look at online Journal activity and following to see if there is any co-relation to their Medical Journal Impact Factor.

Methods:

We explore both Twitter and Facebook to find English Language peer-reviewed medical journals with online accounts.

For each of these journals we record several variables including likes, followers, following and tweets. We compare these social networking figures to the Impact Factor of each of these medical journals and note whether there is any co-relation between the two.

Results:

12 journals were selected, with Impact factors ranging from 53.298 to 1.439. The number of followers on Facebook ranged from 314,864 to 25 and on Twitter this range was 72,379 to 297. The journals themselves followed 3,281 to 19 other Twitter accounts and produced between 8,206 to 151 Tweets. The New England Journal of Medicine had the highest impact factor and also the largest number of followers on Facebook and Twitter. In all three measures this was by a substantial margin. However although there was a pattern between Impact factor and the number of followers there was not a clear correlation.

Conclusion:

The number of social media followers a journal has provides a potentially useful added indicator of its impact. However it does not currently accurately reflect the Impact Factor of the journal. This could be due to several co-founders including; quality of online material disseminated, duration of account activity and career level of subscriber. Alternatively due to the slower rate of change seen with journal impact factors, the number of social media followers a journal has may in fact provide a prediction of the future Impact Factor of a Journal.

P529

Legislation

THE DIFFERENCE BETWEEN INTERPRETATION OF THE LAW BY EMERGENCY PERSONNEL AND PRACTICE IS ALARMING WHEN IT COMES TO PROVIDING MEDICAL INFORMATION

S Colman, J Stroobants, C Boone, B Devriendt, P Dillen

Emergency department, ZNA Middelheim, Antwerp, Belgium

Corresponding author: Mr Stroobants Jan (jan.stroobants@zna.be)

Key-words: medical secret ; behaviour ; ethics

Introduction

Providing medical information is strictly regulated in Belgium by the law and by the codes of ethics. The complexity of these regulations and the implication on emergency departments with a lack of time to consider the right answers to acute requests for information, can lead to medicolegal problems. We wanted to test this hypothesis.

Materials and methods

In March 2012, 42 staff members (7 emergency physicians, 4 residents in training, 28 emergency nurses and 3 paramedics) were confronted separately with 7 different hypothetical acute situations in the ED in which information about the condition of a patient was requested by the police, by strangers over the phone,

by identifiable relatives or by insurance companies. An opinion was asked about the legal aspects of giving the information or not and what was done in practice on the work floor.

Results

For any group, there was ambiguity about the interpretation of the law in the 7 different cases. There was also no consistent link between the interpretation of the law and practice.

Conclusion and discussion

Although the medicolegal consequences may be very serious, there is a big difference between interpretation of the law by emergency personnel and practice when it comes to providing medical information. Teaching by case studies and ongoing juridical support might be more useful than just providing the text of the law

P530

Legislation

COMPARISON OF END OF LIFE'S LAW ACROSS EUROPEAN COUNTRIES

A. SANTIN, A. HUTIN, B. RENAUD

Emergency Department, University Hospital, CRETEIL, France

Corresponding author: Mme Santin Aline (aline.santin.perso@gmail.com)

Key-words: end of life ; law ; Europe

Introduction: End of life is a matter of particular attention and concern for emergency physicians, and related legal framework is still under debate. As a way to improve our knowledge about end of life legal frameworks and their related impacts on medical emergency physicians' practice, we collected existing laws or regulations about end of life and their corresponding impact on medical practice across European countries.

Material and Methods: We searched for laws or specific legal texts across European countries. We sought to collect the following characteristics: existence and date of promulgation of the act about end of life, euthanasia legalization status, nature and harshness of penalties foreseen as consequence of euthanasia where it is prohibited, legalization of assisted suicide, existence of palliative care, physician ability to stop nutrition and/or hydration, to discontinue essential medications, patient ability to write advance directives regarding end of life issues and to name a proxy to endorse health care decisions in case the patient is unable of deciding for him or herself. We collected legal frameworks and related documents for every European country on official websites whenever available in English, and contacted by phone and email European community administration in Brussels.

Results: We could not collect those data for every European country. As a result, the following findings are limited to the 10 European countries for which we obtained this information (Belgium, Denmark, France, Germany, Greece, Luxembourg, Netherlands, Portugal, Switzerland, United Kingdom). Most (6) of these 10 European countries have promulgated laws, regulations and administrative provisions about end of life or terminal illness conditions since the end of last century. Germany, Greece and Portugal do not have specific directives regarding medical care authorized at terminal stage of life. Active euthanasia is authorized in 3 European countries: Netherlands and Belgium since 2002, and more recently Luxembourg in 2009. In the remaining countries (France, Germany, Greece, Portugal, Denmark, Switzerland, United Kingdom) where active euthanasia is forbidden penal sanctions are applied for taking part in an act of euthanasia. The minimal length of prison sentence is about ten days in Greece up to five years in many countries (Germany, Greece, Portugal, and Switzerland).

Apart from active euthanasia, different attitudes owing to relieve patient condition at the end of life exist. Assisting suicide is a legalized or, at least, tolerated practice in the same countries that permit active euthanasia (Belgium, Netherlands and Luxembourg). In Switzerland, assisting suicide is not considered as a crime as long as this procedure is not undertaken by the physician in a personal manner. In Germany, this attitude is tolerated under limited and well defined conditions even though euthanasia per se is clearly prohibited. In the remaining studied countries assisting suicide is not permitted.

Palliative care exists in all these European countries allowing physicians to use opioids even if as a result such medication can shorten duration of life. In all these countries, patients can write advance directives regarding end of life issues but Greece and Portugal have not promulgated specific legal framework regarding these dispositions.

Discussion: Issued from 10 European countries our findings demonstrated that end of life legal frameworks and related authorized medical practices vary across Europe. Attitudes toward end of life dispositions are stemmed in every country's specific political and religious history and still seem to evolve depending on the nature of the relation existing between religious and political authorities. Nonetheless, the first countries in the world to promulgate legalization of euthanasia were European, even though the subject is still heartily debated across Europe.

Conclusion: End of life legal frameworks are very diverse across Europe. As end of life decisions and care are important issues for emergency physicians' practice, therefore an effort should be made to stimulate initiatives aiming to relieve patients' suffering at the end of life and to harmonize our practice.

P531

Management / ED Organisation

ASSESSING PATIENTS SAFETY USING THE HSOPS (HOSPITAL SURVEY ON PATIENT SAFETY) OF THE AGENCY FOR HEALTHCARE RESEARCH AND QUALITY (AHRQ)

S. Navarro Gutierrez (1), S. Castells Juan (1), O. Martinez Ferris (1), L. Manclús Montoya (1), F. González Martínez (2), C. Herraiz de Castro (2), A. Lluch Sastriques (3), M. Roig Durá (1)

1. Emergency Department, Hospital Universitario de La Ribera, Alzira, Alzira, Valencia, Spain

2. Emergency Department, Hospital Virgen de la Luz, Cuenca, Spain

3. Emergency Department, Hospital Universitario La Fe, Valencia, Spain

Corresponding author: Mr Navarro Gutierrez Sergio (sergionavarrog@hotmail.com)

Key-words: patient safety ; emergency medicine ; survey

We present the results of the HSOPS (Hospital Survey On Patient Safety) of the Agency for Healthcare Research and Quality (AHRQ) translated to spanish and adapted to our Emergency Departement (ED) This is a survey that has been validated and widely used in both the U.S. and spanish hospitals.

This survey was answered by physicians and nurses working at our Emergency Dept. After comparing our results to the previous national results,

Teamwork and perception of patient safety and quality were the most positive rated dimensions. In addition to this, staff training, standardization of processes and communication openness were high rated as well.

Among negatively rated dimensions, work pressure specially considerations about perception of lack of staff as well communication about error, were highly reported answers.

P532 Management / ED Organisation

ANALYSIS OF DATA WITH REGARDS TO PATIENT RETURNS TO THE EMERGENCY DEPARTMENT FROM AN URGENT CARE CENTRE

M Ashfaq (1), O Ghazanfar (1), R Ghazanfar (2), Dr Lewin (1)

1. Emergency Department, Wexham Park Hospital, Slough, United Kingdom
2. UCC, Wexham Park Hospital, Slough, United Kingdom

Corresponding author: Mr Ghazanfar Omar (omarg1976@aol.com)

Key-words: Primary Care ; Urgent Care Centre ; General Practice

Our hospital is a district general hospital with patient attendances of upto 96000 a year. To ease with patient volume an Urgent Care Centre was recently established within the premises of the Emergency Department. A senior staff nurse is being used as a navigator to direct patients accordingly. The Urgent Care Centre is run by a General Practitioner, who is primary care trained physician and attends to patients who would normally be seen in the primary care setting.

One of the quality care indicators instituted by the CQC (Care Quality Commission) is patient returns to the Emergency Department with the same complaint within a period of one week. We will aim to analyse the data in depth related to patient returns to the Emergency Department from the UCC. We will also talk about the offset of workload to the UCC from the main Emergency Department and whether it is effective use of available resources and conclude by commenting on the performance of the UCC.

P533 Management / ED Organisation

IMPROVING PATIENT SAFETY CULTURE THROUGH THE DEVELOPEMENT OF THE EMERGENCY DEPARTMENT COMMISSION ON PATIENT SAFETY POLICIES.. NEW EXPERIENCES.

S. Navarro Gutierrez, JI. Aguilar Mossi, I. Baeza Galdón, S. Castells Juan, L. Linares Valls, P. Garcia Bermejo, JL. Ruiz Lopez

Emergency Department, Hospital Universitario de La Ribera, Alzira, Valencia, Spain

Corresponding author: Mr Navarro Gutierrez Sergio (sergionavarrog@hotmail.com)

Key-words: Patient Safety Commission ; Patient Safety Culture ; Emergency Department.

We recently created the Emergency Department Commission on Patient Safety in our centre with a multidisciplinary team including staff physicians and nurses in an attempt of improving patient safety in our hospital.

Patient Safety is an emergent dimension of our healthcare system and staff must be aware of this problem in order to improve health care quality.

With a multidisciplinary team including Administration staff we assessed several patient safety dimensions.

Improving identification of all patients specially elderly and impaired patients as well as prevention of falls and proper use of bed rails were the initial targets of our task of force.

After 6 months of evaluation and work, staff was more seriously concerned on patient safety culture. In addition to this, use of

bracelets for identification was highly improved after implementation of our self developed protocol.

Prevention of falls with the right use of adequate bed rails was also assessed with good results, avoiding complications and prolongation of stay, specially among elderly patients.

We present in the Congress our final results.

P534 Management / ED Organisation

HOW DOES THE EMERGENCY DEPARTMENT IN THE MILITARY TREATMENT FACILITY WORK?

M Plodr

7th Field Hospital, Hospital Base, Hradec Kralove, Czech Armed Forces and Emergency Medical Service of the East Bohemian Region, Hradec Kralove, Czech Republic

Corresponding author: Mr Plodr Michal (plodrmic@seznam.cz)

Key-words: field hospital ; military medicine ; MASCAL

Author presents personal experience from work on the emergency department of the Medical Treatment Facilities (MTF) in KAIA base in Kabul, Afghanistan. The aim of presentation is familiarize civilian health staff with specifics in the field conditions. The Military Medical Facility (Field Hospital) serve primarily for coalition troops and in case of free capacity the local patients can be treated. Local inhabitants are treated in case of involvement in to the coalition troops activities too. The MTF can be built in a two manners: as a tents and containers combination (example- Field Hospital, level ROLE 2E (Enhanced), Czech Armed Forces, located on KAIA South Base, Kabul 2007-2009) or brick and concrete building (example- French Military Treatment Facility, ROLE 3, located on KAIA North Base, Kabul from 2009). Author compared advantage and disadvantage of these two systems. Some basic specific military medical terms and terminology are explained in introduction. Briefly are explained procedures for individual patient admission and for Mass Casualty Plan (MASCAL). MASCAL is specific procedure for treatment of higher number of casualties and request change in system of work. Finally some important common features with civilian system are mentioned as well as knowledge from international team work.

P535 Management / ED Organisation

THE STUDY OF AVAILABILITY OF MODIFIED ESI AND PILOT APPLICATION OF SEMI-AUTOMATIC ESI

KY Suh, JY Ahn, YD Sohn, HC Ahn

Emergency department, Hallym University Sacred Heart Hospital, anyang-si, Korea, (South) Republic of

Corresponding author: Mr Suh Kang Yeol (suhka94@naver.com)

Key-words: availability ; Emergency Severity Index ; Triage

Background & Purpose: Five level triage tool (ESI: Emergency Severity Index) is more available than three level triage tool. But the medical insurance systems and emergency care systems vary from country to country. For this reason, we developed a modified ESI which is more appropriate to Hallym University Medical Center and applied it as well. This is comparative study of availability between modified emergency severity index (hESI), semi-automatic emergency severity index (aESI) and a three level triage tool. Automatic ESI is 1st and 2nd level be classified into the same

system as hESI, and be classified by a prescription result of the first medical examination doctor into 3~5 level automatically, computation by computer.

Methods: All patients over 15-year-of age visiting an urban tertiary hospital emergency department were enrolled (1st phase and 2nd phase study). We collected data from the electronic medical records, which included patients' demographic factors, hospital outcomes including admission to intensive care unit and result of triage at arrival to ED. During 1st phase study (15 July 2009 to 31 July 2009), a three level triage tool and five-level triage tool (ESI) were compared. In 2nd phase study (1 May 2012 to 14 May 2012), modified five level triage tools (hESI and aESI) were applied. These tools compared with a three level triage tool and analyzed their availability, respectively. A chi-squared test and trend analysis were used to measure three level triage, hESI and aESI for analysis of availability. We analyzed degree of agreement between hESI and aESI, too.

Results: A total of 500 patients (1st phase study) and 561 patients (2nd phase study) were involved. During 1st phase study, using three level triage, urgent is 9(1.8%), emergent is 388(77.6%), non-urgent is 103(20.6%) and 100% (ICU admission; 88.9%), 40.2% (9.3%), 15.6% (1.0%) were admitted to the hospital ($p<0.001$), respectively. Using ESI classification, results from level 1 through 5 is 10(2.0%), 64(12.8%), 359(71.8%), 65(13.0%), 2(0.4%) and 100 % (90 %), 76.6% (46.9 %), 33.7% (1.7%), 0% (0%), 50% (0%) were admitted to the hospital ($p<0.001$), respectively. In 2nd phase study, using three level triage, 29(5.2%), 319(56.9%), 213(38.0%) and 100% (72.4%), 38.6% (6%), 3.3% (0.5%) were admitted respectively ($p<0.001$). Using hESI, 12(2.1%), 82(14.6%), 268(47.8%), 157(28.0%), 42(7.5%) and 83.3% (58.3%), 76.9% (35.4%), 28% (1.9%), 7% (0%), 0% (0%) were admitted respectively ($p<0.001$). Using aESI, 83.3% (58.3%), 76.9% (35.4%), 39% (2%), 15% (0.9%), 9.6% (0.6%) were admitted to the hospital ($p<0.001$), respectively. All of our study results show that a general ward and the intensive care unit hospitalization rate showed the tendency to increase which the higher severity of illness except some cases. Gamma value shows agreement of about 0.728 to two classification methods (hESI and aESI) in statistical way ($p<0.001$). **Conclusion:** From the results of this study, we found a statistically usefulness of modified emergency severity index (hESI) and semi-automatic emergency severity index (aESI) where the emergency care systems differ from other hospital emergency department in a Korea and other countries.

P536

Management / ED Organisation

SCORING SYSTEMS ANALYSIS WITH INITIAL ASSESSMENT OF ADULT NON-SURGICAL PATIENT THAT ADMITTED EMERGENCY DEPARTMENTS

N. ERDEM, MA OZKAN

EMERGENCY DEPARTMENT, FLORANCE NIGHTINGALE, ISTANBUL, Turkey

Corresponding author: Mme Erdem Nalan (okan.ozcubukcu.2011@gmail.com)

Key-words: Evaluation critical patient ; Emergency Department ; scoring systems

This dissertation been completed by APACHE II, REMS, CCI, MEWS system analysis with initial assessment of adult non-surgical patients that admitted emergency departments(ED). According to this patients, I mention that; predict the rate of mortality and length of intensive care unit (ICU) stay and requirement of invazif or non-invazif mechanic ventilation while in ICU.

By those results, dissertation has been written by according to adult non-surgical patients who admitted to ED of Istanbul Bilim

University Avrupa Florence Nightingale Hospital Clinical Research Center with various complaints and hospitalized ICU since 2008-2010.

I inquire with retrospective analysis of database of Avrupa Florence Nightingale Hospital Clinical Research Center to gather information. 93 patients diagnosis and results were included in this dissertation.

REMS, APACHE II, CCI, MEWS system results and serum parameters were compare with solitary and together. The results have been evaluated with rate of mortality and length of ICU stay and requirement of mechanic ventilation while in ICU.

After final research, I mention that mortality has been improved system reference: System of APACHE II 20, system of REMS 10, system of CCI 3, system of MEWS 4.

P537

Management / ED Organisation

EVALUATION OF MEDICAL ERROR RISK IN HELSINKI UNIVERSITY HOSPITAL EMERGENCY UNITS.

V.P. Harjola (1), K. Huttunen (1), J. Mattila (1), T. Sandström (2), J. Tolonen (2)

1. Department of Emergency, Helsinki University Central Hospital, Helsinki, Finland
2. Department of Medicine , Helsinki University Central Hospital, Helsinki, Finland.

Corresponding author: Mr Tolonen Jukka (jutolonen@gmail.com)

Key-words: medical errors ; adverse events ; emergency policlinic

Medical errors account a great number of deaths and adverse events, as well as extra costs, in health care systems throughout the world.

Emergency policlinics are due to unexpected circumstances and rapid changes in patient flow in greater risk for medical errors than normal policlinic or in-patient ward. It has been suggested that especially the handoffs may be the most dangerous moments.

Good management of health care system, and especially emergency policlinic, includes easily used and reported follow-up of every situation in treatment process which may be or was harmful either for the patient or for the staff.

In Helsinki University hospital we use HAIPRO-database, in which every person of medical staff can anonym report if the person felled that some kind of adverse event happened or was about to happen. Adverse events are classified in 5-scale seriousness classification from harmless to very serious.

In this study we have analysed all reported adverse events in Division of Emergency, which is part of Department of Medicine, Helsinki University Central Hospital 1.1.2011-31.1.2012. We compared the numbers of reported medical errors in Department of Emergency and the Whole department of Medicine. In addition we focused to hand off periods and analysed the proportional numbers of adverse events during hand offs and the severity classification of these.

Results.

There was 2165 reported adverse events in Department of Medicine in during 1.1.2011-31.1.2012, of which ~1/4 occurred in Division of Emergency (Table)

In the whole Department of Medicine the severity class of events was reported in 1252 cases (57,8%). In Division of Emergency severity classification omitted in 127 cases (21,5%), which was markedly less than in the whole Department of Medicine. Most of the reported errors were harmless, mild or moderate

The most serious adverse events were concentrated in Division of Emergency(Table); all class V(11/11), class IV 86,3% (44/51).

There was a peak of adverse events during hand offs(red arrows).

Our results confirmed the more pronounced risk for medical errors in emergency units as compared to other facilities of the Department of Medicine in Helsinki University Central Hospital. Especially the most serious medical errors are more often occurred in Emergency. In addition, during hand offs accounted more errors than could be expected highlighting risk for medical errors especially during hand offs.

We concluded that it is important to continue follow up of medical errors and via training and management of patient flow try to diminish the risk for patients due to medical errors.

Table. Adverse events classified for severity class (NR= not reported).

	Department of Medicine	Division of Emergency
total	2165	519
V	11	11
IV	52	44
III	251	105
II	653	139
I	285	93
NR	913	127

P538

Management / ED Organisation

ANALYSIS OF ADULT PATIENTS WITH BROUGHT TO THE 112 IN EMERGENCY MEDICINE CLINIC

N Kozaci

acil tip, adana NEAH, adana, Turkey

Corresponding author: Mme Kozaci Nalan (drkozaci@yahoo.com)

Key-words: emergency medical services ; pre-hospital emergency care ; demographic analyze

ABSTRACT

Introduction and Purpose: In our study, we analyze the demographic and medical data of the cases brought by ambulance to our emergency department and evaluate the cases coming to our Educational and Research Hospital.

Materials and Methods: In between December 31, 2009 and 31 December 2010 all adult patients brought by emergency services 112 to the Ministry of Health of Turkey Adana Numune Education and Research Hospital are included to this research so descriptive and retrospective analysis was performed. Patients were evaluated by analyzing 112 ambulance patient records and archive data processing on the records of hospital taken from our hospital archive. The variables of the research were gender, time of arrival to the hospital, the arrival times, the scene that the incident takes place, why the patient was brought to the hospital, the intervention of the ambulance team, pre-hospital emergency care, the diagnosis and the status of outcome were recorded in the emergency department.. SPSS 17.0 statistical program was used for statistical analysis of data.

Results: 16276 patients, 53,5 % male, 46,5 % were female . Arrival time of ambulances to the hospital; in between 0-9 minutes, 1,3 %, in between 10-19minutes 38,7 % and in between 20-29 minutes 45,5 %, in half an hour 14,6 % of the cases were brought to the hospital. It is identified that 49,3 % of patients are taken from home, 24,8 % from the scene, 22,8 % from different hospitals, 3,1 % from different health centers, 75,1 % patients for diagnosis and treatment, 17,6 % of patients for a consultation and 7,3 % for referral were brought to our hospital. It is assigned that 82,6 % of patients who were referred to as income was brought without approval. It is found that when 97,1 % patient are brought to the hospital, the vascular access is open; 89,3 % patients have vital

signs; 42,3 % values of pulse oximetry is measured and 23,3% patients receive a treatment of differential diagnosis. 7439 % of the patients were discharged from hospital and 24,1 % of the patients' hospitalization was signed. when we look at the time periods, we see that most of the patients' arrival to the hospital is mostly in the summer times (29,5 %), looking at the days Friday and Saturday is leading(14,7 %), the most hours during the day in between 21:00-24:00 (17,5 %) and 18:00-21:00 (17 %)

Conclusion: Interventions for patients brought by ambulance to the emergency department was inadequate. This shows us that we should give more weight to the service training of health staff working in ambulance. Organization of pre-hospital emergency medical services should be improved. Most of the referred patients should not be posting without approval.

P539

Management / ED Organisation

INVESTIGATIONS INTO THE MILITARY GENERAL PRACTITIONERS' SATISFACTION WITH THE REPORTS ON THEIR PATIENTS VISITING THE EMERGENCY DEPARTMENTS.

M. Ben Lassoued, G. Ben Jrad, I. Bennouri, O. Djebbi, R. Ben Gueddour, K. Lamine

Emergency department, Military Hospital of Tunis, Tunis, Tunisia

Corresponding author: Mr Ben Lassoued Mehdi (mehdi.benlassoued@gmail.com)

Key-words: satisfaction ; report ; general practitioners of the military units

Introduction

Daily writing of reports on patients visiting emergency departments ensures the continuation of care, but there is no survey of the attending physician's expectations and of the way they perceive these reports.

Material et methods :

All patients referred to the emergency department of the military hospital of Tunis by their general practitioner of their military unit are systematically given a report on their visit that is addressed to the patient's attending physician within the framework of a quality approach, an anonymous prospective survey based on a preestablished question was carried out in November 2010 involving physicians of military units.

Results :

To the 84 questionnaires that we sent to the physicians of the military units, there were 26 responses that we managed to use for our study (31%). The received reports (96%) are always consulted (83%), considered useful for the follow-up of the patient (100%) and preserved (100%). The form was satisfactory in 72% of cases, the content was rather unsatisfactory in 50% of cases. The following information was sometimes given in detail: results of physical examination (58.3%) and of special investigations (75%); prescribed treatment (67%), final diagnosis (92%), follow-up and therapeutic project in 67% of cases.

Admission to the emergency department or to a specialised unit was not mentioned in 92% and 83% of cases, respectively. Time to reception of the reports was unsatisfactory in 52% of cases and the mode of referral (by the patients themselves) in 58% of cases.

In order to improve the reports' contribution, it was suggested that the preestablished standard model should be ameliorated in 81% of cases, should be written by an emergency physician (50%) and should be delivered to all patients presenting to the emergency department (92%). Reports could even be sent by mail (76%).

As for ECG, physicians wished to receive the diagrams (16%), the interpretations (28%), and both of them in 56% of cases. As for

laboratory tests, physicians wished to obtain full results in 24% of cases, and the results with their interpretations in 52% of cases. As for medical imaging data, 60% of physicians wished to obtain the films with their interpretations.

Conclusion :

The general practitioners of the military units find the reports helpful and hope that they contain as much information as possible including the results of special investigations. Reports should be systematically sent by mail.

P540 _____ *Management / ED Organisation*

ED OVERCROWDING: MANAGEMENT OF WAITING ROOM PATIENTS WITH ED NURSE PRACTITIONERS.

K Yamauchi, R Borensztein, N Flomenbaum, B Abramov, C Camas, T Nicholson, B Abramov, A Pinkersov, A Vernet

Emergency Department, Weill Cornell Medical College, New York, United States

Corresponding author: Melle Yamauchi Kyoko (yamauchikyoko@hotmail.com)

Key-words: Overcrowding ; Nurse Practitioner ; Emergency Department

Over the past six years, the New York Presbyterian Weill Cornell Medical Center Emergency Department has developed a system for managing the waiting room to help expedite patient flow and treatment. The change was made to meet the needs of treating a continuously increasing census in recent years. A multi-system approach was initiated involving Emergency Department Nurse Practitioners who target specific time sensitive conditions, such as fever and neutropenia, acute surgical abdomen and possible pneumonia. Expedited registration and patient service representatives meet the non-clinical needs of patients, aided clinically by an assigned nurse even before initial triage. In addition, team triage, with a new electronic ordering/charting system, facilitates the rapid medical evaluation and quick disposition of patients. With this dedicated team approach, we have effectively managed overcrowding and provided timely treatment to our patients. In this presentation, the key elements for successful system changes in the waiting room are discussed and results are described, focusing particularly on the effective utilization of Emergency Department Nurse Practitioners. Securing ED leadership "buy-in" and having the means to monitor the changes are the keys to successfully managing overcrowding.

P541 _____ *Management / ED Organisation*

A COMPARISON STUDY OF TELEPHONE AND PAGER SYSTEMS FOR EMERGENCY DEPARTMENT CONSULTATIONS AND EFFECTIVENESS OF FUNCTIONALITY

S Vural (1), F İçme (2), H Şahin Kavaklı (1), O Karakayalı (1), F Tanrıverdi (1)

1. Emergency department, Ankara Atatürk Training and Research Hospital, Ankara, Turkey
2. Emergency department, Ankara Atatürk Training and Research Hospital, Ankara, Turkey

Corresponding author: Mr İçme Ferhat (ferhaticme@gmail.com)

Key-words: Emergency Medicine ; Consultation Model ; Pager

Objectives: One of the worldwide difficulties which interrupt the steady running of emergency departments is long length of staying

(LOS) generally as a result of improper consultation process. We examined the effectiveness of the telephone system on consultation process at Ankara Atatürk Training and Hospital Emergency Department (ED) and aimed to evaluate appropriate strategies on this purpose by comparing telephone and pager systems which is new in use.

Methods: In our study that is planned as prospective and descriptive, we worked with total 228 number of patients who admitted to Atatürk Teaching Hospital ED between 06/06/2011-04/07/2011. The patients were divided into telephone and pager groups according to the used system. At the beginning, the consulted patients were followed by classic telephone use for 2 weeks. Then the electronic pager system was activated and on the following 2 week period, all the consultation requests were made by pager system. We recorded the data of age, sex, arrival way, legal issues, acuity state, consultant department, arrival time of consultant department, LOS in ED and the final state of patients

Results: When all admitted patients were considered, the proportion of consultations in ED were 28.8 %. The most required consultations were cardiology (17%), general surgery (14.2%) and orthopedics (13.5%). Also, 77.1% of patients needed at least one consultation. The mean consultation reply time was 333.8 minutes and the mean LOS was significantly depending on number of required consultations. During the pager system, the median consultant arrival time and consultation completing time decreased in all departments but significantly only in cardiology, neurology and neurosurgery departments ($p=0.001$, $p<0.001$ and $p=0.019$). No significant difference was observed in the mean LOS by two models ($p=0.64$).

Conclusion: The mean LOS of our patients was longer than the literature data and one of the most important causes of that was longer consultation reply and completing time. Although the pager system was new in use, it maintained shorter consultation process. We believed that the LOS time would get more shorter by using this system effectively too.

P542 _____ *Management / ED Organisation*

APPLICATION OF QUEUING THEORY ANALYSIS TO DECREASE WAITING TIMES IN EMERGENCY DEPARTMENT: DOES IT MAKE SENSE?

M Alavi-Moghaddam (1), R Forouzanfar (2), A Shirvani (3)

1. Emergency department, Imam hossein hospital, Tehran, Iran, Islamic Republic of
2. Emergency department, Imam Hossein hospital, Tehran, Iran, Islamic Republic of
3. Deputy of health, Health and Medical Education Standards, Tehran, Iran, Islamic Republic of

Corresponding author: Mr Alavi-moghaddam Mostafa (mosalavi@yahoo.com)

Key-words: Operation Research ; Queuing theory analysis ; Quality improvement

Objective:

Patients, who receive emergency care in the Emergency Department (ED), are usually waiting in queues as unintended. This study Was done to determine whether application of queuing theory analysis might shorten these waiting times.

Methods:

This was an operation research to use queuing theory analysis in the ED. In the first phase, a field study was done to document the performance of ED in the study and log data from the simulator software. In the second phase, modeling was performed with the common scenario. Phase II study, includes the use of ARENA software for modeling, analysis, and improve the flow of emergency patients in ED. Model validity obtained through comparing the results with the same instrument with the real data.

Phase III study, was modeling to assess the effect of various operational strategies on the queue waiting time of patients using emergency care in the ED.

Results:

The first phase was characterized Of 3000 Patients records, 56% were male and 44% were female. 47.7% referred to trauma section and 52.3% were referred to Non-trauma section in the ED. Maximum input was 4.5 Patient and the least input was 0.5 per hour. The average length of stay of patients in trauma section was 3 hours while for Non-trauma section was 4 Hours. Scenario testing including the effect of increasing one more senior emergency resident in each shift decreased patients length of stay from 4 hours to 3.75 hours. The addition of one more bed to ICU and/or CCU in the hospital of the study reduced occupancy rate of nursing services from 76% to 67%. Adding one more responsible for taking ECG in the ED, the average time request to perform reduced from 26 To 18 minutes. In addition, increasing 50 Percent capacity of laboratory skill workers lead to shorten 90 minutes the length of stay among patients who need more than two lab data to be managed.

Conclusion:

This study showed that application of queuing theory analysis can increasingly improve flow of the Patients and reduce waiting times in bottlenecks within the throughput in the ED.

P543

Management / ED Organisation

ACCURACY OF DISCRETE EVENT SIMULATION IN PREDICTING HOURLY CHANGES IN A COMPLEX SYSTEM OF EMERGENCY DEPARTMENT TRIAGE QUEUES

TE Day (1), EJ Goldlust (2)

1. Health Services Research & Development / Emergency Medicine, John Cochran VA Medical Center / Brown University, Warren Alpert Medical School, St Louis, MO, United States
2. Emergency Medicine, Brown University, Warren Alpert Medical School, Providence, RI, United States

Corresponding author: Mr Goldlust Eric (goldlust@gmail.com)

Key-words: Crowding ; Operations Management ; Computer Simulation

BACKGROUND: The goals of efficient emergency care are continually thwarted by the unpredictability of patient flow, which introduces variance in length of time spent waiting for triage, nursing care, MD assessment, etc. Bottlenecks in patient intake (e.g., patient surge or mass casualty disaster), throughput (reduced staffing, computer downtime), or outflow (inpatient boarding) all contribute with some frequency. Queuing theory does not sufficiently address the relationships between variance in care delivery time and overall departmental throughput. Discrete Event Simulation (DES) is useful for modeling such complex interactions; however, there is little evidence that compares flow predicted from DES models to real-world performance.

OBJECTIVES: To assess the relative accuracy and precision with which a rigorous DES model of a complex triage process reflects corresponding real-world patient throughput measures in the ED of a large, academic, Level 1 Trauma Center.

METHODS: Study Design: Retrospective, matched, simulated cohort study. Site: The Anderson Emergency Center (AEC) of Rhode Island Hospital (RIH). RIH is the sole academic, Level 1 Trauma Center for Southeastern New England. The AEC sees ~103,000 patient visits annually, with an admission rate of ~28%. Our "Public Triage" area incorporates a number of processes: Pivot is a brief nursing assessment on arrival, to determine need for immediate transfer to Critical Care area. Standard Triage includes

brief HPI, vital signs, \pm EKG, from 23:00 – 11:00. Team Triage consists of the same + provider assessment, lab draws, medications, and X-ray as indicated, from 11:00 – 23:00. "Pull til Full" results in immediate bed placement, following 'Pivot', whenever possible. Rapid Disposition is immediate treatment and discharge for low acuity patients (ESI 4-5), whenever feasible. Population: "Real" cohort: All walk-in patients presenting to the AEC during the months of October 2010, December 2010, and March 2011 (n = 15,465). "Simulated" cohort: A computer-generated sample (n = 162,293), matched with respect to Emergency Severity Index (ESI) and inter-arrival time. Simulation: The above processes were decomposed into its component elements, including: locations (real and virtual), resources (which perform work), and entities (upon which work is performed), and characterized as 12 distinct subprocesses. Each was clocked by direct observation of a convenience sample of 10-30 patients and results curve-fit to a standard library of data distributions. For branch points, relative probabilities were calculated from historical data. Inter-arrival times from 6 months of prior visits were calculated per hour of day. The resulting model was implemented using MedModel 2007 (ProModel, Allentown, PA), and underwent face validity (review by staff represented in the model, to confirm that simulated actions matched actual duties) and internal validity (extensive code review and simulated 'stress tests' deliberately overwhelming arrival streams to confirm accurate queue processing), prior to data collection. Data Analysis: Primary outcomes were the numbers of patients in queue (1) awaiting Pivot, and (2) awaiting a Triage Room ("Main Waiting"), by hour of day. Hourly census was compared between real and simulated cohorts using serial Student's t tests. We did not correct for multiple comparisons, to maximize power to detect a difference.

RESULTS: All data distributions were closely fit to appropriate data distributions (p > 0.98 for all). Actual and simulated Pivot queue lengths did not differ significantly (p > 0.05) between the hours of 8AM and 7PM, with a maximal difference between actual and simulated data of 1.73 patients, at 9PM. Mean lengths of actual and simulated Main Waiting queues did not differ significantly between 11PM and 10AM, and between 1PM and 9PM, with a maximal difference between actual and simulated data of 2.23 patients, at 9PM. Variances in queue lengths were similar or decreased in simulated queues, at all hours.

CONCLUSIONS: In this large, academic Level 1 Trauma Center, a rigorously implemented Discrete Event Simulation model of a complex triage process was accurate at predicting the mean number of patients in clinically relevant queues, within 2.3 patients, at all hours of the day. Ongoing work is investigating whether a model of the entire department is similarly accurate at predicting quantitative effects of process improvements.

P544

Management / ED Organisation

EVALUATION OF REPRODUCIBILITY OF TRIAGE PROTOCOL: THE EXPERIENCE OF OSPEDALI RIUNITI DI PINEROLO EMERGENCY DEPARTMENT

E. Mana (1), C. Odetto (1), MC Sfasciamuro (1), M. Civita (1), E. Laurita (1), E. Pivetta (2), V Bonetto (3), GA Cibinel (1)

1. emergency department, ospedali riuniti di pinerolo, pinerolo (TO), Italy
2. university of Turin, Epidemiology Department, torino, Italy
3. university of Turin, Nursing Department, torino, Italy

Corresponding author: Mr Laurita Emanuela (emanuela.laurita@alice.it)

Key-words: Triage protocol ; Emergency Department ; Nursing training

In Emergency Department (ED) overcrowding is one of main problems and it is a priority to distribute the available resources according to the clinical needs of patients. The triage function is essential to absolve this aim.

Triage function is performed by ED nurses using shared decision-making algorithms and protocols to give a correct priority code to the patients. In a complex environment such as the triage where there is a high degree of responsibility and professional autonomy, it is important to monitor the performance and quality of skills to move towards a continuous improvement and professional growth. Aim of the study is to verify the reproducibility of triage protocols in use, drawn on the main signs and symptoms of major diseases presentation in "ospedali riuniti di Pinerolo".

Materials and methods

We collected data from 500 patients who were admitted in our ED between May 2011 and July 2011 with age > 18 years

To collect data it was built a pattern to reproduce logical process of evaluation that each nurse triage active during the evaluation of patient "at door": primary and secondary assessment, assignment of priority code and reevaluation.

The collected data were analyzed in blind by 2 experienced nurses belonging to Pinerolo training triage group, comparing then this evaluation with the one performed at the door.

The data analysis was performed using a coefficient of correlation (Cohen k).

RESULTS

The Combination correlation analysed in every assignment code between 2 experienced nurses and at the door nurse was good (0.76),

Specifically, for the white code, correlation index was good (0.77), for the green codes was very good (0.83) and for the yellow one, good (0.73), only for the red codes the correlation index was moderate (0.6).

The correlation between the two experienced nurses resulted very good in all codes (k 0.9)

CONCLUSIONS

On the basis of the results it is possible to conclude that the triage protocol used at "Ospedali Riuniti di Pinerolo" shows a good reproducibility. It can be explained by the presence of an interdisciplinary group who acts as a reference for triage, ensuring a periodical review of triage protocols based on national and international guidelines. All members of our nursing staff have attended the same course of basic training in triage and it's also assured permanent training through triage refresh, monothematic courses and clinical audit.

Particular consideration deserves the low correlation index of red codes, this data is widely reported in literature and could be explained by an overestimation fear of ED nurses who do not apply provided protocol

P545

Management / ED Organisation

THE IMPORTANCE OF EMERGENCY CLINIC ON THE PATIENT HOSPITALIZATION: ANALYSIS OF A TRAINING HOSPITAL

C SEN TANRIKULU (1), Y TANRIKULU (2), S KARAMAN (1)

1. Emergency Department, Erzurum Area Education and Research Hospital, Erzurum, Turkey
2. General Surgery Department, Erzurum Area Education and Research Hospital, Erzurum, Turkey

Corresponding author: Mme Sen Tanrikulu Ceren (cerensen81@hotmail.com)

Key-words: Emergency clinic ; Admission ; Demographic data

Introduction: Emergency Departments of the hospitals are the services where patient admission is random and obliged. The most of patients referred to emergency clinic being treated as outpatient, a small amount is hospitalized. Hospitalization is change according to months, seasons and diagnosis. The aim of this study was to analysis of patients hospitalized from a training hospital's emergency clinic.

Material-Method: In this study, of 156818 patients presented to the Emergency Department of Erzurum Area Training and Research Hospital between January 01, 2011 and December 31, 2011, 6467 patients whose data were recorded in hospital automation program. Demographic features, times of presentations, health insurances, patient outcome, diagnosis according to the International Classification of Diseases-10 (ICD-10) were analyzed.

Results: Male and female ratio of these patients was 60.9% and 39.1%, respectively, and age of mean was 50.5. 156818 patient was evaluated and it was determined that 148670 patients (94.7%) were examined and treated at emergency clinic, 825 patients (0.5%) were referred to other hospitals, 856 patients (0.5%) left voluntarily from emergency clinic, and 6467 patients (4%) were hospitalized various clinics. The most of patients (98.7%) have to health insurance. According to months and seasons, there was not difference between admitting to internal medicine clinics and intensive care units, the patients, but admitting to surgery clinics especially were the excess in the summer months (June, July and August). It was determined that the most hospitalization clinic was cardiology from internal medicine clinics, general surgery from surgery clinics, and anesthesia-reanimation clinic from intensive care units. The most common disease was neurological emergencies. Traumas were more common in the summer months, and breathing emergencies more common in the winter months.

Conclusion: In conclusion, it was observed that the majority of patients admitted to the emergency clinics don't need have been in emergency, and should have applied to primary health care units and policlinics. This study showed that non-emergency patients on a large scale increase the workload of emergency clinics, thus, patients ought to be educated and awareness of patients should be increased; primary health care units ought to be made available; accurate, effective and enforceable policies for emergency medical services in the country must be established.

P546

Management / ED Organisation

EXPERIENCE AND CLINICAL DATA OF EMERGENCY ROOM INTENSIVE CARE UNIT

G. Kurtoglu Celik (1), O. Karakayali (2), Z. Saral Ozturk (1), MM. Dellul (1), T. Ersen (1), H. Sahin Kavaklı (1)

1. Emergency department, Ataturk Training and Research Hospital, Ankara, Turkey
2. Emergency department, Teaching and Research Hospital in Kocaeli Derince, Kocaeli, Turkey

Corresponding author: Melle Kurtoglu Celik Gulhan (kurtoglugulhan@yahoo.com)

Key-words: intensive care unit ; emergency department ; mechanical ventilatory support

OBJECTIVE : The purpose of this study is to determine the clinical characteristics and mortality rates in patients who were hospitalized in Ankara Atatürk Education and Research Hospital Emergency Medicine department's intensive care unit.

METHOD : In this retrospective study we examined discharge forms and monitoring forms of 176 patients who were hospitalized in the emergency department's 3-bed intensive care unit between 01.01.2012/ 31.05.2012 . Patients demographics, pre-diagnosis and final states were recorded. The obtained data were evaluated with SPSS 15.0 Microsoft for Windows program.

RESULTS : 176 patients were hospitalized and the average age of these patients were found to be $68,27 \pm 23,1$. patients 53,4% (94 patients) were male and 46,6% (82 patients) were female. All patients have an average length of stay 2.05 days in the emergency room intensive care unit, only 1 patient was followed up for 6 days. 71 patients (40,3%) needed mechanical ventilatory support and 105 patients (59,7%) did not require mechanical ventilatory support. 72 patients (40,9%) patients hospitalized due to cardiac and pulmonary causes (respiratory failure, pulmonary embolism, decompensated heart failure, hypercarbia, pneumonia, ARDS), 55 patients (31,3%) due to intracranial pathology (cerebrovascular disease, subdural, epidural hematoma, subarachnoid hemorrhage, intracranial mass, status epilepticus), 11 patients (6,2%) due to multiple trauma after traffic accidents, 15 patients (8,5%) due to gastrointestinal or for reasons related to the terminal stage malignancy, 3 patients (1,7%) due to suicidal attempts, 20 patients (11,4%) due to other reasons. After follow-up and treatment 24 patients (13,6%) were ex in emergency intensive care while 61 patients (34,6%) admitted to relevant clinics intensive care units. 32 patients (18,2%) sent to another intensive care units because of there is no room in our intensive care unit while 42 patients (23,9%) were hospitalized in related clinics and 17 patients (9,6%) were discharged after treatment. Patients mostly hospitalized in intensive care unit (11,3%) and chest diseases service (9,1%)

CONCLUSION : Intensive care units have become an important part of emergency rooms in today's conditions. Because of the followed patients in intensive care units especially high rate of mechanical ventilation, 'intensive care patient monitoring' should be included to care of critically ill patient training programs of emergency physicians.

P547 Management / ED Organisation

USING MEDICAL SOFTWARE IN QUALITY ASSESSMENT IN AN ED

D Desruelles (1), M Sabbe (1), J van der Schoot (2), K Vanhaecht (3)

1. Dept of Emergency Medicine, University Hospitals, Leuven, Belgium
2. Emergency Department, KLIINA hospital, Brasschaat, Belgium
3. Centre for Health Services and Nursing Research, Catholic University, Leuven, Belgium

Corresponding author: Mr Sabbe Marc (lea.vanroelen@uzleuven.be)

Key-words: quality assessment ; information technology ; infections

Introduction: Emergency physicians must continuously evaluate overall quality of care in the ED, especially during overcrowding periods. The purpose of this study was to evaluate the door-to-needle time for antibiotics as treatment for 2 time-sensitive (meningitis, pneumonia) and 2 not time-sensitive infections (urinary tract and soft tissue infections).

Methods: The study was approved by the local ethic committee of a middle-sized hospital in Belgium. A retrospective analysis of data between 2008 and 2010 was performed. Data were collected using E-care software and a software controlled stockroom for medication (Vanas). Measuring crowding was done by evaluating the total number of patients and the number of patients three hours prior to the individual infectious patient. Pearson correlation was used to evaluate correlation between variables.

Results: 941 patients were included (396 pneumonia, 4 meningitis, 368 urinary tract and 173 soft tissue infections). Mean door-to-needle time for all patients was 162.7 ± 85.5 minutes. No significant differences were found between the 4 groups. Crowding

resulted in a significant increase in door-to-needle time in all groups ($p = 0.001$).

Conclusion: Systematic and detailed registration of process parameters using medical software helps to set up a quality assessment project. This project demonstrated a significant increase in door-to-needle time due to crowding in the ED, even for time-sensitive treatment influencing outcome. Such project can help to demonstrate areas needing quality improvement by adapting processes of care.

P548 Management / ED Organisation

HOW MUCH TIME DO UNHOSPITALIZED PATIENTS APPLYING FOR EMERGENCY SERVICES STAY IN EMERGENCY DEPARTMENT?

A Duran, T Ocak

Emergency Medicine, Abant İzzet Baysal University, Medical Of Faculty, Bolu, Turkey

Corresponding author: Mr Ocak Tarik (drtarik1977@gmail.com)

Key-words: time ; unhospitalized Patients ; emergency services

Subject: The patients applying to a emergency service may stay longer than necessary for diagnosis, monitoring and treatment. This can be due to the inadequacy of the treatment performed in emergency department or to the absence of the required unit in the hospital. In this study, we analyzed the waiting period of the patients who have not been hospitalized.

Material Methods: The patients applying to Bolu İzzet Baysal Public Hospital Emergency Unit between the 16.02.2009 and the 03.08.2010 have been studied regarding their application date, the season, and their waiting period in the emergency unit. The data have been analyzed using the statistics software Package for the Social Sciences (SPSS, Inc., Chicago, IL), version 17.0 for Windows. The chi-square χ^2 test has been used for the determination of the percentage distribution and significance and $p < 0,05$ has been considered significant.

Observations: 4215 patients applying to Bolu İzzet Baysal Public Hospital Emergency Unit between the 16.02.2009 and the 03.08.2010 and monitored without hospitalization have been studied. The patients mainly applied during spring ($p < 0.05$). There was no significant difference among the application days ($p > 0.05$). The application occurred more often between 8.00PM – 11.00 PM ($p < 0.005$). The mean duration of the hospitalization of the patients in emergency unit was 09 ± 12 minutes (minimum 0 minute, maximum 2,30 hours). The patients waited $0,26 \pm 1,10$ hours in emergency unit examination (minimum 0 minute, maximum 21,32 hours). The duration of the hospitalization in emergency unit was $08,58 \pm 08,07$ hours (minimum 0,30 hours, maximum 23,32 hours).

Results: In this study, we observed that the duration of the hospitalization in emergency unit is longer than the ideal duration.

P549

Management / ED Organisation

HOW MUCH TIME DOES IT TAKE TO A PATIENT TO BE TRANSFERRED FROM EMERGENCY UNIT TO THE BEDROOM IN THE RELEVANT CLINIC?

A Duran (1), T Ocak (1), M Sit (2)

1. Emergency Medicine, Abant İzzet Baysal University, Medical Of Faculty, Bolu, Turkey
2. General Surgery, Abant İzzet Baysal University, Medical of Faculty, Bolu, Turkey

Corresponding author: Mr Ocak Tarik (drtarik1977@gmail.com)

Key-words: Emergency Unit ; relevant clinic ; transferred time

Subject: Everyone complaints about waiting in emergency unit. Time does not elapse in emergency. It is the same for our family if we wait for being hospitalized. In this study, we analyzed the waiting period of the patients who wait for being hospitalized.

Material Methods: The patients applying to Bolu İzzet Baysal Public Hospital Emergency Unit between the 24.11.2009 and the 25.08.2011 and, who have been hospitalized, have been studied regarding their application date, the season, and their waiting period in the emergency unit. The data have been analyzed using the statistics software Package for the Social Sciences (SPSS, Inc., Chicago, IL), version 17.0 for Windows. The chi-square χ^2 test has been used for the determination of the percentage distribution and significance and $p < 0.05$ has been considered significant.

Observations: 6683 patients applying to Bolu İzzet Baysal Public Hospital Emergency Unit between the 24.11.2009 and the 25.08.2011 and hospitalized have been studied. The lower application period is during summer ($p < 0.05$). There was no significant difference among the application days ($p > 0.05$). The lower application period was between 12.00 AM and 8.00 AM ($p < 0.005$). The patients have been hospitalized mostly in general surgery ($p < 0.05$), internal diseases and neurology. The mean duration of the waiting period of the patients in emergency unit was 08 ± 13 minutes (minimum 0 minute, maximum 2,50 hours). The patients waited $1,10 \pm 1,43$ hours in emergency unit examination (minimum 0 minute, maximum 9,57 hours). The duration of the transfer from the emergency unit to the department was $0,18 \pm 0,18$ hours (minimum 10 minutes, maximum 2,57 hours).

Results: The diagnosis period and the decision about the hospitalization of the patients were the causes of the waiting period in the emergency unit. The patients to be hospitalized in the other departments came during the day. The hospitalization decision was taken on reasonable hours. The distance to the department is not involved in the duration of the hospitalization.

the auxiliary pathologies of the patients are among these. In this study, the effect of the period from the application to the emergency unit to the hospitalization on the mortality has been analyzed retrospectively.

Material Methods: The patients applying to Bolu İzzet Baysal Public Hospital Emergency Unit (EU) between the 16.02.2009 and the 23.08.2011 and who have been diagnosed and hospitalized in IC, have been studied regarding their application date, the season, and their waiting period in the emergency unit. The data have been analyzed using the statistics software Package for the Social Sciences (SPSS, Inc., Chicago, IL), version 17.0 for Windows. The chi-square χ^2 test has been used for the determination of the percentage distribution and significance and $p < 0,05$ has been considered significant.

Observations: 2380 patients applying to Bolu İzzet Baysal Public Hospital Emergency Unit between the 16.02.2009 and the 23.08.2011 and transferred from the EU to the IC have been studied. 1063 have been hospitalized in general IC, 1317 have been hospitalized in Coronary IC. The patients have been mainly hospitalized in general IC during summer and in coronary IC during spring ($p < 0.05$). There was no significant difference among the application days ($p > 0.05$). The application occurred more often between 4.00 PM – 7.00 PM for coronary IC and at the lower level between 4.00 AM – 7.00 AM for coronary and general IC ($p < 0.005$). The mean duration of the hospitalization of the patients in emergency unit was $01,55 \pm 02,17$ hours (minimum 30 minutes, maximum 10,06 hours). The patients waited $0,31 \pm 0,32$ hours in emergency unit examination (minimum 2 minutes, maximum 2,58 hours). No significant difference has been observed between the patients who died or not after their hospitalization in IC for the waiting period in EU ($p > 0.05$)

Results: Due to the clinical state of the patients, their transfer from the EU to the IC is difficult. In this study, we observed that the waiting period in EU does not affect the mortality of the patients transferred to the IC.

P551

Management / ED Organisation

QUALITY CONTROL OF TRIAGE METHOD USED AT THE AZIENDA OSPEDALIERA OF PADUA (ITALY) EMERGENCY DEPARTMENT (ED)

A Scudeller (1), C Pagnin (1), VA Zaggia (1), M Mengardo (1), S De Carlo (1), L Diserò (1), F Stella (2), M Minante (1), G Vettore (1), F Tosato (1)

1. Pronto Soccorso ed Osservazione, Azienda Ospedaliera di Padova, Padova, Italy
2. Dipartimento di Medicina, Università degli Studi di Padova, Padova, Italy

Corresponding author: Mme Stella Federica (fedele.stella@gmail.com)

Key-words: triage ; quality control ; color codes

Background

The triage rules patients access in the emergency system. In Italy the 2 main methods of triage are represented by "global" and "biphasic" triage.

In our Hospital ED is in use a modified "biphasic triage"; a first step is based on a signs and symptoms assessment, using only inspection and clinical history to assign a Colour Code (C/C): red, yellow, green or white. The second step or "internal triage", allows a further evaluation and stratification of patients (for example high and low risk yellow code), by using vital parameters and diagnostic investigations (EKG, e.g.), with a concurrent initial stabilization. Each C/C has its own specific content: red means an objective presence of alteration of the vital functions; yellow: risk of rapid

P550

Management / ED Organisation

EFFECT OF THE WAITING PERIOD IN EMERGENCY UNIT OF THE PATIENT TO BE HOSPITALIZED IN INTENSIVE CARE ON THE MORTALITY

T Ocak, A Duran

Emergency Medicine, Abant İzzet Baysal University, Medical Of Faculty, Bolu, Turkey

Corresponding author: Mr Ocak Tarik (drtarik1977@gmail.com)

Key-words: emergency unit ; intensive care ; waiting period

Subject: There are many factors affecting the mortality of the patients hospitalized in intensive care (IC). The age, the diagnosis,

alteration of vital functions or major impairment; green: priorities for suffering; white: neither priorities for risk nor for suffering. Operational requirements for an efficient triage are: 1) speed of execution, 2) high sensitivity, i.e. an irrelevant underestimation; 3) a good specificity which translates into a not excessive overvaluation.

Aim of the study

Assess the specificity and sensitivity of the triage method in use in our ED, i.e. the percentage of underestimation and of overvaluation in reference both to the work of the triage operator (from now called "triager"), than to the method itself. In addition we have assessed the percentage of each C/C, the waiting time for each of them and the percentage of admission and discharge.

Materials and methods

The survey was carried out in the 2010, prospectively evaluating all the patients visited by 3 emergency doctors, expert in triaging. The methodology consisted in the contemporary allocation of 3 C/C to each patient and subsequent comparison between the three: C1 was assigned by the triager at ED door according to the method, C2 was assigned, in blind, by each of the three expert doctors at the time of their first evaluation of the patients, using the same methodology of the triager, C3 was assigned by the same doctor, after the diagnostic investigations conducted to determine the diagnosis and outcome of patients were completed.

Comparison between C1 and C2 estimates the performance of the triagers, while the C2-C3 comparison indicates the accuracy of the method. We considered red and yellow C/C versus green and white ones.

Results: during the year 2010, 85,553 patients have referred to our ED, of whom 11,334 were prospectively enrolled in our survey. In 1,135 of these patients the three C/C do not coincide; the performance of operators shows about 0.37% of underestimation and 1.08% of overestimation. In 98.5% the triage was well done. The performance of the method was respectively: 0.03% of underestimation, 6.48% of overestimation. In 93.5% of the cases the three C/C coincided for the method.

The mean execution time of triage was about 2 minutes. The percentage of various C/C were the following: red codes about 3.5%, yellow codes 27.1% (51.5% high risk yellow code, 48.5% low risk yellow code), green codes 11.4%, white codes 58%. The waiting time (75th percentile) before visit, was respectively: 0 min for red codes, 10 min for high risk yellow codes, 45 min for low risk yellow codes, 35 minutes for Green codes and 65 min for the white ones.

The percentage of recovered and discharged patients for each C/C were respectively: 78% and 20% for red codes, 51.7% and 48.3% for high risk yellow codes, 23.3% and 76.7% for low risk yellow code, 27.6% and 72.4% for green codes, 5.6% and 94.4% for white ones.

Conclusions: The triage method considered ensures a speed of execution and a low grade of underestimation, both necessary in order to allow a rapid assessment to all potentially critically ill patients. The method itself overestimates intentionally, but in our study we demonstrate that it occurs in an acceptable rate and that the system is not overloaded. Neither these patients nor any of the operator underestimated patients required emergency procedures in the ED.

The percentage of different C/C and waiting time for each of them are similar to those suggested by international standards; the percentage of hospitalizations and discharges for each C/C shows a good match between the severity of the C/C and the outcome. These data suggest a good quality of this triage method, and are confirmed in a range of ten years before and after the year 2010, demonstrating the excellent reproducibility of the method itself.

P553

Management / ED Organisation

DO WE CARE ABOUT PATIENT SAFETY? SURVEY ON PATIENT SAFETY AMONG EMERGENCY DEPARTMENT STAFF.

S. Navarro Gutierrez (2), D. Cuesta Peredo (1), S. Castells Juan (2), E. Burdeos Palau (1), P. Garcia Bermejo (2), J.L. Ruiz Lopez (2)

1. Quality Management Department, Hospital Universitario de La Ribera, Alzira, Valencia, Spain

2. Emergency Department, Hospital Universitario de La Ribera, Alzira, Valencia, Spain

Corresponding author: Mr Navarro Gutierrez Sergio (sergionavarrog@hotmail.com)

Key-words: patient safety ; Emergency Department ; survey

We recently created the Emergency Department (ED) Commission on Patient Safety in our centre with a multidisciplinary team including staff physicians and nurses in an attempt to improve patient safety in our hospital.

As Patient Safety is an emergent dimension of our healthcare system, staff must be aware of this problem in order to improve health care quality.

After four months of hard work, a self designed survey was answered by staff workers in order to assess areas where staff may be more concerned or aspects of special interest for ED workers.

Identification of all patients specially elderly and impaired patients as well as prevention of falls and proper use of bed rails were some items evaluated by our survey.

In addition to this, ED workers were also asked about actions required to improve patient safety as well as personal attitude when they see for instance, a patient without identification bracelet, unlifted bedrails and unbraked beds.

We present in the Congress our final results.

P554

Management / ED Organisation

THE ECG IN THE ED: STAMPING OUT CARELESS PRACTICE

A Murray, WG Niven

Emergency Department, St Vincent's University Hospital, Dublin, Ireland

Corresponding author: Mr Niven William (willniven@hotmail.com)

Key-words: ECG ; Documentation ; Medicolegal

Background and Aims: Patients presenting to the emergency department with chest pain should have an ECG performed within 10 minutes according to the American Heart Foundation Guidelines. Whilst this is key to minimising the risk of missed myocardial infarction and other cardio-pulmonary emergencies, the acknowledgement and documented recording of the clinician who interpreted and acted upon the findings of the ECG is just as important. With this in mind and motivated in part by a perceived lack of documentation in this area, we undertook to audit and improve our department's performance in this area.

Methods: Over a period of 8 months from October 1st 2011 to May 31st 2012 the quality of ECG documentation was audited using sample sizes of between 50 and 75 patients presenting to the department with chest pain. Areas looked at were time to ECG, identification of the interpreting clinician and whether or not timing, dating and action taken were documented on the ECG. Three cycles were carried out and various strategies were

employed in order to improve both the quality and the quantity of ECG documentation. This included the introduction of an ECG stamp with areas for writing the time and date seen as well as 4 'action' options to be taken based on the reading of the ECG. A series of presentations on the findings of the audits were carried out with emphasis put on educating the importance of clear and concise note keeping and its relevance both clinically and medico-legally.

Results and Discussion: The results of the first round of the audit highlighted the need for critical improvement but following the introduction of the ECG stamp, a definite improvement was noted. The interpreting clinician was identifiable initially on 18% and this improved to 49% on the second phase. Timing when the ECG was read improved from 0% to 38% by the second phase and 54% by the third. An interpretation and course of action was identifiable in 54% by the third cycle an improvement from the initial 18% and 6% respectively. The use of the ECG stamp was evident in 80% of the ECGs by the end of the period audited and its introduction appears to have encouraged greater consideration prior to writing findings and action plans. The stamp also forced doctors to write as opposed to sign their names - an important area of clinical governance.

Conclusions: This project was successful in the sense that it discovered and addressed some of the key areas of under-performance with respect to ECG documentation. However the fact that criteria are fulfilled in only roughly 50% of ECGs at present suggests that there is still work to be done particularly in the education arena. It will be one of the priorities of the authors to make this project sustainable over the long term.

P555 Management / ED Organisation

IMPORTANCE OF SAFETY IN CLINICAL CARE IN EMERGENCY ACTIVITY

R Carrio, N Davila, P Garcia, J Mínguez, Al Muhammad, MI Vercher

Emergency department, Hospital Universitario de La Ribera, Valencia, Spain

Corresponding author: Mr Jose Mínguez (jminguez@hospital-ribera.com)

Key-words: Safety ; Quality ; Emergency

Objectives:

The main objective of this study is to measure the degree of patient safety culture among health professionals who work in the emergency department. Evaluate the presence of positive and negative factors related to patient safety.

Material and methods:

This is a cross-sectional study that was conducted based on the implementation of the survey Hospital Survey on Patient Safety Culture, with its version adapted by the Research Group on Quality Management at the University of Murcia.

This survey was distributed and an anonymous self-report of 102 health professionals. The same that included both health and administrative staff, who were working in the emergency department including dates to 2011.

Results:

The overall perception of safety was 43%. 64.7% of the people who take the survey, gave patient safety a score from 6 to 8. 31% of respondents have taken any notice in the last year.

Emphasize positive character dimensions Teamwork within units with 77.2% and Expectations / actions responsible for the service / unit with 66.1%. How weaknesses include "Provision of human

resources" with 69% and "Management Support for Patient Safety" with 35%.

Conclusions:

The low overall level of safety awareness serves as an indicator of the need to increase institutional actions based on patient safety which can encourage a more satisfactory patient care and safe for both parties.

It has managed to identify as a positive factor perception eminently proper teamwork within the unit, a feature that should be promoted and considered within the continuous improvement aspects of the hospital.

The fact of finding as weakness Human Resource Endowment is what generates work overload and in time will increase the margin of error that is exposed to health personnel. We must encourage those responsible for the organization to prioritize adequate hospital rationalization of staff and improvement in working patterns to which they are subjected.

Being able to identify the strengths and weaknesses in the security climate in the unit may serve to develop strategies for continuous improvement in our hospital.

P556 Management / ED Organisation

INDUSTRIAL INDICATORS OF PERFORMANCE IN THE RESCUE OF THE MANAGEMENT OF EMERGENCIES DEPARTMENTS

N BORSALI-FALFOUL (1), A CHARGUI (1), DH CHIBOUB (1), N CHOUIKH (1), CH HAMOUDA (1), H MAGHRAOUI (2), K MAJED (1)

1. emergency department,, la Rabta hospital, Tunis, Tunisia

2. emergency department,, la Rabta hospital, tunis, Tunisia

Corresponding author: Mme Borsali Falfoul Nebiha (nebiha.borsali@yahoo.fr)

Key-words: emergency ; activity indicators ; performance

The emergency department (ED) is the place of receipt, first care and orientation of the patients who come in to hospital for a not programmed consultation. The prolonged periods of wait, for first care, are often responsible for dissatisfaction of the public and ensure a deterioration of the quality of emergency' care. These withdrawal periods are prejudiced by the upstream of the ED (pre load), the organization of the job in the ED (load) and the downstream of the ED (post load) or circuit of orientation. The goal of our study was to find solutions to reduce the withdrawal periods and consequently to improve the quality of patients' first care.

Methods:

It's a prospective observational study of the flow of the consulting patients to the ED of Rabta teaching hospital over 24 hours. Thereafter, and in collaboration with researchers of the national school of engineers de Tunis, we modeled the flow of passage of the consultants on the ambulatory unit of the ED. In last stage we carried out changes on the model of passage of flow by simulation on industrial software of management of flow ARENA ®.

Results:

Over 24 hours of duration, 209 patients were received in the ED. 80 % of the patients were classified "CCMU 1" and "CCMU 2" for only 2 % for the classes "CCMU 4" and "CCMU 5". The average period of wait before the first care was in conformity with the current standards. The service functioned to 145% of its ambulatory theoretical capacity and to 158% of its capacity in hospitalization of short duration. The realization of biological exams in emergencies situation lengthened the time of expectation in ambulatory unit of 56 %, taking into account an average time of recovery of the results

of 157 min. The radiological examinations lengthened the time of passage of 21 %, the average time of realization of the radiographies was about 27 minutes. The modeling and the simulation of the process allowed us in a first stage to note a possibility of reduction of the time of wait which can reach in the best cases -12.8 %. The solutions which were tested were the installation of a laboratory within ED and the optimization of the time of consultation by the doctors at end to decrease the number of required biological examinations. However this potential improvement of the time of wait for the patients who profited from biological examinations would accompany by a lengthening of the times of wait of the patients who benefited from radiological examinations. In addition the ambulatory time of consultation should in no case exceed 7 min. Otherwise the model becomes diverging and result will be less concordant. The virtual solution with this situation was not other than creating another office of consultation.

Conclusion:

To reduce the withdrawal periods to the ambulatory unit of the ED we recommend the introduction of a computing system of recovery of the biological results and the creation of an additional medical office to optimize the request of the complementary examinations.

P557

Management / ED Organisation

IMPACT ASSESSMENT OF THE IMPLEMENTATION OF A MULTIDISCIPLINARY PATIENT-CENTERED DIABETIC FOOT UNIT INVOLVING THE EMERGENCY WARD

E Arana-Arri (1), A Basterretxea (2), L Corton (1), I Estevez (1), A Larrazabal (3), L Lopez (1), C Pesquera (4), P Vela (5)

1. Emergency department, Cruces University Hospital, Osakidetza, Barakaldo, Spain
2. Home Care Department, Cruces University Hospital, Osakidetza, Barakaldo, Spain
3. Care Home Department, Cruces University Hospital, Osakidetza, Barakaldo, Spain
4. Diabetic Foot Unit, Cruces University Hospital, Osakidetza, Barakaldo, Spain
5. Vascular Surgery Department, Cruces University Hospital, Osakidetza, Barakaldo, Spain

Corresponding author: Mme Eunete Arana-arri (eunete.aranaarri@osakidetza.net)

Key-words: Diabetic Foot ; Health outcome research ; Patient-centered

Introduction: It is estimated that the prevalence of diabetes mellitus in patients over 65 years in developed countries is 11%. The presence of diabetic foot ulcers in these countries varies between 4% and 10%. Foot infections that concern the skin and soft tissue and even bone, with or without systemic repercussions, are the most frequent cause of hospitalization in these patients, 25%, often long stay. Diabetes is the most common cause of non-traumatic amputation of the lower extremity in Europe and USA. The amputation rate ranges between 2.5 and 6/1.000 patients/year and the risk for diabetics is 8 to 15 times higher compared to non-diabetics.

Aim: To evaluate the impact on the implementation of a Diabetic Foot Unit (DFU) in a Tertiary Hospital and its health areas of reference, in terms of satisfaction, number of admissions from the emergency department, number of amputations, hospital stay period and cost.

Methods: The DFU was introduced in February 2011 as a multidisciplinary and transdisciplinary team that includes the following services: Emergency Department, Vascular Surgery, Home Care, Infectious Diseases Unit, Endocrinology, Rehabilitation and Microbiology. The services of Trauma Department and Plastic Surgery have recently joined the team. Data from all patients seen in the DFU in 2011 were collected on electronic medical records. The patients were followed for 3 months and were administered

questionnaires of quality of life. The DFU was included in the contract agreement program for the diabetic process between the Department of Health and Consumer Affairs and the Hospital.

Results: Along 2011 202 patients were seen in the DFU. 114 patients went to the emergency room, and 57.8% of them required admission. In total 94 patients were admitted to hospital. The main reason for admission was critical ischemia (78.8%) followed by infection, except one case that required admission due to infection and hyperosmolar coma. 42.3% of patients attending at the emergency department and not admitted initially, were readmitted in a second time. The remaining patients being treated at first time at the emergency ward, were finally follow up at the DFU outpatient service or by his primary care physician. 37.2% of patients required a second admission, 10.6% two readmissions and 2 patients were admitted on 4 occasions. The average stay was 14.04 days. 70 patients required monitoring by the Home Care service, with an average stay of 23.5 days. 16 major amputations were made in this period (6 of them in readmissions) and 65 minor amputations. Of those admitted patients 7.4% died and 75.5% experienced an improvement or healing process. With respect to outpatient, 76 patients were followed in the DFU specialized outpatient service, with an average of visits per patient of 2.18 (range: 1-12 visits). 23 patients were seen in the rehabilitation outpatient service, 7 at the Infectious Diseases Unit and 3 patients were treated by plastic surgery. Of all patients seen the 5% is being followed by his primary care physician. The mean EuroQoL-5D was 4.7 on a scale of 0-10.

Discussion: The implementation of a DFU entails a change of management and referral of patients with this pathology. It requires a transdisciplinary participation of different hospital services and the implementation of protocols to ensure effective referral from primary care. We think that the emergency ward plays a key role in the care of these patients in the initial care, being the main entrance to the DFU unit for further multidisciplinary management. Initial results obtained indicate that the DFU has been effective in improving patients.

P558

Management / ED Organisation

'CATEGORY 4' - AN ADVANCED NURSE PRACTITIONER-LED SERVICE

A El-Gammal, B Ramasubbu, D Shields

Emergency Medicine, St James's Hospital, Dublin, Ireland

Corresponding author: Mr Ramasubbu Benjamin (ramasubb@tcd.ie)

Key-words: Advanced nurse practitioner ; scaphoid ; protocol

Introduction

Scaphoid fractures are the most common carpal bone fracture. Minor injuries are predominantly managed by Advanced Nurse Practitioners (ANPs) led service in our department.

Existing advised management is for all patients with a negative initial x-ray to have a follow-up radiograph taken at 10-14 days if clinically a fracture is still suspected. For these patients if the second x-ray is still negative an NM Isotope Bone Scan is performed.

Methods

All patients presenting to St James's Hospital Dublin Emergency Department with suspected scaphoid fracture in 2011 who received an initial three view scaphoid x-ray were included for review.

Results

92 patients had a scaphoid x-ray for suspected scaphoid fracture. 16 had confirmed scaphoid fracture diagnosed on initial x-ray. 23/76 had a second follow up scaphoid x-ray (30.3 %) after clinical assessment. All patients had immobilisation between visits. Two patients had scaphoid fracture diagnosed from second x-ray. Duration of second x-ray from first x-ray in these patients showed that eight had the repeated x-ray within appropriate time (10-14 days) (34.8%) and 15 patients outside the range (65.2%). For patients outside the range, the average length of follow up was 10.13 days.

Eleven bone scans were carried out. Three further patients had MRI as requested by orthopaedic consultant to clarify inconclusive bone scan results.

Follow up when required was provided by the Orthopaedic team.

Conclusions

To avoid under or overtreatment, accurate and early diagnosis is required to confirm or exclude scaphoid fracture as a diagnosis. An ANP led service for scaphoid injuries provides a high standard of care in our department.

P559

Management / ED Organisation

THE ROLE OF THE EMERGENCY ROOM IN SHORTENING OF DOOR-TO-BALLOON TIME IN PRIMARY PCI.

A Shemesh (1), B Burany (1), G Tatar (1), G. Szabó (2), RG kiss (2)

1. Emergency department, Central Military Hospital, Budapest, Hungary
2. Cardiology, Central Military Hospital, Budapest, Hungary

Corresponding author: Mr Shemesh Assaf (shemeshassaf@hotmail.com)

Key-words: ED organisation ; myocardial infarction ; primer PCI

In 2006 the France Registry- USIC 2000 was suggesting it is better to bypass the emergency room (ER) achieving more frequent and early reperfusion. In Budapest region - with a population of 3 million inhabitants a STEMI primary PCI hospital rotational system was created in 2003 among the 5 invasive centers. In 2007 July, our cardiology department was allocated to Budapest's Millitary Hospital in which a multidisciplinary ER is operating. In our institute a quality improvement scheme was developed that minimized delay factors evaluated in the USIC 2000 registry. ER decision making was moved to the home of the patient where the medical staff makes diagnosis of STEMI, getting in touch through a "hotline" with our cardiologist on call. The cardiologist decides whether the patient is a subject of primer percutaneous coronary intervention (PPCI) or not. If the PPCI is to be done, the patient is transferred to our institute. In ER, a senior doctor rapidly goes through the patient's ECG, major anamnesis, vital signs- while the patient is still on the ambulance car stretcher- and informs the catheter lab personnel. Then ambulance team continues with the patient directly to the cathlab. Working together, we succeeded to reduce the door-to-ball- time (DTBT) substantially. Comparing the number of primary intervention and the DTBT in the first 12 months a tendency of increasing number of PPCI procedures and a steep decrease of Door-to-balloon-time -50% by average -is seen in our center.

Conclusion: The DTBT can be shortened by better organization and therapeutic decision making from first diagnosis at patient's home, through ER until the intervention.

The ER has proved to be a fast, efficient screening tool and the patient can be stabilized if needed, before PPCI. Furthermore, ER senior working together with the cardiologist takes part in the decision making, can rollout patients and in case of multiple patients sequencing and logistics of the PPCI.

P560

Management / ED Organisation

'CATEGORY 4' - AN ADVANCED NURSE PRACTITIONER-LED SERVICE

A El-Gammal, B Ramasubbu, D Shields

emergency department, St James's hospital, Dublin, Ireland

Corresponding author: Mr El Gammal Ayman (Draymanelgammal@hotmail.com)

Key-words: scapoid fracture ; advanced nurse practitioner ; protocol

Introduction

Scaphoid fractures are the most common carpal bone fracture. Minor injuries are predominantly managed by Advanced Nurse Practitioners (ANPs) led service in our department.

Existing advised management is for all patients with a negative initial x-ray to have a follow-up radiograph taken at 10-14 days if clinically a fracture is still suspected. For these patients if the second x-ray is still negative an NM Isotope Bone Scan is performed.

Methods

All patients presenting to St James's Hospital Dublin Emergency Department with suspected scaphoid fracture in 2011 who received an initial three view scaphoid x-ray were included for review.

Results

92 patients had a scaphoid x-ray for suspected scaphoid fracture. 16 had confirmed scaphoid fracture diagnosed on initial x-ray. 23/76 had a second follow up scaphoid x-ray (30.3 %) after clinical assessment. All patients had immobilisation between visits. Two patients had scaphoid fracture diagnosed from second x-ray. Duration of second x-ray from first x-ray in these patients showed that eight had the repeated x-ray within appropriate time (10-14 days) (34.8%) and 15 patients outside the range (65.2%). For patients outside the range, the average length of follow up was 10.13 days.

Eleven bone scans were carried out. Three further patients had MRI as requested by orthopaedic consultant to clarify inconclusive bone scan results.

Follow up when required was provided by the Orthopaedic team.

Conclusions

To avoid under or overtreatment, accurate and early diagnosis is required to confirm or exclude scaphoid fracture as a diagnosis. An ANP led service for scaphoid injuries provides a high standard of care in our department.

P561

Management / ED Organisation

SURGICAL OR NON-SURGICAL ABDOMINAL PAIN IN THE EMERGENCY DEPARTMENT

N ASLAN (1), A BAYDIN (2), M YUCEL (1), Y YURUMEZ (1)

1. EMERGENCY DEPARTMENT, SAKARYA UNIVERSITY, SAKARYA, Turkey
2. EMERGENCY DEPARTMENT, ONDOKUZ MAYIS UNIVERSITY, SAMSUN, Turkey

Corresponding author: Mr Yucel Murat (dryuc@yahoo.com)

Key-words: emergency ; abdominal pain ; cost

Nuray ASLAN1, Ahmet BAYDIN2, Murat YÜCEL1, Yusuf YÜRÜMEZ1
1Sakarya University Training and Research Hospital, Department of Emergency Medicine, Sakarya, Türkiye

2Ondokuz Mayıs University, Department of Emergency Medicine, Samsun, Türkiye

Objective: Abdominal pain which is a condition faced by almost everyone in the community throughout lifetime, may occur due to different reasons. Some of the conditions that cause abdominal pain, are due to reasons requiring emergency surgery, while some of the reasons that do not require. Investigations and consultations required for diagnosis, are factors affecting the cost. In this study we aimed to show demographic characteristics, whether they were operated or not and to perform cost analysis of patients admitted to the emergency department with complaints of abdominal pain. **Materials and Methods:** This study is performed with 200 adult patients admitted to the emergency department with abdominal pain between October 2006-June 2007. The demographic characteristics of patients, whether they were operated or not and cost analysis are performed. The obtained data were evaluated using SPSS statistical software and p values <0.05 were considered statistically significant.

Results: 104 patients (52%) were women, 96 (48%) were male and their mean age was 50.8 ± 20.1 (52,18 to 87). The cause of abdominal pain of 104 (52%) patients was surgical, while the cause of 96 (48.0%) patients was not surgical. The most common cause of abdominal pain caused by surgical reasons was mechanical bowel obstruction (33.6%), whereas the most common cause of non-surgical abdominal pain was urolithiasis (28.1%). Surgical causes of abdominal pain were significantly higher in 56 years and older age groups, non-surgically induced abdominal pain were significantly higher in the 35 years and younger age groups and in women. In surgical causes of abdominal pain, vital signs (temperature, pulse, respiratory rate and blood pressure values) was significantly higher statistically. At the same time, the rates of having abdominal surgery previously and association between tenderness, defence and rebound in terms of physical examination findings in surgical abdominal pain was significantly higher statistically. In the diagnostic approach the most wanted imaging modality was plain radiography (92.5%). The increase in number of tests requested was found to be associated with increased length of stay in the emergency department. The total cost of the required tests of surgical caused abdominal pain (132.7 ± 106.0 TL) was found to be significantly higher than non-surgically abdominal pain (95.7 ± 89.1 TL).

Discussion and Conclusion: Evaluation processes of patients with abdominal pain in emergency department was determined by the number of requested investigations and consultations and depends on whether they are operated or not. Number of research and consultation increase, results with increase of costs and emergency service stay duration. Feedback should be done at regular intervals for emergency department and consultant physicians to reduce the workloads of emergency services, to shorten the duration of stay of patients, as well as to reduce costs. Especially requests should not be compromised for unnecessary tests and consultations.

Key words: Emergency, abdominal pain, surgery, cost

P562

Management / ED Organisation

GP TO TREAT MINOR CODE: A REGIONAL PROJECT TO IMPROVE ED RESPONSE. S. PERTINI HOSPITAL'S EXPERIENCE.

P Daniele (1), FR Pugliese (2), A Revello (2), A Simone (2)

1. Emergency Department, Sandro Pertini Hospital, Rome, Israel
2. Emergency Department, Sandro Pertini Hospital, Rome, Italy

Corresponding author: Mme Revello Alessandra (alerev@bftconsulting.biz)

Key-words: fast track ; minor code ; flow patient

Introduction – On Aprile 2012 the Lazio Region Govern decided to start an experimental fast track in ED:GP for minor code. 14 EDs in Lazio have been included in this project: Sandro Pertini was the first hospital to start.

Aim – the aim of this prospective study is to verify, after 6 months of activity, the trend the expected results: reduction of waiting time to visit for minor codes and of general waiting time to visit, improving appropriateness in assignment white code and decreasing in green code over-triage; reduction of conflicts.

Material and methods - Sandro Pertini Hospital a community hospital in Rome,(300 bed - ED adms 85,000 pts/yr , 55 ambulances/day and about 20 pts/day in boarding) started the project on 2nd April 2012. The introduction of this new track has required an update of triage protocols in order to define which presentation symptoms were appropriate for this track. Including criteria: white or green code low complexity, age >14 years; NRS< 5; self- sufficient patient or with suitable relatives aid; exclusion criteria: age < 14 years, gynecological pathologies, minor trauma within 24 hours, phychiatric syndromes, neurologic syndromes. Up-to-date meetings have been organized for triage nurses and GP. The fast track is open from 8 am to 20 am 7 days/week. GP can require direct specialistic visits only for selected cases. If a patient requires immediate diagnostic exams or observation or admission to hospital he will be automatically reassigned to usual ED track. A monthly activity report is requested to monitor results trend..

Expected results – The following criteria and indicators has been defined to monitor the effects on ED activity: total waiting time to visit for green and white codes – expected result < 10% ; LOS for green and white codes – expected result < 10% ; LOWS <2%; n. pts/day 20-30% green/white code about 25 pts/day; reassigned to ED track<5%; immediate specialist visit and diagnostic exams < 10% for white codes. Data will be compared with those of 2011.

P563

Management / ED Organisation

POORER OUTCOME OF PATIENTS WITH ACUTE MYOCARDIAL INFARCTION AND ATYPICAL SYMPTOMS IN THE EMERGENCY DEPARTMENT

M Koch (1), M Möckel (2), R Muller (3), J Searle (4), A Slagman (5), R Somasundaram (6), O Voller (4)

1. Emergency Medicine CBF, Charité Berlin, Berlin, Ghana
2. Emergency Medicine CVK, CCM, Charité, Berlin, Germany
3. Public Health and Tropical Medicine, James Cook University, Townsville, Australia
4. Emergency Medicine CVK, CCM, Charité Berlin, Berlin, Germany
5. Emergency Medicine, Charité Berlin, Berlin, Germany
6. Emergency Medicine CBF, Charité Berlin, Berlin, Germany

Corresponding author: Melle Slagman Anna (Anna.slagman@charite.de)

Key-words: Acute Myocardial Infarction ; Outcome ; Symptom Managemen, Atypical Symptoms

Purpose: Acute myocardial infarction (AMI) is associated with the chief complaint chest pain but patients present with a variety of different symptoms.

We analyzed data of all patients with a final diagnosis of AMI who initially presented to one of two Emergency Departments (EDs) over a one-year period to evaluate the association of the patient's chief complaint at admission and in-hospital outcome.

Hypotheses: Presentation to the ED with atypical symptoms has an unfavourable impact on in-hospital outcome

Methods: Data were retrieved from the hospital information system for a secondary analysis. All inpatients who had presented

to one of the two EDs and who were assigned a main hospital diagnosis of ICD-9 I21 (AMI) were included in this analysis. Chief complaints (chest pain, dyspnoea, abdominal pain, and none of these symptoms) were documented by the treating physician in the ED in a mandatory field of the electronic ED form.

Results: Of 13,536 inpatients, 624 (4.6%) had a main hospital diagnosis of AMI. Their median age was 68 (59/76), 66.7% were male. Of all patients with AMI, 64.4% presented to the ED with a chief complaint of chest pain, 12.7% with dyspnoea, 1% with abdominal pain and 21.8% with none of these symptoms.

Compared to AMI patients presenting with chest pain, waiting times in the ED were significantly longer for AMI patients with none of these symptoms ($p < 0.0001$) and dyspnoea ($p = 0.22$) at admission. In-hospital fatality rate of the AMI patients was 6.3%. Fatality rates significantly differed between the symptom groups. Of the AMI patients who presented with chest pain, 3% died during the hospital stay as opposed to 13.9% with dyspnoea and 11.8% with none of these symptoms ($p < 0.0001$ for both).

Conclusions: AMI patients presenting to the ED with dyspnoea and unspecified symptoms had longer waiting times and an increased in-hospital mortality rate. Workflows for the evaluation of ACS need to draw special attention to patients with atypical symptoms.

P565

Management / ED Organisation

MEDICAL EMERGENCY TEAM IN CRITICAL PATIENT MANAGEMENT IN THE EMERGENCY DEPARTMENT: ALL THAT GLITTERS IS NOT GOLD

M Zannoni (2), R Codogni (1), E Formaglio (1), S Puglisi (1), C Tobaldini (1), G Ricci (2)

1. Postgraduate School in Emergency Medicine, University of Verona, Verona, Italy
2. Emergency Department, Azienda Ospedaliera Universitaria Integrata, Verona, Italy

Corresponding author: Mr Zannoni Massimo (massimo.zannoni@ospedaleuniverona.it)

Key-words: Medical Emergency Team ; patient outcome ; critical care

In-hospital emergency response varies significantly among medical centres influencing patients outcome. Rapid response teams have been shown to decrease cardiopulmonary arrest rates outside intensive care units. The Medical Emergency Team (MET) was developed in order to rapidly manage critically ill patients at risk of cardiac arrest or high-risk conditions. Aiming to optimize emergency response in the emergency department, we performed an analysis of the task profile of our MET system. In our Emergency Department activation is based on established clinical anatomical criteria or situational dynamic criteria of the event. Patients who do not meet those criteria are managed by the Emergency Department staff. Emergency Department emergencies managed by the MET (MET group) from May 2011 to June 2012 were analyzed retrospectively, and patient and event characteristics were examined for operation time and outcomes. The results were compared to those of critical patients managed by the ED staff without MET (non-MET group). From May 1st, 2011 to June 30th, 2012 1,142 critical patients were admitted to the Emergency Department: 774 patients (67.8%), full filling the activation criteria, were managed by the MET and 368 patients (32.2%) by the ED staff. Most of the trauma critical patients (360; 82.9%) filled the MET activation criteria. On the other hand the two groups were more similar for non-traumatic critical patients distribution (MET: 410 pts; 58.2% vs non-MET: 294 pts; 41.8%). Gender distribution was the same in the 2 groups (53% male, 47% female). We had high prevalence of medical critical patients in the non MET group (294, 79.9%) compared with the MET group (410; 53%). Trauma

critical patients accounted for 74 (20.1%) in the non-MET group and for 360 (43%) in the MET group. Treatment time was reduced in the MET group (1 50' +/- 1 02'; M +/- SD) compared to the non-MET group (3 51' +/- 5 04'; M +/- SD). Outcomes analysis pointed out higher figure of dead patients in the non-MET group (6.8% vs 4.2%). Admission rates of the patients showed a high difference in the groups, too. In fact 60.5% of patients of the MET group were admitted to intensive care unit and 4.3% to stroke unit, burn unit or coronary care unit. Intensive care unit admissions for non-MET group patients amounted to 16.9% and 6.8% were admitted to stroke unit or coronary care unit. Admission rates in medical or surgical wards were higher in non-MET group patients (256; 69.6%) compared to MET group patients (241, 31.1%). In the present retrospective study the patient allocation in one of the two treatment groups depends on the MET activation criteria and this could lead to a bias in patient selection, most of the trauma related patients full filling MET activation criteria compared to medical patients. Treatment time are significantly shorter for the MET group due to team working leads to faster clinical decisions. A key of lecture for the higher death ratio in the non-MET group is the fact that we evaluated mortality only in the Emergency Department. Consequently deaths occurred the first hours after intensive care or ward admission were not accounted. Moreover, if patient stabilization and management is achieved in less time, as in the MET group, a great number of these patients are admitted to expensive and resource consuming intensive care unit. At first analysis the longer period used by skilled emergency physicians in managing critical patients seems a waste of time. However we have to consider the fact that about 70% of the patients can be diverted from intensive care unit to a general medical or surgical ward.

P566

Management / ED Organisation

TURNING MANAGEMENT INTO SCIENCE

A Wei

Emergency Department, University Hospital St Radboud Nijmegen, Nijmegen, Netherlands

Corresponding author: Mr Wei Abel (AbelWei@gmail.com)

Key-words: benchmark ; time registration ; quality of care

Turning management into science

Has anyone ever wonder what happens during a pit stop in a Grand Prix Formula One? For the spectators is the pit stop time that matters but for the team manager is what the pit crew does that matters. Knowing what and how each member of the crew performs enables the team manager to shape off seconds against the competitors.

How about your ED? The length of stay for each patient is similar to pit stop time. Is short the better? Does shorter stay compromise the quality of service provided by your team? All these questions remain unanswered unless we possess detailed data of activities influence the length of stay of each patient.

We have a very poor understanding in this country of what individuals are doing who practice medicine. We have individuals who will tell you what you should do, but none who will tell you what is actually being done. Gregory L. Henry, MD, FACEP (ED Management, 1996). Doctors are scientists. If we manage our department according to best practice like how we practice medicine based on evidence levels, there will be no lengthy waiting time, ED crowding, admission cueing, etc.

Benchmarking your ED is easy. The challenge lies in how. Recently we decide to benchmark our ED on length of stay per patient. The

concept is to register the time of all the activities of each stay, starting from reception desk to discharge. Knowing how long each process takes provide insight on unnecessary delay and possible improvement. We can compare length of stay of our ED to other university teaching hospital. We can even compare time required at reception desk to similar function at outpatient clinic.

Time registration of all activity can take on different modalities. The classic choice is pen and paper because it cheap, so it seems. To collect data it demands discipline and time from all personnel. No one at ED enjoys filling in extra forms. A second choice is to tag personnel with an extra staff who registers their every activity. The quality of data is better but not perfect. 100% coverage and accuracy is only possible when data is passively registered, which means the personnel don't have to register. In that way the data is unbiased and 100% accurate. Passive data registration should be a system, which collects data in the background and fully automated. And example is to provide personnel and patients with badge containing radio-frequency identification (RFID) which tracks movement of everyone in real time. Our department is equipped with digital video surveillance cameras. In theory, the video servers are powerful enough to run facial recognition and Xbox kinect motion sensor and to provide us accurate data about what our personnel is doing and how long it takes.

The activities taken place in an ED is complex. It involves activities from ED personnel and non-ED personnel (consultant and ward nurses). Not forgetting the diagnostic departments: radiology, blood/bacteriology/toxicology laboratories, etc. The data on internal factors, activities provided by our personnel, mostly are easy to collect. Besides, they lay inside our circle of influence. Our assumption is that the external factors take largest portion of ED stay: time for consultant to arrive and finish his consult, time required for the ward nurse to come down to ED to collect a patient for admission, etc.

How many patients do we need to include? Similar to numbers to treat we can calculate the size of survey, $n = z^2 \cdot 502 / a^2$. Z is the confidence interval and a is the error margin. Filling in 95% confidence interval and error margin of 6% the size of survey is 196 patients. Ideally it should be inclusion of at least 196 patients of each major specialty for the data to be significant.

At the time of writing we are finalizing our plan of benchmark. We will be registering the external factors for 2 weeks or inclusion of 200 patients per specialty. Depending which reaches first. We will be presenting our data during the 7th European congress on Emergency Congress in Antalya.

P567

Management / ED Organisation

ANALYSIS OF THE PATIENTS ALLOCATED WITHOUT PENDING IN A BUSY DAY AT EMERGENCY DEPARTMENT

YE EYİ (1), AO YILDIRIM (2), B KARSLIOĞLU (3), SK TUNCER (4), U KALDIRIM (4), M EROĞLU (2), S ARDIÇ (4), I ARZIMAN (4), M DURUSU (4)

1. Emergency department, Hakkari Military Hospital, Hakkari, Turkey
2. Emergency Department, GATA Haydarpaşa Training Hospital, İstanbul, Turkey
3. Orthopaedics and Traumatology Department, Hakkari Military Hospital, Hakkari, Turkey
4. Emergency Department, GATA, Ankara, Turkey

Corresponding author: Mr Eyi Yusuf Emrah (dremrahey@yahoo.com)

Key-words: EMERGENCY DEPARTMENT ; BUSY ; PATIENT

INTRODUCTION

Intensity of the emergency services may vary according to the days, number of emergency cases, and hours. In general, in the evenings and on weekends cause an increase in patients numbers. In this

study, a Sunday, we aimed to introduce analyses of the patients refer to the emergency department triaged in order to urgency but not expect wait the examination because of the density.

METHOD:

174 patients admitted to GMMA emergency service between 17:30 and 23:00 hours on a Sunday were included this study. Patients were welcomed by the triage nurse; complaints, vital signs, history of allergies and current medications are evaluated, and recorded in the form of patient examination. Emergency triage nurse scored patients using severity index (ESI). Triage category of 1-2-3 was directed to the doctor to for the examination. Category 4 and 5 patients were asked to wait in, and sorted in order of application. Triage nurse invited patients by the arriving order for quick maintenance inspection. Patients who did not wait and separated from the emergency department were recorded together with the time for called up for examination.

RESULTS:

The number of patients allocated without waiting for the examination was 28 (16%). 10 (35.7%) male and 18 (64.9%) female, mean age was 28.7 and 31 respectively. Complaints were ; sore throat 31%, cough 35%, trauma 17%, and itching, headaches and back pain was 10%. Average waiting time between the receipt and evaluation was observed as 133.3 min (52-187 mins) . 12 patients were (42.8%), triage category 4; 16 patients (57.8%) were triage category 5. Among those who left there were no complaints likechest pain or abdominal pain.

CONCLUSION:

Emergency department studies have shown that even football match and series affect patient intensity .Results of analyzing allocated patients showed that an effective triage can keep away non-emergency patientsfrom emergency departments so we can provide services to more urgent patients.

P568

Management / ED Organisation

CAN SOCIAL MEDIA MODELED NON INTERRUPTIVE COMMUNICATION IN CRITICAL MEDICINE ENVIRONMENTS IMPROVE PATIENT OUTCOME?

C Laurent

Emergency Medicine, University Hospital Antwerp, Edegem, Belgium

Corresponding author: Mr Laurent Christophe (spoedman@gmail.com)

Key-words: interruptive ; communication ; emergency

Background: The advances patients are making in collaboration, participation, and empowerment in health care are greatly linked to what is called the "power" of social media. On the other hand, a number of problems that are documented in critical medicine, such as the Emergency Department (ED) or the Intensive Care Unit (ICU) are related to the unforeseeable dynamics of the work. This makes efficient and safe communication an important necessity and a top priority to process an ever increasing pressure in these environments.

Objective: Reflecting on the pervasiveness and prowess of non interruptive aspects of communication through social media by patients in social media applications, we examined if non interruptive communication could be an universal asset and thus should be a goal, rather than only a positive observation in the productivity and safety of a high dynamics shop floor environment such as the ED or the ICU.

Methods: Within the realm of evidence based medicine, we used the methodology of Best Evidence Topic (www.bestbets.org) to answer the three part question: "In (critical medicine

environments), does (non interruptive communication) improve (patient outcome)?". PubMed and Google Scholar were searched to find articles presenting evidence about the effect of non interruptive communication on patient outcome.

Results: The search generated 77 articles of which 5 were relevant: one systematic review, two critical reviews and two prospective observational studies. Evidence presented shows that interruptions of work flow in critical medical environments are much higher in number than was expected. It shows that not all interruptions are alike. Though some interruptions are necessary to avoid mistakes, interruptions of any nature are disruptive to the work flow in dynamic work situations. Non interruptive communication decreases the need to rely solely on memory for order communication or drug delivery control. It also allows an overall better work flow. Evidence that medication management information technology (MMIT) improves clinical outcomes exists, but is limited.

Conclusions: Evidence that non interruptive communication benefits patient outcome exists, but is limited in numbers and in its qualitative aspects. Most studies concern non interruptive communication, about drug prescription and drug delivery tracking. This is due to the original goals of mentioned research, studies and reviews, rather than to the prevalence of benefits. Further specifically oriented research and studies may prove to be more supportive of non interruptive communication in critical medical environments. The familiarity of personnel with social media communication outside the work place will certainly positively influence the assimilation of non interruptive communication at work.

P569

Management / ED Organisation

TECHNOLOGY AUGMENTED DISASTER DRIVEN APOMEDIATION: PRE-INSTRUCTED HASH TAGS AS A MONITORING TOOL FOR SOCIAL MEDIA COMMUNICATION DURING AND AFTER AN UNEXPECTED EVENT AT MASS GATHERINGS.

C. Laurent (1), K. Van de Vijver (2)

1. Emergency Medicine, University Hospital Antwerp, Edegem, Belgium
2. Emergency Medicine, University Hospitals Leuven, Leuven, Belgium

Corresponding author: Mr Laurent Christophe (spoedman@gmail.com)

Key-words: hashtag ; disaster ; apomediaion

Background: During the storm that occurred at the Pukkelpop music festival in Belgium in 2011, many were wounded, several lost their lives. Because additional mobile cellular towers or Cells On Wheels (COW's) are not used in Belgium, mobile connections as well as texting were impossible during and after the disaster. Limited availability of data communications and the growing ubiquitousness of smart phones created a social media hyperactivity. Most of this "chatter" was aimed at orientation and communication with missing persons, and illustrated a intuitive use of social media to connect locally.

Objective: Thorough monitoring Social Media at a mass event, with a purpose beyond marketing, could initiate a direct response from the organizers ("Do not take exit X", "Please avoid leaving through alley Y", "The Camping is flooded"), and also influence the rescue and relief operations. A wider array of predetermined event specific hash tags, targeted at relief and rescue, may prove to be an valuable tool during these events.

Methods: Experience shows that people and the crowds they form rapidly develop an explicit solidarity that is much stronger than

when a cataclysmic event does not occur. This was the case at Pukkelpop in 2011. For this reason a set of designated hash tags, for use on festival grounds during the event, can provide an tool set for information during the disaster, for the organizers and the relief, but also for mutual communication between visitors. Crowdsourcing can transform a cloud of hash tags in geotagged tweets into invaluable tools for the organisation. It might even provide additional decision support and feedback on the success of decisions made, by closely monitoring several parameters. Predetermined hash tags can amplify the information acquired from monitoring tweets during a festival, and even more so during a unexpected potentially harmful event occurring during a mass gathering. Obviously, analysis of this data can perfectly happen off-site, and as such provide additional support from a safe location.

Results: A new set of hash tags is now in the process of being evaluated and fine-tuned, so as not to alarm people, but rather empower them. Predetermined hash tags for other practical uses were already used at Pukkelpop in 2011, and appeared very helpful. But as one might suspect, these were not calculated for a disaster. This is bound to change.

Conclusion: Experience has shown that as a result of natural and technology augmented disasters, the public at mass gatherings quickly develops a social response in which they help each other. Lately, non interruptive communication through social networks has shown to peak in these situations. We plan to augment the power of the people by improving and shaping the tools they have, so as to improve the outcome of the relief as well of the victims in the field. The non interruptive aspects of low bandwidth social media communication are a valuable asset in these circumstances. It is capital that event organisations and relief efforts make good use of it.

P570

Nephrology

GIANT HYDRONEPHROSIS WITH URINARY SYSTEM STONES

E. Sönmez (1), C. Civelek (1), A. Dur (1), U. Çavuş (2), O. KÜÇÜKDAĞLI (1), A. ÖZKAN (1)

1. Emergency Department , Bezmialem Vakif University Hospital, İstanbul, Turkey
2. Emergency Department , Dışkapı Yıldırım Beyazıt Hospital, Ankara, Turkey

Corresponding author: Mr Sönmez Ertan (ertansonmez3@msn.com)

Key-words: giant hydronephrosis ; abdominal, swelling ; nephrolithiasis

A 77 years old man was brought to the emergency department with fever of three days and right flank pain of increasing intensity for two weeks. His medical history revealed nephrolithiasis for approximately ten years, but he refused the treatment. Physical examination included fever of 38.5°C and right abdominal swelling, especially in the right kidney region. Other systemic examinations were normal. Abdominal ultrasound and tomography showed a multiseptated cystic mass in the right kidney with the dimension of 30 centimeters, filling the right hemiabdomen and extending into the pelvis, which caused a giant hydronephrosis. A hyperintense stone of 7 centimeters was found in the mass.

Stones of urinary system causes serious colic pain, making them diagnosed and treated easily. However, in elderly patients and children, who cannot describe their complaints completely, urinary stones can be diagnosed at later stages after forming giant hydronephrosis.

P571

Nephrology

DIFFERENTIAL DIAGNOSIS OF HYPOKALEMIA : BARTTER SYNDROME

H Altın (1), S Karadas (2), R Dursun (3), H Gönüllü (2)

1. emergency department, Yüzüncü Yıl University, Van, Turkey

2. emergency department, Yüzüncü Yıl University, van, Turkey

3. emergency department, Van Region Training and Research Hospital, van, Turkey

Corresponding author: Mr Dursun Recep (drrecep@yuzuncuyil.edu.tr)

Key-words: metabolic disease ; polyuria ; polydipsia

Introduction

Bartter syndrome (BS) is a rare metabolic disease characterized by polyuria, polydipsia, constipation, muscle weakness and growth retardation. Hypokalemia is characterized by the elevated excretion of hypochloremic alkalosis, potassium, chlor and prostaglandin E2 via urine. Whilst renin-angiotensin aldosterone system has hyperactivity, blood pressure is normal. In this paper, a BS case diagnosed at our clinic was presented by emphasizing its importance.

Case Report

Thanks to the personal background information of 21-year-old male patient who applied to emergency service with weakness and fatigue complaints, it was found out that he had had xerostomia for the last 2-3 months, thirst, drinking too much water, debility in extremities, numbness in lips and weight loss. In his examination, symptoms were TA :135/85 mmHg, fever : 36,5°C, Pulse : 85/dk, Respiratory rate:15/ min, dry skin, decreased turgor tone, cachectic appearance and loss of strength in extremities (4/5). The case determined with serious hyponatremia and hypokalemic metabolic alkalosis was diagnosed with BS. Intravenous electrolysis replacement was carried out. The patient whose clinical condition and lab values returned to normal was discharged from the hospital by organizing his oral treatment.

Conclusion

BS is usually diagnosed in neonatal period or during childhood. In this study, the case diagnosed with BS in young adulthood period was presented and it was pointed out that it should be kept in mind in the distinctive diagnosis of hypokalemia.

occur depending on technical reasons. In long term, various infections and metabolic disorders can appear as a result of current immunosuppressive treatments. The present study was conducted in order to determine critical conditions in management of renal transplant cases in Emergency Department (ED) and to investigate the efficacy of MODIFIED EARLY WARNING (MEW) score.

Method: In the study, total 172 renal transplant patients presenting to Uludağ University Medicine Faculty Emergency Department between March 2009 and June 2010, were investigated prospectively. The vital signs and laboratory values of the patients were recorded. The patients, whose MEW scores were calculated, were evaluated in terms of the diagnoses, hospitalization reasons, and presence of acute rejection attack and the relationship with MEW score was investigated.

Findings: While 37.8% (n:65) of admitted patients were hospitalized, 62.2% (n:105) were discharged. Applications originating from infection were 66.3 % (n:114). 22.8% of applications (n:26) matched with sepsis and significant difference was found out in those patients in terms of acute rejection ($p<0.005$). Also, acute rejection group had higher MEW score (MEW score: ≥ 3 , $p<0.005$). Furthermore, in terms of hospitalization, significant difference was observed in admitted patients with MEW score ≥ 2 ($p<0.005$).

Results: The number of renal transplant patients in our country and in the world and accordingly presenting to Emergency Departments has been increasing. Emergency physicians should know admission reasons, specific diagnosis and treatment methods of those patients and could determine critical conditions and should keep their knowledge update.

P573

Neurology

THUNDERCLAP HEADACHE; DILEMMA IN THE EMERGENCY DEPARTMENT

AL Almudena Lopez, EL Elisa Lopera Lopera, JV Alonso, YH Yelda Hernandez

Emergency department, Hospital Valle de los Pedroches, POZOBLANCO, Spain

Corresponding author: Mr Joaquín Valle Alonso (joa51274@yahoo.es)

Key-words: thunderclap headache ; subarachnoid hemorrhage ; lumbar puncture

Objective: The aimed of the study is to show the incidence, characteristics and causes of thunderclap headache (TH) in an unselected population, emphasizing the diagnosis of subarachnoid hemorrhage (SAH).

Methods: We retrospectively reviewed the medical records of consecutive adults presenting with thunderclap headache to the emergency department (ED) at Hospital Valle de los Pedroches during one year (January 2009 to January 2010).

Results: Of 31 835 consecutive attendances over 12 months, 954 adults were triage because of headache (3%, 95% CI 2.81-3.19%), 97 of them (0.30%, 95% CI 0.25-0.37%) presented with thunderclap headache. Documentation of time to peak headache intensity and headache duration was complete in 34% of cases. Brain computed tomography was performed in 100% of patients according to department protocols. Lumbar puncture was performed in 42 patients (43,2%) with undetermined diagnosis in CT scan and lumbar puncture and SHA (n=2) or meningitis (n=8) suspicion. SHA was diagnosed in 9 patients and another patient was diagnosed through LP after a normal CT scan. Nausea, neck stiffness, occipital location and impaired consciousness were more frequent with SAH. Using the International headache Society classification 46,3% of the patients were diagnosed as primary headache

P572

Nephrology

THE EFFICACY OF MODIFIED EARLY WARNING (MEW) SCORE IN DETERMINING THE MORBIDITY IN RENAL TRANSPLANT PATIENTS IN EMERGENCY DEPARTMENTS

E Kocabaş (1), E Armağan (2), O Köksal (2), S KULAÇ (3), E Çildir (4), AK BALCI (5)

1. Emergency department, Aksaray State Hospital, AKSARAY, Turkey

2. Emergency department, Uludağ University Health Research and Application Center, Bursa, Turkey

3. Emergency Department, The Taksim Training and Research Hospital, İstanbul, Turkey

4. Emergency department, Esenyurt State Hospital, İstanbul, Turkey

5. Emergency Department, Uludağ University Health Research and Application Center, Bursa, Turkey

Corresponding author: Mr Kocabaş Egemen (dregemenkocabas@gmail.com)

Key-words: Renal transplantation ; emergency department ; MEW score, morbidity

Purpose: The best treatment option in relation to the advantages in survival in chronic renal disease and in life quality is renal transplantation. During or after transplant some complications may

predominating migraine headache (51%) and tension headache (26,6%). The final IHS diagnoses in our patient population (in order of decreasing frequency) were: meningitis, intracranial hemorrhage, ischemic stroke and reversible cerebral vasoconstriction syndrome (RCVS). Of the discharge patients, 15 (15,4%) were remitted to the reference Hospital to the Neurology or Neurosurgical service, 37 patients were admitted to our Hospital (38,1%) and 43 patients were home discharge.

Conclusions: It was concluded that attacks caused by a SAH cannot be distinguished from non-SAH attacks on clinical grounds. It is important that patients with their first TCH attack are investigated with CT and CSF examination to exclude SAH, meningitis or cerebral infarction. The results from this and previous studies indicate that it is not necessary to perform angiography in patients with a TCH attack, provided that no symptoms or signs indicate a possible brain lesion and a CT scan and CSF examination have not indicated other diagnosis.

P574

Neurology

COMPARISON OF EXISTING SYNCOPE RULES AND NEWLY PROPOSED ANATOLIAN SYNCOPE RULE

K. Kayayurt (1), H. Akoglu (2), O. Limon (1), A.O. Ergene (3), O. Yavaşı (1), S. Bayata (3), N. Vandenberg (1), E.E. Unluer (1)

1. Emergency Department, Izmir Katip Çelebi University, Atatürk Research and Training Hospital, Izmir, Turkey
2. Emergency Department, Dr. Lutfu Kırdar Kartal Research and Training Hospital, İstanbul, Turkey
3. Cardiology Department, Izmir Katip Çelebi University, Atatürk Research and Training Hospital, Izmir, Turkey

Corresponding author: Melle Kara Pinar Hanife (hpinarkara@hotmail.com)

Key-words: Syncope rule ; short-term outcome ; emergency department

Background: We wished to compare the San Francisco Syncope Rule (SFSR), Evaluation of Guidelines in Syncope Study (EGSYS) and the Osservatorio Epidemiologico sulla Sincope nel Lazio (OESIL) risk scores and to assess their efficacy in recognising patients with syncope at high risk for short-term adverse events (death, the need for major therapeutic procedures, and early readmission to the hospital). We also wanted to test those variables to designate a local risk score, the Anatolian Syncope Rule (ASR).

Methods: This prospective, cohort study was conducted at the emergency department of a tertiary care centre. Between December 1 2009 and December 31 2010, we prospectively collected data on patients of ages 18 and over who presented to the emergency department with syncope.

Results: We enrolled 231 patients to the study. A univariate analysis found 23 variables that predicted syncope with adverse events. Dyspnoea, orthostatic hypotension, precipitating cause of syncope, age over 58 years, congestive heart failure, and electrocardiogram abnormality (termed DO-PACE) were found to predict short-term serious outcomes by logistic regression analysis and these were used to compose the ASR. The sensitivity of ASR, OESIL, EGSYS and SFSR for mortality were 100% (0.66 to 1.00); 90% (0.54 to 0.99), 80% (0.44 to 0.97) and 100% (0.66 to 1.00), respectively. The specificity of ASR, OESIL, EGSYS and SFSR for mortality were 78% (0.72 to 0.83); 76% (0.70 to 0.82); 80% (0.74 to 0.85) and 70% (0.63 to 0.76). The sensitivity of ASR, OESIL, EGSYS and SFSR for any adverse event were 97% (0.85 to 1.00); 70% (0.52 to 0.82); 56% (0.40 to 0.72) and 87% (0.72 to 0.95). The specificity of ASR, OESIL, EGSYS and SFSR for any adverse event were 72%

(0.64 to 0.78); 82% (0.76 to 0.87); 84% (0.78 to 0.89); 78% (0.71 to 0.83), respectively.

Conclusion: The newly proposed ASR appears to be highly sensitive for identifying patients at risk for short-term serious outcomes, with scores at least as good as those provided by existing diagnostic rules, and it is easier to perform at the bedside within the Turkish population. If prospectively validated, it may offer a tool to aid physicians' decision-making.

P575

Neurology

A RARE CAUSE OF ENCEPHALOPATHY IN EMERGENCY DEPARTMENT: VALPROATE RELATED HYPERAMMONEMIC ENCEPHALOPATHY

O Salt (1), MF Yetkin (2), P Durukan (1), S Ozkan (1), FF Erdogan (2), U Ocak (1)

1. Erciyes University Faculty of Medicine, Department of Emergency Medicine, Kayseri, Turkey
2. Erciyes University Faculty of Medicine, Department of Neurology

Corresponding author: Mr Durukan Polat (polatdurukan@gmail.com)

Key-words: Hyperammonemia ; Encephalopathy ; Valproate

Valproate (VPA) is an antiepileptic drug that is a mainstay for achieving mood stabilization in patients with bipolar disorder. Acute encephalopathy can occur in patients taking them, especially VPA and Topiramate. Hyperammonemia without liver failure seems to be the key feature in its pathophysiology. Acute encephalopathy is a serious disease that leads to severe neurological damage, but it can be reversed with a timely diagnosis and withdrawal of VPA. We present a woman with epilepsy treated with VPA (500 mg/day) who was admitted to the emergency department with altered mental status and somnolence.

Case Report

A 21-year old woman with diagnosis of idiopathic generalized epilepsy using Lamotrigine admitted to emergency department due to somnolence and altered mental status. Five days ago VPA (500 mg/day) was added to treatment because of ongoing absence seizures. 2 days before admission. At the admission the physical examination showed a body temperature of 36.3 °C, pulse rate: 97 /min, respiratory rate: 18 /min and blood pressure: 108/74 mmHg. Neurological examination revealed no significant abnormalities except somnolence and disorientation. Her laboratory tests on admission were as follows: hemoglobin, 12.4 g/dL; hematocrit: 36.9%; WBC: 6720/mm³; PLT: 271,000/mm³; BUN: 9 mg/dL; creatinine: 0.63 g/dL; Na: 145 meq/L; K: 4.1 meq/L; Cl: 107 meq/L; P: 4.5 mg/dL. Her liver function tests, total protein, albumin, and calcium levels were normal. Brain computed tomography revealed no significant abnormality, electroencephalogram showed bilaterally continuous generalized slowing with sharp and spike waves. Serum valproate level was 43 µg/mL. We studied blood ammonia level as 101 µg/mL (normal range < 35 µg/mL). Valproate was discontinued and began intravenous fluid infusion (serum physiologic). The patient improved clinically afterward with a major amelioration in consciousness. We have consulted the patient with neurology department and the patient was hospitalized. She was discharged with full recovery.

Conclusion

The emergence of Valproate induced hyperammonemic encephalopathy is indeed an unpredictable adverse effect, irrespective of the dosage or duration of VPA treatment. Emergency physicians should be alert about the patients admitted to ED with loss of consciousness who had a history of VPA use.

P576

Neurology

PRES SYNDROME, A CASE REPORT

E Akıncı, AK Işık, NB Akıllı, MO Gonen, R Köylü, B Cander

Emergency department, Konya Training and Research Hospital, Konya, Turkey

Corresponding author: Melle Akinci Emine (emineakinci@yahoo.com)

Key-words: emergency ; Pres syndrome ; MRI

Introduction

Although posterior reversible encephalopathy syndrome (PRES) has gained substantial recognition since its initial description by Hinchey et al in 1996, both its clinical spectrum and underlying pathophysiology remain poorly defined. A clinical diagnosis of PRES includes the presence of headache, seizures, encephalopathy, and visual disturbances, as well as radiologic findings of focal reversible vasogenic edema, best seen on magnetic resonance imaging (MRI) of the brain. The syndrome is most commonly encountered in association with acute hypertension, preeclampsia or eclampsia, renal disease, sepsis, and exposure to immunosuppressants. It has been less commonly described in the setting of autoimmune disease. We present an old lady patient with complaints of syncope and taken diagnosis PRES syndrome in the emergency department.

Case report

82 years old female patient was admitted to the emergency department with syncope. In medical history, the patient had fainted in her seat and she had diabetes mellitus and hypertension. She didn't have fecal or urine incontinence nor any muscles contraction. Her drug history was enjectable insulin, ramipril 2,5 mg, amlodipine 5mg and metformine 1g used in a day. Glasgow coma scores is eight. Vital signs are heart rate 88, tension 180/100, fever 36,5 degree Celsius. Physical examination, bilateral lung bases rales auscultated, view obese. Sensitivity defender, rebound could not be evaluated. Neurological examination, pupils isochoric and ptosis seemed on right eye. Mobile extremities, open eyes, moaning with painful stimulus. There was no lateralized deficits on four extremities, babinski negative and sensitive examination could not be evaluated. There was no signs about meningismus. In ECG, Sinus rhythm and incomplete right bundle block was seemed. There was no ischemic finding. Laboratory results are glucose: 144 mg/dl, BUN:38 mg/dl, Cre:1,2 mg/dl, WBC:9100 K/uL, Hb:13.1 gr/dl. In radiological imaging brain CT is normal but diffusion brain MR seemed that bilateral cerebellar hemisphere medial sides suspicious ischemic areas probable subacute ischemi. The patient was admitted to the intensive care pre-diagnosis hypertensive encephalopathy or press syndrome. In intensive care IV nitrate infusion and oral amlodipine stated. The second day of her hospitalization was cardiac arrest and died.

Discussion

Despite the syndrome's name, radiographic lesions in PRES are rarely isolated to the "posterior" parieto-occipital white matter and instead often involve the cortex, frontal lobes, basal ganglia, and brainstem. No conclusive evidence supports a clear relationship between clinical conditions and specific imaging findings of severity or location of edema, although some studies have suggested correlations such as greater vasogenic edema in normotensive patients and a trend for basal ganglia involvement in patients with preeclampsia or eclampsia.

The underlying pathophysiology of PRES remains elusive. Several theories have been proposed, the most widely accepted of which states that rapidly developing hypertension leads to a breakdown in cerebral autoregulation, particularly in the posterior head region (where there is a relative lack of sympathetic innervation). Hyperperfusion ensues with protein and fluid extravasation,

producing focal vasogenic edema. An alternative theory, which has been best characterized in preeclampsia, eclampsia, and sepsis, implicates endothelial dysfunction. A third theory proposes that vasospasm with subsequent ischemia may be responsible.

Early recognition of PRES is important for timely institution of therapy, which typically consists of gradual blood pressure control and withdrawal of potentially offending agents. Although reversible by definition, secondary complications, such as status epilepticus (SE), intracranial hemorrhage, and massive ischemic infarction, can cause substantial morbidity and mortality.

Conclusion

Abrupt hypertension undoubtedly contributes to the development of PRES, and the hyperperfusion theory is supported by the frequent presence of substantial hypertension in patients with PRES and subsequent resolution of clinical symptoms and radiologic edema with prompt treatment of hypertension.

P577

Neurology

VISUAL ALTERATIONS AND HEADACHE IN EMERGENCY MEDICINE. TWO CASES OF INTRACRANIAL PRESSURE ELEVATION AND CEREBRAL VEIN AND DURAL SINUS THROMBOSIS (CVT)

S. Navarro Gutierrez (1), F. González Martínez (2), A. Huete Hurtado (3), S. Castells Juan (1), C. Herraiz de Castro (2), D. Garcia Mateos (2)

1. Emergency Department, Hospital Universitario de La Ribera, Alzira, Valencia, Spain

2. Emergency Department, Hospital Virgen de la Luz, Cuenca, Spain

3. Neurology Department, Hospital Virgen de la Luz, Cuenca, Spain

Corresponding author: Mr Navarro Gutierrez Sergio (sergionavarro@hotmail.com)

Key-words: Elevated intracranial pressure ; cerebral vein and dural sinus thrombosis ; visual alterations and headache

Cerebral vein and dural sinus thrombosis (CVT) is less common than most other types of stroke but can be more challenging to diagnose. We present hereby two cases of young female patients with CVT diagnosis who complained of headache and visual alterations. In both cases CVT was related to hormonal contraceptive therapy and tabaquism.

After anticoagulation and recommendation of giving up both smoking and hormonal contraceptive therapy, partial transverse sigmoid sinus and internal jugular reperfusion was observed.

CVT is associated with a good outcome (complete recovery or minor residual symptoms or signs) in close to 80 percent of patients. Nevertheless, approximately 5 percent of patients die in the acute phase.

Predictors of poor long-term prognosis include CNS infection, malignancy, deep CVT location, intracranial hemorrhage, Glasgow coma scale score on admission 37 years, and male sex. Isolated intracranial hypertension at the time of CVT diagnosis may be a predictor of good outcome.

Recurrent CVT appears to be uncommon, with rates ranging from 2 to 7 percent.

Some conditions are related to increased risk of CVT such as antithrombin deficiency, Protein C deficiency or protein S deficiency and Factor V Leiden mutation.

Evaluation for the cause of CVT include searching for a thrombophilic state, either genetic or acquired and should be done in all patients. Screening should include Antithrombin, Protein C, Protein S, Factor V Leiden, Prothrombin G20210A mutation, Lupus anticoagulant, anticardiolipin, and anti-β2 glycoprotein-I antibodies.

For adults with symptomatic CVT, with or without hemorrhagic venous infarction, initial anticoagulation therapy with intravenous heparin or subcutaneous low molecular weight (LMW) heparin has been recommended.

For adult and children with CVT who develop progressive neurologic worsening despite adequate anticoagulation with IV heparin or subcutaneous LMW heparin, endovascular thrombolysis at centers experienced with this therapy is a treatment option.

Measures to control acutely increased intracranial pressure may be required in patients with CVT.

For patients with CVT who have seizures and focal cerebral supratentorial lesions such as edema or infarction on admission head CT or brain MRI lesions, seizure prophylaxis with antiepileptic medication has been recommended.

After the acute phase of CVT, anticoagulation with warfarin for three to 12 months duration in adults is suggested.

Chronic oral anticoagulation is reserved for patients with recurrent CVT, severe thrombophilia or combined prothrombotic conditions.

For pregnant women with a history of CVT who have a prothrombotic state or have had an additional previous thromboembolism, temporary anticoagulation has been suggested.

P578

Neurology

MYOCARDIAL INVOLVEMENT IN MYASTHENIA GRAVIS: WHERE IS THE PART OF REALITY? STUDY OF 4 CASES AND LITERATURE REVIEW

H EZZOUINE, A BENSLAMA, B CHARRA, S MOTAOUAKKIL

Medical intensive care unit, university teaching hospital Ibn Rushd, CASABLANCA, Morocco

Corresponding author: Mme Ezzouine Hanane (ezzouinehanane@yahoo.fr)

Key-words: myasthenia gravis; myocardial involvement; cases study

introduction:

Myasthenia gravis is an autoimmune disease characterized by impairment of the neuromuscular junction. We propose to assess myocardial function by means of echocardiography in patients with myasthenic crisis (severe myasthenic score > 50) to assess myocardial involvement in crisis sévère. Nous avons recueilli des paramètres échocardiographiques de ces patients pour évaluer l'implication myocardique dans la crise sévère.

cases reports:

These 4 patients aged 20 to 35 years for at least 2 years with MG and stabilized on corticosteroid therapy in 2 patients and immunosuppressive therapy was added, admitted to the ICU for myasthenic crises. These patients were admitted to intensive care for acute respiratory distress that prompted intubation and assisted ventilation. The evolution was marked by a difficulty of weaning. A heart ultrasound was also performed to assess myocardial function. For four patients, global and segmental contractility was retained and the ejection fraction was stabilized. Patients and weaning was done under immunoglobulin treatment, treatment with methylprednisolone. Patient was a tracheostomized, the others were extubated with good outcome.

Discussion / Conclusion:

Our observation through this sample of patients with MG shows that the global and segmental myocardial contractility is preserved and not done for the weaning of patients with severe myasthenic crisis.

P579

Neurology

ULTRASONOGRAPHIC MEASUREMENT OF OPTIC NERVE SHEATH DIAMETER: AN ALTERNATIVE FOR PATIENTS WITH ELEVATED INTRACRANIAL PRESSURE

A Avcioglu, N Vandenberg

Emergency Department, Izmir Ataturk Research and Training Hospital, Izmir, Turkey

Corresponding author: Mme Van Den Berk Nergiz (nvandenberg@yahoo.com)

Key-words: Emergency; Confusion; Optic nerve ultrasonography

Altered consciousness is one of the common causes of emergency department. Although, the differential diagnosis of altered consciousness is difficult.

Patients with altered level of consciousness may be suffering from elevated intracranial pressure (EICP) from variety of causes, usually with structural reasons.

In this study, the authors performed a retrospective study on emergency department (ED) patients with altered consciousness and searched for ultrasound (US) of optic nerve sheath diameter (ONSD) findings in patients with elevated intracranial pressure.

Patients with altered consciousness admitted to our emergency department between January 2011-January 2012 and computed tomography (CT) or magnetic resonance (MR) scanning were available, were screened retrospectively.

US measurements of the optic nerve sheath diameter (ONSD) were available for 61 patients, they were enrolled in the study. Data were recorded using statistical software (SPSS 15.0 for windows). US findings were compared with CT and MR findings to detect for EICP. Also, differential diagnosis of altered consciousness were searched by US findings. Lastly, for differential diagnosis of it, US of ONSD specificity and sensitivity value were very less and not available.

The sensitivity and specificity for ONSD, when compared with CT and MR results for EICP, were 97.4 and 59.1, respectively.

This study suggests that bedside ED US of ONSD may be useful in diagnosis of EICP with altered consciousness patients.

P580

Neurology

A CASE REPORT OF FAHR'S DISEASE.

M Ergin, E Ozsaglam, N Karakus, S Kocak, AS Girisgin, M Gul, B Cander

Emergency Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

Corresponding author: Mr Ergin Mehmet (drmehtemertgin@gmail.com)

Key-words: Fahr's disease; Calcinosi; Neuropsychological disorder.

Introduction: Fahr's disease (FD) (Bilateral Striopallidodentate Calcinosi) which is characterized by symmetric calcifications at thalamus, nucleus dentatus, cerebral white substance and basal ganglia is a rare condition. **Case:** We are presenting 59 year old woman with history of metastatic malignant melanoma, epilepsy, thyroidectomy whose presentation was progressive loss of consciousness, exhaustion and general weakness. Cranial computerized tomography needed to explain loss of consciousness shown calcification of dentate nucleus and basal ganglia. **Discussion:** The presentation of disease is variable but commonly progressive mental disorder, tremor, ataxia, dysarthria, convulsion, Parkinson-

like symptoms and neuropsychological disorders may be seen. The diagnosis is demonstrated by cranial CT which frequently is needed for another reason. The related conditions which may cause FD are anorexia, radiation, systemic disorders, toxins, disorders of calcium metabolism and encephalitis.

P581

Neurology

SEASONAL EFFECTS ON BELL'S PALSY: FOUR-YEAR STUDY AND REVIEW OF THE LITERATURE

H Narci (1), B Horasanlı (2), M Uğur (1)

1. Department of Emergency, Baskent University Faculty of Medicine, Konya, Turkey

2. Department of Neurology, Baskent University Faculty of Medicine, Konya, Turkey

Corresponding author: Mr Narci Hüseyin (hsnnarci@gmail.com)

Key-words: Season ; bell's palsy ; age

Background: The purpose of this study was to investigate the seasonal distribution of Bell's palsy (BP).

Methods: We investigated as a retrospective a 533 patients with Bell's palsy in our hospital, treated from 2007 until 2010. Data were analyzed according to age, gender, seasonal and monthly distribution.

Results: The study consisted of 533 patients (259 female and 274 male), Mean age was 55±24.7. The age of patients ranged from 9 to 89 years. Bell's palsy was most common in the 30-39 age group (4th) (n=105) (p<0.001). The annual incidence of the disease was 12.7 per 100,000 population during the 4 years. Most patients were seen spring and fall, 169 and 133 respectively. The most cases were determined in spring months (n=169, 43%), and this was also statistically significant (p=0.002). The smallest numbers of the patients were seen on winter. May was the month with the highest BP. The lowest BP was determined in July and December (p>0.001). **Conclusions:** We found significant statistical relation between seasonal variation and BP. The risk of BP is high during the spring and low during the winter and summer.

P582

Neurology

NONCONVULSIVE STATUS EPILEPTICUS: A CASE REPORT

M Esen (1), M Ayan (1), N Basol (1), D Aksoy (2), A Kablan (1), H Barut (2)

1. Department of Emergency Medicine, Gaziosmanpaşa University, Faculty of Medicine, Tokat, Turkey

2. Department of Neurology, Gaziosmanpaşa University, Faculty of Medicine, Tokat, Turkey

Corresponding author: Mr Ayan Murat (ayan421975@windowslive.com)

Key-words: loss of conscious ; nonconvulsive status epilepticus ; benzodiazepine

Introduction: Nonconvulsive status epilepticus (NKSE) is an extended epileptic condition lasting at least 30 minutes in which there are mostly electroencephalographic (EEG) indications accompanied by changes in mental status. Nonconvulsive status epilepticus makes up about a quarter of status epilepticus cases. The cause can be such diverse factors as infections, toxication and metabolic events. It is among neurological emergencies since its diagnosis is difficult and it can affect the school performance especially in child patients.

Case: A 61-year old male patient was brought to emergency room in loss of consciousness. He had a history of schizophrenia and was

found urinated and unconscious by his relatives in bathroom. In the physical examination, he was unconscious, disoriented, non-cooperative, localized the painful stimulus, had bilateral positive light response, and no side findings based on the best appraisal. His deep tendon reflexes were normoactive bilaterally. After the examination for the possible causes of unconsciousness, anti-epileptic treatment was started by a neurologist. He responded to this treatment in a short time. He was admitted to neurology clinic with a NKSE pre-diagnosis.

Discussion: NKSE can go without diagnosis for a long time due to various reasons. Since the clinical manifestations of the condition take different forms, most of the time physicians may miss the correct diagnosis. Diagnosis criteria are still debated. Most cases respond well to intravenous benzodiazepine. In resistant cases, other antiepileptic drugs can be used.

Conclusion: Diagnosis of NKSE is difficult and it is an epileptic condition that should necessarily be taken into account in differential diagnosis in patients representing with unconsciousness and behavioral change.

P583

Neurology

NEUROLOGIC EMERGENCIES IN PREGNANT PATIENTS

O Damar, HM Durgun, E Özcete, A Özhasenekler, Y Zengin

Emergency Department, University of Dicle, Medical School, Diyarbakir, Turkey

Corresponding author: Mr Özhasenekler Ayhan (drhasenek@hotmail.com)

Key-words: pregnancy ; altered mental status ; intracranial hemorrhage

INTRODUCTION: Stroke is the third leading cause of death and the primary cause of adult disability in the United States. It may be broadly classified as ischemic or hemorrhagic. Although cerebrovascular disease is thought to be uncommon in pregnancy, it is an important source of maternal and fetal morbidity and mortality, causing 3.5-26 cases of neurologic dysfunction per 100,000 deliveries, and is associated with more than 12% of maternal deaths.

CASE 1: A 32-year-old 32-week pregnant patient was referred by an external medical facility to our emergency service with eclampsia and poor general status. She had a seizure attack at arrival treated by Diazepam once 5 mg IV bolus followed by magnesium. Post-ictal physical examination revealed a blood pressure of 160/90 mmHg, a pulse rate of 125 bpm, body temperature of 36.7 and an oxygen saturation of 96%. Neurologic examination showed no stiff neck or anisocoria and light reflexes were bilaterally positive. Other systemic examination findings were normal. Since post-ictal period prolonged a cranial MRI was obtained that showed a 5x6 cm hematoma at right frontal lobe and a 8-mm shift from midline. She was simultaneously operated by neurosurgery and obstetrics, the former evacuating the hematoma and latter performing cesarean section. The mother and the baby were discharged after adequate hospital care.

CASE 2: A 40-year-old 15-week pregnant patient presented to emergency room with sudden-onset headache. Her vital signs, physical examination, and blood tests were normal. She was given paracetamol 1 gr IV infusion therapy with no effect. Thus, a head MRI was obtained for differential of her headache. MRI showed an increased signal at FLAIR sequences at hemispheric fissure and sulci, which was interpreted subarachnoid hemorrhage (SAH). A lumbar puncture (LP) was performed, confirming SAH. She was hospitalized by department of neurosurgery. She later underwent a cranial CT angiography showing an aneurysm for which she was operated by neurosurgery team. She was discharged 12 days later

with recommendation to visit of obstetrics gynecology and neurosurgery outpatient clinics.

DISCUSSION: These are present in 24-47% of ischemic strokes and 14-44% of intracranial hemorrhages. Women at risk for intracerebral hemorrhage in pregnancy are those with eclampsia, vasculitis, or an aneurysm or vascular malformation. High blood pressure is the most important risk factor for intracranial hemorrhage in pregnancy. Prevention is the key. Blood pressure should be monitored closely during pregnancy. Hemorrhagic stroke is the most common stroke type associated with pregnant or postpartum women with preeclampsia/eclampsia. Data from the Nationwide Inpatient Sample examining women aged 15 to 44 showed that most cases of pregnancy-associated hemorrhagic strokes occurred postpartum. The risk factors independently associated with hemorrhagic stroke included preexisting hypertension, gestational hypertension, and preeclampsia/eclampsia. The in-hospital mortality was 20%. In a detailed series of 27 women with preeclampsia and subsequent stroke, 25 (89%) had hemorrhagic and 2 (7%) had ischemic stroke; 96% of these women had headache, 63% with nausea and vomiting, 71% had symptoms attributable to the central nervous system (e.g., focal weakness, seizure, syncope, decreased level of alertness), and 37.5% had visual problems. Similar to the Nationwide Inpatient Sample analysis, the majority (57%) of strokes occurred postpartum. Another striking feature in this series was that 96% of these women had prestroke systolic blood pressures ≥ 160 mm Hg, whereas only 21% of women had diastolic blood pressures > 105 mm Hg. Not surprisingly, given the high rate of hemorrhagic strokes, the mortality was 54%. The important message from this case series was that, in contrast to current management protocols which base treatment decisions on elevated diastolic blood pressures, women with severe preeclampsia and high isolated systolic blood pressures should be considered at high risk for hemorrhagic stroke and that antihypertensive therapy should be considered in these patients.

CONCLUSIONS: Intracranial hemorrhage should be considered in differential diagnosis in patients with sudden-onset, resistant headache and prolonged seizures.

P584

Neurology

STURGE WEBER SYNDROME AND EPILEPSY

HM Durgun, E Ozcete, A Ozhasenekler, M Yaman, Y Zengin
Emergency Department, University of Dicle, Medical School, Diyarbakir, Turkey

Corresponding author: Mr Ozhasenekler Ayhan (drhasenek@hotmail.com)

Key-words: convulsion ; altered mental status ; emergency

INTRODUCTION: Schirmer described the first report of the syndrome in 1860 in a patient with bilateral facial nevus and unilateral buphthalmos. In 1879, William Allen Sturge presented another case of a 6-year-old girl with bilateral facial nevus, congenital glaucoma and vascular malformation at the right eye and progressing twitching on the left side of her body. In 1922, Parkes Weber was the first to demonstrate the associated intracranial calcifications in this syndrome radiographically.

CASE: A forty-six-year-old female patient presented to emergency department with seizure. Her relatives told that she had seizure for the last 1 hour. Her past history was notable for a diagnosis of Sturge-Weber disease 8 months ago. She was having seizures at the time of presentation. A diazepam 10 mg IV bolus was administered while airway was secured. She was considered to have status epilepticus given 1 hour of continuous epileptic activity and was given phenytoin infusion. Her seizure attacks were

adequately controlled. At the post-ictal period a physical examination showed a poor general status, no consciousness, and an irregular respiration. She had no neck stiffness and light reflexes were positive. Her blood sugar was 105 mg/dl. Her vital signs and other blood tests were in normal limits. Her ECG showed sinus tachycardia and cranial CT showed hyperdense calcified lesions located subcortically at the left temporooccipital region and at the left choroid plexus. The findings may be consistent with Sturge-Weber syndrome. She was admitted to neurology clinic with status epilepticus. After 14 days at intensive care unit of neurology department, she died from aspiration pneumonia and sepsis.

DISCUSSION: Epilepsy is a very common feature and often occurs during the first year of life. Seizures result from cortical irritability caused by angioma through the mechanism of hypoxia, ischaemia and gliosis. About 80% of affected persons have focal seizures involving the contralateral side of the portwine stain. The hypoperfusion of cortical tissue is further accelerated by seizures, thereby worsening the prognosis.

Cranial CT demonstrates abnormal contrast enhancement of angioma, enlarged choroid plexus ipsilateral to the angioma and abnormal draining medullary and subependymal veins. Cortical atrophy underlying the angioma with gyriform "tram track" calcification is the characteristic imaging feature.

Seizures occurred in 80 percent of patients with Sturge Weber Syndrome (SWS) in one series and were more common with bilateral than unilateral port wine stains. In another report, seizures occurred in 93 percent of patients with bilateral leptomeningeal lesions. In one case series of six patients with SWS who underwent epilepsy surgery, pathologic examination in all patients revealed a cortical malformation (polymicrogyria, cortical dysplasia). Seizures are often the first symptom of SWS. They may occur in the setting of an acute illness and may be associated with the acute onset of hemiparesis. Initially, seizures are typically focal, but often become generalized tonic-clonic. The success of controlling seizures with anticonvulsant medication is variable and unpredictable. Some patients have long intervals without seizures, even without medication, while others have frequent or prolonged seizures despite high doses of multiple medications. The occurrence of seizures, the age at onset, and the response to treatment affect prognosis. Onset before one year and poor response to anticonvulsant therapy are associated with a greater likelihood of cognitive impairment.

In one report, adequate control was accomplished with anticonvulsant therapy in approximately 40 percent of cases. In refractory cases, hemispherectomy or more limited surgical resection of epileptogenic tissue may be beneficial, although data are limited. The available data suggest that focal resections are less likely to result in good seizure control than hemispherectomy. Thus, some experts recommend surgery with hemispherectomy, lobectomy or transection of the corpus callosum for patients with SWS and medically resistant epilepsy (eg, poor seizure control despite treatment for six months with a minimum of two anticonvulsants), particularly when associated with clinically significant hemiparesis, visual field loss, and developmental delay.

CONCLUSIONS: Seizure control can be difficult in patients with status epilepticus and diagnosed with Sturge Weber.

P585

Neurology

DO ENERGY DRINKS CAUSE EPILEPTIC SEIZURE AND ISCHEMIC STROKE?

FH Besir (1), S Dikici (2), H Kandis (3), A Saritas (4), AH Tasci (2)

1. Radiology, Duzce University Medical Faculty, Duzce, Turkey

2. Neurology, Duzce University Medical Faculty, Duzce, Turkey
3. Emergency department, Duzce University Medical Faculty, Duzce, Turkey
4. Emergency department, Duzce University School of Medicine, Duzce, Turkey

Corresponding author: Mr Saritas Ayhan (a_saritas@hotmail.com)

Key-words: Ischemic stroke ; epilepsy ; energy drinks

Energy drinks are popular among young individuals and marketed to college students, athletes, and active individuals between the ages of 21 and 35. We report a case that had ischemic stroke and epileptic seizure after intake of energy drink with alcohol. To the best of our knowledge, the following case is the first report of ischemic stroke after intake of energy drink. A previously healthy 37-year-old man was brought to the emergency room after a witnessed tonic-clonic seizure. According to his wife's testimony, just before loss of consciousness, the patient had been drinking 3 boxes of energy drinks (Redbull®, 250 ml) with vodka on an empty stomach. He did not have a history of seizures, head trauma, or family history of seizures or another disease. In cranial diffusion magnetic resonance imaging, there were hyperintense signal changes in bilateral occipital area (more pronounced in left occipital lobe), right temporal lobe, frontal lobe and posterior parietal lobe. All tests associated with possible etiologic causes of ischemic stroke in young patients, were negative. Herein we want to attract attention to adverse effect of energy drinks usage.

P586 Neurology

CEREBRAL VENOUS SINUS THROMBOSIS: ANALYSIS OF 20 CASES

L Duran (1), HU Akdemir (1), C Katı (1), A Ergül (2), Y Şahin (1), A Yılmaz (3), Y Yavuz (1)

1. Emergency Department, Ondokuz Mayıs University Medical Faculty Hospital, Samsun, Turkey
2. Emergency Service, Samsun Training and Research Hospital, Samsun, Turkey
3. Neurology Department, Samsun Training and Research Hospital, Samsun, Turkey

Corresponding author: Mr Akdemir Hızır Ufuk (hufukakdemir@hotmail.com)

Key-words: Cerebral venous sinus thrombosis ; Papilledema ; Postpartum period

Objective: Cerebral venous and sinus thrombosis (CVST) is a cerebrovascular disease which differs from arterial stroke with some features. Symptoms and clinical course is highly variable. While cerebral venous thrombosis causes local effects due to venous blockage, major sinus thrombosis causes intracranial hypertension clinic. One or both of these processes can be in these patients. Increased awareness of diagnosis, new imaging techniques for more easier and quicker diagnosis and management of more effective treatment have contributed to a better prognosis.

Material and Methods: Between 2005 and 2011 years, we analysed neurologic findings, etiologic factors, imaging results and prognosis of 20 patient which were admitted to Medicine Faculty of 19 Mayıs University and Samsun Training and Research Hospital and had diagnosis of cerebral venous thrombosis.

Results: Most of patients were between 18-44 years of age (75%) and were females (80%). 60 % of patients admitted at 48th hours after beginning of complaints. The most common symptom was headache (60%). There were papilledema in 7 patients, focal neurologic findings in 4 patients and cranial nerve involvement in 3 patients. The most common type was superior sagittal sinus thrombosis (n=6) and 6 patients had multiple sinus occlusions. Extracerebral venous occlusion was detected in one patient. This event was associated with postpartum period in 7 patients, was idiopathic in 4 patients and other identified causes were protein

C/S deficiency, factor V Leiden mutation and Behçet disease. After anticoagulant or antiagregant therapy, all patient except one of them recovered without sequelae.

Conclusions: CVST can present in different clinics and can vary in etiologic causes according to arterial stroke. Neuroradiological methods is important in diagnosis. Prognosis is very good due to early diagnosis and treatment.

P587 Neurology

EVALUATION OF THE BLOOD PARAMETERS OF STROKE PATIENTS REFERRING TO EMERGENCY DEPARTMENT

H Gonullu (1), S Karadas (1), A Milanlioğlu (2), M Sahin (3)

1. Emergency Medicine, Yuzuncu Yil University, School of Medicine, Van, Turkey
2. Neurology, Yuzuncu Yil University, School of Medicine, Van, Turkey
3. Department of Emergency Medicine, Yuzuncu Yil University, School of Medicine, Van, Turkey

Corresponding author: Mme Gonullu Hayriye (drhayriyegonullu@gmail.com)

Key-words: Stroke ; Blood Parameters ; Neuronal Damage

Abstract

Although previous studies have revealed that blood parameters alone in cerebrovascular diseases had no specificity in diagnosis, the objective of this study was to determine, within the context of a retrospective analysis, whether any differences existed between some blood parameters of various groups of patients who referred to emergency department with a history of cerebrovascular diseases. In the study, some parameters such as alanine and aspartate aminotransferase enzyme, white blood cells and thrombocytes, hematocrite, INR, prothrombin time, sodium, glucose were retrospectively investigated in emergency department in a total of 254 patients suffered from ischemic stroke, temporary ischemic attack, intracerebral hemorrhage and subarachnoid hemorrhage. There was no statistically significant difference between the sub-groups of the patients in all of the parameters apart from glucose value.

In conclusion, we suggest that early detection and management of these abnormalities in these parameters, which play an active role in the pathogenesis and the development of neuronal damage, would be imperative in terms of the clinical pattern, prognosis and recurrence of the disease

P588 Neurology

THE NEUROLOGICAL IMPROVEMENT OF A PATIENT AFTER AMANTADIN INFUSION

MD Huleyde Senlikci, MD m.mahir ozmen, MD meltem akkas, MD Nalan M:AKSU

emergency department, hacettepe university school of medicine, ankara, Turkey

Corresponding author: Mme Aksu Nalan (nmaksu@superposta.com)

Key-words: dopaminergic agents ; amantadin ; consciousness

Introduction: Amantadin is a dopaminergic agent with possible N-methyl-D-aspartate antagonist effects. Dopaminergic agents have been successfully used in many purposes including prophylaxis for influenza, adjunctive therapy for psychiatric diseases, treatment for Parkinson Disease and treatment for disorders of consciousness.

We present the improvement of the consciousness of the patient treated for meningoencephalitis following amantadin infusion.

Case Report: A 63 years old female patient presented to the emergency department with altered mental status and a diagnosis of meningoencephalitis. The diagnosis was established 1 day before presentation and the patient was prescribed ceftriaxone and acyclovir. The patient's history was insignificant other than hypertension. Physical examination findings at Presentation : Heart Rate: 118/min, Blood Pressure: 131/77 mmHg, Body Temperature: 39,8°C, Oxygen Saturation: 94%, Glasgow Coma Scale (GCS) : 7. The patient also had stiff neck and was electively intubated. The complete blood count and biochemistry study results were as follows: WBC:28000/mm³ AST/ALT:56/32U/L Na:129 mEq/L INR:1.35. Cranial CT was suspicious for subarachnoid hemorrhage, thus, lumbar puncture (L/P) was performed which was clear. The patient was then given 6X2 gr ampicillin, 2X2 gr ceftriaxone and 3X750 mg of acyclovir for meningitis, with the recommendation of the Infectious Disease specialists. The cerebrospinal fluid (CSF) culture was clear. A second L/P was performed because the patient's status did not improve after 5 days, and the antibiotic regimen was changed. Ceftriaxone was switched to meropenem. When the patient failed recovery, a CT angiography was performed which had no pathological findings. The patient's MRI could not be performed, as the patient could not fit in the machine due to her morbid obesity. On the 10th day of the patients unconsciousness with GCS of 6, amantadine sulphate solution 1X200 mg was administered in three hours. On the second day of this treatment, the patient improved and GCS was 7. Then EEG was performed which demonstrated paroxysmal alterations with characteristic slow waves. On the third day of this treatment the patient's GCS raised to 10 , and she regained her consciousness. On the fourth day the patient's general state was improved, and then the patient was extubated. A control EEG was performed which revealed significant improvement. On the fourth day the amantadine treatment was stopped. Another CSF culture was obtained which was also clear. Meropenem and acyclovir treatments were also stopped, ampicillin was continued for 21 days. The patient was discharged on the 21st day of antibiotic treatment.

Conclusion: There were few data about the effects of dopaminergic stimulation after brain injury. We used amantadine for awakening the patient treated for meningoencephalitis and we detected the improvement in her consciousness. Though it seems that amantadin is very effective in our patient we believe the further studies are needed to differentiate the potential effects of treatment on the disorders of consciousness.

P589

Neurology

BUILDING A SYSTEM: THE FIRST ROMANIAN EMERGENCY DEPARTMENT ACUTE ISCHEMIC STROKE TREATMENT PROGRAM - ACHIEVEMENTS, CHALLENGES AND ISSUES. ACUTE ISCHEMIC STROKE, INTRAVENOUS FIBRINOLYTIC THERAPY, NATIONAL STROKE PROGRAM

HL Borcea (1), M Sabau (2)

1. Emergency Department, Bihor County Emergency Hospital, Oradea, Romania
2. Neurology, University of Oradea Faculty of Medicine and Pharmacy, Oradea, Romania

Corresponding author: Mr Borcea Hadrian (hadrianborcea@yahoo.com)

Key-words: acute ischemic stroke ; intravenous fibrinolytic therapy ; national stroke program

Introduction: intravenous fibrinolytic therapy is a proven therapeutic resource for the ischemic stroke in selected patients. More than 20 clinical trials were completed during the last decade

in order to analyse the opportunity, the recommended drugs or the outcome of the thrombolytic therapy. Specific guidelines were released for defining the principles of the management of the patients with acute ischemic stroke. In Romania stroke is one of the leading causes of morbidity and mortality and the WHO statistics places Romania in a top position not only inside the European Union but also worldwide. In 2004 an estimated proportional mortality rate in males was 18,2 (the european region overall rate for males is 10,9) and in females 24.8 (the european region overall rate for females was 18,0). Despite that situation, despite the social and economical influence of the stroke management on the Romanian Society, until 2011 only isolated attempts of fibrinolysis were reported but without any scientific reports or confirmation of the outcome of these attempts.

Material and method: in these circumstances in january 2011 a joint Program was started by the University of Oradea, (Romania) and the University of Debrecen (Hungary) for the implementation of fibrinolytic therapy of the patients with acute ischemic stroke that are admitted to the Bihor County Hospital Emergency Department. The activities inside the Program were performed during one year and were structured in three phases. The first phase was related to a scientific approach of choosing guidelines, protocols and defining procedures suitable for the designated Emergency Department. The starting point was represented by the Guidelines of the European Neurological Society but the relevant institutional and personal experience and expertise of the Debrecen Neurology Clinic (Prof. Dr. Csiba Laszlo) was used to define the step by step procedures and documents used for that specific therapeutic approach. The second phase was the creation of a link between the Debrecen Neurology Clinic and the Bihor County Hospital Emergency Department by a video-conferencing system. That system was meant for an assisted decision-making but also to facilitate the support that might be needed during procedures but also for shared educational programs. In that phase an extensive presentation of the program for the population of the Bihor County was performed through available media channels. During the third phase in the Emergency Department the first patients received fibrinolytic treatment. The first patient was treated in june 2011 at almost 6 months after the Program was started.

Conclusion. Discussions: we are going to present the creation, the implementation and the outcome of the Joint Cross Border Program. Starting from here we will discuss challenges, achievements, issues, pitfalls and mistakes that were made and we will analyse the regional and national importance and significance of that Program at 6 months after the Program was ended. A number of 18 patients treated in less than an year, a duplication in two other emergency structures in Romania, the huge impact on the romanian population of that therapeutic opportunity, and other results of the Program will be extensively discussed and commented.

P590

Neurology

PSEUDO-SUBARACHNOID HEMORRHAGE AND DEATH AFTER A BEE STING

UY Tekelioglu (1), A Demirhan (1), A Akkaya (1), K Gurel (2), T Ocak (3), A Duran (3), H Kocoglu (1)

1. Anesthesiology and Reanimation, Abant Izzet Baysal University, Medical of Faculty,, Bolu, Turkey
2. Radiology, Abant Izzet Baysal University Medical of Faculty, Bolu, Turkey
3. Emergency Medicine, Abant Izzet Baysal University, Medical Of Faculty, Bolu, Turkey

Corresponding author: Mr Ocak Tarik (drtarik1977@gmail.com)

Key-words: Pseudo-Subarachnoid Hemorrhage ; Bee Sting ; Death

We report a 33-year-old woman who developed severe brain edema and pseudo-subarachnoid hemorrhage on 36 hours' follow-up after successful cardiopulmonary resuscitation for anaphylactic shock as a result of a bee sting.

A Thirty-three-year-old woman patient, cardiopulmonary resuscitation (CPR) was performed to the patient due to anaphylactic shock induced cardiac arrest, which was attributed to a single sting of a honeybee (*Apis mellifera*). Such clinical picture developed 15 minutes after the sting. Cranial CT images were obtained in the transverse plane parallel to the orbitomeatal line in 5-mm thicknesses for the infratentorial sections and in 10-mm thicknesses for the supratentorial sections without intravenous contrast administration. On the second day after resuscitation, the brain CT showed diffuse low attenuation of brain parenchyma with the occlusion of cisterns and cerebral sulci and narrowed ventricles. We graded brain edema as severe in our patient due to obscuration of the gray-white matter and almost complete obliteration of the cortical sulci (4). High density areas mimicking subarachnoid hemorrhage (SAH) were noted along the bilateral Sylvian vallicula and tentorium cerebelli.

In conclusion, like as our case, CT measurement of high density areas of the Sylvian vallicula must be measured in the course of patients following prolonged CPR regardless underlying cause for the SAH and pseudo-SAH differentiating. Especially in patient with diffuse low attenuation of brain parenchyma with obliteration of cisterns and cerebral sulci and narrowed ventricles showing on non contrast brain CT.

P591

Neurology

FACIAL PARALYSIS; TRAUMA OR BELL'S Palsy?

K. Karaman, G. Kuruoğlu, S. Özkan Gunes, E. Özluer

Emergency Department, Adnan Menderes University Medical Faculty, Aydın, Turkey

Corresponding author: Mr Coskun Sedat (doktor_sedatcoskun@hotmail.com)

Key-words: Facial paralysis ; temporal bone ; Methylprednisolone

Introduction: Facial paralysis cases are often due to temporal bone fractures in emergency department and generally get promising outcomes in 2 weeks with appropriate surgical intervention. These cases, traumatic or not, are in the field of endeavor for emergency department physicians.

Case: Fifty-eight years old male patient has complaint of numbness on half of his face which started after he has fallen one week ago. Left facial paralysis detected in his neurologic examination and soft tissue swelling seen on mastoid process. Systemic examination was normal. He has heart failure on his background. Dexamethasone and metoclopramide infusion was administered. The bone windowed CT scan of temporal bone was reported normal by radiology physicians. Therefore acyclovir 800mg 5x1 and methylprednisolone 16mg 3x1 was prescribed. His complaints were regressed in 5 days control.

Conclusion: Although it has been thought that facial paralysis was due to temporal bone fracture depending on patient's history, it has been considered as an incidental Bell's palsy because no fracture has been seen in CT scans and also positive respond to medication obtained.

P592

Neurology

MANCHESTER TRIAGE SYSTEM IN THE ISCHEMIC STROKE: OUR ACTIVITY IN THE EMERGENCY DEPARTMENT

FJ Salvador, M Sanchis, J Millán, CI Piqueres, M Martinez, JC Montalva

Emergency departement, Lluís Alcanyis Hospital, Xàtiva, Spain

Corresponding author: Mr Salvador Suarez Francisco (fransalv@hotmail.com)

Key-words: Ischemic stroke ; triage system ; door-to-triage time

Introduction: The ischemic stroke constitutes the third reason of death. First reason of death in Spanish woman and the first reason of serious disability with an incidence in Spain of 150-350 cases/100.000 inhabitants year. A third of the patients reported die in a year and another third survive with a permanent disability. In order to reduce the in-hospital mortality and to minimize time to treatment, length of stay, and resource utilization, triage Systems are required in emergency departments. The Manchester Triage System installed in our hospital since January 2006 (MTS, UK) uses defined presentational flow charts combined with indicators.

Objectives: To assess the intervention in triage room with Manchester Triage System with a nurse management and a emergency physician support of the patients with neurologic symptoms and a final diagnosis of ischemic stroke in hospital admission. Differences in outcomes with those patients selected from the Emergency Department who were performed fibrinolysis. To analyze results.

Methods: It is an observational descriptive retrospective research. January 2011 - December 2011. Included: age more than 18; neurological symptoms in the emergency admission and clinical diagnosis of ischemic stroke at internal medicine discharged. Excluded: patients admitted in internal medicine ward with different diagnosis than ischemic stroke. Variables: age, sex, gap time since the patient emergency admission to the patient triage (door-to-triage time), vital signs monitored; presentational flow charts and indicators used; levels assigned; patient placement in emergency room.

Results: 335 patients included (50,45% males; 49,55% women). Average age 74.5 years (95% confidence interval (CI) 73,1-75,9). (71,4 male average; 77,56 women average; $p < 0,05$). 95,82% patients triaged (CI 93,09 - 97,70); 4,18% patients no triaged (CI 2,30 - 6,91). Presentational flow charts used: strange behaviour 57,63% (CI 52,02 - 63,10); syncope or blackout in adult 13,08% (CI 9,60 - 17,27); severe headache 9,35% (CI 6,39 - 13,07); general malaise in adult 9,03 (CI 6,13 - 12,72); other presentational flow charts used: 10.91% (dysnea, vomiting, apparently drunk) (CI 7,71 - 14,84). Indicators used: recent neurological signs and symptoms 52,96% (CI 47,34 - 58,53); progressive and focal function lost 9,66% (CI 6,66 - 13,43); recent problem 7,79% (CI 5,10 - 11,28); consciousness level altered 6,23% (CI 3,85 - 9,46); rapid establishment 5,92% (CI 3,60 - 9,09). Levels assigned: Level I: 0.60% (CI 0,07 - 2,14); level II: 7,76% (CI 5,13 - 11,17); level III 73,13 (CI 68,05 - 77,81); level IV 14.33% (CI 10,76 - 18,54); level V 0%. Vital signs were monitored in triage room in 93.4% of patients (CI 90,23 - 95,84). The vital signs monitored were: arterial pressure 91,6% (CI 88,15 - 94,37); temperature 67,5% (CI 62,16 - 72,46); capillary glycemia 10,4% (CI 7,39 - 14,23); heart rate 87,8% (CI 83,76 - 91,07); oxygen saturation 89,9% (CI 86,11 - 92,87). Door-triage time 0:09:20 (CI 0:08:17-0:10:22). The 8,06% of triaged patients were located initially in reanimation room (CI 5,38 - 11,51). Were performed fibrinolysis in 3 patients; whose outcomes: average age 65 (100% males), strange behaviour flow chart 100% of cases, vital

signs monitored in 100%, 66,7% triaged level III; 33,3% level II with door-triage time 0:02:19.

Conclusions: In our emergency department the most frequent level assigned is III with 1 hour deadline to be the patient attended. Furthermore, are triaged the 95,82% of patients with neurological symptoms with the vital signs monitored in 93.4% of cases reported. But only a 10,4% were tested the capillary glycemia. Time in the early attention and selection to the patients in the emergency department is fundamental in the management of the ischemic stroke, being essential to minimize time to treatment, a triage system as first action when a patient is attended in the emergency department works out decisive using presentational flow charts defined.

P593

Neurology

FIBRINOLYSIS OF THE ISCHEMIC STROKE: OUR ACTIVITY IN THE EMERGENCY DEPARTMENT IN 2011

FJ Salvador, CI Piqueres, M Sanchis, J Millán, M Martinez, JC Montalva

Emergency departement, Lluís Alcanyis Hospital, Xàtiva, Spain

Corresponding author: Mr Salvador Suarez Francisco (fransalv@hotmail.com)

Key-words: Fibrinolysis in ischemic stroke ; stroke code ; door-to-needle time

Introduction: The ischemic stroke constitutes the third reason of death and the first reason of serious disability with an incidence in Spain of 150-350 cases/100.000 inhabitants year. A third of the patients reported die in a year and another third survive with a permanent disability. In our Emergency department was established en 2005 a intrahospital stroke code with the objective of detecting and treating in preestablishing times those neurological patients subjects of fibrinolysis.

Objectives: To assess the intervention of the patients with ischemic stroke selected from the Emergency Department(ED) who were performed fibrinolysis during 2011.To analyze time results

Methods: It is an observational descriptive retrospective research. January 2011 - December 2011. Included: age from 18 to 80 years ; clinical diagnosis of ischemic stroke with a punctuation < 22 in the NIH stroke scale (NIHSS) (established symptoms > 30 minutes); gap time since onset of symptoms lower than 4,5 hours; a normal previous cranial CT or with early signs of ischemic stroke in less than 33 % of the middle cerebral artery territory. Excluded: contraindications established by the European Medicines Agency in 2002. Rt-PA 0.9 mg/kg fibrinolysis (10 % intravenous bolus over 1 minute followed by 90 % over 60-minute infusion) Variables: age, sex, gap time since the patient emergency admission to CT is performed, gap time since the patient emergency admission to blood test is validated, gap time since emergency admission to fibrinolysis is initiated; gap times since the neurological symptoms onset and gap times to the activation stroke code in the emergency department.

Results: 3 patients included (3 males; 0 women). Average age 65 years ((95% confidence interval (CI) 32,4 – 97,6)): symptom onset-to-door time 1:20:40 h (CI 0:00:00 – 3:20:58); door-to-CT time 0:30:00 h. (CI 0:00:00 – 1:00:13), door-to-blood test validation 0:56:40 h (CI 0:18:00 – 1:35:20), door-to needle time 01:15:20 h (CI 0:19:56 – 2:10:44).Symptom onset-to-needle time 02:27:00 (CI 0:00:00 – 5:10:31). Symptom onset-to-activation stroke code time 01:20:40h (CI 0:00:00 – 3:20:58). Door-to- activation stroke code time 0:10:20 h (CI 0:02:21 – 0:18:20). 12,67 average points at the admission NIHSS (CI 6,42 – 18,92).

Conclusions: Time in the early attention and selection to the patients and the accomplishment of the complementary tests in the ED is fundamental in the management of the ischemic stroke, being essential a whole action of all the Services involved in the initial attention of these patients. Though the series assessed is small, the symptom onset-to-needle time is lower than 3h with a very low door-to- activation stroke code time, but the door-to-needle time should be lower than 1h. Implements and reviews of guides to manage the ischemic stroke in the emergency departments are strongly necessary to improve the attention of patients with neurological symptoms.

P594

Neurology

THE ISCHEMIC STROKE: IMPACT AFTER COMMENCE AND STABLISHMENT OF A NEW ACTION GUIDE IN EMERGENCY DEPARTMENT

FJ Salvador, M Martinez, M Sanchis, J Millán, CI Piqueres, JC Montalva

Emergency departement, Lluís Alcanyis Hospital, Xàtiva, Spain

Corresponding author: Mr Salvador Suarez Francisco (fransalv@hotmail.com)

Key-words: ischemic stroke ; action guide in emergency department ; door-to-CT time

Introduction: The ischemic stroke constitutes the third reason of death and the first reason of serious disability with an incidence in Spain of 150-350 cases/100.000 inhabitants year. A third of the patients reported die in a year and another third survive with a permanent disability. It is considered a time-dependent. In order to reduce the in-hospital mortality and to minimize time to treatment are necessary to establish measures in the emergency departments. In 2008 was created a new action guide previously developed together with intensive care unit and neurology department for the management of ischemic stroke in the emergency department. It included: the clinical information, explorations, tests and quality indicators should be performed with neurological patients.

Objectives: To assess the impact of commence a protocol in June 2008 for the management of ischemic stroke in the Emergency department. It included the quality of medical histories and the management of the patients admitted. To evaluate test times

Methods: It is an observational descriptive retrospective research. January 2011 - December 2011. Included: age more than 18; neurological symptoms in the emergency admission and clinical diagnosis of ischemic stroke at internal medicine discharged. Excluded: patients admitted in internal medicine ward with different diagnosis than ischemic stroke. Variables: age, sex, quality (achievement of the established protocol by means of medical history, onset symptoms and NIHSS included, complementary tests, average stay in ED and gap time since the patient emergency admission to the CT and blood tests (hh:mm:ss), final destination.

Results: 335 patients included (50,45% males; 49,55% women). Average age 74.5 years (95% confidence interval (CI) 73,1-75,9). (71,4 male average; 77,56 women average; p<0,05). The average stay in ED was 5:21:02 h (CI 5:02:22 – 5:39:42). Final destination: (hospitalization in Internal medicine ward 80,3% (CI 75,6-84,4); discharged home 18,2% (CI 14,2 – 22,8); death 0,3% (CI 0,008-1,65); hospital transfer 6,9% (CI 4,6-10,5); discharged to neurology office 6,9% (CI 4,6-10,5); residence hospitalization unit 0,3%(CI 0,008-1,65); others 7,2% (CI 4,6-10,5). Degree of achievement of medical history (anamnesis 99,75 % (98,3 – 100); onset symptoms referred 31,3% (CI 26,4 – 36,6); general exploration 99,1% (CI 97,4 – 99,8); neurological exploration 97,3% CCI 99,5 – 98,8); capillary

glycemia 10,4% (CI 7,4 – 14,2)) Complementary tests achieved (blood tests 97,9% (CI 95,7 – 99,2); electrocardiogram 86,9% (CI 82,8 – 90,3); thorax x-ray 81,5% (CI 76,9 – 85,5); head CT 92,2% (CI 88,8 – 94,9). NIHSS evaluated in 5,1% (CI 3 – 8). Door-to-CT time: 2:27:37h (CI 2:15:52 – 2:39:21) Door-to-blood test time: 1:50:51 (CI 1:43:56 – 1:57:46)

Conclusions: Time in the early attention to the patients and the accomplishment of the complementary tests in the ED is fundamental in the management of the ischemic stroke, being essential a whole action of all the Services involved in the initial attention of these patients. The creation of an action guide for the management of ischemic stroke is strongly recommended. In our department the degree of achievement of medical history is 99,75% but onset symptoms are only referred in 31,3% of medical histories; piece of information necessary to detect patients subjected to fibrinolysis. The most frequent final destination is the admission in internal medicine and door-to-CT and blood test are lower than 3 hours. New reviews of the guide should be established in order to improve the achievement of the protocol.

P595

Neurology

OXIDATIVE STRESS FACTORS IN ISCHEMIC STROKE

E Acar (1), B Atıfoğlu (2), S Karaman (1), CS Tanrıkulu (1)

1. Emergency department, Erzurum district education and research hospital, Erzurum, Turkey

2. Emergency department, Atatürk university, faculty of medicine, Erzurum, Turkey

Corresponding author: Mr Acar Ethem (dr.ethemacar@hotmail.com)

Key-words: Ischemic Stroke ; mortality and morbidity ; emergency department

Introduction

Stroke is not only in developed countries, but also it is the third most common cause of death after cancer and coronary heart disease all over the world. The most common risk factors for stroke are hypertension, diabetes, and high cholesterol. It was certainly showed that there is a causal relationship between high cholesterol levels and ischemic stroke, and a reduction in the incidence of stroke with treatment. Experimental studies have shown that oxidative stress plays an important role in the pathophysiology of ischemic stroke. This study supports that oxidative stress increases neuronal death in ischemic stroke, and it encourages the use of antioxidants in the treatment of acute ischemic stroke. Some studies shows that height of serum uric acid level was associated with better and more neurological improvement in patients with stroke. Some studies suggest that prognosis with acute phase reactants may be associated with patients with stroke. However, there are different results in the literature on this subject. The use of CRP for acute ischemia is lower than coronary artery disease. Several studies show that high CRP is associated with between ischemic stroke and mortality. High bilirubin levels can create an advantage for diseases, associated with oxidative stress. It may also show size of oxidative stress. In this study, it was aimed to investigate whether mortality and morbidity associated with uric acid, CRP, potassium (K), bilirubin, and cholesterol levels in patients with ischemic stroke.

Materials and Methods

151 patients were reviewed that they were diagnosed as stroke at the emergency department, and admitted the neurology department between October 2011 and March 2012. The data were recorded in SPSS 15 computer program. $p < 0.05$ was considered significant.

Findings

51% of the cases were male and average age was 69.5 ± 12.8 . 76.8% of the cases were detected mild for ranking score. Average uric acid was 5.64 ± 2.09 mg / dL in patients. They were classified according to uric acid levels and ranking score and it was not statistically significant when they were compared as mild and severe patients. There was no statistically relationship between death rate and uric acid levels. In the cases, average potassium (K) was 4.42 ± 0.61 mmol / L, and when K levels compared to ranking score, result was not statistically significant, but when K levels compared to death, result was statistically significant ($p = 0.02$). It is determined that average CRP was 21.24 ± 34.6 mg /dL, CRP levels and ranking score comparisons were no statistically significant results. Average bilirubin was found out $0.71 \pm .49$ mg /dL. When bilirubin levels compared to mortality and ranking score, they were not statistically significant. Average cholesterol level was 197.02 ± 42.63 mg /dL. When Cholesterol levels compared to mortality and ranking score, they still were not statistically significant.

Result

As a conclusion, there are relationships between K levels and death when it is evaluated according to mortality and morbidity in ischemic stroke patients, but there is no statistically significant relationship among others.

P596

Neurology

STROKE WITH HEMIBALLISMUS

E Acar, S Karaman, CS Tanrıkulu, O Delice

Emergency department, Erzurum district education and research hospital, Erzurum, Turkey

Corresponding author: Mr Acar Ethem (dr.ethemacar@hotmail.com)

Key-words: cerebrovascular diseases ; hemiballismus ; emergency department

Introduction

Chorea is a short-term and irregular muscle spasm that occurs as convulsion; emerges as fulminant; spreads from organ to others, and can be randomly every part of body. Ballismus is a kind of chorea that dominates by large-amplitude proximal movements. Movements which are often generalized ballismus, but it can be emerged as focal, segmental, or half of a body (hemiballismus). There are many causes for acute hemiballismus, but it can rarely occur depending on in cerebrovascular disease. In recent years, caudate nucleus, putamen, thalamus, subthalamic nucleus, ischemic or hemorrhagic vascular lesions can have been detected along with the development of imaging techniques in cases of hemiballismus. This case is a rare case, presented to draw attention for ischemic infarction, presented with hemiballismus.

Case

71-year-old and right-handed female patient suffered from pulsating in right arm and leg and flexing which begins suddenly and wakes from sleep. She applied to emergency service due to continuing complaints. According to her medical history, she has hypertension and hyperlipidemia, but she did not regularly use her drugs. In the initial evaluation, the patient was conscious and oriented at emergency department. Neurological and other system examinations were normal except for hemiballismus in the right arm and leg. Arterial blood pressure was 180/110 mmHg, fingertip blood sugar was normal. Laboratory tests and brain computed tomography were evaluated as normal. In addition to, brain diffusion MRI was taken. Left thalamic lacuna infarct was determined on diffusion MRI. For this reason, the patient was admitted to the neurology clinic.

Result

Hemiballismus has been rarely observed after acute cerebrovascular diseases. Infarction is even rare if hemiballismus is only evidence. While other causes are removed from patients, applied with Hemiballismus, emergency department physicians should take consideration for stroke.

P597

Neurology

DYSTONIA DUE TO INSECT STINGS

A. Karakus, K Caliskan, M. Duru, G. Kuvandik, G Arslan, YK Erdoğan

Department of Emergency Medicine, Mustafa Kemal University, Faculty of Medicine, Hatay, Turkey

Corresponding author: Mr Karakus Ali (drkarakus@yahoo.com)

Key-words: Dystonia ; insect bites ; biperiden and pheniramine maleate

A few cases have dystonic reaction due to bee sting is reported. The aim of this case report that insect stings can occur dystonia and choreiform movement.

18 year-old man bitten by an insect two days ago. Six hours later involuntary muscles contractions affected the muscle of his left arm and neck. It treated in the nearest emergency department. It did not repeat again in that day but the second day the same muscle groups contractions occurred. Because of this contractions he was referred to our hospital. In our hospital we saw painful dystonic reactions and choreiform movement. In his history similar contraction has never happened before, he did not attempt suicide or used drug.

Physical examination: temperature:36,7 °C, pulse: 95/min, blood pressure: 110/85 mm/hg, sPO₂: %100, there was choreiform movement- contractions of the left arm and neck, neurological and other system examinations were normal, fundoscopic examination is normal, no rigidity of neck or Kernig's sign and Brudzinski's sign. Laboratory values; Hgb: 15 g/dl, Plt:239000, Hct: %43,1, Wbc: 5,200 Glu: 86, Ure/Cretinin: 24/095, AST/ALT:18/8, creatin kinase.: 81, Na:138 mmol/L, K:4,4 mmol/L,Cl: 102 mmol/L, Ca: 9,7 mg/dl(8,8-10,6), Mg:1,96mg/dl(1,8-2,6).Ecg: normal,Non-contrast brain CT: normal,Brain MR scan with 7,5 ml gadbutrol: normal

Patient admitted to the hospital for etiology of dystonia. 2x5 mg biperidene lactate, 3x50 mg pheniramine maleate, 3x50 mg ranitidine HCl medication was started. MR- CT scans and other examinations are normal, because of this and history that thought the cause of dystonia is insect bites. Dystonic reaction has occurred if biperiden stopped for 10 days, 12. Days drugs were stopped and two weeks he was being followed. It did not repeat again.

P598

Neurology

UNEXPECTED SIDE EFFECTS OF CEFUROXIME AXETİL

EG ERSUNAN (1), BO BILIR (2), KA KALKAN (1), YS YENİOCAK (3), UE UĞRAŞ (4)

1. emergency department, Recep Tayyip Erdogan University, Medical Faculty, rize, Turkey
2. emergency department, Recep Tayyip Erdogan University, Medical Faculty, rize, Turkey
3. Emergency Service, Haseki Training and Research Hospital, Istanbul, Turkey
4. emergency department, Recep Tayyip Erdogan University, Medical Faculty, rize, Turkey

Corresponding author: Mr Ersunan Gökhan (gokhanersunan@gmail.com)

Key-words: acute dystonia ; cefuroxime axetil ; adverse effect of drug

BACKGROUND: Cefuroxime axetil is a drug commonly used in infectious diseases. A wide variety of adverse effects from gastrointestinal findings to anaphylaxis due to antibiotic use can be seen .However , dystonic reactions may occur because of the use of various drugs. Diagnosis is made by referring to the story and and by the recognition of the classical existence form . Patients with acute dystonia are the patient groups that need immediate treatment in emergency departments.Here,we will inform about an acute dystonia case caused by cefuroxime axetil use

CASE: 10 year-old boy applied to our emergency department about his regular rhythmic contractions in the neck.In the detailed medical history, there was no distinctive feature apart from cefuroxime axetil use that was started due to an acute sinusitis two days before.In the physical examination performed he was conscious, restless, cooperative, and oriented.His speech was normal. Pupillary isochoric(3mm /3mm) direct and indirect light reflexes were taken, but eye movements could not be evaluated because of the oculogyric crisis. There was no flaw in the motor examination .Muscle tone was normal but rigidity was not detected. Deep tendon reflexes were equal and normoactive in four extremities .Plantar responses were bilateral flexor.Cerebellar system and sense examinations were normal.There was a torticollis and oculogyric crisis in extrapyramidal system examination .The other system examinations were normal.No abnormality was detected in laboratory examinations, complete blood count, electrolytes, liver and kidney function tests.Because the patient didn't have similar complaints before and due to the sudden start of patient's complaints, acute dystonic reaction was thought to have developed on account of cefuroxime axetil he was taking. For this reason, cefuroxime axetil treatment was discontinued, biperidin with a slow 15-minute infusion of 2.5 mg iv was applied to the patient .The symptoms were observed to disappear dramatically within a short period of about ten minutes time. The patient was discharged after a four hour observation on condition that he comes for check another time .During the control ,it was learned that the symptoms of the patient whose physical examination was normal didn't recur .The patient was advised to avoid using all of cefuroxime axetil forever.

DISCUSSION: As long as one doesn't think that acutely induced dystonic reactions emerge depending on drug use , making a diagnosis may be difficult and it may be confused with some other illnesses. Patients can be misdiagnosed as meningitis, encephalitis, hysteria, hypocalcemia, food poisoning, seizures, tetanus.In the treatment of acute dystonic reactions Diphenhydramine(1-2 mg / kg orally, intravenously or intramuscularly) or biperiden (2.5-5 mg intramuscularly or intravenously) are used.

In our case since laboratory tests were normal , and there were no past history of any sickness and no drug use history except for cefuroxime axetil and because of the sudden onset of symptoms, total dystonia table was thought to be an adverse effect due to cefuroxime axetil.

Moreover, the quick response of the patient to the treatment and complete recovery of symptoms due to dystonic reaction confirmed the diagnosis.

CONCLUSION: In the patients with acute dystonic reaction applying to the emergency department, the side effects of drugs used mustn't be forgotten . An emergency physician must question the story of drug use and must arrange his treatment of this case accordingly.

P599

Neurology

SYMPTOMS OF MENINGITIS-ENCEPHALITIS CASES

G Arslan (1), S Dikici (1), H Gumus (1), A Ozturk (1), A Saritas (2)

1. Neurology, Duzce University, Duzce, Turkey

2. Emergency department, Duzce University, Duzce, Turkey

Corresponding author: Melle Dikici Süber (suberdikici@gmail.com)

Key-words: Meningitis ; encephalitis ; elderly people

Bacterial meningitis continues to be an important cause of mortality and morbidity in the world. Current strategies to prevention and therapy of bacterial meningitis are compromised by incomplete understanding of the pathogenesis, emergence of antimicrobial resistant microorganisms and lack of simple diagnostic tools in resource-limited settings. Several viruses may cause central nervous system infections that lead to a broad range of clinical manifestations. The course of the viral encephalitis can be acute, sub-acute, or chronic. Some viruses have the ability to enter into the brain and cause direct injury, while others activate inflammatory cells that attack the central nervous system (CNS) secondarily.

In our study, we aimed to define the complaints of viral-bacterial meningitis-encephalitis cases, who had inpatient treatment in our neurology clinic in last two years, at their arrival to the emergency room and outcomes of their clinical follow ups. 9 out of 15 patients who applied to the emergency room and taken into neurology inpatient ward were female and 6 out of 15 patients were male. Average age was 59.2 years. Average length of hospitalization of cases was 16.2 days. Change in consciousness was the leading cause of emergency room application in %46 of cases. Epileptic seizures, headaches, fever and nausea-vomitting followed the change of consciousness with 33%, 20%, 13%, 6% ratios respectively. All of the cases had magnetic resonance imaging (MRI) and 4 cases had pathological changes in the MRI. Antiviral and/or antibiotherapy was started according to the lumbar puncture results and all of the cases were discharged from the hospital with cure.

In conclusion, unlike the patients with changes in consciousness as in meningitis/encephalitis, it may not be possible to see fever and nausea-vomitting especially in cases at their mid-late ages. Infectious situations should not be ignored in all of the cases of changed consciousness and lumbar puncture should be done immediately just before starting the treatment.

P600

Neurology

A RARE COMBINATION: MYOCARDIAL INFARCTION AND CEREBRAL ISCHEMIA

S Bulur (1), R Buyukkaya (2), S Dikici (3), N Ercan (3), A Saritas (4)

1. Cardiology, Duzce University, Duzce, Turkey

2. Radiology, Duzce University, Duzce, Turkey

3. Neurology, Duzce University, Duzce, Turkey

4. Emergency department, Duzce University, Duzce, Turkey

Corresponding author: Melle Dikici Süber (suberdikici@gmail.com)

Key-words: Myocardial infarction, Etiology ; Cerebral ischemia ; Etiology

INTRODUCTION

Myocardial infarction (MI) is death of heart cells due to the decreased blood flow to a part of the heart. Reduction in blood flow increases the oxygen demand of the heart and if it left untreated for a sufficient period of time, can cause damage or death of heart muscle tissue. Cerebral ischemia, represents metabolic damage in the brain as a result of insufficient blood flow.

CASE
A 74 year old woman with a history of hypertension presented to our hospital with acute onset of left sided weakness and unconscious. The patient initially experienced an attack of chest pain associated with shortness of breath. Her EKG and computed tomographic was consistent MI and cerebral infarction concurrency.

CONCLUSION

Cerebral hypoxia leads to death of brain tissue that named cerebral infarction. Symptoms of brain ischemia can include unconsciousness (from somnolence to stupor), blindness, coordination problems, body weakness, cardiorespiratory arrest and irreversible brain damage. Observation of cerebral ischemia, MI, and a rare combination. As combination of MI and cerebral ischemia is a rare situation we evaluated the case in light of recent literature.

P601

Neurology

NEUROLOGIC COMPLICATIONS RELATED TO CAROTID SINUS MASSAGE (CSM)

O. America

Emergency department, Radboud University Nijmegen Medical Centre, Nijmegen, Netherlands

Corresponding author: Melle America O. (o.america@seh.umcn.nl)

Key-words: Neurologic ; Complications ; Carotid sinus massage

Question:

Is it safe to perform CSM: what is the chance of a neurologic complication?

P: Patient who need CSM

I: CSM

C: None

O: Neurological complications

Background

Carotid sinus massage is used to diagnose carotid sinus syncope and is sometimes useful for differentiating supraventricular tachycardia from ventricular tachycardia. Like the Valsalva maneuver, it is a therapy for SVT.

Despite the increased use of CSM, concerns persist regarding its safety (the development of neurological events) particularly in older patients. A neurological complication is usually defined as a stroke or transient ischemic attack (TIA).

Search strategy and results

Mesh terms and regular terms were used. The following search was conducted in Pubmed:

[Carotid sinus massage] AND [complication OR neurologic complication]. No limits were activated.

Using this method 94 articles were found, with 6 relevant articles.

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Conclusion and level of recommendation

These studies conclude that the rate of complications, even in an older patient group, is very low and the result of all the studies are comparable. The differences that do exist probably are due to differences in study population, methods and in one study, the definition of a neurologic complication.

Clinical bottom line

TIA's and strokes are rare following carotid massage in patients with exclusion of patients with carotid bruits, ventricular arrhythmias or recent MI or stroke within previous 3 months. CSM remains a safe diagnostic procedure even in older populations.

Grade of recommendation is B.

P602

Neurology

A RARE CASE OF FAHR'S SYNDROME PRESENTING AS EPILEPTIC SEIZURE

H Dogan, DN Ozucelik, A Avci, S Yıldırım, C Simsek

Emergency department, Bakırköy Dr Sadi Konuk training and research hospital, Istanbul, Turkey

Corresponding author: Mr Dogan Halil (drhalildogan@gmail.com)

Key-words: Fahr sendromu ; konvülsiyon ; idiyopatik hipoparatiroidizm

Giriş:

Fahr sendromu; bazal gangliyonların simetrik kalsifikasyonu ile seyreden nadir bir klinik durumdur. Hastalığın ilişkili olduğu birçok durum olmasına rağmen etyolojisi halen bilinmemektedir. Hastalıkla ilgili ailesel durum da bildirilmiştir. Sendromun klinik özellikleri değişken olmasına rağmen sıklıkla nöropsikiyatrik, ekstrapiramidal ve serebellar semptomlar mevcuttur. Ayrıca nöbet, demans ve konuşma bozuklukları da eşlik eden diğer durumlardır. Bu sendroma hipoparatiroidizm, psödohipoparatiroidizm veya hiperparatiroidizm neden olabilir.

Konvülsiyon ile gelen ve idiyopatik hipoparatiroidizmi olan bir hastada nadir görülen Fahr sendromunun sunarak; Fahr sendromu ile idiyopatik hipoparatiroidizmi ve konvülsiyon ilişkisini tartıştık.

OLGU:

51 yaşında erkek hasta jeneralize konvülsiyon nedeniyle 112 ekibi tarafından acil servise getirildi. Hastanın 20 yıldır idiyopatik hipoparatiroidi hastalığı mevcut. Yılda 2-3 kez konvülsiyonlarının olduğu öğrenildi. Jeneralize konvülsiyonu intravenöz diyazepam yapılarak durdurulmuştu.

Fizik muayenesinde; kan basıncı:132/86mmHg, genel durumunu orta, suuru açık ve uykuya meyilliydi, pupilleri izokorik ışık refleksi bilateral doğaldı.

EKG'si normal olan olgunun laboratuvar incelemelerinde; Ca 7.3mg/dL (normal refereans aralığı: 8.4-10.2), fosfor 4.2 mg/dl (normal refereans aralığı 2.3-4.7 mg/dl), parathormon: 2,5 pg/ml (normal refereans aralığı 17-72 pg/ml. Mevcut laboratuvar verileri idiyopatik hipoparatiroidi ile uyumlu idi.

Kraniyal bilgisayarlı tomografide, bilateral serebellar hemisferler ve bazal gangliyonlarda periventriküler derin ak madde içinde ve subkortikal alanda yaygın kalsifikasyonlar saptandı

EEG incelemesi normal bulundu. Troid ve paratiroid ultrasonografik inceleme normal olarak bulunmuştu. Mevcut klinik, laboratuvar ve radyolojik bulgularla Fahr sendromu tanısı konan hastaya parenteral kalsiyum ve intravenöz sıvı desteği verildi. Acil serviste 12 saatlik takipte klinik ve laboratuvar bulguları düzelen hasta taburcu edildi.

TARTIŞMA:

Fahr sendromu bilateral striatopallidodentat kalsinozis (BSPDK) tablosudur. Bu tablodan sorumlu element, sıklıkla kalsiyumdur. Kalsiyum, kapillerler, arteriyoller, küçük venler ve perivasküler alanlarda birikir ve kraniyal mikro damarlarda obliterasyon, damar çevresinde nöronal dejenerasyon ve gliyozise sebep olur. Kalsifikasyonlar çoğunlukla simetrik olarak dentat çekirdek, bazal gangliyon, talamus ve sentrum semiovalede görülür. Tanıda, kalsiyum birikimlerini göstermede en sık kullanılan inceleme yöntemi kraniyal BT'dir.

Literatürle uyumlu olarak, 51 yaşındaki erkek hastamızda, kraniyal incelemelerinde saptanan, bilateral serebellar hemisferler ve bazal gangliyonlarda periventriküler derin ak madde içinde ve subkortikal alanda yaygın kalsifikasyonlar Fahr sendromunu akla getirdi.

Etiyolojik olarak Fahr sendromu, ailevi, sporadik veya sekonder (enflamatuvar, tümoral, hipoksik, vasküler, endokrin, toksik, metabolik, dejeneratif, malabsorptif) olabilir.

Fahr sendromunun birlikte görüldüğü patolojiler dört grup altında toplanır. Birinci gruba, kalsiyum metabolizma değişiklikleri, hipoparatiroidizm, psödohipoparatiroidizm, bazen de hiperparatiroidizm oluşturur. İkinci grup konjenital dejeneratif gelişim anomalilerini, üçüncü grup sistemik hastalıklar ve geçirilen enflamatuvar olayları kapsar. Dördüncü grup ise toksik ve anoksik etkilenelemlere ikincil olarak gelişir.

Sekonder BSPDK'de görülen en sık etiyolojik neden bizim vakamızda olduğu gibi hipoparatiroidizm ve hipokalsemidir. Hipoparatiroidizm iyatrojenik nedenler (ilaçlar, tiroid ve paratiroid cerrahisi, radyasyon), otoimmün nedenler (izole idiyopatik veya poliglandüler), infiltratif hastalıklar (Wilson hastalığı, hemokromatozis, sarkoidoz, talassemi) sonucu paratiroid bezinin zarar görmesi, bozulmuş PTH etkisi (hipomagnezemi, PTH gen defektleri, kalsiyum duyarlı reseptör mutasyonları) ve herediter hastalıklar sonucu görülebilir. Sonuç olarak hipoparatiroidizmde ya PTH sekresyonu azalmıştır ya da efektör organlarda PTH sekresyonuna anormal yanıt verilmesi söz konusudur. Hipoparatiroidizm'e bağlı intrakraniyal kalsifikasyonun mekanizması ise bilinmemektedir.

Erkeklerde daha fazla görülen Fahr sendromu, sıklıkla asemptomatiktir. Fakat eğer kalsifikasyonlar yoğunsa, ekstrapiramidal ve serebellar bulgular açığa çıkar. Fahr sendromunda, en sık bulgu parkinsonizm, kore, tremor, distoni, atetoz, orofasiyal diskinezi gibi hareket bozuklukları olmasına rağmen olgumuzda da olduğu gibi konvülsiyon nadir olarak bulunur.

Hipoparatiroidizm nörolojik açıdan, semptomatik veya latent tetani, nöbetler ve BSPDK'de görülen klinik tablolarla seyreder. Jeneralize tonik klonik nöbetin nedeninin hipokalsemi, hiperfosfatemi ve paratiroidhormon eksikliği yada direnci sonucu olduğu ileri sürülmüştür. Bizim vakamızda da konvülsiyonlar, hipokalsemiye bağlı olarak değerlendirildi.

Hipoparatiroidizmin ciddiyeti ile serebral kalsifikasyon derecesi arasında bir ilişki bulunmamaktadır. Hipokalseminin süresi uzadıkça, bazal gangliyonların kalsifikasyonuna rastlanma sıklığı artar. Kalsiyum ve vitamin D'nin yerine konulması metabolik anormallığı düzeltir ve klinik progresyonu geciktirir. Olgumuzda kalsiyumun yerine konması konvülsiyonların tekrarlamasını önlemiştir.

Vakamız, klinik tablo, laboratuvar, görüntüleme sonuçları ve tedaviye yanıtı ile hipokalsemi, idiyatik hipoparatiroidi ve Fahr sendromu olarak değerlendirildi. Fahr sendromunda, semptomlar çeşitlilik göstermekte olup; semptomatik olanların tedavi edilebilir alt gruplarının hızla saptanması hasta için hayati önem taşır. Özellikle akut nöropsikiyatrik bozukluklar gelişen, altta kalsiyum metabolizma bozukluğu olanlarda, konvülsiyonları olan hastalarda Fahr sendromu ayırıcı tanıda akılda tutulmalıdır.

P603

Neurology

NEUROLOGICAL DEFICIT IN PATIENTS ADMITTED IN THE EMERGENCY DEPARTMENT OBSERVATION AREA IN A PRIVATE HOSPITAL

OJ Simón (1), A Blanco (1), M Bravo (1), E Castellano (2), I De La Torre (1), MA Díaz (1), A Fernández (1)

1. Emergency Department, Hospital Xanit Internacional, Benalmadena, Málaga, Spain
2. Laboratory and Clinical Analysis, Hospital Xanit Internacional, Benalmadena, Málaga, Spain

Corresponding author: Mr Simón Padilla Oscar Jerónimo (oscarjsp@hotmail.com)

Key-words: NEUROLOGICAL DEFICIT ; EMERGENCY ; OBSERVATION AREA

OBJECTIVE: To determine the prevalence of neurological deficit in patients admitted to ED observation area of a private hospital, and the characteristics of patients with this presentation and the final diagnosis of the process.

MATERIAL AND METHODS: A descriptive study without therapeutic intervention for 10 months, among patients admitted for neurological deficit in the observation area of a private hospital (N = 210), obtaining data on age, sex, length of stay entered, destination on discharge and final diagnosis after the study of these patients. We obtained data from our internal Medyction program, and processed using Microsoft Excel 2011.

RESULTS: Of the patients admitted for neurological deficit, the average age of the patients was 52,15 years old, 69% were women, average time spent 123 minutes, the main destinations were home (59.31%) and admission by the Department of Neurology (26.2%). The most common diagnosis was acute headache (40,68%), followed by peripheral vertigo (25,5%) and stroke (12,4%).

CONCLUSIONS: This study showed that the prevalence of neurological deficit as main complaint in our hospital is 8,3%, being the most frequent diagnosis of headache. Most patients are discharged home after being evaluated in the emergency department of our hospital. The average age of patients with this picture is 52.1 years old, being more frequent in women.

P604

Neurology

THE COMPARISON OF PATIENTS AT THE AGE OF 65 AND 65+AND DIAGNOSED WITH STROKE IN EMERGENCY DEPARTMENT

T Inal (1), E Armagan (1), A Kose (1), F Ozdemir (1), A Durak (1), S Akkose (1), AB Demir (2)

1. Department of Emergency Medicine, Uludag University, Faculty of Medicine, Bursa, Turkey
2. Department of Neurology, Uludag University, Faculty of Medicine, Bursa, Turkey

Corresponding author: Mr Kose Ataman (ataberk76@yahoo.com.tr)

Key-words: Emergency Department ; stroke ; over the age of 65

Introduction: Elderly population in the World has been increasing gradually. In terms of emergency service, the elderly constitute a special group.

Methods: By obtaining the data of the patients with stroke diagnosis, who are 65 and over the age of 65 and who applied to Uludag University Medicine Faculty Emergency Department between 01.01.2011 and 29.02.2012, demographic, clinical, and pathological characteristics were investigated and then compared among age groups in this study.

Results: According to the study results, among the age groups of 65-74, 75-84 and 85, significant difference was not found out between gender, complaints for application, duration of complaints, and comorbidities. Similarly, among physical examination findings such as eye movements, visual fields, facial nerve examinations, upper extremity motor functions, lower extremity motor functions, ataxia, negligence, aphasia, dysarthria and NIHSS scores, statistically significant difference was not established. Besides, no significant difference was found among diagnoses, infarct periods in BBT, vein pathologies detected in MR, infarct localizations detected in MR, infarct periods in MR, infarct side in MR, and EKG findings. In the same time, no significant differences were observed among the departments where the patients were hospitalised, the results of hospitalization, duration spent in emergency department, duration of hospitalization in clinic, and the rate of thrombolytic therapy given to the patients. Following the statistical analyses, the parameters revealing significant differences among age groups were conscious status (p=0.002), sense examinations (p=0.001), infarct in BBT (p=0.037), and bleeding sides (p=0.046).

Conclusion: As a result of our study, we have seen that etiology of stroke may alter along with advancing age, however; in terms of clinical characteristics and patient results statistically significant differences were not observed. In the present study, the majority of the patients transferred and hospitalization duration of the patients in this group in intensive care and in clinics and also their mortality have not been clarified enough. Therefore, we are of opinion that this may be supported by new studies which are multi-centred and having large number of cases.

P605

Neurology

THE PROGNOSTIC VALUE OF 'AGE, WHITE BLOOD CELL COUNT, SERUM CALCIUM AND SODIUM LEVELS' IN CEREBROVASCULAR ACCIDENTS

B Cander (1), FE Visneci (1), M Ergin (1), AS Bodur (2), A Batur (3), S Kocak (1), AS Girisgin (1), M Gul (1)

1. Emergency Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey
2. Public Health Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey
3. Radiology Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

Corresponding author: Mr Ergin Mehmet (drmehtemtergin@gmail.com)

Key-words: Cerebravascular accidents ; Sodium ; Calcium

BACKGROUND: The prognostic value of serum sodium and calcium level in patients with acute cerebrovascular events isn't known. We aimed to analyze whether 'age, white blood cell count (WBC), serum calcium (Ca) and sodium (Na) levels' contributed to the risk of mortality in cerebrovascular accidents (CVA) were investigated in the study. **MATERIAL – METHOD:** The study is conducted retrospectively at Necmettin Erbakan University Meram Medicine Faculty Emergency Service, Observation and Critical Care Units. It

included 145 patients with diagnosis of CVA according to clinical and radiological (brain computed tomography and/or magnetic resonance imaging) The demographic data, laboratory, radiological and clinical results were documented from hospital data system. The SPSS v.10 was used to document data and Pearson Chi Square Test and Independent Samples Test were performed. RESULTS: There was no statistical difference between genders in terms of mortality ($p>0.05$). There were significant statistical difference between survival and non-survival groups in terms of WBC count ($p<0.05$) but not significant in terms of age, serum Ca and Na levels and admission duration ($p>0.05$). It was found that there was also no significant statistical difference between CVA types (ischemic, traumatic hemorrhagic and non-traumatic hemorrhagic) in terms of mortality. CONCLUSION: We found that age, serum Ca and Na levels and admission duration weren't significant factors in prognosis in CVA whereas WBC count was. There is need for further prospective studies.

P606

Neurology

QUETIAPINE AND LITHIUM INDUCED NEUROLEPTIC MALIGNANT SYNDROME :A CASE REPORT

M İÇER, Y ZENGİN, HM DURGUN, M ÜSTÜNDAĞ, C GULOĞLU

Emergency department, Dicle University, Diyarbakir, Turkey

Corresponding author: Mr Zengin Yilmaz (yilmazzengin79@mynet.com)

Key-words: Neuroleptic malignant syndrome ; quetiapine ; fever

Introduction: Neuroleptic malignant syndrome (NMS) is a potentially fatal adverse event associated with the use of antipsychotics. The incidence of NMS in patients with psychiatric disorders treated with antipsychotics is 0.01% to 0.02% per year. The most frequent signs and symptoms of NMS include fever, muscle rigidity, autonomic dysfunction (e.g. tachycardia, labile blood pressure, tachypnea), and mental status changes, including delirium. The most consistently abnormal laboratory finding is elevated serum creatine kinase (CK). NMS is a life-threatening illness thought to be caused by the blockade of dopaminergic receptors in the nigrostriatal pathway. We report a schizophrenic patient who developed NMS with quetiapine and lithium.

Case Report: A 63-year-old woman with a history of schizophrenia presented to the Emergency Department (ED) with tachypnea, tachycardia, sweating, fever and decreased mental status. He had been treated for schizophrenia for 25 years, he started to use quetiapine 300 mg and lithium 600 mg daily before 2 years. On physical examination, she had a temperature of 38.3°C, a heart rate of 113 bpm, a respiratory rate of 28 breaths/min, and a right upper extremity manual blood pressure of 100/65 mm Hg in the supine position. Laboratory evaluation included an initial serum creatinine phosphokinase level of 316 U/L. Leukocyte count was 18,4/UL with a hemoglobin of 14.3 g% and a hematocrit of 41.1%. The patient's serum sodium level was 153 mmol/L, potassium 3.4 mmol/L, chloride 113 mmol/L, urea 9 mg/dL, creatinine of 2.08 mg/dL and serum lithium level 1.51 nmol/L. A lumbar puncture and a computed tomography (CT) scan of the head were also performed and were reported as normal. A lumbar puncture was evaluated as normal. She was admitted from the ED to intensive care unit with the diagnosis of NMS.

Conclusion: Differential diagnosis consist many conditions. NMS is a diagnosis of exclusion. NMS is in the differential diagnosis of patients presenting with fever to emergency department, where

careful history and previous medication use is essential for diagnosing and treating this phenomenon.

P607

Neurology

QUETIAPINE INDUCED NEUROLEPTIC MALIGNANT SYNDROME ON PATIENT WITH VENTRICULOPERITONEAL SHUNT: A CASE REPORT

Y ZENGİN, M İÇER, A ÖZHASSENEKLER, M ORAK, C GULOĞLU

Emergency department, Dicle University, Diyarbakir, Turkey

Corresponding author: Mr Zengin Yilmaz (yilmazzengin79@mynet.com)

Key-words: neuroleptic malignant syndrome ; quetiapine ; ventriculoperitoneal shunt

Introduction: Ventriculoperitoneal (V-P) shunt implants have been widely used for the treatment of patients with communicating hydrocephalus. Acute and chronic subdural hematoma, slit ventricle syndrome, intracranial hypotension, infection, and hemorrhage are complications of V-P shunt implantation. Neuroleptic malignant syndrome (NMS) is a rare but potentially fatal idiosyncratic reaction to antipsychotic drug treatment with an incidence of 0.01–0.02%. Although the precise pathophysiological mechanisms of NMS are uncertain, antipsychotic-induced dopamine receptor blockade is thought to play the pivotal triggering role in the condition. NMS is characterized by hyperthermia, autonomic instability, neuromuscular rigidity, and altered mental status. We report a case of a quetiapine induced neuroleptic malignant syndrome on patient with ventriculoperitoneal shunt.

Case Report: A 26-year-old male with a history of V-P shunt implantation presented to the Emergency Department (ED) with unconsciousness, tachypnea, tachycardia, sweating and fever and decreased mental status. When he was 4 years old, hydrocephalus has been developed by traffic accident. V-P shunt was placed 4 years ago. Before 6 months, he started to use quetiapine 25 mg for psychotic disorder. On physical examination, the patient had a temperature of 39.5°C, a heart rate of 125 bpm, a respiratory rate of 32 breaths/min, and a right upper extremity manual blood pressure of 90/50 mmHg in the supine position. Laboratory evaluation included an initial serum creatinine phosphokinase level of 1815 U/L. Leukocyte count was 10,4/UL with a hemoglobin of 17.1 g% and a hematocrit of 49.6%. The patient's serum sodium level was 150 mmol/L, potassium 3.8 mmol/L, chloride 114 mmol/L, urea 43 mg/dL and creatinine of 1.06 mg/dL. Lumbar puncture was reported as normal. Blood, urine, and CSF cultures were negative for any bacterial pathogens. Brain computed tomography (CT) was evaluated as third and lateral ventricular enlargement. V-P shunt was no dysfunction. This patient was admitted from the ED to intensive care unit with the diagnosis of NMS.

Conclusion: NMS is a rare but potentially fatal disorder characterized by fever, muscular rigidity, delirium, and autonomic instability. A V-P shunt implanted patient who was admitted to the ED with fever and loss of consciousness, usually it is thought to be infection or VP shunt dysfunction. However, in the anamnesis medications must be questioned and if a patient uses any antipsychotic drug, NMS must be excluded from the other differential diagnoses.

P608

Neurology

NOT ONLY A NOSE TRAUMA AND WHIPLASH

G Prado (1), M Molina (2), A Gallego (1), R Ruiz (1)

1. Emergency department, Hospital de Manises, Valencia, Spain
2. Emergency Department, Hospital de Manises, Valencia, Spain

Corresponding author: Melle Prado Paz Grethzel (grethzel@hotmail.com)

Key-words: whiplash ; spinal stenosis ; corticoids

Introduction

Whiplash is a range of injuries to the neck caused by a sudden hyperextension and flexion of the neck, in young people often is a result of a car accident produced by a collision from behind as by a fast moving vehicle and in elder people by accidental falls.

The whiplash's prevalence never has been studied and the actual incidence neither has been studied prospectively. Although, we accept it is frequent.

The whiplash's incidence varies all around the world, thus does not exist agree in the literature about the natural current of the sickness.

Clinic Case

Patient with 41 years-old man, previously in good health, who suffered an accidental fall in his house, beating on his nose and with doubtful loss of conscience got into the hospital, walking and bleeding for the injury that has in his nose and without neurologic lesion. After a complete physical examination, complementaries proves were made: X-Ray of cervical spine and nose bones, blood test.

After confirm the suspected diagnosis of fracture nose by simple X-Ray, a Cranioencephalic Computed Tomography (CT) was made where were fracture and sinking of the nasal pyramid and fracture of the left lacrimonasal duct. No cranioencephalic injury.

While the patient was in the Observation Room in Emergency Department, waiting for the nose specialist, began to feel a level neckache, suspecting initially a whiplash that in the following minutes progress to an hypoesthesia in both hands.

He came back to the Radiology Department for a Cervical CT: Spondylosis in C4-5 and minimal osteophytes that decreased the spinal duct.

After this the Magnetic Resonance (MR) detected an edema from C4 to C6 and spinal stenosis.

During the process of the imaging proves, the hypoesthesia progressed, becoming the patient in few minutes quadriplegic.

Immediately we was taken back to the Emergency Department and treated with big doses of Methylprednisolone during 2days and decreasing doses during 10days more, did not develop complications concerning to corticoids. Eleven days after the accident he began again to move progressively his arms and legs. One month later he began to walk with the help of a walking stick.

Discussion

The interest of this case lies in the absence of knowledge about the evolution of a whiplash that initially seems to be banal and end with a very serious complication. Fortunately based in our own experience we know whiplashes are banal sickness that bothers to the patients producing pain.

Is this a real pain or is just a Neurosis Rental?

How long should be the observation in this kind of patients after the diagnosis of whiplashes?

What percent of the people who suffer this kind of injury develop serious complications?

Many of you should be thinking about the use of methylprednisolone, but that is a topic of another case.

P609

Neurology

PHENYTOIN INDUCED DYSTONIA: CASE PRESENTATION

T Acar (1), G Alkan (2), H Caksen (2), M Ergin (1), S Kocak (1), B Cander (1)

1. Emergency department, University of Necmettin Erbakan, Meram Medical Faculty, Konya, Turkey
2. Pediatrics department, University of Necmettin Erbakan, Meram Medical Faculty, Konya, Turkey

Corresponding author: Mr Acar Tarik (drtarikacar@gmail.com)

Key-words: PHENYTOIN ; DYSTONIA ; ACUTE REACTION

BACKGROUND: Beside the fact that the underlying neuro-chemical pathology is not known, the abnormalities of dopaminergic activity in basal ganglia is emphasized to be effective at dystonia. CASE: 2.5 year-old male patient was admitted to hospital as a result of whole body contraction lasting approximately for 5 min and repeating 4-5 times in one hour. The patient, who was born 2900 grams by spontaneous vaginal delivery, and with normal development stages, did not have a declared medical history. The 11-year-old brother of the patient with non-kin parents was diagnosed with epilepsy at the age of four and takes sodium valproate. In brain MR test of two months ago, a slight increase was monitored at centrum semi-ovale level and bilateral forceps major levels in white matter T2 dominated images ad flair images. It was thought that myelination did not complete its development in white matter. As a result of detecting bilateral generalized sharp wave paroxysm, sodium valproate 20 mg/kg was started. Rectal diazepam was medicated to the patient who consulted, 1 month later, with the complains of whole-body-contraction and trismus. 20 mg/kg phenytoin was given to the patient whose attacks could not be got under control. The child-patient, who has status, was taken into intensive care unit and midazolam infusion was started. Afterwards, the patient, whose attacks were under control, was given less midazolam given to the patient, whose attacks were under control, was decreased gradually, phenytoin was conducted. 20-mg/kg phenytoin was given to the patient whose attacks could not be got under control. The child-patient, who has status, was taken into intensive care unit and midazolam infusion was started. Afterwards, midazolam was given the patient, whose attacks were under control, was decreased gradually, phenytoin was conducted. After 1-month-phentyoin and sodium valproate-treatment, the child-patient re-consulted emergency department due to generalize tonic-clonic attacks repeating every 5 minutes and 10 times a day. Physical findings were temperature 36.7, blood pressure 95/55 mmHg, pulse 95/minute, pulse saturation 98%, closed front fontanel, equal size pupils, no neck stiffness, no pathologic reflex, normal activity of deep tendon reflex and muscle strength 5/5 for all extremities. Laboratory results were glucose 90 mg/dl, urea 33 mg/dl, creatinine 0,4 mg/dl, sodium 137 mg/dl, potassium 5.1mEq/L, calcium 10 mg/dl, magnesium 2.4 mg/dl, white blood cell count 12.000, hemoglobin 12, thrombocyte 423.000. Phenytoin 20 mg/kg was given to the patient. At the 12th hour of the patient follow-up, dystonic movements were seen at the patient's legs and arms. Biperiden hydrochlorur (0.04 mg/kg) intramuscular was medicated to the patient. At the 10-15th minute of the follow-up, dystonic movements disappeared and as a result of dystonia connected to phenytoin was considered, phenytoin was discontinued. Primidon was added to the treatment. Attacks and dystonic movements were not seen at the patient-follow-up. There was bilateral generalize slow wave paroxysm with high amplitude at EEG. There were rarely appearing sharp wave bilateral generalize paroxysm at bilateral front center sides. After 2-day-follow-up at the hospital, the patient with no dystonia and attacks

was discharged from the hospital. **CONCLUSION:** It is informed that acute dystonic reaction not only grows as a result of metoclopramide but also with the usage of diazepam, chloroquin, phenytoin, carbamazepine, cocaine, codeine along with antihistamines, expectorants, decongestants. If the possibility of acute progressing dystonic reactions connected to side effect of medicines is not considered, it may be difficult to diagnose accurately. Acute dystonic reaction may be often mistaken with some other illnesses such as meningitis, encephalitis, hypocalcaemia and hypomagnesaemia, hypoventilation, epilepsy, hysteria, tetanus, insect or scorpion biting

P610

Neurology

AN UNCOMMON CAUSE OF STROKE: VERTEBRAL ARTERY DISSECTION

YA Altuncu (1), C Çınar (2), K Kadam (1), S Kıyan (1), E Tavas (1)

1. Emergency Department, Ege University Faculty of Medicine, İzmir, Turkey
2. Interventional Radiology, Ege University Faculty of Medicine, İzmir, Turkey

Corresponding author: Melle Tavas Ayşe Ece (ecetavas@gmail.com)

Key-words: Vertebral artery dissection ; Stroke ; Neurology

Yusuf Ali Altuncu, Ayşe Ece Tavas, Selahattin Kıyan, Koray Kadam, Celal Çınar

An uncommon cause of stroke: Vertebral artery dissection

Introduction:

Vertebral artery dissection (VAD) is a lesser known but significant cause of stroke in young, healthy people. An expanding hematoma in the vessel wall is the root lesion in VAD. The annual incidence of spontaneous vertebral-artery dissection can be estimated at 1 per 100,000 to 1.5 per 100,000. Our aim is to emphasize that vertebral artery dissection might be the underlying etiology in a young stroke patient

Case 1:

Twenty-four years old male with no prior medical history presented to the emergency department with numbness and weakness at the left upper and lower limb, which he recognized when he woke up. His vital signs were within normal limits. Neurological examination findings were left hemi hypoesthesia, 2/5 and 4/5 loss of motor function on the left upper and lower limbs consecutively, positive left Babinski reflex, right truncal ataxia, impairment of vibration sense at left side. The ECG was in normal sinus rhythm and laboratory tests showed no pathological results. Cranial computerized tomography(CT) and carotico vertebral artery doppler ultrasound were ordered, radiologists reported a suspected area of acute ischemic stroke at right bulbous of brain stem. The patient was started on enoxaparin treatment with the diagnosis of stroke. Cranial MRI and angiography showed right bulbar paramedian infarct and right vertebral artery dissection. The patient was admitted to neurology service ward.

Case 2:

Discussion:

We planned to do the discussion through Case 1. Vertebral artery dissection (VAD) is an increasingly recognized cause of stroke in patients younger than 45 years (1). Similarly our patient was 24 years old. Risk factors for VAD include spinal manipulation, ceiling painting, nose blowing, minor neck trauma, hypertension, oral contraceptive use, intrinsic vascular pathology, fibromuscular dysplasia, cystic medial necrosis, female sex(1). However, our patient was male and had none of the following risk factors. Computer tomography scanning, four-vessel cerebral angiography, magnetic resonance imaging and magnetic resonance angiography

are the imaging modalities that can be used to diagnose VAD. Anticoagulation or antiplatelet therapy is the mainstay of treatment for spontaneous or traumatic dissections and will reduce the risk of stroke (6). The patient usually presents with severe occipital headache and posterior nuchal pain following a recent, relatively minor, head or neck injury(3). Pain was not among his complaints. Patients with vertebral artery dissection most commonly report symptoms attributable to lateral medullary dysfunction (ie, Wallenberg syndrome) (1). Ipsilateral facial dysesthesia (pain and numbness) is the most common symptom (4). Patient history may include dysarthria or hoarseness, ipsilateral loss of taste, hiccups, contralateral loss of pain and temperature sensation in the trunk and limbs, vertigo, nausea and vomiting, diplopia, unilateral loss of hearing. Rarely, patients may present with the symptoms of medial medullary syndrome: contralateral weakness or paralysis, contralateral numbness and dysphagia (1). Our patient had left hemihypoesthesia and hemiparesia, right truncal ataxia and impaired vibration sense on the left side. The imaging modalities revealed a right bulbar infarct due to right vertebral artery dissection. VAD has been associated with a 10% mortality rate in the acute phase. Death is the result of extensive intracranial dissection, brainstem infarction, or subarachnoid hemorrhage.(1). Those who survive the initial crisis do remarkably well, seldomly having long-term sequelae (1). After fourteen days of hospitalization patient could walk without assistance. If the patient was misdiagnosed as acute ischemic stroke and given fibrinolytics, the outcome could have been catastrophic and even mortal. Therefore it is important to exclude vertebral artery dissection before treating a stroke patient with fibrinolytics.

Conclusion:

Vertebral artery dissection is a disease that presents with common symptoms especially in young patients. Therefore, the clinician must always keep in mind that underneath common symptoms might be an uncommon cause.

P611

Neurology

ACUTE LITHIUM INTOXICATION

B. IŞIK (1), E. Kadioğlu (2)

1. Emergency department, State hospital of Aydın, Aydın, Turkey
2. Emergency department, D.P.Ü Evliya Çelebi Training and Research Hospital, Kütahya, Turkey

Corresponding author: Melle Isik Bahar (drbaharisik7@gmail.com)

Key-words: Lithium intoxication ; Bipolar disorder ; Emergency department

Objective: Lithium is used for depression, gout, neutropenia and cluster headache's prophylaxis since 1870's. But due to its side effects it has been used to treat bipolar disorder nowadays. To be used by a population at risk group lithium intoxication is common. Because of its narrow therapeutic index a slight change in the patient's health status or a change in drug utilization can lead to intoxication. Even it is thought to be a rare situation that can be seen in the emergency department we wanted to make a report of case to show that it can be relatively common and can result in death.

Findings: 45-year-old female patient with bipolar disorder for 23 years was brought to the emergency department by 112 emergency service vehicle. Her consciousness was blurred and she was lethargic. The patient's relatives said that the patient had not eaten anything for two days and she had not taken her meds, she handed out the pills and foods which are given her by force. She had nausea and vomiting for two days. There were tremors and convulsions especially in her hands and in her all body. And she had

a seizure. The relatives expressed the patient had not recognized themselves lately. The patient was not exposed to any trauma. A week before the patient's drug use was reorganized by her doctor. The patient was taking all lithium, biperidene HCL, valproate sodium and haloperidol with a prescription arranged according to the hours for a week. In her routine blood tests urea value was 178mg/dl, creatinin 5,6 mg/dl, sodium was 165 mEq/l. Potassium 5,2 mEq/l, CKMB 80, calcium 9,5 mg/dl, AST:87U/l, ALT30 U/l WBC 20400/μl, troponin 0,208ng/ml. On her electrocardiographic exam long QT interval, T wave inversion and minimal ST depression were present. Blood Ph was 7,3, blood HCO₃ was 18,2. Blood lithium level which can be obtained after about 36 hours was 1,8 mEq/l. Immediately hemodialysis was performed for the patient and was admitted to medical intensive care unit. But there were no improvement in patient's condition so she referred to a transplantation center for possibility of transplantation.

Discussion: Lithium has a delayed distribution and its toxicity is not correlated with serum drug concentration clearly. Lithium accumulate in the cerebral white matter. Renal disfunction, sodium depletion, NSAID's and some diuretics by reducing renal excretion and antidepressants, neuroleptic drugs by increasing the intracellular concentration aggravate the toxicity of lithium. Toxicity will occur in patients receiving long term lithium treatment at any time by 75-90%. The half life of the drug excreted renally is 12-27 hours. Its therapeutic range is 0,6-1,2 mEq/l. On the value of 1,5 mEq/l toxicity starts. In mild intoxication lethargy, drowsiness, coarse tremor in hands, muscle weakness, nausea and vomiting occur. In severe intoxication there can be impaired consciousness, hyperactive deep tendon reflexes, seizures, syncope, renal failure and coma. Lithium intoxication can create ST depression, T wave abnormalities, hypothyroidism, hypothermia or hypercalcemia. The actual treatment is hemodialysis. Activated charcoal is ineffective. Irrigation with ethylene glycol is minimally effective. Conclusion: In patients presenting emergency department with neurological symptoms and if they also have psychiatric complaints, lithium intoxication which frequently seen should be considered.

P612 Neurology

THE RETROSPECTIVE ANALYSIS OF CASES OF MULTIPLE SCLEROSIS IN EMERGENCY DEPARTMENTS AT TURKEY

M Gul (1), FE Visneci (1), M Ergin (1), F Altunay (1), A Batur (2), S Kocak (1), AS Girisgin (1), B Cander (1)

1. Emergency Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

2. Radiology Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

Corresponding author: Mr Ergin Mehmet (drmehtemergegin@gmail.com)

Key-words: Multiple sclerosis; Emergency department; Neurodegenerative diseases

BACKGROUND: Multiple sclerosis is the most common cause of neurological disability in young adults after trauma. In this study we analyzed demographic, clinical and radiological results of MS in an academic emergency department. MATERIAL-METHOD: The study was conducted at Necmettin Erbakan University Meram Medicine Faculty Emergency Department. The hospital data system was searched and demographic features, patients' complains, laboratory and radiological imaging results and result of ED visits were recorded. RESULTS: The study included 67 patients. Female ratio was 80.6% of all. The age distribution of patients was that 79.1% between 21-40 year old; 13.4% between 0-20 year old and 7.5% <40 year old. The most common complains presenting at ED

was numbness of extremities (41.9%), vertigo (21.6%) and visual complains (18.9%). In terms of magnetic resonance imaging results, there were 37 (53.6% patients having old and new findings for Multiple Sclerosis, 26 (37.7%) with old findings for MS. CONCLUSION: Since there is a considerable variability in clinical, laboratory and radiological features of MS, it is difficult to diagnose. However, emergency physicians should be familiar with neurodegenerative diseases.

P613 Neurology

IMPACT OF QUALITY APPROACH IN TRANSIENT ISCHEMIC ATTACK CARE IN EMERGENCY DEPARTMENT.

M Perennes, D Rousseau, S Giese, J Bouget, A Bellou

Emergency Department CHU Pontchaillou, Rennes, France

Corresponding author: Mr Perennes Mathieu (mateorital@hotmail.com)

Key-words: impact of a protocol; TIA's Management; guidelines

Introduction:

Risk of stroke after Transient Ischemic Attack is very high (20%). Since 2007 new guidelines of management of TIA are proposed, insisting on the urgency of management to reduce risk of stroke. According to these guidelines, we evaluated the impact of a protocol of management of TIA in ED.

Method:

187 patient files were analyzed in 2008 and 2009 using a before and after methodology of evaluation of professional practice. The first clinical assessment was performed by an emergency physician (EP), then by a neurologist who decided which investigation to realize. Therapeutic decision and orientation were defined in association with the EP. The protocol was explained and spread to the ED doctors after the first period.

Results:

Ten criteria were evaluated. The number of brain MRIs (0 in 2007 vs 5 in 2008, p=0.02) and vascular imaging (28 in 2007 vs 38 in 2008, p=0.046) increased after implementation of the protocol. The number of neurological expertise increased (6 in 2007 vs 16, p=0.05) but remains low. The delay to obtain imaging, ED care and ED length of stay were not improved (4:59 h in 2007 vs 4:07 h in 2008, 2:02 h in 2007 vs 2:07 h in 2008, 11:22 h in 2007 vs 10:03 h in 2008, respectively). Initiation of aspirin or clopidogrel did not increase (57 in 2007 vs 49 in 2008).

Conclusion:

Diagnostic investigation is more in compliance with the guidelines but the protocol did not improve the therapeutic management of TIA. Other factors must be determined to optimize the application of recommendations, as for example the use of computerized reminders at real time.

P614 Neurology

THE RELATIONSHIP BETWEEN THE INITIAL LEVEL OF GLUCOSE AND WHITE BLOOD CELL WITH THE PROGNOSIS AT THE PATIENTS ADMITTED TO THE EMERGENCY DEPARTMENT WITH CEREBROVASCULAR DISEASES

F Büyükcım (1), UY Çavuş (2), A Ceylan (1), AB Erdem (1), U Kaya (1)

1. Department of Emergency Medicine, Diskapi Yildirim Beyazit Training&Research Hospital, Ankara, Turkey
2. Department of Emergency Medicine, Diskapi Yildirim Beyazit Training&Research Hospital, Ankara, Turkey

Corresponding author: Mr Büyükcam Fatih (fatihbuyukcam@gmail.com)

Key-words: cerebrovascular disease ; white blood cell ; mortality

Introduction: Among adult neurological diseases, cerebrovascular diseases (CVD) are common and important. Therefore, to fight against the preventable prognostic factors in these patients has an important role in reducing the severity of the disease.

Material and Method: In our study, during the six-month period, 98 patients hospitalized at the neurology services after the first evaluation at the emergency department were examined retrospectively. Their glucose levels and white blood cell (WBC) counts are recorded and the relationship of them with mortality was researched.

Results: 43 (43.9%) of the patients were male, M:F ratio was 0.78. Median of the age was 73 (37-99 range). 87 (88.8%) of the patients diagnosed as ischemic CVD and others were hemorrhagic CVD. Diabetes mellitus was present at admission at 27 (27.6%) of the patients. Brain computed tomography (BCT) was applied 94 of the patients, other patients were diagnosed with physical examination and magnetic resonance imaging (MRI). 60 (63.8%) of the BCT were normal, 23 (24.4%) of them were reported as ischemia and 11 (11.7%) were hematoma. MRI was performed for 53 of the patients, ischemia was seen 52 (98.1%) of them and one of the patient was diagnosed as CVD only with physical examination. In hospital 19 (19.4%) of the patients has died, 65 (66.3%) of them were discharged with sequel and 14 (14.3%) of them without any complication or sequel. Mean value of WBC was 9.30 ± 3.31 ($10^3/\mu\text{L}$) in ischemic CVD and 10.05 ± 5.45 ($10^3/\mu\text{L}$) in hemorrhagic CVD group, there wasn't any statistical difference ($p=0.514$). Mean value of glucose was 144.32 ± 56.78 mg/dL in ischemic CVD and 131.27 ± 59.15 mg/dL in hemorrhagic CVD group, there wasn't any statistical difference ($p=0.272$). Glucose levels of dead and alive patient group were similar ($p=0.327$). The WBC values of dead patient group was higher than the alive patient group ($p=0.003$). In alive patient group, there wasn't any difference of WBC between patient with and without sequel. There wasn't any relationship between type of CVD (ischemic or hemorrhagic) and prognosis (0.263).

Discussion: Some of the hematologic parameters has important role on cerebral microperfusion and regulation of perfusion (1-2). Leucocytes contribute the onset and continuation of ischemic CVD and elevations in leukocytes may be independently associated with markers of subclinical atherosclerosis and increased risk of ischemic stroke (3-4). Güven et al reported that the WBC count at admission of ischemic CVD is associated with initial clinical picture and ischemia severity. Also the WBC count in the first 12 hours is a good prognostic predictor of mortality (5). In our study we also reported the relationship between the initial WBC count and the mortality.

Although the influx of leukocytes into injured ischemic tissue and the subsequent hemorheologic and biochemical reactions that could contribute to ischemic damage are believed to represent a response to the existing injury, the possibility that white cells may also play a role in the chain of events leading to the impairment of cerebral circulation and then to the induction of the ischemic event has been suggested. This hypothesis is also supported by the evidence that an elevated white blood cell count is a predictor of cerebral ischemia (6).

In conclusion, the increased level of the white blood cells of patients diagnosed with CVD were considered to be an important role in the severity of the disease.

P615

Obstetric Emergencies

ACUTE ABDOMEN SECONDARY TO SPONTANEOUS RUPTURE OF UTERINE VARICOSE VEIN IN THE SECOND TRIMESTER OF PREGNANCY . CASE REPORT AND RETROSPECTIVE REVIEW OF PREGNANT WOMEN PRESENTED WITH ACUTE ABDOMEN TO A MIDDLE SIZE EMERGENCY DEPARTMENT.

Zs Erdélyi, Z Kákonyi, F Rupp, I Szabó, L Zag

Emergency Department, County Hospital of Kecskemét, Kecskemét, Hungary

Corresponding author: Mme Erdélyi Zsuzsanna (erdelyizs@kkm.hu)

Key-words: rupture of uterine vein ; acute abdomen ; pregnancy

Background: The diagnosis and management of acute abdomen in pregnant women presented to the emergency department (ED) is a difficult task for the physicians. The physiological and anatomical changes during pregnancy can make the diagnosis of acute abdomen even more difficult. There are several non-obstetric conditions leading to acute abdomen: appendicitis, acute pancreatitis, ileus, liver or spleen rupture, perforation of peptic ulcer and obstetric conditions including rupture secondary to extra-uterine pregnancy, placental abruption and hemorrhage of arteries or veins of genitourinary organs. Rupture of uterine vein is a rare condition but it can be serious complication of pregnancy. Prompt diagnosis is essential for early management and it can reduce morbidity and mortality rates in mothers and babies as well.

Objective: The aim was to evaluate the number and the underlying causes of acute abdomen among pregnant women presented with abdominal symptoms to our ED. In addition, present a case history of a pregnant woman with acute abdomen secondary to rupture of uterine vein in emergency department.

Methods: Retrospective review of medical records of pregnant women presented with symptoms of acute abdomen to our ED between 01.01.2007-30.04.2012. Physical examination, vital sign assessment, laboratory tests, abdominal ultrasound and urine test were performed in every case of pregnancy with acute abdomen.

Results and case report: The number of pregnant women presented to our ED in the study period was 337. 198 patients had abdominal symptoms from which 24 patients had acute abdomen. The non-obstetric cause of acute abdomen in pregnancy were: appendicitis (9 cases), pancreatitis or acute cholecystitis (9 cases) and complication of peptic ulcer (3 cases). The obstetric cause of acute abdomen in pregnancy were tubarian rupture due to ectopic pregnancy (2 cases) and rupture of uterine vein (1 case).

We report the case of a 32 year-old twin pregnant women who was admitted for sudden onset of abdominal pain. Physical examination, vital sign assessment, laboratory tests, abdominal ultrasound, gynecological and surgical examination were performed during ED staying. Due to results of the tests surgical exploration was performed which identified the ruptured vein of the uterus, the bleeding was stopped by suture. After successful operation she was admitted to the intensive care unit later to the gynecologic department.

Conclusion: Almost half of pregnant women presented to our ED had abdominal symptoms and the small part of them requires early surgery. Qualified and experienced emergency physicians are needed for differential diagnosis and appropriate treatment. Collaboration between other specialties (including ambulance, surgery, gynecology, radiology) is essential.

P616

Obstetric Emergencies

PULMONARY EMBOLISM IN PREGNANCY

HM Durgun, M Icer,

E Ozcete, A Ozhasenekler, E Tektas

Emergency Department, University of Dicle, Medical School, Diyarbakir, Turkey

Corresponding author: Mr Ozhasenekler Ayhan (drhasenek@hotmail.com)

Key-words: pregnancy ; pulmonary embolism ; emergency

INTRODUCTION: Pregnancy is a physiologic process in which thromboembolic complications increase. Although uncommon, pulmonary embolism is important due to maternal mortality and morbidity.

CASE: A 40-year-old and 8-week pregnant female patient presented to emergency department with 5-day dyspnea and chest pain. Her general status was moderately stressed; she was conscious, cooperated and tachypneic. Her vital signs and systemic examination were otherwise normal. Her ECG showed sinus tachycardia without ST-T changes. Her mediastinum and cardiothoracic index on chest x-ray were of normal width, costophrenic sinuses were patent, and no parenchymal pathology was present. Her D-Dimer was 3,24 mg/L (0-0,55). Her arterial saturation on room air was SO₂:84%. Her arterial blood gas analysis on oxygen therapy revealed the following: Ph:7,49 PO₂:128,3 mmHg PCO₂:28,3 mmHg SO₂:98,8 % HCO₃:22 mmol/L. Echocardiography demonstrated mild tricuspid insufficiency with pulmonary hypertension (PAPs: 48 mmHg). Her bilateral lower extremity Doppler USG was normal. With the initial diagnosis of pulmonary embolism she underwent Thorax angio CT which revealed pulmonary arterial emboli bilaterally in the lower lobe and segmentary branches in the upper and middle lobe segmentary branches. She was admitted to chest diseases intensive care and begun on thrombotic therapy.

DISCUSSION: The most feared manifestation of venous thromboembolism (VTE) is PTE, a common entity with a mortality of 30% if untreated, mainly due to recurrence. Oral anticoagulation (OAC) at therapeutic doses within 24 hours reduces mortality to 2-8%. In-hospital mortality is 5-17% in patients who present evidence of RV dysfunction at diagnosis and 20-30% in those with hemodynamic compromise.

VTE, which includes DVT and PTE, is the leading cause of maternal death (20%) in developed countries, accounting for 1.2-4.7 deaths per 100 000 pregnancies. The precise incidence of VTE is unknown but is estimated at 0.5-2 cases per 1000 pregnancies. The risk is greatest in the first three weeks after birth by cesarean section, but the risk is still high between the third and sixth week after delivery and is the same as during pregnancy. From the sixth week the risk is the same as for non-pregnant women.

The clinical features of VTE can be frustratingly difficult to evaluate, since most healthy pregnant women have lower limb edema and up to 70% suffer from shortness of breath during pregnancy. Diagnosis of VTE, and particularly PTE, requires a high index of clinical suspicion, based on predisposing conditions and risk factors (in the case presented, these included overweight, pregnancy at age over 35, thrombophilia, immobility during a flight, and initial symptoms in the left leg compatible with DVT). Laboratory results such as respiratory alkalosis or elevated fibrin degradation products are also commonly found in healthy pregnant women; levels of the latter increase with gestational age and reach a maximum at the time of birth, but such tests should be performed due to their ability to exclude disease and to avoid unnecessary exposure to ionizing radiation.

A major problem with diagnosis of PTE is clinicians' reluctance to expose the fetus to ionizing radiation, often due to overestimation of the risk of harm. When faced with the clinical probability of PTE, the primary diagnostic modalities are pulmonary ventilation-perfusion scintigraphy (VPS) and thoracic CT. The estimated radiation dose from CT absorbed by the fetus is 0.003-0.13 mGy, while from VPS it is 0.2 mGy. There is no evidence that doses of up to 50 mGy lead to fetal abnormalities, low IQ, growth restriction or miscarriage. Less radiation is absorbed by the mother's mammary and pulmonary tissue with VPS than with CT. Although VPS and CT appear to be safe for the fetus, it should be noted that some studies suggest that exposure to low radiation doses in utero can increase the risk of childhood leukemia (1 in 2000 compared to the baseline risk of 1 in 2800), which does not compare with the risk of maternal death from undiagnosed and untreated PTE (15%).

CONCLUSIONS: Pulmonary thromboembolism is common in pregnancy and is associated with significant maternal morbidity and mortality. It should always be considered in the presence of suspicious symptoms and signs and confirmed by appropriate diagnostic exams, including VPS or CT.

P617

Obstetric Emergencies

ANALYSIS OF PREGNANT CASES ADMITTING TO THE EMERGENCY SERVICE

A Guler (1), S Karadas (2), N Kurt (2), G Zirhiloglu (3)

1. Obstetrics and Gynecology, Yuzuncu Yil University Medical Faculty, Van, Turkey

2. Emergency Medicine, Yuzuncu Yil University Medical Faculty, Van, Turkey

3. Measurement and Evaluation, Yuzuncu Yil University Education Faculty, Van, Turkey

Corresponding author: Melle Guler Ayse (doctorayseguler@yahoo.com.tr)

Key-words: emergency service ; pregnancy ; retrospective analysis

Objective: In this study, investigation of pregnant cases admitted to the emergency service in terms of age, gravidity, parity, miscarriage, gestational age, complaint at admission, diagnosis, treatment results and duration of hospitalisation was aimed.

Design: Data between 01.06.2010 and 01.06.2011 was collected by screening the hospital registrations and emergency record book retrospectively. SPSS 15.0 package programme was used for statistical analyses of the data. Kolmogorow Smirnov test was used to check the dispersion of variables to be compared between the groups. The level of 0.05 was considered as significant. Since the registrations were insufficient, 141 cases were excluded from the study. 1254 pregnant cases were grouped into 3 according to the age as group 1 (n=218); ≤20 year-old, group 2 (n=767); 21-35 year-old and group 3 (n=269); ≥36 year-old. According to the gestational week, the cases were further divided into 4 as group 1 (n=81); ≤12 weeks, group 2 (n=96); 13-24 weeks, group 3 (n=595); 25-36 weeks and group 4 (n=482); >36 weeks.

Results: Ages were between 14-52 years and the mean age was found as 29,32±7,5 year-old. According to the age, the most frequently seen diagnoses were preterm labor (n=43, 19.8%) in group 1, hypertensive disorders (preeclampsia, eclampsia, chronic hypertension, gestational hypertension, HELLP) in group 2 (n=185 (24.2 %) and group 3 (n=102 (38.1%)). On the other hand, the least frequently encountered diagnoses in group 1 and group 2 were systemic diseases (n=0 (0%) and n=5 (0.7 %), respectively) and in group 3 were trauma and intoxications (n=3, 1.1%).

In terms of gestational week, the most frequently made diagnoses were; vaginal bleeding (n=25 (31,3%)) in group 1, genitourinary system infections (n=29 (30.5%)) and neurological disorders (n=12 (12.5%)) in group 2, hypertensive disorders (n=174 (29.3%)) in

group 3 and term pregnancies with labor (n=190 (39.5%)) in group 4.

Of the cases, 977 (78%) were hospitalised, 199 (15.9%) were outpatient, 63 (5%) declined any treatment and 15 (1.1%) were referred to other centers for various reasons. According to the treatment results of hospitalised cases, 321 pregnant were delivered by cesarean, 365 were by vaginal delivery and 291 cases were undergone medical treatment. Of the 686 cases who delivered, 25 had twin pregnancy. Dead fetuses were delivered in 37 births. Of these dead-fetuses, 33 were at 24-36 weeks, 4 were at 36-42 gestational weeks. Of the neonates, 382 were male and 292 were female babies. The mortality was found as 3/1254 (0.2%). Conclusions: Considering all pregnant cases at emergency service in our hospital during 1 year, emergency admissions were found to be the most frequent at 24-36 gestational weeks. The most frequent diagnosis was the normal labor at term followed by gestational hypertensive diseases. In accordance with literature, hypertensive disorders were diagnosed mostly at 24-36. gestational weeks. A pregnant woman applying to the emergency service should always be evaluated by an obstetrician as well following the first examination by the emergency service doctor.

P618

Obstetric Emergencies

LAPAROSCOPIC TREATMENT OPTIONS OF CORNUAL ECTOPIC PREGNANCY

YK Akpak (1), I Gün (2), N Kaya (2), V Atay (2), U Savaşçı (3), U Kaldırım (4)

1. Department of Obstetrics and Gynecology, Sarıkamış Military Hospital, Kars, Turkey
2. Department of Obstetrics and Gynecology, GATA Haydarpaşa Training Hospital, İstanbul, Turkey
3. Department of Infectious Diseases and Clinical Microbiology, Sarıkamış Military Hospital, Kars, Turkey
4. Department of Emergency Medicine, Gülhane Military Medical School, Ankara, Turkey

Corresponding author: Mr Akpak Yasam Kemal (yasamaster@gmail.com)

Key-words: Cornual ectopic pregnancy ; Laparoscopy ; Cornual resection

Introduction

Ectopic pregnancy is a serious morbidity alone. We should be kept the clinical diagnosis in mind in the diagnosis of women presenting to the emergency department with vaginal bleeding. Cornual or interstitial ectopic is a pregnancy that implants in the intrauterine part of fallopian tube. It makes this disease more rare but the most dangerous type. The incidence of cornual ectopic pregnancies is 1-2 % of all ectopic pregnancies. Cornual ectopic pregnancies can cause excessive bleeding with sudden rupture of the cornua, which is a vascular portion of the fallopian tube. Until recently, cornual ectopic pregnancies has been treated by laparotomy with hysterectomy. We wanted to emphasize the laparoscopic treatment options of cornual ectopic pregnancy with this case.

Case Report

The patient was admitted to emergency department with pelvic pain and vaginal bleeding over the last one day. She was 29-year-old and her last menstrual period was passed 17 days. The patient had no previous pregnancy. The patient's general condition was variable, she had a state of hypotension and her pulse was weak. She had vaginal bleeding, abdominal tenderness and rebound on pelvic and abdominal examination. There were mass in the right cornual region with dimensions of 33x38 mm and massive free fluid in douglas on the transvaginal ultrasonography also the endometrial cavity was empty. The patient was operated by laparoscopic surgery with the diagnosis of cornual ectopic pregnancy. Right cornual pregnancy was ruptured and active bleeding was observed during the operation. We wanted to protect

the right fallopian tube for fertility but taking into consideration the patient's hemodynamic status, superficial cornual resection and complete salpingectomy were performed and after that the bleeding was controlled.

Discussion

Conservative approach can be applied in the treatment of unruptured interstitial pregnancy. There are two important factors in the surgical treatment of this troubled type of ectopic pregnancy. These are, the patient's desire about fertility and do not damage to the uterine wall. Laparoscopic cornuostomy, salpingostomy or corneal wedge resection may be tried for unruptured cornual pregnancies' treatment but cornual resection, laparotomy or hysterectomy options should be kept in mind in ruptured cornual ectopic pregnancies with active bleeding. If cornual resection is superficial, suture may not be required. However, suture should be used in deep myometrial resections. The risk of uterine rupture in vaginal birth must be explained to these patients when discussing the mode of delivery.

P619

Obstetric Emergencies

COMPARISON OF ECTOPIC PREGNANCY TREATMENT MODALITIES IN A TERTIARY CENTER: FIVE-YEAR EXPERIENCE

M Albayrak (1), I Biyik (1), A Karatas (2), F Keskin (1)

1. Obstetrics and Gynecology, Duzce University, Duzce, Turkey
2. Obstetrics and Gynecology, Duzce University Medical Faculty, Duzce, Turkey

Corresponding author: Mr Saritas Ayhan (a_saritas_@hotmail.com)

Key-words: ectopic pregnancy ; methotrexate therapy ; surgical treatment

Background: Ectopic pregnancy (EP) is the leading cause of maternal mortality in first trimester. It constitutes 75% and 9% of pregnancy related deaths in first and all three trimesters, respectively.

Objectives: The aim of this study was to review and analyze the outcomes of various treatment modalities and predictors of success in women with EP with a special focus on un-ruptured tubal pregnancies treated in our clinic.

Methods: 124 women diagnosed with EP were included into the study. 7 were excluded because of the incomplete records, and 11 were excluded because an aborting intrauterine pregnancy could not be excluded. Remaining 106 were found eligible for inclusion into analysis. All the cases were subdivided into three groups as management: expectant (group I); medical with methotrexate (group II) and surgical (group III). Demographic characteristics were analyzed and success rates between groups were compared.

Results: Group I, II and III consisted of 21, 46 and 39 women, respectively. Mean age of women was 30.5±5.3 years and mean gestational age was 42.3±18.8 days. β -hCG levels were significantly higher in group III than group I and group II with a level of 2337 mIU/mL (range, 287-9803), 713 mIU/mL (range, 67-2449) and 1017 mIU/mL (range, 124 - 9328), respectively (P for group I vs. III <0.001, P for group II vs. III = 0.004). Mean time to resolution of β -hCG in expectant, medical and surgery groups were 20 (11 - 60), 27.5 (12 - 49), and 20 (10 - 47) days, respectively with a significance only between medical and surgery groups. Surgery was more successful than expectant and medical managements (97% vs. 66.7%, and 97% vs. 81.6%).

Conclusion: According to this study, the highest success rates observed with surgical treatment. But, based on this study, expectant and medical treatment may eliminate the need for surgery for the treatment of EP especially in women who wish to preserve their fertility.

P620

Obstetric Emergencies

LIFE-THREATENING COMPLICATIONS OF CLANDESTINE VOLUNTARY INDUCED ABORTION DEPEND ON ABORTIVE METHOD

T RASOLONJATOVO (1), P JABRE (2), B VIVIEN (3), B RAKOTOAMBININA (4)

1. Anesthesiology and Emergency Gynecological Obstetric Unit, Antananarivo University Hospital, Madagascar, Madagascar
2. SAMU de Paris, Anesthesiology and Intensive Care Department, Necker-Enfants Malades Hospital and Paris Descartes University, Paris, France
3. Necker-Enfants Malades Hospital and Paris Descartes University, SAMU de Paris, Anesthesiology and Intensive Care Department, Paris, France
4. Physiology Research Unit, Collaboration Necker-Enfants Malades, Antananarivo University Hospital, Paris, France

Corresponding author: Mr Vivien Benoît (benoit.vivien@nck.aphp.fr)

Key-words: Clandestine voluntary induced abortion ; Life-threatening complications ; Abortive technique

Introduction:

While the liberalization of abortion laws is widespread in developed countries, the voluntary induced abortion (VIA) remains illegal in most Third World countries such as in Madagascar and subsequently generates an underground practice. It is an actual societal phenomenon with dramatic medical complications, validating unsafe abortion concept (WHO). There are scarce malagasy data enabling the appraisal of problem magnitude. This study aims at establishing both epidemiological and clinical profile of women admitted in gynecological emergency unit after clandestine voluntary induced abortion.

Methods:

This is a retrospective study from January 2007 until December 2008 of admitted women for termination of pregnancy in a referred gynecological and obstetric ICU in a university-affiliated hospital of the capital of Madagascar. We excluded medical interruption of pregnancy, molar abortion and declared spontaneous abortion. The analyzed parameters were: age, parity, weeks of amenorrhea (WA), socioeconomic level, abortive methods, microbial agents, and outcome at hospitalization discharge.

Results:

Among 22994 admissions, 419 cases of admitted termination of pregnancy were recorded. The average frequency per year was $18.2 \pm 0.2\%$. The first emergency signs were: vaginal bleeding, common genital infection, sub-occlusion and states of shock. The candidates to VIA were young women 20-30 years old, with a stable partner ($p < 0.0001$), mostly primiparous ($p = 0.012$), with an income reaching 100% of the minimum wage salary ($p < 0.0001$). The rates of hemorrhagic and infectious complications were respectively 61% and 39%.

The drug-induced abortive methods (including herb decoction) were frequently used for the terms < 12 WA (40%, $p < 0.0001$). They led to hemorrhages, which came as 4 clinical profiles: intermittent vaginal bleeding, excessive genital bleeding, placental retention hemorrhage with shock, non-specific hemorrhages with renal failure, icterus and disseminated intravascular coagulopathy (due to commelina madagascariensis herb »). The average hemoglobin level on admission (HemoCue®) was 7.1 ± 1.5 g/dl, and transfusion was required in 70% of the patients.

The invasive mechanical abortive methods were frequently used for the terms ≥ 12 WA (60%, $p < 0.0001$), or when the date of last menstrual period was unknown (50%). They were suppliers of infectious complications. For documented cases, the most frequent

microbial agent germ found was staphylococcus aureus (85%), isolated or in association with anaerobic or gram negative germs. These invasive acts are responsible for high risk infections: pelvipertitonitis (54%), endometritis (45%) and uterus perforation (1%). Empiric antibiotics with broad spectrum were used in 82% of infectious cases. The rate of death from all-causes was 3.4%, i.e. 9.6% of all maternal deaths during the same period.

Conclusion:

This study highlights the occult aspect and the life threatening complications due to clandestine voluntary induced abortion. The method chosen to terminate pregnancy mainly depend on the stage of pregnancy. An algorithm for suspected VIA management must focus on the epidemio-clinical profile of these women and the relevant use of broad spectrum antibiotics. Recommendations against the dangerousness of both drug-induced and invasive mechanical abortive methods must be diffused. Finally, this study strengthens the need for the contraceptive education towards the target public and stakeholders of underground business of VIA.

P621

Obstetric Emergencies

EVALUATION OF MATERNAL-FETAL MORBIDITY AND MORTALITY IN HYPERTENSIVE PREGNANCIES

A Karatas (1), Z Karatas (2), T Sener (3), HM Tanir (3)

1. Obstetrics and Gynecology, Duzce University Medical Faculty, Duzce, Turkey
2. Pediatrics department, Konya University Meram Medical Faculty, Konya, Turkey
3. Obstetrics&Gynecology department, Eskişehir Osmangazi University, Eskişehir, Turkey

Corresponding author: Mr Saritas Ayhan (a_saritas_@hotmail.com)

Key-words: Preeclampsia ; eclampsia ; maternal-fetal mortality and morbidity

Background: Hypertension is the most common systemic disease during pregnancy. Morbidity and mortality increase in both mother and infant when preeclampsia and eclampsia have been developed.

Aims: Evaluation of maternal-fetal morbidity and mortality in hypertensive pregnancies.

Methods: Three hundred and fifty four of 595 patients and babies of these mothers whose data of clinical records and files were available at last ten years in a tertiary center hospital were included in the study.

Results: Among all hypertensive pregnancies 66% were not followed up regularly during pregnancy. The prevalence of hypertension, gestational hypertension, chronic hypertension, severe preeclampsia, eclampsia and HELLP were 7%, 2.8%, 5%, 1.9%, 0.47%, and 0.64%, respectively during pregnancy. Dialysis was required for 4 mothers (1.1%) and seven (2%) were applied ventilatory support at postpartum period. A total of 11 maternal deaths (0.31%) were detected. There were 234 preterm and 120 term labor, and a total 124 infant deaths, of them 23 were in the antenatal period. 197 babies were delivered by caesarean, while 157 babies were vaginally. The mortality rates in caesarean and vaginal deliveries were 24.3%(48/197) and 48.4%(76/157), respectively. Newborns with 1. minute APGAR score ≥ 4 and 5. minute APGAR score ≥ 8 had significantly higher umbilical artery and vein blood pH than the newborns with lower APGAR score ($p < 0.001$).

Conclusions: This retrospective study showed that hypertensive pregnancies predict an important risk for preterm delivery. Also it has an important role in determining perinatal morbidity and mortality. Currently, the only successful treatment is still early diagnosis and delivery.

P622

Obstetric Emergencies

PREDICTORS OF THE NEED OF MASSIVE TRANSFUSION IN PATIENTS WITH POSTPARTUM HEMORRHAGE PRESENTED TO THE EMERGENCY DEPARTMENT

HJ Kim, WY Kim, BJ Oh, DW Seo, CH Sohn

Emergency Department, Asan Medical Center, Seoul, Korea, (South) Republic of

Corresponding author: Mr Sohn Chang Hwan (schwan97@gmail.com)

Key-words: postpartum hemorrhage ; massive transfusion ; emergency department

Background:

Postpartum hemorrhage (PPH) is a major cause of maternal mortality and morbidity worldwide. Early and aggressive use of massive transfusion (MT) patients with postpartum hemorrhage may restore effective intravascular volume, correct coagulopathy, and improves outcomes.

However, early identification of patients who require MT has been difficult and there is no research related to this topic.

The aim of this study was to determine which variables, available early after postpartum hemorrhage, especially in the emergency department, are associated with the need of MT.

Methods:

This was a retrospective cohort study on patients with postpartum hemorrhage presented to the ED of a tertiary care university-affiliated hospital in Korea from January 1, 2004 to May 31, 2012. Patients who required MT (defined as the transfusion of 10 units or more of packed red blood cells) were compared with patients who did not. Demographic, clinical, and laboratory variables obtained upon presentation were evaluated. Univariate and multivariate analyses were performed.

Results:

A total of 238 patients were included in this study. Of these patients, 101 patients received MT. Patients with required MT showed lower systolic pressure ($p=0.000$), diastolic pressure ($p=0.003$), hemoglobin ($p=0.003$), hematocrit ($p=0.004$) and higher pulse rate ($p=0.000$), PT INR ($p=0.000$), lactate values ($p=0.000$), as compared to those who did not require MT. We established a statistically significant association between PT INR > 1.2 (OR=5.46, 95% CI 2.70-11.0, $p=0.000$), platelets $< 138,000/\text{mm}^3$ (OR=3.59, 95% CI 1.82-7.06, $p=0.000$), pulse rate > 108 bpm (OR=2.73, 95% CI 1.39-5.35, $p=0.003$) and the requirement of massive transfusion.

Conclusion:

Our study showed that PT INR > 1.2 , platelets $< 138,000/\text{mm}^3$, pulse rate > 108 bpm were the three parameters that demonstrated the highest association with the requirement of massive transfusion in patients with postpartum hemorrhage presented to the emergency department.

P623

Orthopedics

WHAT PLACE FOR SEDATION IN THE TREATMENT OF SHOULDER DISLOCATION IN EMERGENCY DEPARTMENT?

V. Wauters (1), A. Higuete (2), C. Mélot (1)

1. Emergency department, Hôpital Erasme, Brussel, Belgium
2. Emergency department, AZ Sint-Maria, Halle, Halle, Belgium

Corresponding author: Mr Higuete Adeline (higueteadeline@yahoo.fr)

Key-words: shoulder dislocation ; pain ; emergency

Introduction: It should no longer be permitted to suffer pain a long time in an emergency department. Dislocated shoulder is one of these painful diseases. What scope is there for sedation-analgesia? **Materials and methods:** This represents a bi-centric retrospective observational study. We compared the treatment of dislocated shoulders in two university hospitals. The criteria used were: age, sex, traumatic cause, duration of the treatment, administration of analgesics, administration of sedatives and the speciality of the doctor involved.

Results: The number of patients was 28 for hospital A and 77 for hospital B. The study population was homogeneous and consisted respectively of 64,3% men for hospital A and 65% men for hospital B. Women were older and a traumatic cause was associated with them in 100% of the cases. The reduction of shoulder dislocation was very successful: there were minor complications in only 10,7% of the cases. The administration of Propofol occurred in 35% of the cases treated in hospital A compared to 75% in hospital B. Transit time was 368 minutes in the former hospital against 298 minutes in the latter hospital.

Discussion: The study population was the same in both groups. The painkillers were administered in all cases without accurate information about the doses. We noted a wide disparity in the administration of Propofol between the two hospitals.

Conclusion: Based on a multivariate linear regression analysis of data, it may be concluded that, in addition to decreasing age, Propofol reduces the time spent in the emergency room by 70 minutes in average.

Perspectives: This study could translate into the establishment of a more uniform protocol of care to be agreed upon in agreement with the anaesthesia society.

Such protocol could allow for the administration of Propofol by the emergency physician in the acute treatment of shoulder dislocation for a better comfort for the patient.

P624

Orthopedics

A SURVEY INVESTIGATION OF THE FREQUENCY OF EATING FAST FOOD AND ORTHOPEDIC HEALTH

P Hurd (1), L Myers (2), L Moreno-Walton (3)

1. medical student, Louisiana State University Health Sciences Center, New Orleans, United States
2. Biostatistics, Tulane University School of Public Health & Tropical Medicine, New Orleans, United States
3. Emergency Medicine & Research Genetics, Louisiana State University Health Sciences Center, New Orleans, United States

Corresponding author: Mme Moreno-walton Lisa (DoctorMoreno@gmail.com)

Key-words: orthopedics ; injury ; diet

BACKGROUND: Campaigns to increase awareness about the health risks of obesity have resulted in Americans becoming more aware of healthy eating habits. Despite this, rates of obesity continue to rise. Presently, obesity is one of the most prevalent diseases in our society, affecting over 30% of the US population. Fast food is recognized as a major contributory factor in both childhood and adult obesity. Obesity has been documented to have an increased correlation with orthopedic injury and saturated fat intake with a higher risk of bone loss and osteoporotic fractures. No literature exists which establishes the relationship between frequency of eating at fast food restaurants (FFR) and the frequency of orthopedic injuries.

OBJECTIVE: To test the correlation between the frequencies with which subjects eat at fast food restaurants (EaFFR) and the number of orthopedic injuries (OI) that they sustain.

METHODS: This is a self-reported survey study of a convenience sample of 100 subjects recruited in the Emergency Department waiting area of an urban teaching hospital during day, night and weekend shifts. Body mass index (BMI) was calculated for each. The survey included questions about orthopedic injuries over the previous 5 years, stratifying by injury type and surgical v. non-surgical intervention, as well as questions about the favorite meal at their favorite FFR, for which the nutritional information was calculated. Tabulated values were assessed using chi-square test. Relationships between variables were analyzed using Spearman correlation coefficients.

RESULTS: The average BMI was 29.4 (SD= 6.62). Average number of orthopedic injuries was 1.06 (SD = 2.11). The rho value of the relationship between the number of times subjects EaFFR and OI was 0.25 (p-value = 0.0138). EaFFR and the number of fractures sustained was not statistically significant, but there was significant correlation between EaFFR and the number of sprains, strains, and/or ligamentous injuries sustained (rho = 0.30 and p = 0.0024). The relationship between EaFFR and OI was not impacted by age. (Age adjusted correlation= 0.275; p = 0.006). Older subjects were less likely to EaFFR than were younger subjects (p = 0.0006).

CONCLUSION: There is a positive correlation between EaFFR and OI independent of the known correlation between obesity and OI. Younger subjects EaFFR more often than older subjects. These findings may indicate that today's young people will have more orthopedic injuries than their counterparts in earlier generations due to a life time of EaFFR.

P625

Orthopedics

NECROTISING FASCIITIS AFTER INTRAVENOUS INFUSION: A RARE CASE

R Dursun (1), CC Turan (2), MF Ceylan (3), S Karadas (4), S Güner (3)

1. emergency department, Van Region Training and Research Hospital, van, Turkey
2. orthopedy department, Private Gözde Kışla Hospital, malatya, Turkey
3. orthopedy department, Yüzüncü Yıl University, van, Turkey
4. emergency department, Yüzüncü Yıl University, van, Turkey

Corresponding author: Mr Dursun Recep (drrecep@dursun@hotmail.com)

Key-words: necrotising fasciitis ; intravenous infusion ; emergency surgery

INTRODUCTION

Necrotizing fasciitis is a life threatening infection which is characterized by the advancing necrosis of skin, subcutaneous tissues and fascias. The first description of the disease was made by Wilson who observed that skin necrosis do not always occur but fascias necrosis always occurs. It is found rare in childhood age. It can be observed in healthy individuals too but in case of preparatory factors its frequency increases. The mortality rate of the disease is high. (% 6-76).

CASE

A 22 years old female patient applied to our emergency center with pain and swelling complaint on the left elbow. She said serum was applied to her left arm the day before in the same center. As the pain was intense and no pathology could be observed in the x-ray film, Ultrasound was applied to the patient. Thickening and edema was observed in the subcutaneous soft tissues around the elbow and fluid increase was observed in the elbow joint. The patient was laid after the soft tissue infection diagnosis of the orthopedist and treatment was initiated with sefazolin sodium 1000 mg i.v 3x1,gentamisin sülfat 160 mg i.v. Due to increase in patient pain and lab values becoming worse, emergency surgery was applied to her after 24 hours. During surgery, necrosis was

present in subcutaneous tissues and fascias and bad smell was felt. After application of wide debridman the wound was left open and due to opinion of infectious diseases department, Clindamisin hcl 3x600 mg Penicillin 3x6000000 units and Amikacin sülfat 1X1gr treatment was applied parenterally. As convalescence was observed clinically and according to lab results, the wound was closed with graft at the end of 14.day.

DISCUSSION

The most determining clinical finding for necrotizing fasciitis is intense pain and sensitivity which is not in accordance with the physical appearance of the lesion. Necrotizing fasciitis diagnosis should be made depending on clinical findings and anamnesis. Tang and friends, emphasized that accurate and correct diagnosis will be mad clinically and no method cen be replaced with carefully made physical examination. In lab studies, a significant leucocytosis and bending to left, creatinin kynasis, erythrocyte sedimentation speed and C-reactive protein increase is observed. In these subjects, the basis of the cure is early diagnosis, wide spectrum antibiotic treatment, debridement that can reach to healthy tissues and leave no necrotic tissues behind, maintaining the liquid-electrolyte balance, oxygenization of the infected area and sufficient nutritional support and analgesia.

P626

Orthopedics

TAKING OUT THE RING STUCK ON THE FINGER BY A MOTOR WITH HIGH RPM

MF Ceylan (1), S Güner (1), R Dursun (2), H Taşkınöz (1), G Görmeli (3)

1. ortopedy department, Yüzüncü Yıl University, van, Turkey
2. emergency department, Van Region Training and Research Hospital, van, Turkey
3. orthopedy department, Van Region Training and Research Hospital, Van, Turkey

Corresponding author: Mr Dursun Recep (drrecep@dursun@hotmail.com)

Key-words: high rpm motor ; ring pressure ; emergency service

PURPOSE

A subject where a ring which is stuck in the finger and caused edema and infection is removed with unusual method.

METHODS

A 17 years old lady applied to emergency service with complaint of swelling and pain in her finger due to a ring which was stuck. When the patient clinic was evaluated the ring in her 4th finger in her right hand was extremely stuck. The ring was produced from a hard alloy and with a shape of double circle and also it was thicker and wider than the regular rings. Wire cutter, pliers, gigli saw and ring cutter tool in emergency service was used before but they could not cut the ring. The finger of the patient was too stretched and there was a risk for compartment syndrome development. The ring was removed by cutting in 10 minutes by using high rpm motor with no. 40 diamond end that we use in spinal surgery. The pain and swelling got better after the ring was removed. Oral treatment was applied to the patient with Cefazolin 3*1 gr and after 3 days of follow up the infection in the hand of patient was cured.

RESULTS

High rpm motors can be used for cutting hard rings.

DISCUSSION

When hard rings cause edema and infection in the finger, it may not be removed with traditional tools. In such cases high rpm motors are effective.

P627

Orthopedics

THROMBOPROPHYLAXIS FOR AMBULATORY PATIENTS WITH LOWER LEG INJURIES.

M Hageman

Emergency department, Isala Kliniken, Zwolle, Netherlands

Corresponding author: Melle Hageman Mariëlle (m.hageman@isala.nl)

Key-words: venous thromboembolism ; prophylaxis ; lower leg injury

Background

Lower leg trauma is a frequent pathology in the emergency department of every hospital. Many of these injuries do not require surgery and these patients are treated as outpatients with a plaster cast.

Immobilization of the lower leg is a significant risk factor for the development of venous thromboembolism (VTE)¹. The use of pharmacological thromboprophylaxis for patients with lower leg immobilization in plaster casts is still controversial. There is substantial practice variation amongst physicians regarding the use of anticoagulation measures^{1,2}.

Objectives

The aim of this study was to find an evidence-based answer to our clinical question following the PICO principle. Is thromboprophylaxis necessary for ambulatory patients with lower leg injuries immobilized in plaster cast?

Patient Adult outpatients with lower leg injuries immobilized in plaster casts

Intervention Thromboprophylaxis

Control No thromboprophylaxis or placebo

Outcome VTE

Methods

Pubmed, National guideline clearinghouse, TRIP database and the Cochrane library were searched for national and international guidelines and trials on prevention of VTE. The following search terms were used: deep vein thrombosis, venous thromboembolism, antithrombotic therapy, thromboprophylaxis, prevention, low molecular weight heparin (LMWH), plaster-cast, immobilization, lower limb, lower extremity, lower leg. Within the identified studies a cross-reference check was performed.

Results

Meek et al³ retrospectively determined the incidence of symptomatic VTE in adult patients who were discharged from the ED with rigid immobilization for lower limb injury. The estimated incidence of VTE was 4.3%. Increasing age and a diagnosis of Achilles tendon rupture (ATR) appeared to increase the risk of VTE. A Cochrane systematic review⁴ analyzed data from six randomized controlled trials⁵⁻¹⁰ involving approximately 1500 patients who required lower leg immobilization for at least one week and compared LMWH with controls and showed a significant reduction in VTE. This is likely to be an underestimate of the real risk reduction as most trials excluded high risk patients from randomization¹¹. The authors advise administration of LMWH during the entire period of immobilization of the lower extremity. According to a meta-analysis by Ettema et al¹² the mean VTE rate dropped from 17.1% to 9.6% with the use of LMWH, without a significant increase in bleeding. PE was a rare event. Most DVTs in the studies were asymptomatic and located in the distal veins. Of the non-operated patients, 17 patients developed DVT in the LMWH group versus 44 patients in the control group⁴. The number needed to treat is 14; hence 14 patients require prophylaxis to prevent one event of asymptomatic DVT. The relative risk (RR) of asymptomatic DVT in below-knee immobilization is 0.66 (95%CI 0.44-1.02)¹³.

The American College of Chest Physicians (ACCP) analyzed an additional multicenter study by Selby et al¹⁴ and performed a meta-analysis¹⁵. The results of this analysis failed to demonstrate or exclude a beneficial effect of LMWH on symptomatic DVT (RR 0.34; 95%CI 0.09-1.28). In a recently published guideline, the ACCP advise against routine prophylaxis for patients with injuries of a lower limb.

In 2009 Goel et al¹⁶ published a RCT which compared the use of LMWH in patients who had sustained an isolated fracture below the knee which required surgery, with controls. There was no statistically significant difference in the incidence of DVT between those patients treated with LMWH or the placebo (p=0.22). The overall incidence of DVT in this series was 11% and all patients with a DVT were asymptomatic and did not require medical management. However, due to a cessation of funding, recruitment to this trial had to be ended prior to establishing the necessary sample size.

Discussion

There was considerable variation in the pathology, management, screening method and type of prophylaxis among studies. There is an obvious risk that the use of heterogeneous patient populations will affect the risk of DVT and therefore also the outcome about the efficacy of thromboprophylaxis. There is still no world-wide consensus in guidelines regarding the use of thromboprophylaxis. The clinical and cost effectiveness of pharmacological prophylaxis for reducing the risk of VTE in patients with lower limb plaster casts remains to be shown. A further multicenter trial is recommended to resolve this matter.

P628

Orthopedics

AN UNUSUAL CAUSE OF FACTITOUS ARTHRITIS

A Aygun (1), O Gonenc Cekic (1), Y Karaca (2), O Tatlı (3), S Turkmen (4)

1. Emergency department, Karadeniz Technical University, Trabzon, Turkey
2. emergency department, Kanuni State Hospital, Trabzon, Turkey
3. Emergency department, Kanuni State Hospital, Trabzon, Turkey
4. Emergency Department, Karadeniz Technical University, Trabzon, Turkey

Corresponding author: Mme Gönenç Çekiç Özgen (ozgen_gonenc@hotmail.com)

Key-words: Clinical toxicology ; Inflammation ; Natural toxins

Septic arthritis and toxic synovitis are clinical conditions that can develop in association with various causes and involve symptoms such as pain, swelling, redness, sensitivity and restricted movement in the joint. A 42-year-old male presented to the emergency department with severe joint pain and nausea after injecting a 1 cc mixture of turpentine oil, eucalyptus oil, mint oil and thyme oil he purchased from an alternative medicine store into his right knee with a syringe because of chronic knee pain. Ballottement and sensitivity were present at physical examination. Knee puncture yielded 60 cc of cloudy fluid. There was no growth in the material obtained. Improvement was observed following subsequent arthroscopic washing of the joint space and IV antibiotherapy, and the patient was discharged on day 21 of hospitalization with oral antibiotic and analgesic therapy. Intra-articular injection of foreign bodies into the knee joint space for therapeutic purposes, is a very rare occurrence, but may lead to potentially complicated arthritis.

P629

Orthopedics

SIMULTANEOUS BILATERAL ANTERIOR SHOULDER DISLOCATION OCCURRED AFTER SLEEPWALKING

F Yilmaz, A Solakoglu, M Ozlem, A Demir, C Kavalci, M Sonmez, ED Arslan

Emergency department, Numune Training and Research Hospital, Ankara, Turkey

Corresponding author: Mr Yilmaz Fevzi (fevzi_yilmaz2002@yahoo.com)

Key-words: Bilateral shoulder dislocation ; bilateral anterior dislocation ; sleepwalking

Abstract

Bilateral shoulder dislocation is a rare entity and almost always occur in the posterior direction. Simultaneous bilateral anterior shoulder dislocation is seen much less frequently and only a few cases are stated in the literature. This article reports bilateral simultaneous anterior shoulder dislocation occurred after sleepwalking.

Introduction

Although anterior shoulder dislocation is the most common major joint dislocation encountered in the emergency department, bilateral glenohumeral dislocations are rare and almost always posterior. Such dislocations are usually caused by sports injuries, seizures, electrical shock, or electroconvulsive therapy. However, simultaneous bilateral anterior shoulder dislocation is very rare: only about 30 cases have been described in the literature. This article reports that bilateral simultaneous anterior shoulder dislocation occurred after sleepwalking. To the best of our knowledge, this is the first case report of such condition.

Case report

A 17-years-old male presented to our emergency department with a complaint of bilateral shoulder pain and motion restriction. His past medical history was unremarkable for epilepsy or major trauma. His family members said that he was a sleepwalker since he was 5 or 6 years old and sometimes he was going to another place from his bed and when they saw him there were abrasions especially on his face and extremities. It was learned that he left the drugs given by the doctors for his complaint after using a short time.

On his physical examination in the emergency department he appeared to be good, he was conscious, cooperative and oriented to person, time and place. His vital signs and neurological examination were normal. His extremity examination revealed that his arms were slightly in abduction and external rotation. There was epaulet sign bilateral on his shoulders and his peripheral neurological examination was otherwise normal. The radiological evaluation revealed bilateral subcoracoid anterior dislocation without signs of fracture. After sedation closed reduction with Kocher maneuver was performed initially and then evaluated radiologically. After reduction, forward flexion and abduction of each shoulder were over 75 degrees and immobilization with Valpeau bandage was applied bilaterally for 3 weeks. The bandage was removed after immobilization period and the patient was taken into 6-week exercise programme in control of physical therapy unite beginning with pendulum like movements to increase length of the motion and then continuing with movements to increase strength of muscles around shoulder. There was no decrease in length of motion and muscular strength during 1-year follow-up and stability of each shoulder was normal. Additionally, the patient was followed by psychiatry and prescribed benzodiazepins and since then he had no any new attacks.

Discussion

The shoulder joint is the most unstable joint in the body and is easily dislocated. Anterior shoulder dislocation is the most

common major joint dislocation encountered in the emergency department. Its injury mechanism is forced extension, abduction, and external rotation. Anterior dislocation of the shoulder may occur in a violent contraction of the shoulder muscles or a direct blow to the posterior aspect of the shoulder. Because of the position naturally adopted by the upper extremity during a fall, unilateral anterior dislocation of the shoulder is common. Bilateral glenohumeral dislocations are rare and almost always posterior. However, simultaneous bilateral anterior shoulder dislocation is rare: only about 30 cases have been described in the literature. A review of the literature revealed about 30 reports of bilateral anterior shoulder dislocations, 15 of which were of fracture-dislocation. Most were due to violent trauma or electrocution; the remaining few were attributed to epileptic or hypoglycemic seizures. Sports injuries, seizures, electrical shock, electroconvulsive therapy, drug overdose, neuromuscular disorders, and psychiatric disturbances have been implicated.

Conclusion

All orthopedic surgeons and emergency physicians should be aware of such unusual possibilities to have an early diagnosis and treatment. An early reduction and appropriate rehabilitation can provide satisfactory functional outcome

P630

Orthopedics

COUGH-SNEEZE INDUCED CLAVICLE FRACTURE IN OSTEOPOROTIC PATIENT

H. Hocagil, Ö. Aydın, Ö. Güneysel

Emergency Department, Dr. Lütfi Kırdar Training and Research Hospital, İstanbul, Türkiye

Corresponding author: Mme Hilal Hocagil (drhocagil@gmail.com)

Key-words: Cough-sneeze ; Clavicle fractures ; Osteoporosis

Introduction: Osteoporosis is a condition characterized by a decrease in the density of bone, decreasing its strength and resulting in fragile bones. This disorder of the skeleton weakens the bone and results in frequent fractures in the bones. The spine, hips, ribs, and wrists are common areas of bone fractures from osteoporosis although osteoporosis-related fractures can occur almost in any skeletal bone. Clavicle fractures are not common fracture site, either in osteoporosis or in osteopenia.

In this case, we present a case of uncommon cough-sneeze induced clavicle fracture in osteoporotic patient.

Case report: A 72 year old woman presented to our emergency department with sudden pain in the left shoulder after coughing-sneezing. There was no history of any thoracic or shoulder trauma. Past medical history revealed osteoporosis but she had not any treatment for osteoporosis. Vital signs were as follows; blood pressure 135/85 mmHg, heart rate 98/minute, respiratory rate 14/minute, oxygen saturation 95 % at room air. On physical evaluation, she had seriously tenderness over her left clavicle other physical examination was completely normal. Because of initial diagnosis of cough- sneeze induced fracture of bone in osteoporotic patient may be misdiagnosed in X ray, chest computed tomography imaging was performed.

CT demonstrated left clavicle fracture. Medical treatment and bandage applied; and she was discharged with no complication.

Discussion: The most frequent and best documented complications of cough- sneeze are rib fractures. Rib fractures are caused by opposing muscular forces in the middle of the rib at the axillary line from the serratus anterior and external oblique muscles. Other cough - sneeze induced rib fractures are caused by a complex

interplay between inspiratory and expiratory muscles. But there is not cough-sneeze induced clavicle fracture in the literature. Probable reason for cough-sneeze induced clavicle fractures are sudden pull out the clavicle via sternocleidomastoid muscle due to a sudden increase in intrathoracic pressure and osteoporosis facilitated the fracture. Pathological fractures of clavicle may be encountered secondary to malignancy, osteoporosis due to older age, renal failure, pregnancy, chronic steroid use and radiation therapy. Its worth of interest that isolated clavicle fracture due to cough-sneeze without rib fractures.

Cough-sneeze induced clavicle fractures are rare complications nonetheless pathological clavicle fractures should be kept in mind in patients with osteoporosis.

P631

Orthopedics

A CASE WITH DASHBOARD FEMORAL FRACTURE

N ERDEM (1), M ERGIN (2), H GUVEN (3), B KARAHASANOGLU (4)

1. EMERGENCY DEPARTMENT, GUMUSHANE STATE HOSPITAL, GUMUSHANE, Turkey
2. EMERGENCY DEPARTMENT, NECMETTIN ERBAKAN UNIVERSITY HOSPITAL, KONYA, Turkey
3. RADIOLOGY, GUMUSHANE STATE HOSPITAL, GUMUSHANE, Turkey
4. INFECTIOUS DISEASE, GUMUSHANE STATE HOSPITAL, GUMUSHANE, Turkey

Corresponding author: Mme Erdem Nalan (okan.ozcubukcu.2011@gmail.com)

Key-words: femur shaft fracture ; seat belt ; dashboard injury

INTRODUCTION: The dashboard femoral fracture is characteristic and cannot easily be confused with the other types of femoral-shaft fractures. We are presenting a motor vehicle victim with bilateral open-femoral shaft fracture. **CASE:** AC, 24, M, was admitted to ED due to motor vehicle accident. During first evaluation, he had hypotension and tachycardia. Physical exam showed that Glasgow Coma Scale with 15; laceration of the left eyelid but no loss vision, the fourth and fifth rib fracture on the left but there weren't any pneumothorax, hemothorax nor lung contusion. He had bilateral opened-femur shaft fracture. The abdominal computed tomography demonstrated bleeding in the upper pole of the right kidney, which was limited to the capsule and did not require any surgical intervention. After femoral traction was performed at ED, he was admitted to orthopedic department. **DISCUSSION:** The femoral-shaft fracture is peculiar to the driver or front-seat automobile passenger traveling in high speeds. In the usual sitting posture, the femoral shaft is parallel to the major line of force, with the patella and upper portion of the tibia facing the dashboard. During a head-on collision with its resultant rapid deceleration, the front-seat occupants continue directly forward and the knee region strikes the instrument panel or floorboard. A passenger with his knee two inches from the impact object, none was wearing a seat belt, decelerating totally from sixty mile per hour, may have a force of fifty tons or more applied to the longitudinal axis of the femoral shaft. Basically, therefore, this fracture results from instantaneous longitudinal compression of the femoral shaft by extraordinary force, resulting in structural failure of the shaft over a long area, with extreme fracture combination. The hip abduction cannot occur; associated acetabular or femoral neck fracture may also be sustained. The impact area is the knee region. **CONCLUSION:** Prevention of this injury requires safety engineering of automobiles and highways. Proper construction of the instrument panel and the installation of seat belts to allow controlled deceleration on impact are both feasible and economical. The wearing of seat belts will specifically prevent dashboard injury to the femur, knee, and hip.

P632

Orthopedics

BILATERAL ANTERIOR SHOULDER DISLOCATION DUE TO SEIZURE SEIZURE,BILATERAL,SHOULDER

S GÖKHAN (1), M TAS (1), M GEM (2), C YAYLALI (1)

1. Emergency Department, Diyarbakir Training and Research Hospital, Diyarbakir, Turkey
2. Orthopedy and Traumatology, Dicle University, Diyarbakir, Turkey

Corresponding author: Mr Gökhan Servan (servan.gokhan@yahoo.com)

Key-words: seizure ; bilateral ; shoulder

INTRODUCTION: Unilateral shoulder dislocations are the commonest dislocations in emergency rooms whereas bilateral shoulder dislocations are very rare. Bilateral shoulder dislocations are typically posterior while bilateral anterior shoulder dislocations have been quite rarely reported. Anterior shoulder dislocations most frequently develop by falling on the palms with hands open and elbows unflexed. Forces creating bilateral dislocation should be simultaneously effective in both joints. We report in this paper a case presenting to our emergency clinic with bilateral anterior shoulder dislocation following generalized tonic clonic seizure

Case: A 56-year-old female patient who had been on epilepsy therapy for 7 years had a history of unilateral anterior shoulder dislocation following a seizure. She presented to our emergency clinic with pain and movement limitation in both shoulders following generalized tonic clonic seizure. On arrival, she had pain with palpation. Both arms were in abduction and internal rotation position. Shoulders were depressed internally and there was a typical depression below acromion. There was no neural, vascular injury or any other pathology. X-Ray revealed bilateral anterior shoulder dislocation without any accompanying fracture. Both shoulders were reduced with the method of external rotation under sedation (0,05 mg/kg intravenous midazolam).

DISCUSSION: Shoulder dislocations are associated with direct or indirect traumas to these regions. Shoulder dislocations are classified in 4 main groups as anterior, posterior, superior, and inferior. Anterior dislocations forms 85% of all traumatic shoulder dislocations. Bilateral dislocations are frequently caused by convulsions, diving, and falls. Bilateral shoulder dislocations are caused by trauma of both extremities of the same instant, intensity, and mode of occurrence. Thus, anterior shoulder dislocations are rare. The mechanism of development is overextension of resting of humerus and tuberculum majus against acromion because of abduction and external rotation. Such dislocations can be reduced at emergency service with the method of external rotation under sedation, as in our case.

As a conclusion, we aimed to draw attention to the necessity of remembering that, although rare, shoulder dislocations may be bilateral and importance of suspicion from the diagnosis and radiologic examination in patients presenting with bilateral shoulder pain after convulsion.

P633

Orthopedics

AN UNUSUAL CAUSE OF POST OPERATIVE PROLONGED BLEEDING AFTER TOTAL KNEE ARTHROPLASTY: MULTIPLE MYELOMA; A CASE REPORT

S Inal (1), F Taspınar (2), AO Uzumcugil (3)

1. Orthopaedics and Traumatology Department, Dumlupınar University School of Medicine, Kutahya, Turkey
2. Physiotherapy and Rehabilitation Department, Dumlupınar University Kutahya Graduate School of Health, Kutahya, Turkey
3. Orthopaedics and Traumatology Department, Dumlupınar University Kutahya Evliya Çelebi Education and Research Hospital, Kutahya, Turkey

Corresponding author: Mr Taspınar Ferruh (ptferruh@mynet.com)

Key-words: blood ; diagnosis ; complications

Multiple myeloma is a kind of leukemia usually seen in older age and grouped under the plasma cells dyscrasias. This malignancy can also cause to abnormal bleeding diathesis by infiltration of bone marrow. Here, we are presenting a sixty-eight years old male gonarthrosis patient who had undiagnosed multiple myeloma and diagnosed after a total knee arthroplasty operation. The prolonged bleeding at the operation area of the knee has thought us that may be a hematogenic malignancy. After transfusion of more than 10 units of erythrocyte suspension, the patient referred to hematologist in another hospital. Preoperatively undiagnosed multiple myeloma or another hematogenic malignancy can be a cause of prolonged bleeding after an orthopaedic surgical procedure to the bone. In fact, this status is an emergency and multiple myeloma or other hematogeneous malignancy must be thought as a rare cause of postoperative prolonged bleeding in any orthopaedic procedure related to the bone.

P634

Orthopedics

ARTHROPLASTY APPLICATION OF A PATIENT WHO DEVELOPED PSEUDOARTHROSIS AFTER THE FIRST STABILIZATION OF COMMUNUTED INTRAARTICULAR ELBOW FRACTURE; A CASE REPORT

S Inal (1), F Taspınar (2), O Ersan (3)

1. Orthopaedics and Traumatology Department, Dumlupınar University School of Medicine, Kutahya, Turkey
2. Physiotherapy and Rehabilitation Department, Dumlupınar University Kutahya Graduate School of Health, Kutahya, Turkey
3. Orthopaedics and Traumatology Department, Diskapi Yildirim Beyazit Education and Research Hospital, Ankara, Turkey

Corresponding author: Mr Taspınar Ferruh (ptferruh@mynet.com)

Key-words: fracture ; intraarticular ; nonunion

The comminuted fractures are in the difficult group to treat. Generally; these injuries occur as a result of high energy trauma. In particular; if the fracture pattern is intraarticular, it is more difficult to treat. So that; malunion, nonunion or the other morbidity rates increases in these cases. Here, we are reporting a fifty-nine years old female patient who developed pseudoarthrosis after the screw fixation of a comminuted intraarticular elbow fracture. Finally; her definitive surgery has been done with elbow arthroplasty. We treated the instability of the elbow joint and related symptoms by application of elbow arthroplasty and rehabilitation. The patients who come to emergency services with intraarticular comminuted elbow fractures must be consider as a candidate for

pseudoarthrosis and elbow arthroplasty. Because of this reason; such injuries must be kept in the mind as high morbidity.

P635

Orthopedics

POLYMEDICATION RELATIONSHIP AND OTHER FACTORS OF OSTEOPOROTIC FRACTURES IN REGIONAL HOSPITAL LLUÍS ALCANYÍS-XÀTIVA (SPAIN)

R Alvarez (1), E Ferrer Brandley (2), A Lombardi (3), JC Montalva Barra (4), A Pinzón Rivadeneira (5), R Sanchez Artal (6)

1. Xativa, Hospital Lluís Alcanyis, Xativa, Spain
2. Xativa, H Lluís Alcanyis, Xativa, Spain
3. Xativa, H Lluís Alcanyis, Xativa, Italy
4. Emergency department, Hospital Lluís Alcanyis, Xativa (Valencia), Spain
5. Xativa, H. Lluís Alcanyis, Xativa, Spain
6. xativa, hospital lluis alcanyis, xativa, Spain

Corresponding author: Mr Montalva Barra Juan Carlos (JcMontalva@comv.es)

Key-words: osteoporosis ; interaction drugs ; fractures

The relationship with osteoporosis and polypharmacy compliance is increasingly studied and related side effects that highlight the osteoporotic fracture origin.

Osteoporosis is the most important metabolic bone disease in the fracture and increased mortality in both sexes now, not just postmenopausal, increasing secondary to other processes and treatments with certain drugs involved in this.

OBJECTIVE: To demonstrate the relationship between age, sex, and some factors, with polypharmacy, which determine the type of fracture and subsequent treatment after surgery is offered by the Trauma Service at our hospital.

MATERIALS AND METHODS: Retrospective descriptive study of all patients with a fracture in the emergency department between January and August 2011. We included all patients over 50 years of both sexes and diagnosis of fracture and secondarily osteoporosis. We analyzed the type of osteoporotic fracture, the treatment followed by Trauma, treatments before and after surgery. For this was used GAYA system from Health Service of the Valencia electronic prescribing of medication through ABUCASIS. Statistical analysis was analyzed using SPSS for Windows 15.0, as a measure of association used the value of the odds ratio with confidence interval 95%.

RESULTS: Of a sample of 25 patients with fractures associated with a previous diagnosis of osteoporosis, 23 of these (92%) were women and 2 (8%) men with a mean age of 85.64 years. Alpha 100% of patients previously diagnosed with a fracture of osteoporosis densitometric and FRAX positive. The type of fracture by 52% gave at the left (13 left hip fractures) and the rest straight. 84% were operated (21 patients) and 100% used a technique similar blade plate anchor. As for treatments prior to the fracture point: only 44% of patients had been treated with bisphosphonates- vitamin D, and subsequent surgery kept bisphosphonates, 36% of all patients, taking prior to the fracture calcium in their various preparations for 44% while post-surgery were taking calcium 96% of patients. 16% of the patients consumed oral corticosteroids, anticoagulants in 36%, proton pump inhibitors 64%, anxiolytics or antidepressants in 32% of cases, and anticholinergics (simvastatin, atorvastatin) in 40% of all patients.

CONCLUSIONS: Our study demonstrates the direct relationship between osteoporosis, age, sex and fractures studied. Is shown under monitoring of treatment of osteoporosis. Surgical treatment is effective in most patients regardless of age. The results in patient

outcomes favoring rehabilitation and improvement of quality of life of patients. Polypharmacy is a factor in most of the patients studied and emphasizes oral glucocorticoids, inhibitors of proton pump antituberculous oral and statins. The proportions of these drugs is as follows: 36% of patients are consumers of oral corticosteroids, 64% inhibitors of proton pump inhibitors (omeprazole, lansoprazole or pantoprazole), 32% anxiolytics or antidepressants and 40% lipid-lowering drugs (simvastatin or atorvastatin).

It is important to note that the discharge of its intervention only 36% of patients remained on bisphosphonates or calcium treatment earlier, with increase to 36% of patients in the calcium, without revision or indicate the pattern of vitamin D, where most were efficient and kept below levels in blood and as minimum guidelines.

P636 Other - Part 2

VALIDATION OF THE IPSILATERAL NIPPLE AS THE DIRECTIONAL GUIDE DURING RIGHT INTERNAL JUGULAR VEIN CATHETERIZATION

IK Jang, JY Jeong, H Lee, HG Ryu

Department of Anesthesiology and Pain Medicine, Seoul National University Hospital, Seoul, Korea, (South) Republic of

Corresponding author: Melle Lee Hannah (closerthan@gmail.com)

Key-words: Internal jugular vein catheterization ; ;

The ipsilateral nipple has traditionally been used as a directional guide for needle advance during internal jugular vein (IJV) catheterization. However, the rationale for its use is very weak. We attempted to validate the ipsilateral nipple's utility as a directional guide during IJV catheterization.

One hundred and two patients (M:F=54:48) scheduled to undergo elective surgery were enrolled. Patients with anomalies or history of surgery at the neck or the ipsilateral breast were excluded. Patients were placed in the 15 degree Trendelenberg position with their head rotated 30 degrees to the left. The tip of the triangle formed by the 2 heads of the SCM muscle and the clavicle was identified with palpation and marked by a single investigator. A line connecting the tip and the ipsilateral nipple was drawn. Using a ultrasound device, the center of IJV at the cricoid cartilage level and the course of the IJV was drawn. The angle formed by the two lines and the distance between the tip of the anatomical triangle and the IJV center identified via ultrasound were measured. The relationship between the IJV and the carotid artery at the cricoid level was also recorded.

The average angle formed between the actual course of the IJV and the line connecting the tip of the anatomical triangle and the ipsilateral nipple was 16(±7.6) degrees. Regression analysis showed that height, weight, gender, and age did not affect the angle as an independent factor. The tip of the anatomical triangle was on average 0.5 cm medial to the center of the IJV. The extended course of the IJV crossed the line between the two nipples at 4.8 (±2.4) cm medial to the ipsilateral nipple. The carotid artery was either medial or mediolateral to the IJV in 91/102 (90%) patients.

Our study showed that when the needle is directed towards the ipsilateral nipple during IJV catheterization, it crosses the course of the IJV. This is because the tip of the anatomical triangle is lateral to the actual center of the IJV and the IJV runs more medially compare to the path that heads toward the ipsilateral nipple. Considering the fact that the carotid artery is medial to the IJV in

most cases, directing the needle towards the ipsilateral nipple can avoid the carotid artery and also puncture the IJV.

P637 Other - Part 2

ARE WE TOUCHES TO WATER AND SOAP?

E. Altunbilek, C. Kavalci, D. Öztürk, O. Hakbilir, C. Akman, Ö. Aslan, M. Sönmez

Emergency Department, Numune Training and Research Hospital, Ankara, Turkey

Corresponding author: Mr Kavalci Cemil (cemkavalci@yahoo.com)

Key-words: emergency ; handwashing ; soap

OBJECTIVE: In this study, we aimed to define effects of the endemic infective processes on the hand-washing habits of the emergency department staff in contact with the patients.

METHODS: The study was prospectively conducted in Emergency Clinic of Ankara Numune Training and Research Hospital. Information recorded in the study forms consisted of the title of health care staff, type of the contact with the patients, whether the hands were washed before and after the contact with the patients, duration of the hand-washing, using soap or disinfectant, hand-drying, proper use of the glove and whether the gloves were destroyed in a proper way. Ki-kare test assay was used in the statistical analysis and p<0.05 values were considered significant.

RESULTS: Following all the clean and dirty contacts, hand washing was made in 237 (28.9 %) of total 819 contacts. Of the total 819 contacts, 538 (65.7 %) were found to be clean and 281 (34.3 %) dirty contacts. Incidence of the hand-washing was found as 84 times (15.6 %) in 538 clean and 153 times (54.4 %) in 281 dirty contacts. Frequency of the hand-washing was found higher in the dirty than in the clean contacts. Totally, 462 gloves were used during the study. When areas of use for 462 gloves were examined, it was observed that 219 gloves (47.4 %) was used in the clean and 243 gloves (52.6 %) in the dirty contacts. It was found during the observation that, soap was used in 134 (56.5 %), while no soap was used in 103 (43.5 %) of 237 hand-washing.

CONCLUSION: In the emergency department in which the study was conducted, incidence of the hand-washing was found to be more than in the previous studies, but still it was not at a desired level.

P638 Other - Part 2

INVESTIGATION OF THE FREQUENCY OF HEALTH CARE PERSONNEL SAFETY BELT USAGE IN TURKEY

B. Uyanik, C. Kavalci, ED. Arslan, F.Yilmaz, Ö. Aslan, S. Dede

Emergency Department, Numune Training and Research Hospital, Ankara, Turkey

Corresponding author: Mr Kavalci Cemil (cemkavalci@yahoo.com)

Key-words: Traffic accidents ; seat belt ; health care providers

In Turkey, as in so many other developing countries, traffic accidents appear as a major public health problem that causes damage to thousands of people every year. Use of seat belt which is one of the most important life-saving safety measures in car accidents has not yet reached the desired level. In this study, the sensibilities of hospital health care providers with respect to seat belt use were investigated. After approved to local ethics committee we conducted this study in Ankara Numune Training

and Research Hospital. Health care providers were observed at the parking entrance in order to see whether they put on seat belt or not while driving. The personal data of the subjects were obtained either from themselves or through the hospital employee records. Their names, gender, age, marital status, work unit, education level seat belt usage status, and professional parameters were recorded. Fisher's exact chi-square test was used in statistical analysis. In conclusion, we found that health care providers have significantly higher seat belt use rate. In other words, the use of seat belt increases in direct proportion to the education level and socio-economic status.

P639

Other - Part 2

THE ANALYSIS OF PATIENTS ADMITTED TO EMERGENCY DEPARTMENT DUE TO COMPLICATIONS RELATED TO WARFARIN TREATMENT

S Hüseyin (1), S Oğuz (2), MB Sayhan (3), E Seçgin Sayhan (4), G Yagcı (5), V Yüksel (1)

1. Cardiovascular Surgery, Trakya University Medical School, Edirne, Turkey
2. General Surgery, Trakya University Medical School, Edirne, Turkey
3. Emergency Medicine, Trakya University Medical School, Edirne, Turkey
4. Public Health, Trakya University Medical School, Edirne, Turkey
5. Emergency Medicine, Trakya University Medical School, Edirne, Turkey

Corresponding author: Mr Sayhan Mustafa Burak (mustafaburak@yahoo.com)

Key-words: Emergency Department ; Warfarin ; oral anticoagulant

Objective

Warfarin is the most commonly used oral anticoagulant around the world. The most important complication of warfarin is bleeding. This study was conducted to evaluate the patients admitted to our emergency department due to complications related to warfarin treatment.

Materials and Methods

Eighty-nine patients (32 female, 57 male) were enrolled into this retrospective study. The patients were evaluated according to their age, gender, duration of the therapy (year), co-administered drugs, bleeding localization, treatments, amount of blood transfusions, duration of bleeding, initial and after treatment PT, INR, complete blood count and aPTT.

Results

Mean duration of anticoagulant use was 3.05±2.87 years. The most common indication of warfarin was atrial fibrillation. The most frequent bleeding localization was upper gastrointestinal tract. Thirty-four (38.2%) of the patients had major bleeding, and 55 (61.8%) had minor bleeding. Age, co-administered drugs, amount of erythrocyte suspension transfusions, the presence of previous warfarine overdose history, Hb levels at the admission and duration of follow-up at ED were different among bleeding types ($p < 0.05$).

Conclusion

In this study we found that the bleeding complications of warfarin were associated with the aged population, the presence of previous warfarine overdose history and concomitant drug use.

P640

Other - Part 2

ADULT EMERGENCY SERVICES AT ŞAHINBEY RESEARCH AND PRACTICE HOSPITAL: A COST ANALYSIS

C Yildirim, R Guzel, S Zengin, B Al, S Kartal, E Sarcan

- Emergency Department, Gaziantep University, Gaziantep, Turkey
2. Emergency department, Gaziantep University, Gaziantep, Turkey

Corresponding author: Mr Zengin Suat (zengins76@gmail.com)

Key-words: Emergency department ; cost analysis ; cost effectivity

In this study, we aimed to calculate the costs of emergency service unit examinations by using the administrative, financial, and medical data of Şahinbey Research and Practice Hospital in 2011. Every billed service and every documented income and expense for a year of adult emergency services within the hospital's Emergency Department, between January 1 and December 31, 2011 was included in the study. The conventional cost analyzing method was used to calculate the emergency service unit's examination costs, based on this data. Microsoft Office Excel was used to carry out the analysis.

In 2011, the total expense of adult emergency services for the Gaziantep University Medical Faculty at Şahinbey Research and Practice Hospital was calculated to be 4,026,436.70 TL, including gross personnel salaries. The total income was calculated to be 3,682,551.21 TL. In the same year, a total loss of 343,885.49 TL was detected, which was a high percentage (46.15%) of the total cost of personnel expenses. Emergency service unit examination costs, including gross personnel salaries, were calculated to be 54.09 TL. Since personnel salary is paid from the head office's budget, in a calculation not including gross salaries, the profit was determined to be 403,655.12 TL. Emergency service unit examination costs, excluding gross personnel salary, were calculated to be 44.05 TL. Personnel salary costs per unit patient were found to be 10.04 TL. In 2011, the emergency service unit examination price paid by SGK (a social security institution) was 15.50 TL.

Hospitals should primarily aim to manage health and not to profit. Their primary task is to provide for the health needs of citizens in the best way possible. However, in order to be able to offer continuing, high-quality services, institutions should look after their income-expense ratios rather than their profits. In this context, institutions providing health services should also be considered and evaluated by management. In public hospitals, the most important question in cost analysis is whether to include personnel salaries paid from the main budget.

P641

Other - Part 2

EVALUATION OF RISK FACTORS AND CLINICAL CHARACTERISTICS OF ELDERLY PATIENTS WITH ACUTE UPPER GASTROINTESTINAL HEMORRHAGE

MB Sayhan (1), S Oğuz (2), H Umit (3), E Seçgin Sayhan (4), mo eralp (5), g akdur (5), c kavalcı (6), T Sagioglu (7)

1. Emergency Medicine, Trakya University Medical School, Edirne, Turkey
2. General Surgery, Trakya University Medical School, Edirne, Turkey
3. Gastroenterology, Trakya University, Edirne, Turkey
4. Public Health, Trakya University Medical School, Edirne, Turkey
5. emergency medicine, trakya university, edirne, Turkey
6. emergency medicine, Ankara Numune Hospital, Ankara, Turkey
7. General Surgery, Trakya University, Edirne, Turkey

Corresponding author: Mr Sayhan Mustafa Burak (mustafaburak@yahoo.com)

Key-words: Elderly Patients ; Gastrointestinal Hemorrhage ; Emergency Department

Introduction: Acute upper gastrointestinal hemorrhage (AUGIH) is a life-threatening emergency problem in the elderly population. In this study we aimed at investigating the risk factors and clinical features of the elderly and very elderly patients presenting to the Emergency Department (ED) with AUGIH.

Method and Materials: A historical cohort study was conducted in a university-based hospital. 194 patients were divided into two groups: Group A (n=128); elderly group (ages 65-79 years) and Group B (n=66); very elderly group (aged > 79 years).

Results: The mean age was 76,34±7,91 years. The most frequent presenting symptom was melana (87,1%). Fourteen patients (7,2%) were in shock at the time of bleeding. 133 patients (68,5%) had a history of rebleeding. Underlying comorbid illnesses were detected in 171 patients (88,1%). There was a significant difference in terms of alcohol consumption and coroner artery disease between two groups (respectively p=0,038 and p=0,049). The most frequently observed endoscopic lesions were peptic ulcer and gastroduodenal erosions in both groups. Most patients in both groups were submitted to medical treatment. Conservative medical treatments were applied in most of the patients in both groups but there were no statistically significant differences between them (p=0,892). The overall mortality rate was 11,7% in group A and 19,7% in group B.

Conclusion: In order to successfully diagnose and treat AUGIH in the elderly and the very elderly presenting in the emergency department, physicians must be well-versed in geriatric emergency medicine approaches.

P642

Other - Part 2

SANDRO PERTINI HOSPITAL OF ROME - MODEL - SHORT INTENSIVE OBSERVATION

C Cancrini, D Livoli, FR Pugliese, A Revello, A Simone, V Valeriano

Emergency Department, Hospital Sandro Pertini, Rome, Italy

Corresponding author: Mr Livoli Donatella (donalivoli@yahoo.it)

Key-words: Emergency ; Overcrowding ; Hospitalizations

Introduction

From 1st January 2008 has been instituted in the UOC of Emergency Department and Emergency Medicine of the Sandro Pertini Hospital in Rome the "Short Intensive Observation", according to the indications suggested by SIMEU- region Latium. In four years of activity, the Short Intensive Observation has constituted a valid answer to the overcrowding and to the necessity of optimize the hospitalizations, necessity based on the application of scientific criteria, following the international guidelines, as EBM. That offers a welfare setting completely alternative in comparison with the traditional hospitalization. The starting point of the Short Intensive Observation experience was the modality of the handling related to acute clinical problems, selected according to the rank of graveness. These clinical problems were also selected in connection with other aspects, as the necessity of a diagnostic procedure not inferior than 6 hours and not superior than 36 hours, in order to estimate the concrete necessities of a hospitalization or safe discharge.

The purpose of the work

The management experience, began four years ago, has brought to the achievement of the optimal gold standard (70% of discharges and 30% of hospitalizations), thanks to the application of a method strictly scientific, based on EBM and shared by all the staff. The

flows trend in incoming and outbound, constant in time, has to be correlated to the method: the Short Intensive Observation isn't operator-dependent.

Materials and methods

We have analyzed the data of the flows in incoming and outbound from the Short Intensive Observation, the times of permanence, the percentage of discharge in the single months and also the percentage of the return after 72 hours with the respective result of the return (discharged, hospitalized, dead) from January 2008 to December 2011. Moreover we have also estimated the progress of the hospitalizations for that particular kind of pathology after the institution of Short Intensive Observation in relation with former years, that were taken as sample.

Results

In the considered period, about 20.000 patients have passed in Short Intensive Observation, with an average permanence of 30 hours. The 76% of the patients has been discharged or transferred in external structures (57% discharged, 19 % transferred), the 21% hospitalized. The remaining percentage (3%) include the dead patients and the patients that have refused the hospitalization. The average number of re-accesses in Emergency Department within 72 hours from the discharge has been of 48,5 % patients/year (< 2%).

The pathologies, that are mainly passed in Short Intensive Observation, were:

- Thoracic pain (25%)
- Syncope (30%)
- Abdominal pain (23%)
- BPCO (20%)
- Renal colic (15%)
- Pneumonia (5%)
- Vertigos (5%)
- TIA (10%)
- Cardiac decompensation (8%)
- Head Injury (9%)

Conclusion

The existence of itineraries, that offer clinical care post-discharge, and the adhesion to defined guidelines (both on the clinical management, both on the handling), has allowed to reduce the hospitalization for the most part of the cases. The Short Intensive Observation method is based on a continuous reevaluation of the patient, on the application of procedures and itineraries, on the itineraries verification through focused clinical audit. Moreover the training on field, the operators' motivations and the stratification of the risk according to scientific criteria guide to the itinerary more appropriate for the patient.

P643

Other - Part 2

CLINICAL AND DEMOGRAPHIC CHARACTERISTICS OF OVER 65 YEARS PATIENTS ADMITTED EMERGENCY DEPARTMENT.

A Ozhasenekler, HM Durgun, C Guloglu, M Orak, I Tunc, M Ustundag

Emergency Department, University of Dicle, Medical School, Diyarbakir, Turkey

Corresponding author: Mr Ozhasenekler Ayhan (drhasenek@hotmail.com)

Key-words: older patient ; emergency department ; clinical and demographic characteristics

Aim: In Turkey as well as in the world, along with the rising share of older people in the total population, their presentation rates to Emergency Departments are steadily increasing in this study,

therefore, our aim is to document clinical and socio-demographic characteristics of patients aged 65 and older presenting to our Emergency Service.

Patients and Method: In the study, the attendance data of 1719 patients aged 65 and above, treated in the Emergency Service of Dicle University Hospital, were retrospectively studied.

Findings: 1719 patients of included into the study, 903 (52.5%) were males, and 816 (47.5%) were females. Of those patients, 197 (11.5%) died, 57.9% (n=114) of whom were males and 42.1% (n=83) of whom were females.

When analysed in terms of mean ages according to the gender, the mean age was found to be 75.20 ± 7.14 (65-107) years in females, while it was 74.18 ± 6.20 (65-102) years in males, suggesting that the mean age of females was significantly higher with respect to male patients ($p=0.002$).

As for marital status of our patients, the rate of being widowed in females, and that of being married in males were determined to be significantly higher when compared with their counter-genders ($p < 0.001$).

When our patients were examined in terms of education, the education level was found to be significantly higher in males.

In addition, through analysis of the patients presenting complaints, the first five causes were as follows: dyspnea (27.9%), other internal complaints (23.6%), abdominal pain (15.3%), chest pain (13.0%) and conscience alteration (9.9%). The mortality rate was observed to be significantly higher in those with conscience alteration and exposure to non-vehicle traffic accidents.

The follow-up and treatment of 41.2% of our patients were performed at our emergency service and the mortality rate of our clinic, where the diagnosis and therapies of the majority of our patients are conducted was 7.6%.

Results: Through the improvement of living conditions, elder population is increasing in our country as well, and thus the number of elder patients presenting to the emergency service is also rising. Ageing-related problems accompanied by more than one chronic illness require a more different and careful approach towards the elderly patients.

P644

Other - Part 2

EXTENSIVE EDEMA OF THE LEFT ARM FROM A SNAKE BITE CASE

S Karaman (1), O Delice (1), H Şahin (1), A Bayramoğlu (2)

1. Emergency Department, Erzurum District Training and Research Hospital, Erzurum, Turkey

2. Emergency Department, Atatürk University Medical Faculty,, Erzurum, Turkey

Corresponding author: Mr Karaman Serhat (drserhatkaraman@hotmail.com)

Key-words: snake bites ; compartment syndrome ; antiserum therapy

In our country snake bites rarely causes life-threatening complications. Especially the Southern Anatolia and Southeast Anatolia regions of Turkey are often encountered with snake bites. Viper snakes of venomous snakes group found in most in our country. Snake bites can cause serious morbidity and mortality. Local or systemic findings can be monitored based on the contents in the type of the snake toxin.

52-year-old female patient admitted to state hospital after a snake bite between the fourth and fifth fingers of her left hand. Because of the increase of the left hand and left arm edema and formation of ecchymosis she referred to our center. 10 ml of antiserum (1 vial) IM/IV was applied to the patient. Prophylactic intravenous antibiotics, tetanus vaccine and fluid therapy was given. On physical examination in the bite site of the patient there were pain,

warmth, ecchymosis and hemorrhagic edema. The patient's vital signs were stable. Left upper extremity evaluated in terms of compartment syndrome. In the patient's blood test's results WBC: 12700, AST: 51 U/L, ALT: 214 U/L, GGT: 160 U/L. The patient was hospitalized for systemic complications and compartment syndrome. Local wound care was made. And supportive therapy was given. After a close follow up the patient was discharged when the local findings were regressed.

Even the main treatment of the snake bites is fluid therapy and antiserum therapy as in our case patients should be monitored in terms of possible systemic complications and compartment syndrome. Initially applied antiserum treatment can be inadequate in preventing local signs but systemic complications that may occur can be prevented with this treatment.

P645

Other - Part 2

DIAMINE OXIDASE IN DIAGNOSIS OF ACUTE MESENTERIC ISCHEMIA

dr Narci, dr ucar karabulut

Emergency, Baskent University Konya Hospital, Konya, Turkey

Corresponding author: Mme Ucar Karabulut Keziban (dr_kezi@hotmail.com)

Key-words: Acute mesenteric ischemia ; Diamine oxidase ; Amylase

Objective

Acute Mesenteric Ischemia (AMI) is an important clinical condition with a high mortality rate in abdominal emergencies due to delay in diagnosis in spite of the new strategies in the management. We have studied the role of Diamine oxidase (DAO) in the early diagnosis of AMI.

Method

In the study, 21 New Zealand rabbits were used. Subjects were named as the groups of controls, sham and ischemia. No intervention was performed in the subjects in the control group. In the subjects from sham and ischemia groups, laparotomy was performed with middle line incision. However, Superior Mesenteric Artery (SMA) was found and tied in those from ischemia group after the performance of laparotomy. From the animals in 3 groups, blood was drawn at the hours of 0, 1, 3 and 6, and DAO and amylase were studied in these samples.

Results

The increase in serum amylase levels was found to be statistically significant in the ischemia group compared to the control and the sham groups ($p < 0.05$). The decrease in serum DAO levels was found to be statistically significant in the ischemia group compared to the control and the sham groups ($p < 0.05$). DAO levels were found to decrease, beginning from the 1. hour after ischemia had been developed and this rise was found to continue for 6 hours ($p < 0.05$).

Conclusion

Serum DAO levels were decreased in ischemia. Further clinical and experimental investigations would be valuable to confirm the probable role of DAO in AMI.

P646

Other - Part 2

EVALUATION OF THE PATIENTS DIAGNOSED WITH DIAPHRAGMATIC RUPTURE IN EMERGENCY DEPARTMENT

F İçme (1), E Balkan (2), S Becel (3), H Şahin Kavaklı (3), Y Yüzbaşıoğlu (3), A Şener (3)

1. Emergency department, Ankara Atatürk Training and Research Hospital, Ankara, Turkey
2. Thoracic Surgery Department, Ankara Atatürk Training and Research Hospital, Ankara, Turkey
3. Emergency department, Ankara Atatürk Training and Research Hospital, Ankara, Turkey

Corresponding author: Mr İçme Ferhat (ferhaticme@gmail.com)

Key-words: Diaphragmatic rupture ; radiologic diagnosis ; treatment

Background: The aims of this study are to review the characteristics and management of diaphragmatic injuries which we diagnosed in patients who admitted to emergency room because of thoracoabdominal trauma and to investigate the effect of the trauma scoring systems in predicting hospitalization time.

Methods: In this retrospective study we evaluated 20 patients who admitted to Ankara Atatürk Training and Research Hospital Emergency Department between 25/04/2005 and 12/31/2011 because of thoracoabdominal trauma who we diagnosed with diaphragmatic injury. Demographic characteristics, etiology, diagnostic evaluation, associated injuries, treatment and effects of trauma scores [Glasgow Coma Score (GCS), Revised Trauma Score (RTS), Injury Severity Score (ISS), Trauma Injury Severity Score (TRISS)] in hospitalization time were evaluated for all the subjects.

Results: Eighteen of the patients were male (90%), and 2 patients were female (10%). The mean age of patients was 44.4 ± 13.8 (18-72). Four of the patients had penetrating injuries, 16 of the patients had blunt trauma. In the first examination GCS in the ED was 13.4 ± 2.78 , RTS: 5.8 ± 3.09 , ISP: 18.75 ± 7.63 and Predicted death rate according to TRISS was 6.4 ± 10.4 , respectively. There was no statistically significant difference in duration of hospitalization with RTS and GCS whereas in patients with ISS score 16 and above hospitalization time was significantly longer. Hospital stay of patients was 20.4 ± 23.1 days and no mortality was observed.

Conclusion: In cases of thoracoabdominal trauma especially in the upper abdomen and / or lower thoracic region diaphragmatic injury should always be considered and the tests should be assessed carefully. In addition, we suggest that in predicting mortality and the duration of hospitalization anatomical scoring systems (ISS) should be preferred rather than physiologic scoring systems (RTS, GCS) in certain anatomical disorders which may be life-threatening lonely such as rupture of the diaphragm.

P647

Other - Part 2

EPIDEMIOLOGY OF DEATHS IN EMERGENCY DEPARTMENTS

M. Ben Lassoued, S. Ben Nasr, O. Djebbi, M. Haggui, G. Ben Jrad, I. Bennouri, K. Lamine

Emergency department, Military Hospital of Tunis, Tunis, Tunisia

Corresponding author: Mr Ben Lassoued Mehdi (mehdi.benlassoued@gmail.com)

Key-words: death ; epidemiology ; emergency department

Introduction :

Epidemiology of deaths in emergency departments is not well known in Tunisia contrary to the epidemiology of deaths in critical care units.

Objective :

To study the epidemiologic characteristics of deaths in emergency departments.

Material and methods :

This retrospective study covered a 3-year period from January 2008 to December 2010, including all deaths occurring in the emergency department of the military hospital of Tunis.

Results :

There were 131 deaths representing 0.15% of all cases treated in the department. Mean age of patients was 69.5 ± 15 years, and their sex-ratio 1.8. Seventy eight percent of patients were more than 60 years old, and 6.1% of them were less than 40 years old. Past medical facts included essentially high blood pressure in 46.87% of cases and diabetes in 30.23% of cases. In 26% of deaths patients were admitted to the emergency department for chronic and essentially cardio-vascular diseases. In 95.4% of cases, patients were not taken to hospital by any hospital means of transport. In 94% of cases death occurred in the department. In 6% of cases, patients had a cardiac arrest before reaching the hospital. Mean length of stay in the emergency department before death was 19.7 ± 9 hours. Fifty-three of patients died within 6 hours after admission. Death occurred following a cardio-vascular disease in 38.1% of cases, a neurological disease in 16% of cases and an infectious disease in 13% of cases. Necropsy was warranted in 5.3% of cases. In 34.4% of cases of cardiocirculatory arrest we decided to refrain from providing further critical care.

Conclusion :

According to the present study, death occurred in 0.15% of cases following essentially a cardiovascular complication. Multicentre prospective studies would be of great importance.

P648

Other - Part 2

ANALYSIS OF JUDICIAL CASES AT EMERGENCY DEPARTMENT

N Kozaci

acil tip, adana NEAH, adana, Turkey

Corresponding author: Mme Kozaci Nalan (drkozac@yahoo.com)

Key-words: Emergency ; forensic report ; forensic cases

Objective: In this study, we aimed to analyse the demographic features of judicial cases admitted to emergency department of an education and research hospital, the content of life-threatening of forensic reports, the status of simple medical intervention and outcomes in the emergency department.

Material and Methods: Judicial cases, admitted to the emergency department during December 1, 2009 and December 31, 2010 were included in the study. Patients were evaluated from the patient cards retrospectively. Categorical data summarized as number and percentage, numerical measurements summarized as mean and standard deviation. the data were statistically analyzed with using SPSS 16.0 statistical program.

Results: Of the 5870 judicial cases, 63,78 % were male and 36,22 % were female. Mean age of patients were $33,75 \pm 12,4$. Traffic accident (27,3 %), intoxication (24,3 %) and to be beaten (17,6 %) were the first three judicial events. Traffic accidents were seen in males between 26-33 ages mostly and intoxications were seen in females between 18-25 ages commonly. The most reason of injuries were limb injuries with 2404 cases. 73,3 % of patients were

discharged and 26,3 % of patients were hospitalized. When forensic reports were evaluated, 28,8 % of males and 11,3 % of females were not resolved with simple medical intervention. 21,1% of patients whom life-threatening condition were defined had life-threatening.

Conclusion: Forensic cases are seen in young adult males most commonly. Extremities are most frequently injured region. Many forensic patients can be treated with simple medical intervention but In one fifth of the patients have life threatening.

P649

Other - Part 2

PARAOXONASE-1 GENE IN PATIENTS WITH ISCHEMIC STROKE DISEASE INVESTIGATION Q192R AND L55M POLYMORPHISMS

I Adsiz (1), M Yildiz (2), M Kara (3), CF Demir (4), M Gurger (2), N Adsiz (2)

1. Department of Emergency Medicine, Elazığ Training and Research Hospital, Elazığ, Turkey
2. Department of Emergency Medicine, Firat University, School of Medicine, Elazığ, Turkey
3. Department of Medical Genetic, Firat University, School of Medicine, Elazığ, Turkey
4. Department of Neurology, Firat University, School of Medicine, Elazığ, Turkey

Corresponding author: Mr Yildiz Mustafa (aciltip@gmail.com)

Key-words: Ischemic stroke ; paraoxonase ; polymorphism

The effect of increased oxidative stress in development of acute ischemic stroke is well known. One of the antioxidative systems against oxidative stress in human body is paraoxonase (PON) enzyme that protects low density lipoproteins against oxidation. In this study we aimed to search the polymorphisms on PON1, Q192R, L55M genes of patients with ischemic stroke.

The DNAs extraction was obtained from blood samples of the 50 patients diagnosed with ischemic stroke and 50 patients as control group who were presented to emergency clinic. Genotypes were obtained with polymerase chain reaction and Alw I and Hsp92II restriction enzymes were used for Q192R and L55M polymorphisms, respectively. Analysis of data was done with Chi-Square and Fisher's exact tests.

A statistically significant difference regarding Q192R polymorphism was found between ischemic stroke patients and control group ($P = 0.05$). There was no statistically significant difference about L55M polymorphisms in patient and control groups ($P > 0.05$).

In our study, we observed PON-1 gen Q192R and L55M polymorphism in patient with ischemic cerebrovascular disease. Consequently, we suggest that PON-1 gen Q192R polymorphism contribute pathogenesis of cerebrovascular disease. We believe that more studies are needed in this subject.

P650

Other - Part 2

DEMOGRAPHICS FEATURES OF PATIENTS OLDER THAN 65 YEARS PRESENTING TO EMERGENCY DEPARTMENT

B Mutlu (1), M Yildiz (1), M Gurger (1), E Gul (2), MN Bozdemir (3), I Kilicaslan (4)

1. Department of Emergency Medicine, Firat University, School of Medicine, Elazığ, Turkey
2. Department of Emergency Medicine, Elazığ Training and Research Hospital, Elazığ, Turkey
3. Emergency Medicine, Antalya Training and Research Hospital, Antalya, Turkey
4. Department of Emergency Medicine, Gazi University, School of Medicine, Ankara, Turkey

Corresponding author: Mr Yildiz Mustafa (aciltip@gmail.com)

Key-words: geriatric patient ; emergency department ; comorbidity

Admission to the emergency department by the elderly is increasing proportionally with the increase in the elderly population in Türkiye. The presence of multiple diseases causes a complicated clinical situation. Evaluation of elderly patients in the emergency department may be difficult. Approaching the emergency problems of the elderly population with specially educated personnel will result in the provision of a faster and more qualified health service. From these reasons, knowing the elderly patient profile presenting to emergency department becomes important. Our study, we aimed to evaluate the demographics of elderly patients who were admitted to the emergency department. Complaints, diagnosis, history of illnesses, medications, length of hospital stay, wards of admission, and mortality rates of patients older than 65 years, presenting to Firat University Emergency Department from June 2011 to November 2011 were recorded prospectively from patient records.

On average, 13.8% of the total number of patients who applied to the emergency department represented the geriatric population over the age of 65. Mean of age was 74.8 ± 7.2 . The results indicated that 37.2% hypertension, 21.9% coronary artery disease and 18% diabetes mellitus. Top three disease was found as follows: strokes (%5.3), congestive heart failure (%4.8), vertigo (%4.2). The gender distribution of the elderly was 49.2% women and 50.8 men. 38.3% of all admission to the geriatric patients were hospitalized. The most common department of hospitalization was cardiology.

High rates of geriatric patients applying to emergency department show the necessity for emergency staff to be informed and trained about geriatrics. We think that, more research needs to be done on this subject.

P651

Other - Part 2

EVALUATION OF EMERGENCY DISEASES OF NURSING HOME RESIDENTS

A. Karakus (1), C. Zeren (2), S Arica (3), ES. Erden (4), M. CELIK (5), H. Kandis (6)

1. Department of Emergency Medicine, Mustafa Kemal University, Hatay, Turkey
2. Department of Forensic Medicine, Mustafa Kemal University Faculty of Medicine, Hatay, Turkey
3. Family Medicine, Mustafa Kemal University, Faculty of Medicine, HATAY, Turkey
4. Department of Chest Diseases, Mustafa Kemal University Faculty of Medicine, Hatay, Turkey
5. Department of Internal Medicine, Mustafa Kemal University, Faculty of Medicine, Hatay, Turkey
6. Emergency department, Düzce University, Düzce, Turkey

Corresponding author: Mr Karakus Ali (drkarakus@yahoo.com)

Key-words: Emergency disease ; Nursing Home ; Elderly Patient

Objective: This study was aimed to evaluate diseases of nursing home residents requiring emergency intervention.

Material and methods: A total of 185 nursing home residents residing in Hatay nursing home, between November 2010 and January 2012, were included in the study. Governorship approval (11/02/2011-1040- Local Family and Social Policy Directorate) was obtained. Nurse observation records and relevant medical files were investigated.

Results: Of residents 114 (61.6%) were male while 71 (38.4%) were female with a mean age of 78.67 ± 8.38 years. Out of all 89 (48.1%) cases were suffering from a chronic illness. Hypertension was found to be the most common chronic disease ($n:27, 33.7\%$). The most

common illness reports were those of diseases related internal medicine (n:37, 41.5%) and acetyl salicylic acid was the most commonly used drug as in 17 patients (22.6%). Of 67 (36.2%) patients treated in Emergency Departments the most common complaint was impaired general condition with 19 (28.3%) patients a complaint was taken 89 times. Patients were mostly diagnosed with hypertension (n:10, 15.3%). Out of hospitalized patients, twenty-seven (36.0%) were discharged, while patients were frequently admitted and followed in internal medicine (n:15, 20%) departments. Out of hospitalized patients 10 (13.3%) were died. Conclusion: It was determined that the most common complaints were general poor health, fall and respiratory failure and the most common diagnosis were hypertension, heart disease and orthopedic emergencies in nursing home residents.

P652

Other - Part 2

ADMITTED TO THE EMERGENCY DEPARTMENT ASSESSMENT OF THE IMPORTANCE OF THE FINDINGS OF PHYSICAL EXAMINATION IN PATIENTS WITH ACUTE ABDOMEN.

E KAYA (1), G. Kuvandık (2), A. Karakus (3), E UCAR (4), M. CELIK (5), A AYDOGAN (6)

1. Emergency Medicine, Mustafa Kemal University, Faculty of Medicine, hatay, Turkey
2. Emergency department, Mustafa Kemal University Faculty of Medicine,, Hatay,, Turkey
3. Department of Emergency Medicine, Mustafa Kemal University, Hatay, Turkey
4. Internal Medicine, Mustafa Kemal University, Faculty of Medicine, HATAY, Turkey
5. Department of Internal Medicine, Mustafa Kemal University, Faculty of Medicine, Hatay, Turkey
6. General Surgery, Mustafa Kemal University, Faculty of Medicine, HATAY, Turkey

Corresponding author: Mr Karakus Ali (drkarakus@yahoo.com)

Key-words: Acute abdominal pain ; physical examination ; emergency service

Acute abdominal pain is common among patients admitted to the emergency department. The pain less than a week is called acute pain. The differential diagnosis of the patients with acute abdominal pain is always difficult for emergency physicians. Nowadays in many countries, more effective, less expensive and easily accessed health care services is targeted. Physical examination still has greater importance than laboratory tests and imaging in diagnosis of abdominal.

The study is a cross-sectional descriptive study carried out in emergency department of Mustafa Kemal University. The study was performed prospectively in the emergency department. 150 patients were included in the study (76 male (51,3%) - 74 female (48,7%). 150 patients presenting to the emergency department with an abdominal pain in the last seven days comprised the study sample.

Patients classified according to their treatment such as medical, surgical and medical in surgery department in respect to the results of the attending time. Nonspecific abdominal pain was the most frequent type. Physical findings of patients undergoing surgical operation were correlated with their abdominal x-rays.

After all the work of general literature, and as we have shown in our study: 34-53% of the patients with abdominal pain final diagnosis of nonspecific abdominal pain is the nude. This patients diagnosis with physical examination findings along with laboratory and imaging methods are needed for the differential diagnosis.

P653

Other - Part 2

EVALUATION OF DERMATOLOGICAL DISORDERS AMONG ADMITTANCES TO 112 EMERGENCY SERVICES IN KAYSERİ - 2011

K. Ozyurt (1), S. Bozkurt (2), P. Ozturk (1), M. Okumuş (2), H. Baykan (3)

1. Dermatology Department, Sutcu Imam University Medical Faculty, Kahramanmaraş,, Turkey
2. Emergency Medicine Department, Sutcu Imam University Medical Faculty, Kahramanmaraş, Turkey
3. Plastic and Reconstructive Surgery Department, Sutcu Imam University Medical Faculty Kahramanmaraş, Turkey

Corresponding author: Mr Ozyurt Kemal (drkozyurt@gmail.com)

Key-words: emergency ; 112 ; emergency dermatology

This study aimed to determine the clinical characteristics of the patients admitted to 112 emergency services with dermatological disorders in Kayseri city in 2011. A total of 52472 cases admitted to 112 emergency services in Kayseri, in 2011. Of the cases 39815 (75,8 %) were from urban and 12657 (24,2 %) were from rural regions of the city. Of the cases, 0,88 % admitted due to dermatological disorders. The most common dermatological reason for calling the 112 emergency services was insect bite (70,8 %) and the most diagnosed dermatological disorder was insect bite (70,8 %). It is often a challenge for a primary care provider to differentiate common skin disorders from more serious, life-threatening conditions that require immediate intervention. The purpose of this study is to highlight some dermatologic emergencies

P654

Other - Part 2

RETROSPECTIVE ANALYSIS OF SKIN DISEASES ADMITTED TO A EMERGENCY DEPARTMENT

S Güneş Bilgili (1), S Karadas (2), R Dursun (3), AS Karadag (1), O Calka (1)

1. Dermatology department, Yüzüncü Yıl University, van, Turkey
2. emergency department, Yüzüncü Yıl University, van, Turkey
3. emergency department, Van Region Training and Research Hospital, van, Turkey

Corresponding author: Mr Dursun Recep (drrecep@dursun@hotmail.com)

Key-words: skin diseases ; emergency department ; urticaria-angioedema

Aim

In this study we aimed to investigate regarding the reasons for application, clinical characteristics, diagnoses, treatments, and hospitalization rates of patients applying to the emergency service who underwent dermatology consultation.

Materials and Method

We retrospectively analyzed 902 patients admitted to emergency department between January 2006 and December 2010. The data were analyzed according to age, sex, diagnosis and time of admittance.

Results

Of the 182,456 patients who attended to emergency department, 902 (0.5%) were diagnosed with skin conditions. The age of the patients ranged from 16 years to 87 years, with a mean age of 40±16 years. There was a predominance of women, who accounted for 60% of the group. According to seasonal distribution, 31.7% patients admitted to the emergency department in summer,

26.8% patients were in spring, 21.6% were in autumn, and 19.8% were in winter. The five most frequently encountered diseases in patients were urticaria-angiodema (27.4%), bacterial infections (18.8%), drug reactions (16.4%), eczematous dermatitis (12.6%), viral infections (6.44%). 61.5% of the patients were treated in outpatient clinic while 22.5% of them were needed inpatient treatment. 4.5% of the patients were refused inpatient treatment. 6% of the patients were interned in the other departments and 5.4% of them were interned in the emergency department.

Conclusion

Skin diseases are less frequent in emergency department comparing with the other diseases that depend to the other departments. The major part of the skin diseases that seen in emergency department are; urticaria-angioedema, bacterial skin infections, drug reactions and eczema. Surprisingly the skin diseases are frequent in summer while most of the acute diseases in emergency departments are seen in winter. Most of the patients with skin diseases are followed in outpatient clinic and that costs lower prices to the health care units

P655

Other - Part 2

INMIGRATION AT THE E.R.

C Jiménez Hidalgo, A Ferrer Baena, JL Gálvez San Román, MC Navarro Bustos, ME Oncala Sibajas, E Salamanca Rivera
Emergency department, University Hospital Virgen Macarena, Seville, Spain

Corresponding author: Mr Jiménez Hidalgo Cristina (jimencristina@gmail.com)

Key-words: INMIGRATION ; EMERGENCY ; DEPARTMENT

INTRODUCTION

In the last 30 years, Spain has turned from an emigrant country to a huge receptor of migratory flows. According to the I.N.E., in January 2011 almost 6.7 million foreigners were living in our country. At present, net immigration rate only reaches 0,99%, occupying the 15th position of the European Union.

In Spain, most foreigners are Latin American. In Andalusia, the majority are Moroccans.

AIMS

To determine the frequency of attendance and the type of pathology due to which foreigners attend the E.R., as well as the prescriptions done with electronic prescriptions.

MATERIAL AND METHODS

This is a descriptive, retrospective study of the foreigner population living in Spain in a legal situation, that attends the E.R. during the month of November, 2011.

We analyzed 849 records. The information was obtained from the medical records registered in the computerized system Digitalized Citizen's Health Records of the Andalusian Health System «DIRAYA». We collected data such as affiliation, hours of attendance, priority during triage, specialty, cause of consultation, complementary tests, clinical opinion on discharge and prescriptions as well as the number of cases attended during the year, exporting them to a calculation sheet for a further analysis.

RESULTS I

•ATTENDANCES	5,28% (849/16081)
•WOMEN: MEN	59,36% : 39,81%
•MEAN AGE	31,84 años
•ATTENDANCES/YEAR/PAC	2,47
•DIGITAL PRESCRIPTIONS	677
•BANAL PATHOLOGY	50,4%
•IMMEDIATE ATTENTION	5,54%

RESULTS II

• ROMANIA:	14.72%
• MOROCCO :	12.84%
•BOLIVIA:	9.66 %
•ECUADOR:	8.48 %
•COLOMBIA :	6.24 %
•PERU:	5.89%
•PARAGUAY:	4.12 %

RESULTS III

•INTERNAL MEDICINE:	39.34 %
•TRAUMA-SURGERY:	27.44%
•GYNECOLOGY	14.84%
•PEDIATRICS:	6.71%
•OFTALMOLOGY:	5.89%
•OTOLARYNGOLOGY:	2.83%
•ESCAPE.	2.24 %
•PSYCHIATRY:	0.71 %

RESULTS IV

•INTERNAL MEDICINE	
–Abdominal Pain	7,07%
•OBGYN	
–Labor	4,36%
•TRAUMATOLOGY	
–Contusions	4,12%

RESULTS V

COMPLEMENTARY TESTS

•RX:	36.63%
•LABORATORY TESTS.	27.44%
•EKG:	7.66%
•VAGINAL ECO:	6.60 %
•ABDOMINAL ECO:	4.36%
•CRANIAL CAT:	1.18%
•ABDOMINAL CAT :	0.35%
•ECO DOPPLER:	0.12 %
•ECOCARDIOGRAPHY:	0.12 %

RESULTS VI

DISCHARGE DERIVATION

•DISCHARGE:	87.99%
•ADMISION	7.18 %
•NOT STATED:	4.83%

CONCLUSIONS

Foreigner patients that attend our E.R. are mostly young women. One third of these are originary from Latin America, mostly presenting banal pathologies with abdominal pain accounting for most of the cases and discharge from the hospital as the most frequent outcome.

P656

Other - Part 2

INGESTION OF A TEA SPOON AS A FOREIGN BODY

HM Durgun, M Icer, E Ozcete, A Ozhasenekler, Y Zengin
Emergency Department, University of Dicle, Medical School, Diyarbakir, Turkey

Corresponding author: Mr Ozhasenekler Ayhan (drhasenek@hotmail.com)

Key-words: foreign body ; tea spoon ; emergency

Introduction: Inadvertent foreign body ingestion is generally seen in infants and young children. Infants tend to bring every object to their mouth. These objects may be anything they can swallow.

Older children, on the other hand, may inadvertently swallow foreign objects they play with. We report in this paper a case of foreign body swallowing of a 12-year-old boy swallowing a tea spoon after he had bent it while playing. Our aim was to draw attention to foreign body swallowing incidents in infancy and childhood.

Case: A 12-year-old male patient was referred by another center with foreign body swallowing. He inadvertently swallowed a tea spoon he had bent while playing with it, one hour ago. He was brought to a different clinic with chest pain and difficulty in swallowing. His past history was unremarkable. His general condition was good, he was conscious, GKS was 15. On physical examination, he was nervous and had an increased salivation. Other systems were normal. Posteroanterior chest X-Ray showed an opacity consistent with a tea spoon folded in two at the distal 1/3 part of the esophagus. The patient was consulted with pediatric surgery. After entering esophagus with flexible endoscope, the foreign body was removed with the help of a forceps. No complication developed and the patient was discharged after an appropriate monitorization period.

Discussion: Foreign body ingestion is most commonly seen between 6 months and 3 years of age. The most common ingested foreign bodies are coins, toys, toy parts, magnets, watch batteries, staples, pins, bone pieces, and big morsels. It is uncommon to ingest materials used daily such as spoons or tooth brushes. Foreign bodies generally caught by physiologic narrowings of esophagus which are, in descending order, upper esophageal sphincter, level of arcus aorta, and lower esophageal sphincter. Most of these bodies are removed spontaneously; however, 10-20% may require endoscopic or rarely surgical intervention.

As a conclusion, it should be remembered that foreign body ingestion may be encountered in every age group although it is more common under the age of 3; the families should be warn about this danger since it is common in infants.

P657

Other - Part 2

TRAUMATIC PENILE AMPUTATIONS DUE TO HORSE BITE: REPORT OF TWO CASES

HM Durgun, C Guloglu, M Orak, A Ozhasenekler, M Ustundag

Emergency Department, University of Dicle, Medical School, Diyarbakir, Turkey

Corresponding author: Mr Ozhasenekler Ayhan (drhasenek@hotmail.com)

Key-words: penil amputation ; horse bite ; emergency

Introduction: Genitourinary trauma is more common in men than women, which is due to both anatomical differences and more active state of men in society. Genital traumas in men may be seen in all age groups due to fall on blunt, sharp objects and animal bites, particularly by dogs. The most common animal bites are by cats and dogs, although rarely bites of other animals may be encountered. Two cases of total penile amputations due to horse bite were reported in this paper.

Case 1: An eleven-year-old male patient was bitten by an unowned horse while he was trying to get on it. He was brought to our clinic with total penile amputation 1 hour after the incident. His general condition was good, he was conscious, blood pressure was 120/70 mmHg, and pulse rate was 105 bpm. On physical examination, distal ½ penis was amputated with active bleeding from the stump. The amputated distal part was not brought with the patient. His other systems were normal on examination, so were the laboratory tests. Wound hemostasis was achieved and wound care was made.

Tetanus prophylaxis and wide-spectrum antibiotics were begun. The patient was referred to a tertiary center for penile reconstruction.

Case 2: A sixty-seven-year-old male patient was bitten by his own horse from his genital region. He was brought to our clinic two hours later with total penile amputation and amputated part brought with. Amputated part was necrotic. He told that he had been using warfarin for 10 days against deep vein thrombosis. His general condition was good, he was conscious, blood pressure was 130/85 mmHg, pulse rate was 95 bpm. On physical examination, distal part of the penis was amputated and the bleeding had been stopped with pressure dressing. His INR was 5.7, and prothrombin time was 73.5, other laboratory tests were in normal limits. He was given tetanus prophylaxis and wide-spectrum antibiotics. Warfarin was stopped, fraxiparine was begun and fresh frozen plasma was given. A cystostomy was performed. Foley catheter was placed. Operation for amputated part was contemplated but since it is necrotic, only stump revision was made. He was discharged on day 4 with foley catheter in place.

Discussion: Animal bites are rare in traumatic penile amputations, dog bites are more common. Horse bites leading to penile amputations are mostly seen in rural regions. Prevention of infections is paramount in animal bites. Typically Pasteurella Multicoda infection develops. The primary treatment in such patients is reimplantation of the amputated organ.

As a conclusion, the length of post-amputation duration, transport of amputated part under adequate conditions, and degree of damage of amputated part are the main factors influencing the success of reimplantation.

P658

Other - Part 2

SIDE EFFECTS OF INTRAVENOUS ADRENALINE

E Acar, CS Tanrikulu, S Karaman, H Şahin

Emergency department, Erzurum district education and research hospital, Erzurum, Turkey

Corresponding author: Mr Acar Ethem (dr.ethemacar@hotmail.com)

Key-words: Adrenaline ; side effects ; emergency department

Introduction

Adrenaline has many functions in the body, regulating heart rate, blood vessel and air passage diameters, and metabolic shifts; Adrenaline release is a crucial component of the fight-or-flight response of the sympathetic nervous system. Adrenaline is used to treat a number of conditions including: cardiac arrest, anaphylaxis, and superficial bleeding. Due to its vasoconstrictive effects, adrenaline is the drug of choice for treating anaphylaxis. Anaphylaxis is treated with 0.3-0.5 mg subcutaneous (SC). The implementation of adrenaline accidentally leads to serious side effects out of these indications. In this study, a case is presented that it was considered anaphylaxis and should have been done SC for adrenaline, but intravenous (IV) was applied accidentally.

Case

This case was observed because adrenaline-IV applied by mistake instead of SC for 16-year-old female patient. She applied to Emergency Department with breath shortness complaint. According to patient story, she used bronchodilator for asthma; had lung widespread bronchi on physical examination, and also applied B-mimetic treatment. It was learned that anaphylactic reactions were thought due to increasing breath shortness and being cyanosis by following treatment. Thus, adrenaline application was planned, but 1 mg IV was applied accidentally. Patients were monitored. Blood pressure was 140/80 mmHg, and rhythm sinus

heart rate was 135 beats per minute. On physical examination, conscious was open; there was no uvula edema; the patient's lungs was natural, but she severe headache. After approximately 10 minutes, her orientation was deteriorated and agitations were begun. Brain CT was normal. Analgesic was done for headache and fluid replacement, but agitation continued approximately 1 hour, and headache continued approximately 2 hours. Then they were recovered. The patient was followed for fluid replacement with monitor, and her vitality was evaluated at frequent intervals, and there was no additional complaint.

Result

Anxiety, irritability, headache, chills, dizziness, nervousness, insomnia, agitation, nausea, vomiting, color fading, tachycardia, palpitations, ECG T flattening, hypertension, hypotension, and arrhythmias may occur as a side effect of adrenaline. It is important monitored following and hydration with plenty of fluid for such patients

P659

Other - Part 2

SPONTANEOUS EPIDURAL HEMATOMA IN SICKLE CELL ANEMIA PATIENT

A. Karakus, K Caliskan, G. Kuvandik, M. Duru, V Tasin, I Gencay

Department of Emergency Medicine, Mustafa Kemal University, Faculty of Medicine, Hatay, Turkey

Corresponding author: Mr Karakus Ali (drkarakus@yahoo.com)

Key-words: Spontaneous epidural hematoma ; sickle cell anemia ; emergency department

Intracranial bleeding is uncommon and serious complication of sickle cell disease (SCD). A few cases of spontaneous epidural hemorrhage have been reported. The real cause of epidural hemorrhage is not well known in this patient, but it is probably due to vaso-occlusive episodes and tearing of small vessels. Neurologic complications of SCD include stroke, both ischemic and hemorrhagic, as well as epidural hemorrhage. In some cases, vague symptoms consistent with a transient ischemic attack may be present as potential warnings of impending stroke. The cause of stroke in most patients is cerebral infarction because of occlusion or narrowing of cerebral vessels. We report a case have epidural hematoma in the absence of trauma, thrombocytopenia or any detectable haemostatic defect. Emergency physicians thought that it should not forget.

18 year old female patient two days ago hospitalized because of progressive back and neck pain. In first day no complaints other than pain. She felt pain in the back of the neck especially. Because of the change in consciousness, patient referred to our hospital. Physical examination: temperature: 36,7 °C, pulse: 95/min, blood pressure: 100/80 mm/hg, sPO2: %98, Glasgow coma scale: 10(v:2,e:3,m:5), No trace of the head and neck trauma, natural pupils, bilateral light reflex and other reflexes are normal, normal active deep tendon reflexes. Other system examinations were normal. Laboratory values; Hb: 7,46 g/dl, Hct: %21,8, Plt: 122000, Wbc: 5000, Ure: 15 mg/dl, Cre: 0,61 mg/dl, Glu: 123 mg/dl, AST/ALT: 57,4/10 U/L, Na: 141 mmol/L, K: 4,06 mmol/L, Cl: 107,9 mmol/L, T.bil/D.bil: 2,04/0,4 mg/dl. Other laboratory values were normal. For our patient principally ischemic origin was thought by hematologist. But we determined epidural hematoma in the absence of skull fracture with non-contrasts brain CT (Resim 1.)

Key Words: Spontaneous epidural hematoma, sickle cell anemia, emergency department

P660

Other - Part 2

ARE ACCIDENT AND EMERGENCY PATIENTS GETTING OLDER AND SICKER?

S Hill (1), R Jarman (2), S. Parker (1)

1. Newcastle Medical School, Newcastle University, Newcastle, United Kingdom

2. Accident and Emergency department, Queen Elizabeth Hospital, Gateshead, United Kingdom

Corresponding author: Melle Hill Susanna (susie.l.hill@gmail.com)

Key-words: Accident and emergency ; Ageing population ; Triage

Background: The population of the UK is changing. As people are living longer they are more likely to be living with a long term health condition requiring the services of the NHS(1). In accident and emergency (A&E) departments, previous studies have demonstrated that the time taken to manage patients and the number of investigations performed increased with the age of the patient(2).

The Manchester Triage System(3) is used at Queen Elizabeth Hospital (QEH), Gateshead, UK, to classify patients into an appropriate priority category [P1 to P5] to determine the urgency in which they require treatment. Changes in the acuteness of patients' conditions may also impact on the time required to treat them as well as on the staffing levels, space and resources needed to run an efficient A&E department.

Aims: To identify whether there have been demographic changes in patients attending A&E at Queen Elizabeth Hospital, Gateshead, UK from 2003-2012.

To identify whether there has been a change in the pattern of patients presenting most acutely unwell (as P1 or P2) to A&E at Queen Elizabeth Hospital from 2006-2012.

Methods: Numbers of attendances to A&E each year and demographic data (age, triage category) were collected from the "Symphony" database from 2003-2012 (544,727 attendances).

Further demographic data, including presenting complaint, were obtained from Symphony for 862 attendances. Data were collected for all patients presenting as a P1 or P2 on the first day of every month for the years 2006, 2007, 2008, 2010 and 2012.

Results: From 2003 to 2012, patients requiring the most urgent treatment have increased (category P1: +63% P2: +184% and P3: +71%) and less urgent patients have decreased (category P4: -25% and P5: -43%).

There has been a 9% increase in total patients attending A&E from 2003 to 2012, and a disproportionate 53% increase in patients over the age of 75 attending A&E.

The percentage of adult attendances that were admitted also increased by 8.5% from 2003 to 2012.

The average age of a category P1 patient (56) is greater than that of P2 (52) and both are greater than the average age of all A&E patients combined (39).

The average age of all A&E attendees, P1's and P2's have increased from 2006 to 2012

Chest pain, shortness of breath, abdominal pain, limb problems and 'unwell' were the most common complaints presenting to A&E from 2006 to 2012. Numbers of patients presenting as 'unwell' or with chest pain increased from 2006 to 2012.

Conclusions: There are many reasons why the number of acutely unwell patients presenting to Queen Elizabeth Hospital A&E has increased. These results demonstrate that an ageing population is a likely contributing factor. Increased public awareness of common acute conditions (Myocardial infarction, stroke) and the public's demand for more immediate, convenient treatment may also play a part.

As the population continues to shift towards an increase in older people, numbers of patients presenting as acutely unwell in A&E patients are likely to increase. These results are of particular relevance when considering both the staffing and resources required by the A&E department. More acutely unwell patients require more time and input from senior staff and greater resources to assess and treat them. An increase in the number of staff, particularly at a senior level, may be necessary to reflect the increase in both the number and the severity of acutely unwell patients seen in A&E at the Queen Elizabeth Hospital.

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P661

Other - Part 2

TRENDS OF CT USE IN THE ADULT EMERGENCY DEPARTMENT IN A TERTIARY ACADEMIC HOSPITAL OF KOREA DURING 2001 - 2010

J Cho (1), EY Kim (2), HJ Yang (1)

1. Department of Emergency Medicine, Gachon University Gil Hospital, Incheon, Korea, (South) Republic of
2. Department of Radiology, Gil Hospital, Incheon, Korea, (South) Republic of

Corresponding author: Mme Kim Eun Young (oneshot0229@gmail.com)

Key-words: Computed Tomography ; Adult ; Emergency Department

Objective: We wanted to assess the trends of computed tomography (CT) examinations that were conducted in an adult emergency department (ED).

Materials and Methods: We searched the medical database to identify adult patients (≥ 18 years) who'd visited the ED and the number of CT examinations of the patients during the period from January 2001 to December 2010. We also analyzed the types of CT scans performed by body part as follows; head CTs, facial bone CTs, cervical CTs, chest CTs, abdominal CTs, and miscellaneous CTs. And miscellaneous CTs were subdivided as CT angiographies and et cetera.

Results: A total of 113,656 CT scans were examined for 409,439 adult ED patients during the 10-year period, and the number of CT scans increased by 255% (from 4,743 CTs in 2001 to 16,856 CTs in 2010), while the adult ED patient volume increased by 34% during the period. Although the head CTs occupied proportionally the most, the facial bone CTs revealed the largest rate of increase (3118%), followed by cervical CTs (1173%) and chest CTs (455%), miscellaneous CTs (388%; 862% and 84% for CT angiographies and et cetera, respectively), abdominal CTs (315%) and head CTs (95%) per 1000 patients for a decade.

Conclusion: Utilization of CT scans has increased at a rate that far exceeds the growth of the ED patient volume, with facial bone CTs and cervical CTs increasing the most, followed by chest CTs, miscellaneous CTs, abdominal CTs and head CTs.

P662

Other - Part 2

TRENDS OF CT USE IN THE PEDIATRIC EMERGENCY DEPARTMENT IN A TERTIARY ACADEMIC HOSPITAL OF KOREA DURING 2001 - 2010

J Cho (1), EY Kim (2), HJ Yang (1)

1. Department of Emergency Medicine, Gachon University Gil Hospital, Incheon, Korea, (South) Republic of
2. Department of Radiology, Gil Hospital, Incheon, Korea, (South) Republic of

Corresponding author: Mme Kim Eun Young (oneshot0229@gmail.com)

Key-words: Computed Tomography ; Pediatric ; Emergency Department

Objective: We wanted to assess the trends of computed tomography (CT) examinations in a pediatric emergency department (ED).

Materials and Methods: We searched the medical database to identify pediatric patients who had visited the ED and the number of CTs from January 2001 to December 2010. We analyzed the types of CTs according to anatomic region and the patients who underwent CT examinations for multiple regions. Data were stratified according to the patient age (< 13 years and $13 \leq$ ages < 18 years).

Results: The number of CTs per 1000 patients increased by 92% during the 10-year period (per 1,000 patients, increased from 50.1 CTs in 2001 to 156.5 CTs in 2006, and then decreased to 96.0 CTs in 2010). Although head CTs were performed most often (74.6% of all CTs), facial bone CTs showed the largest rate of increase (3188%) per 1000 patients, followed by cervical CTs (642%), abdominal CTs (474%), miscellaneous CTs (236%), chest CTs (89%) and head CTs (39%). Patients who had CT examinations for multiple regions in the same day showed a similar pattern of increase with that of overall CT examinations. Increase of CT utilization was more pronounced in adolescents than in pediatric patients younger than 13 years (189% vs. 59%).

Conclusion: Utilization of CTs increased from 2001 to 2006 and has declined since 2006. Increase of CTs was more pronounced in adolescents and facial bone CTs showed the greatest increase, followed by cervical CTs, abdominal CTs, miscellaneous CTs, chest CTs, and head CTs.

P663

Other - Part 2

SELF REPORTED USE OF GUIDELINES AMONG EMERGENCY MEDICAL COMMUNICATION CENTER OPERATORS – A QUESTIONNAIRE BASED SURVEY

EN Ellensen (1), T Wisborg (2), S Hunskaar (3), E Zakariassen (1)

1. Research department, Norwegian Air Ambulance Foundation, Drøbak, Norway
2. Anesthesia and Critical Care Research Group, Faculty of Health Sciences, University of Tromsø, Tromsø, Norway
3. National Centre for Emergency Primary Health Care, Uni Health, Bergen, Norway

Corresponding author: Mme Ellensen Eirin (eirin.nybo.ellensen@norskluftambulanse.no)

Key-words: Dispatch ; Guidelines ; Compliance

Objective

The Norwegian Index for Medical Emergency Assistance (Index) is the criteria-based dispatch guidelines used by the Emergency Medical Communication Centers (EMCCs) in Norway. The electronic version is under development, but for now the EMCCs

still use the paper version, an A3 flip over desk protocol. After 18 years the Index' validity is still unknown. Furthermore, there are no data on the operators' compliance with the dispatch guidelines when answering an emergency medical phone call. As a step towards the validation process, we invited all EMCC operators in Norway to answer a questionnaire regarding their use of Index. The objective was to determine their self-reported compliance with the dispatch guidelines.

Methods

The EMCCs were asked to distribute the questionnaire to all their employees with primary task to answer emergency medical phone calls. All 19 EMCCs in Norway participated, distributing a total of 443 questionnaires. A prepaid return envelope was attached to each questionnaire to secure no management involvement in the answering process, thus securing anonymity. We analyzed total use of flip over paper version, specific use of start page, and reasons for not using either one.

Results

251 questionnaires were returned, all EMCCs were represented, giving a response rate of 56.7 %. 32.3 % of the responders claimed to use the flip over Index always during an emergency medical phone call, while 75.7 % used it often or always (> 75 % of the calls). The start page, which includes important questions like location and the patient's state of consciousness and breathing, was always used by 21.5 %, whereas 47.0 % used it often or always (> 75 % of the calls).

The main reason for not using the flip over Index, in general or the start page in particular, was reported to be the perception of knowing the content very well.

Conclusion

There is a mismatch between the criteria based system's required active use of the guidelines and the actual self reported use by the operators. The main reason for not using the flip over Index was reported to be the operators' belief that they know it by heart. Whether that is true, is yet to find out.

P664

Other - Part 2

UPPER GASTROINTESTINAL BLEEDING IN THE ELDERLY AT EMERGENCY DEPARTMENT

F Adnet (1), E Debuc (2), O Gardy (3), C Hermand (2), D Pateron (4), P Ray (4), E Vicaut (5)

1. Emergency Medicine, Hôpital Avicenne, APHP, Université Paris 13, Bobigny, France
2. Emergency department, Hôpital Saint-Antoine, Paris, France
3. Emergency Department, Hôpital Saint-Antoine, Paris, France
4. Emergency Medicine, Hôpital Saint-Antoine, APHP, Université Paris 6, Paris, France
5. Unité de recherche clinique, Hôpital Fernand Widal, APHP, Université Paris 7, Paris, France

Corresponding author: Mr Pateron Dominique (dominique.pateron@sat.aphp.fr)

Key-words: gastrointestinal bleeding ; elderly ; endoscopy

Acute upper gastrointestinal bleeding is a common medical emergency with a high morbidity and mortality rate. Global incidence of acute upper gastrointestinal bleeding has decreased these last ten years, but this decrease was not observed in old patients. In the elderly, the nature, severity and outcome of bleeding are influenced by the presence of comorbidities and the use of drugs. Age is known to be by itself a prognostic factor. Few studies concerning the elderly people with acute gastrointestinal bleeding at emergency department (ED) have been yet performed. This study analysed the characteristics of acute upper gastrointestinal bleeding in the old patients (>70 years) compared with patients under 70 years, admitted in emergency department.

Methods: we compared the characteristics of acute upper gastrointestinal bleeding in the old patients, (defined as the patients >70 years) with patients under 70 years issued from a prospective multicentre study (6 emergency departments). Analysed parameters concerned characteristics of patients, endoscopic data and outcome.

Results: During the study, 253 presented at emergency department with haematemesis or melaena and were analysed. Eighty-four patients (33%) were diagnosed with cirrhosis. 82 were >70 y old (Group old: GO) and 171 <70 y old (Group young: GY). There were 45 males in GO (55%) vs. 136 in GY (80%) (p<0.0001). There was no difference in terms of initial shock, initial hemoglobinemia, oxygen therapy, admission in ICU, quality of gastrointestinal tract visualisation, rebleeding and death at one month. There were less cirrhosis in GO than in GJ (7% vs. 45), uremia was higher in GO than in GY (17 moles/l vs. 11). Patients of GO were more frequently transfused than of GY (83% vs. 66, P<0.005). There were more undetermined lesions in GO than in GJ (31% vs. 14, P<0.006)

Discussion: In elderly people with gastrointestinal bleeding, morbidity and mortality is determined by both the nature of the bleeding lesion and the presence of comorbid conditions. In such patients, immediate attention should focus on hemodynamic stabilization and diagnostic evaluation. Although the initial hemodynamic status of elderly people did not differ from the young group, the old people were more transfused than the young people. As previously described, the prevalence of cirrhosis is weak in elderly people and peptic ulcer disease is the most frequent source of acute upper gastrointestinal bleeding. Endoscopy can be performed safely but the efficiency to determine the cause of the bleeding seems to be lower than in younger patients. Prognosis of elderly did not differ in our study, but this could be explained by the high prevalence of cirrhosis in the young group and the loss of statistic power.

Conclusion: Acute upper gastrointestinal bleeding in elderly is characterised by a high prevalence of peptic ulcer disease and a weak prevalence of cirrhosis. Elderly people are more transfused than the others due to co morbid conditions. The diagnostic endoscopic performance is lower than usually described.

P666

Other - Part 2

THROMBOEMBOLIC DISEASE AND THROMBOPHILIA IN AN EMERGENCY DEPARTMENT

I. Blasco-Esquivias, R. Vera-Cruz, P. Salamanca-Bautista, M. Vaquero-De Sedas, J.L. Pérez-Alonso, C. Navarro-Bustos.

Emergency department, Hospital Virgen Macarena, Sevilla, Spain

Corresponding author: Melle Salamanca Prado (pradosalamanca@hotmail.com)

Key-words: Thromboembolic disease ; Emergency department ; Thrombophilia

INTRODUCTION: Venous thromboembolic disease (VTD) is a pathology that encompasses deep venous thrombosis (DVT) and pulmonary embolism (PE) and conditioned by the interaction of genetic, acquired and environmental factors that determine the appearance of a thrombotic episode.

Annual incidence of VTD is 1 case per 1.000 inhabitants among general population, being more prevalent in the elderly as its increases with age until reaching 1% incidence in people older than 75 years old.

Genetic risk factors are present throughout life in 55-60% of the patients with VTD and cannot be modified.

5% of the VTD cases are deadly, especially due to PE.

Thrombophilia is a group of heterogeneous alteration that conditions an increased trend of suffering thrombosis. Two types are described: acquired and congenital.

AIMS: The aim of our study is to conduct a retrospective descriptive analysis of a cohort of patients with VTD and thrombophilia, analyzing their distribution by gender, age and mode of presentation, most frequent thrombophilia, incidence according to gender and correlation between the mode of presentation of VTD and thrombophilia, as well as associated acquired risks.

METHODOLOGY: A retrospective descriptive study of a cohort including 606 patients with a diagnosis of VTD from the E.R. Unit in the latest 5 years. It was revised by a VTD monographic consultation area from the E.R.

RESULTS: Of the 606 analyzed patients 16,83% presented thrombophilia. Gender distribution was 53% men and 47% women. In both of them, increased factor VIII was the most frequent thrombophilia. Mean age was 60,12 years. Mode of presentation: 94 patients shoed DVT, 63,83% of them were proximal and 36,17% were distal. In 3 patients 2,94% PE was confirmed and 3,92% has SVT. Thrombosis distribution: In 3 patients 3,22% it was located in the upper limb, 2,15% in the right arm and 1,08% in the left arm. In 40 patients 43,01% DVT in the right leg was observed and in 53,76% in the left one. The most frequent thrombophilia: increased factor VIII 41,18%; hyperhomocysteinemia 23,53%; prothrombin 20210A 16,67%. In SVT the most frequent thrombophilia was FVL 50%, in DVT increased factor VIII 46% and in PE hyperhomocysteinemia 41%. The most frequently associated acquired risk factor was obesity followed by immobilization.

DISCUSSION: Almost half of the patients with VTD have an identifiable congenital cause for their hypercoagulability. Data from our study cannot prove this fact, as only 16,83% of our patients present thrombophilia.

According to published data, there isn't a clear predominance of any gender when presenting the first episode of VTD. In out cohort, distribution was similar 53% men and 47% women.

Mean age was 60,12 years old.

The most frequent mode of presentation was DVT, especially proximal in the left leg.

In different series, factor VIII appears in 25% of the patients with VTD and, when increased, the risks of suffering VTD is multiplied by 1,5. Hyperhomocysteinemia shows a prevalence of 10-20%. In our patients, factor VIII was the most frequent alteration (41,18%) while homocysteinemia appears in 23,53% of the analysed patients. The most common genetic alteration for VTD, except for factor V Leiden, is the mutation of the gene encoding prothrombin G20210A. In our patients, prothrombin 20210a appears in 16,67% of the cases and FVL in 15,67%.

In several cases, a combination of two or more factors was observed.

CONCLUSIONS:

1. Thrombophilia is an important casue of VTD.
2. Gender distribution was similar in our patients. Mean age of 60,12 years old and the most frequent thrombophilia, in relation to gender distribution, is increased factor VIII.
3. The most common mode of presentation is DVT, proximal in the left leg.
4. The most common congenital thrombophilia in our patients are factor VIII, hyperhomocysteinemia and prothrombin 20210A.
5. FVL, the most frequent congenital thrombophilia, is in fourth place in our study and it is the most frequent mode of presentation in SVT. In DVT this is factor VIII and in EP it is hyperhomocysteinemia.
6. The most frequent acquired factor is obesity, followed by immobilization.

P667

Other - Part 2

ABDOMINAL PAIN IN PATIENTS ADMITTED IN THE EMERGENCY DEPARTMENT OBSERVATION AREA IN A PRIVATE HOSPITAL

OJ Simón (1), J Robles (3), R Gambero (2), S Soler (1), R Sabes (1), C Morales (1), F Moya (1)

1. Emergency Department, Hospital Xanit Internacional, Benalmadena, Málaga, Spain
2. Laboratory and Clinical Analysis, Hospital Xanit Internacional, Benalmadena, Málaga, Spain
3. Intensive Care Unit, Hospital Xanit Internacional, Benalmadena, Málaga, Spain

Corresponding author: Mr Simón Padilla Oscar Jerónimo (oscarjsp@hotmail.com)

Key-words: abdominal pain ; emergeny ; obsevation area

OBJECTIVE: To determine the prevalence of abdominal pain in patients admitted to ED observation area of a private hospital, and the characteristics of patients with this presentation and the final diagnosis of the process.

MATERIAL AND METHODS: A descriptive study without therapeutic intervention for 12 months, among patients admitted for abdominal pain in the observation area of a private hospital (N = 512), obtaining data on age, sex, length of stay entered, destination on discharge and final diagnosis after the study of these patients. We obtained data from our internal Medyction program, and processed using Microsoft Excel 2011.

RESULTS: Of the patients admitted for abdominal pain, the average age of the patients was 47,3 years old, 60,9% were women, average time spent 155,6 minutes, the main destinations were home (52,68%) and admission by the Department of Internal Medicine (22,7%). The most common diagnosis was acute gastroenteritis (41,07%), followed by non specific epigastric pain (7,08%) and appedicitis (4,3%).

CONCLUSIONS: This study showed that the prevalence of abdominal pain as main complaint in our hospital is 26,76%, being the most frequent diagnosis of acute gastroenteritis. Most patients are discharged home after being evaluated in the emergency department of our hospital. The average age of patients with this picture is 47,3 years old, being more frequent in women

P668

Other - Part 2

THE SATISFACTION DEGREE OF PATIENT'S RELATIVES IN EMERGENCY DEPARTMENT OF AN UNIVERSITY HOSPITAL IN TURKEY

O Akdur (1), O Aydın (2), E Guzeldere (3)

1. Emergency Medicine, Canakkale Onsekiz Mart University Medical Faculty Emergency Medicine, CANAKKALE, Turkey
2. Emergency, Canakkale Onsekiz Mart University Research and Application Hospital, Emergency, Turkey
3. Emergency, Canakkale Onsekiz Mart University Research and Application Hospital, Emergency Medicine, Turkey

Corresponding author: Mr Okhan Akdur (oakdur@erciyes.edu.tr)

Key-words: Medicine, Emergency ; Satisfaction, Patient ; University Hospitals

The pleasure range of patients and their relatives is one of the important criterias for evaluation the qualification of exhibited health service. Emergency Services are departments in where employment is given consistently to patients and their relatives and also these places are the ones at where the hospitals

communicate with population in whole world. But the factors impressed the pleasure levels of patients and especially their relatives could not be exerted totally. The aim of this study is to evaluate the pleasure levels of patient's relatives in Emergency Departments and make contribution for the development of health service given in Emergency Services.

This anterograd complementary study was carried out with patient's relatives who are over 18 years and can dial with us and appealed to the emergency department in daytime between 01.03.2012 and 31.05.2011. In this study, we wanted from patient's relatives to declare their closeness degree and arrival form, their demographic informations, the problems they had in emergency room, difficulties and their pleasure levels. Informations taken from study was evaluated with "SPSS for Windows, Version 10.0".

The study included 108 patients. The mean age of patient's relatives was 38.2±13.2 years and 51 of these were men (%47.2). Closeness degree in % 69.4 (75 persons) was 1. degree; %12 (13 persons) was 2. degree and %18.6 (20 persons) was just friends. %89 of patient's relatives said that they had not a difficulty about finding emergency room entrance but 6 persons (%5.5) told they had difficulty with registration. 88 persons said they were satisfied with waiting room and there must be mostly newspaper, book, journal, suitable chair, cafe, and a system on where they follow their patients in there. Relatives of 19 patient's (%17.6) said they had parking problem and 18 (%16.7) said they were not satisfied with the cleaning of emergency room. 35 persons (%32.4) were satisfied for interest too much, 31 persons (%28.7) indicated the interest as normal. 44 patient's relatives (% 40.7) were too much pleased of interest of nurses worked in emergency department and 24 (%22.7) said that the interest was normal. The interest of doctors was too fine for 52 persons (%48.1) but normal for 22 relatives (%20.3). While the comfort of emergency department evaluated as too fine by 27 patient's relatives (%25), 29 persons (%26.8) evaluated it as normal. While the general satisfaction from the service given in emergency department was too fine for 36 persons (%33.3), 47 of those (%43.5) evaluated as fine, 22 (%20.4) as normal, 2 (% 1.9) as bad and 1(%0.9) as too bad.

As the consequence; emergency departments are for answering the needs of patients and their relatives. The satisfaction of patient's relatives must be kept in view during the duty. Education of personnel is essential to realize this. Experience of emergency service personnel and education of them about behavior, communication and notification are effective positively on the quality of duty given.

P669

Other - Part 2

THE EPIDEMIOLOGICAL AND CLINICAL PROPERTIES OF SCORPION ENVENOMATION IN BEYDAGI, MALATYA, TURKEY

M İÇER, Y ZENGİN, HM DURGUN, MN GÜLLÜ, E GÜNDÜZ, A ÖZHASENEKLER

Emergency department, Dicle University, Diyarbakir, Turkey

Corresponding author: Mr Zengin Yilmaz (yilmazzengin79@mynet.com)

Key-words: epidemiology ; Malatya ; Scorpion sting

Introduction: The scorpionism and its consequences are an actual public health problem in several parts of the world. Scorpion envenomation is common in certain areas of the world including the Middle East, Latin America, Africa and India. Approximately 1500 species of scorpions are described. About thirty of them are

recognized as potentially dangerous for humans. Scorpion envenomation is common in and around Malatya.

Objective: The aim of this study is to describe the circumstances and clinical effects of stings scorpions in Beydagı, Malatya, Turkey.

Methods: Fifty four patients with scorpion sting were collected prospectively from presentations to emergency departments of Malatya State Hospital from June 2010 to November 2010. The following information were prospectively recorded: demographics(age, gender), circumstances of the sting(location, time, date, activity at the time), sting site, local and systemic effects, vital signs(heart rate, respiratory rate, systolic and diastolic blood pressure), past medical history. Blood samples were collected for evaluation of biochemical and cardiac panel studies. ECG recordings were gathered. The patients were monitored after their history and physical examination. Patients were examined at least every 6 h for the first 24 h and daily thereafter. Biochemical investigations were repeated 24 h later. The patients who had hypertension were treated with sublingual captopril. Diklofenak Sodyum (Dikloran® 75 mg im. ampoule, Deva, Turkey) was performed to the patients who had mild and severe pain.

Results: A total of 54 subjects were recruited during the 6 month period. Of victims, 59.3%(n=32) were females, and 40.7% (n=22) were males with a mean age of 34.2 (range 11-80 years old). The majority of (85.2%) stings occurred in the warmest months (July and August) throughout Beydagı, Malatya. Of stings, 14.8% occurred between 24:00 -06:00, 27.8% between 06:00 -12:00, 27.8% between 12:00-18:00, and 29.6% occurred between 18:00-24:00 o'clock. Stings occurred to all parts of the body, with 48.1% upper extremities (hand and arm), 40.7% on the lower extremities (leg, foot wrist and finger), 7.4% on the trunk, and 3.7% on the head/neck. In this study, signs of envenoming were 94.5% pain, 47.6% numbness and 1.8% edema. Systemic effects that occurred in victims were including nausea-vomiting (13.3%), chest pain (7.5%) and headache(6.7%). The most common electrocardiography sign was tachycardia (7,4%). There was an increase of CK and CKMB on 27.7% of patients but no increase of troponin . There were no cases of hypersensitivity reactions, cardiogenic shock and pulmonary edema.

Conclusion: Medically significant scorpion stings are almost universally characterized by intense local pain, usually without local tissue injury. Systemic effects occur in a smaller proportion of scorpion stings, depending on scorpion species involved and are caused by a variety of excitatory neurotoxins.

Generally, scorpion stings appear to cause mild effects in Turkey. Severe or life-threatening effects were detected in 0,9% patients. Scorpion stings occurred in and around Malatya region do not appear to cause severe or life-threatening effects.

P670

Other - Part 2

THE AWARENESS AND PERFORMANCE OF THE FORENSIC NURSING ROLE IN EMERGENCY DEPARTMENTS

MH Han (1), HS Hong (2)

1. Emergency department, Seoul National University Hospital, Seoul, Korea, (South) Republic of

2. College of Nursing, Kyungpook National University, Daegu, Korea, (South) Republic of

Corresponding author: Melle Han Mi Hyun (2jhz@naver.com)

Key-words: Awareness ; Forensic nursing role ; Performance

Study Objectives: This study attempted to measure the awareness and performance of the forensic nursing role among the emergency department (ED) nurses to emphasize the presence of

forensic nurses in ED and suggest encouraging essential forensic nursing education.

Methods: From June 7 to June 15, 2012, a quantitative descriptive survey using a questionnaire was carried out to the nurses, who had a minimum of 6 months experience in the ED. This study conducted at 7 hospitals in Republic of Korea. The study was approved by the institutional review boards at all sites.

Results: A total of 124 nurses were enrolled. As to the question on 'Awareness of the role of forensic nurses', 44.4% answered 'Not at all'. 54.0% responded 'A little', no one answered 'Most of it' and 1.6% selected 'Know exactly'. As to the Awareness of the forensic nursing role, all the core data obtained an average of 3.39 points out of 4 points, and the documentation category was the highest score of 3.57. The lowest score was contact category, which acquired 3.10. For the performance of the forensic nursing role, all the core data obtained an average of 2.50 points out of 4 points, and a documentation category acquired the highest score of 2.91. However, a contact category was 2.13, which is the lowest score. A degree of the awareness and performance of the forensic nursing role according to a subject's general characteristic had no significant distinction. There is a significant correlation of ($r=.452$, $p=.000$) the awareness and performance of the forensic nursing role.

Conclusion: Currently, the awareness regarding to forensic nursing role is below par. Therefore, the performance of forensic nursing role is also became low level. To conclude, Forensic nursing education is the essential part of ED nurses to preserve evidence accurately.

P671

Other - Part 2

DOMESTIC VIOLENCE: A CASE STUDY OF ABUSED WIVES IN NAKHON RATCHASIMA PROVINCE

J Deankhntod

Accident and Emergency, Maharat Nakhon Ratchasima Hospital, Nakhon Ratchasima, Thailand

Corresponding author: Melle Rojtinakorn Nitaya (erkorat03@yahoo.com)

Key-words: violence ; family violence ; domestic violence

This research aimed to study way of life, causal factors and methods for coping with domestic violence of abused wives. The study was a qualitative research. Key informants were 5 abused wives who used services in Children and Women's Rights Protection Center, Maharat Nakhon Ratchasima Hospital. Data was collected from February – December 2010 by in-dept interview, observation and home visit . Content analysis was used for data analyzing. The research results revealed that: those abused wives aged between 29-58 years, duration of cohabitation between 3-37 years, 4 of them had registered their marriages, lived in warm family among their childhood. All of them were thought to be patient and good housewives, adhered to Thai good old traditions and customs as well as honored family leaders. Expectations on their married life were to have their life's partners for sharing both of happiness and suffering, to have their family leaders and did not want to fail of their married lives. For factors that caused violence, it was found that their husbands were aggressive, hot-tempered, flirt, drug addicts and alcoholics. Most of their families were in moderate level of economy without debts but wives had to earn extra incomes and they were single family that had no one to warn or assist while violence was appeared. Their social culture was mixed by urban and rural culture and considered that nobody should not concern with those abused wives. For recognition of male and female's role, it was found that male had his power on

decision making while female had her duty on taking care of family members and complied with her husband's requirements. Violence was divided into 3 groups by those abused wives as; 1) psychological violence – their husbands had close relationship with other women, 2) physical violence and 3) sexual violence. When they were faced with violent problems they would mainly assess on more physical and psychological violence. If those circumstances did not harm themselves and family members, they would be still. If there was more violence, they would adjust their emotions, be patient and comply with their husband's requirements. Finally, if such violent circumstance was still occurred, they would sue in accordance with their legal rights, divorce or separate.

P672

Other - Part 2

UTILITY OF INFORMATION AND COMMUNICATION TECHNOLOGY IN DISASTER MANAGEMENT

A Taotho, W Amornsongchai, N Buayan

Department of Trauma and Emergency Medicine, Phramongkutklao Hospital, Bangkok, Thailand

Corresponding author: Melle Taotho Artittaya (mangpor_joker@hotmail.com)

Key-words: information ; technology ; disaster management

Purpose

Information technology entails the collection, storage, dissemination, and management of information. Lack of disaster information can cause catastrophes. Information and communication technology (ICT) can greatly benefit disaster management.

Method

In 2011, Thailand Great Flood affected over 560 healthcare facilities; the worst-hit was the abruptly shut down Ayutthaya hospital. Phramongkutklao Hospital (PMK), the largest military hospital in Thailand, accomplished the medical evacuation of 122 patients (14 intubated) from the Ayutthaya hospital, without fatality. A retrospective study of the mission was carried out to demonstrate roles of ICT in disaster management.

Result

Although hydrological data (rainfall, dam status, river and sea level) and satellite images display can be used for early warning, it was difficult to predict accurately flood depth and travel time because of water diversion, barriers, and urban drainage system or lack thereof. In addition to traditional telecommunication, two-way radios and mobile phones, various ICT applications had been implemented by PMK team to facilitated the multi-modal (river, air, land) evacuation and transportation to the remote receiving hospitals such as Google Maps for naval rout planning, Google Earth for terrain viewing, GPS positioning for en-route navigation, GPS tracking for knowing real-time location of ambulances, Geo-informatics and space technology websites for aviation safety, Multimedia Messaging Service for sending visual information of patients, Biosignals telemonitoring of patients, personal mobile WiFi (MiFi) for providing wireless network connection at the incident command post, and electronic mailing referral letters or reports.

Conclusion

Effective disaster management relies on accurate information and data. ICT is of vital importance in minimizing the impact of disasters.

P673

Other - Part 2

PATIENTS PRESENTING WITH ALTERED MENTAL STATUS DUE TO SUICIDE IN THE EMERGENCY DEPARTMENT

M. Saritemur, S.T. Akgol Gur, A. Bayramoglu, A. Aköz, M. Emet

Emergency Department, Ataturk University Medical Faculty, Erzurum, Turkey

Corresponding author: Mr Saritemur Murat (muratsaritemur@gmail.com)

Key-words: Suicide ; Altered Mental Status ; Emergency Department

Introduction: In our country, the patients with altered mental status (AMS) due to a suicidal attempt are generally followed by internal medicine clinic or anesthesia and were treated in intensive care units before the emergency services had started to work as a department. Some problems have been experienced in the treatment and follow-up of these patients. We aimed to study whether there is a change of treatment or follow-up of these patients after emergency departments (ED) had been established.

Method: The patients admitted to our ED with suicidal attempt and had AMS between 2008 and 2012 were reviewed retrospectively. Patients higher than 16 years old were included. Patients with Glasgow coma score (GCS) ≤ 14 were considered having altered mental status and GCS ≤ 8 were considered in a comatose state.

Results: A total of 84 patients with AMS (GCS <15) admitted to our ED in the study period. Along with 220 control patients [attempted suicide without AMS (GCS = 15)], a total of 304 patients were studied. Of the patients with AMS, 54 (64.3%) were female and mean age was 26.1 ± 10.1 . GCS was ≤ 8 in 27 (32.1%) of these patients. Of the patients considered comatose, 13 (48.1%) were female and mean age was 26.5 ± 10.4 . Of the patients without AMS (GCS=15), 150 (68.2%) were female and mean age was 25.7 ± 8.7 . According to the drugs used for suicidal attempt, the majority of patients with AMS used antidepressants. The rate of using more than one drug in each group was similar and high. According to the admission rates, of the patients with AMS, %4.8 (n=4) were discharged from the ED, %2.4 (n=2) were left after initial treatment without medical advice, and %92.9 (n=78) were hospitalized. Of the patients without AMS, %16.8 (n=37) were discharged from the ED, %13.6 (n=30) were left without medical advice, and %69.5 (n=153) were hospitalized ($P<0.0001$). A total of 58.3% (n=177) patients were treated in the ED. Although, the majority (51.9%, n=14) of the comatose patients admitted to intensive care units (ICUs), patients with GCS 9-14 were followed and treated in the ED with a percentage of 68.4% (n=39).

Conclusion: Emergency services and ICUs have an important role in the treatment of patients presenting with attempted suicide. Therefore, psychiatric support of these patients should be initiated in the ED in addition to the emergent management, and emergency physicians should improve their knowledge about this problem.

P674

Other - Part 2

METHOD OF INCREASING SUCCESS RATE OF CENTRAL VENOUS CATHETERIZATION VIA EXTERNAL JUGULAR VEIN

J Huh (1), JY Hwang (2), DK Kim (3)

1. Department of anesthesia and pain medicine, SNU-SMG boramae hospital, Seoul, Korea, (South) Republic of
2. Anesthesia and pain medicine, SMG-SNU boramae hospital, Seoul, Korea, (South) Republic of
3. Anesthesia and pain medicine, Samsung hospital, Seoul, Korea, (South) Republic of

Corresponding author: Mr Huh Jin (huhjin419@gmail.com)

Key-words: external jugular vein ; subclavian vein ; central venous catheterization

Central venous catheterization via external jugular vein (EJV) can be unsuccessful in approximately 30% of patients due to the obstruction of the guide-wire by the fascia, clavicle, venous valve or the acute angle of the junction with the subclavian vein (SCV). The aim of this study was to test the hypothesis that the angle between SCV and EJV is the major determinant in successful placement of catheter.

In eighty surgical patients, catheterization of the central venous system via an EJV was attempted using the Seldinger technique. If the wire could not be placed in the Trendelenberg position, the shoulder on the puncture side was elevated in the second attempt. If catheterization was not successful after this manipulation, an additional lateral flexion of the head toward the puncture side was done in the third attempt.

In the first attempt, catheterization was successful 47 times with success rate of 58.6% (47/80). In 22 of 33 (66.7%) patients the wire could not be placed successfully in the first attempt, manipulating the shoulder and neck enabled the wire to be placed successfully (95% confidence interval: 0.501 - 0.838). The angle between the EJV and the clavicle in the overall success was significantly more than that in the failure group (77.9 vs 61).

Shoulder manipulation and neck tilting to augment the angle between SCV and EJV increased the success rate of the central venous catheterization via EJV.

P675

Other - Part 2

HEREDITARY ANGIOEDEMA: A CASE REPORT

md cemil kavalci (1), Md Miray Ozlem (2), md özgür arslan (3)

1. emergency, numune research and training hospital, ankara, Turkey
2. Emergency Department, Numune Training and Research Hospital, Ankara, Turkey
3. emergency, numune training and research hospital, ankara, Turkey

Corresponding author: Mr Kavalci Cemil (cemkavalci@yahoo.com)

Key-words: emergency ; hereditary angioedema ; airway

Hereditary angioedema (HAE) is a extremely rare disease with autosomal dominant inheritance, which is resulted from deficiency or dysfunction of C1-esterase inhibitor (C1-inh) produced by liver and involved in regulation of kinin-kallikrein, complement and fibrinolytic system.

A 28-years old woman presented to emergency department with edema at face, eyes and around mouth and tongue. The patient with good general status and stable vital signs was considered as classical angioedema and was given methylprednisolone (80 mg IV) and chlorphenoxamine. However, we further evaluated the patient, as edema on face and eyes was escalated. In the physical examination, vital signs were as follows: blood pressure, 110/60 mmHg; heart rate, 119 beat/min, body temperature, 36.2, respiratory rate, 24/min. Diffuse edema developed at face, eyes, lip and tongue mucosa.

It has been reported that angioedema attack might be triggered by factors including disorders causing tissue injury, infection, tooth extraction, surgical interventions such as tonsillectomy, trauma, menstruation, stress, oral contraceptive use, anxiety and fatigue.]. In HAE, follow-up is sufficient in mild cutaneous and abdominal symptoms, as they may spontaneously resolve. If there is a larynx edema or severe abdominal attack, it should be treated. The optimal and most rapid approach is to use intravenous C1-inh

concentrates. Symptoms relieves 30-60 minutes after injection. However, it is difficult to provide this preparation in the first attack. Thus, the optimal alternative is fresh frozen plasma in patients presented with first attack. It is used at a dose of 10 ml/kg

P676

Other - Part 2

ACUTE GASTROINTESTINAL BLEEDING IN PATIENTS ON ORAL ANTICOAGULATION THERAPY; IN EMERGENCY DEPARTMENT

N. Noura, K. Majed, S. Othamani, Y. Yahya, N. Chouikh, M. Modhaffer, A. Meganem, C. Hamouda, N. Borsali-Falfoul
Emergency department, la Rabta Academic Medical Center, Tunisia

Corresponding author: Mme Noura Mizahma Nour (noura_n1_h2@yahoo.fr)

Key-words: gastrointestinal tracts ; bleeding ; overdose acenocoumarol

AIM: acute gastrointestinal bleeding is a severe complication in patients receiving long-term oral anticoagulant therapy. They were the subject of numerous scientific publications, but few studies have focused on the AVK overdose in emergency departments. The purpose of this study was to describe the causes, clinical management and outcome of these patients and to develop practical recommendations.

METHODS: a retrospective review was conducted in patients treated with acenocoumarol who consulted the emergency department of la Rabta hospital in Tunis for various symptoms during five years since January 2006 until December 2010.

RESULTS: we collected 54 cases of gastrointestinal bleeding during 5 years. The average age was 57.6 ± 15.5 years and the sex ratio was 0.47. The indications for anticoagulation were an ACFA (40%), valvular disease (27%) and VTE (31%). The median time to onset of first hemorrhagic stroke was 17.2 weeks. 42% Of gastrointestinal bleeding were classified as Grade II on the Constans classification and 55% with grade IV and V of the CCMU. 22% of these patients were kept in emergency department. Only five patients received the PPSB, the mortality rate was 7.4%.

CONCLUSION: gastrointestinal bleeding is unique by their recurrence and severity. Half of bleeding event are classified as very serious. The management of these patients to the emergency requires the development of practical recommendations to prescribers and consumers of oral anticoagulants.

P677

Other - Part 2

GROWING CONGENITAL NECK MASS IN OLD AGE: BRANCHIAL CYST

YE EYİ (1), SK TUNCER (2), AO YILDIRIM (3), U KALDIRIM (2), M EROĞLU (3), B KARSLIOĞLU (4), I ARZIMAN (2), M DURUSU (2), O TEZEL (2)

1. Emergency department, Hakkari Military Hospital, Hakkari, Turkey
2. Emergency Department, GATA, Ankara, Turkey
3. Emergency Department, GATA Haydarpaşa Training Hospital, İstanbul, Turkey
4. Orthopaedics and Traumatology Department, Hakkari Military Hospital, Hakkari, Turkey

Corresponding author: Mr Eyi Yusuf Emrah (dremrahey@yahoo.com)

Key-words: CONGENITAL ; BRANCHIAL CYST ; NECK MASS

INTRODUCTION

Swellings in the neck are frequently encountered. These are one of the causes for referring to the emergency department because of malignancy suspicion. Although the most common reasons are infectious causes, also neoplastic causes, trauma, congenital and developmental neck masses can cause swelling in the neck region. We report a case of branchial cyst aggravated after upper respiratory tract infection.

Case:

41-year-old female patient. She referred to emergency room with complaints of palpable painful swelling on the left side of the neck. She started to use flu drug for runny nose and sore throat three days ago. On physical examination, hyperemic oropharynx, normal-sized tonsils, both outer ear and eardrum were seen as intact. With palpation, painful, elastic viscous fluctuating mass which is 4-5 cm away from the thyroid cartilage, was found on the left side of the neck. By ultrasound study of the superficial tissues, thick-walled 20x20 mm lesion with thin septations, and the rich wall blood supplied cyst image were taken adjacent to the lateral wall of the jugular vein. Patient was diagnosed as Type 2 infected branchial cyst, localized in the left neck and operation was planned as a result of otorhinolaryngology consultation.

CONCLUSION:

Type 2 branchial cyst generates 95% of branchial anomalies. The mouth of the cyst, or fistula formation located along the anterior border of the sternocleidomastoid muscle in the carotid triangle. Malignant degeneration is rare. Usually diagnosed at the age of 20-30. 25% of these are appears as a growing up fluid-filled mass with upper respiratory tract infection. When lateral-neck localized fluid-filled masses aggravates especially with upper respiratory tract infection, branchial cyst should be kept in mind. In such cases, instead of antibiotic therapy with ultrasound guided diagnosis patient should be directed to the surgery.

P678

Other - Part 2

INFLAMMATORY BOWEL DISEASE ARRIVING BY ATTACKS OF ILEUS: A CASE REPORT

YE EYİ (1), AO YILDIRIM (2), SK TUNCER (3), U KALDIRIM (3), B KARSLIOĞLU (4), I ARZIMAN (3), M EROĞLU (2), C KAYA (3)

1. Emergency department, Hakkari Military Hospital, Hakkari, Turkey
2. Emergency Department, GATA Haydarpaşa Training Hospital, İstanbul, Turkey
3. Emergency Department, GATA, Ankara, Turkey
4. Orthopaedics and Traumatology Department, Hakkari Military Hospital, Hakkari, Turkey

Corresponding author: Mr Eyi Yusuf Emrah (dremrahey@yahoo.com)

Key-words: ILEUS ; INFLAMMATORY BOWEL DISEASE ; EMERGENCY DEPARTMENT

INTRODUCTION

Inflammatory bowel disease (IBD), occurs because of intestinal epithelial barrier dysfunction and associated with an abnormal response of the mucosal immune system due to immunologic defects. IBD causes excessive defecation, abdominal pain, symptoms such as weight loss. Although rarely bowel obstruction and related symptoms can also occur.

CASE

21-year-old male patient. He admitted to the emergency room complaining about constipation and abdominal pain for 15 days. He had history of being operated for ileus at 11-year-old and hospitalization by most centers because of ileus. His vital signs were stable. Physical examination: there was abdominal tenderness and generalized rebound. Rectal examination showed off empty ampulla. WBC was $21\,000\text{ e3/mikroL}$ and at patient's standing abdominal X-ray showed the air-fluid levels. Ultrasound exposed

ileum wall thickening and reduced bowel movements. IV-oral contrast-enhanced abdominal computed tomography planned. At computerized tomography expansion of the colon and rectum walls and thickening, and slight irregularities in the wall of the distal ileum were observed. These findings are considered with the inflammatory bowel disease. The patient underwent colonoscopy and biopsy after Gastroenterology consultation and was diagnosed as Crohn's disease.

CONCLUSION:

Postoperative adhesions, electrolyte abnormalities, masses, and many other reasons, such as gall stones can cause ileus. Although rare inflammatory bowel disease can also cause ileus. When there is recurrent episodes of ileus, especially at a young age, keep in mind inflammatory bowel disease, to facilitate diagnosis and reduce unnecessary surgeries.

P679

Other - Part 2

SPONTANEOUS RUPTURE AS A FIRST PRESENTATION OF NOT PREVIOUSLY DIAGNOSED HEPATOCELLULAR CARCINOMA: A SINGLE CENTER EXPERIENCE IN KOREA

WY Kim, BJ Oh, DW Seo, CH Sohn

Emergency Department, Asan Medical Center, Seoul, Korea, (South) Republic of

Corresponding author: Mr Sohn Chang Hwan (schwan97@gmail.com)

Key-words: hepatocellular carcinoma ; spontaneous rupture ; emergency department

Introduction

Spontaneous rupture of hepatocellular carcinoma (HCC) is a life-threatening condition and most of these patients have been seen in emergency department (ED). Diagnosis of spontaneous rupture of HCC may be extremely difficult, especially in patients with not previously diagnosed HCC.

The aim of this study was to describe the clinical characteristics and outcomes of patients with spontaneous rupture as a first presentation of not previously diagnosed HCC.

Methods

This was a retrospective case series on all consecutive patients with diagnosis of spontaneous rupture as a first presentation of not previously diagnosed HCC presented to the ED of a tertiary care university-affiliated hospital from January 1, 2005 to December 31, 2011.

Demographic and clinical data including sex, age, history of chronic hepatitis B or C, habitual alcohol consumption, chief complaint, sudden or non-sudden onset, presence of shock, definitive treatments and outcomes were reviewed.

Results

A total of 11 patients were included in this study. Most of these patients were male (90.9%) and between 50 and 60 years old (81.8%). All patients had risk factors for HCC; chronic viral hepatitis B (63.6%), habitual alcohol consumption (27.3%) and chronic viral hepatitis C (9.1%). The chief complaint was abdominal pain (72.7%) and abdominal distension (27.3%). Non-sudden onset presentations were more common than sudden onset presentations (63.6% vs. 36.4%). On ED arrival, only two patients were in a shock state. However, four patients developed into a shock state during ED evaluation. In 4 patients, CT was performed to investigate right upper quadrant tenderness and abnormal liver function test. In 3 patients, ultrasonography and paracentesis were performed to investigate abdominal distension and CT was performed after identification of bloody ascites. In 4 patients, CT was performed for differential diagnosis of shock that occurred during ED evaluation. Five patients undergone emergent

embolization for bleeding control and in-hospital mortality was 27.3%.

Conclusion

Emergency physicians should be familiar with spontaneous rupture as a first presentation of not previously diagnosed hepatocellular carcinoma and should consider this rare disease entity in the differential diagnosis in male patients between 50 and 60 years old who present to the emergency department with abdominal pain, abdominal distension, shock and have a history of chronic viral hepatitis B or C, habitual alcohol consumption.

P680

Other - Part 2

MANAGEMENT OF PATIENTS WITH CONGENITAL HAEMORRHAGIC DISEASE IN EMERGENCY DEPARTMENT

A.C. Giuffrida (1), A. Bonora (2), N. Guerra (1), A. Maccagnani (2), G. Gandini (1), G. Zerman (2), G. Aprili (1), C. Pistorelli (2)

1. Medical Transfusion Department, University Hospital, VERONA, Italy

2. Emergency Department, University Hospital, VERONA, Italy

Corresponding author: Mr Bonora Antonio (antonio.bonora@ospedaleuniverona.it)

Key-words: Congenital haemorrhagic disease ; Emergency Department ; Haemorrhagic complications

Patients suffering from congenital haemorrhagic disease (CHD) can refer to Emergency Departments (ED) in high risk of complications and even life-threatening clinical conditions, like traumatic and haemorrhagic events. An adequate management of these patients, that is the right identification of CHD and the timely administration of the lacking factor, has a basic role both in preventing or treating haemorrhagic events and in avoiding complications during invasive procedures.

We retrospectively evaluated all the CHD patients followed-up in the Medical Transfusion Department (MTD) of the University of Verona, observed in ED in a 10-years period. All clinical MTD documents and ED reports were checked up in order to point out critical steps and assess the most effective intra-hospital management of acute event.

From July 2002 to June 2012, out of 148 patients followed-up in MTD for CHD, 59 (36 males, 23 females; mean age 44 years, range 17-79) resulted to have been observed once or more times (overall accesses 189, median 3) in the Emergency Department of the University of Verona.

These 59 patients appeared to suffer from: Haemophilia A (19 pts, 32.2%); Haemophilia B (3 pts, 5.1%); Von Willebrand Disease (28 pts, 47.4%), other disorders (9 pts, 15.3%).

Out of the overall number, in 130 cases (68.8%) patients were admitted for high risk events, like trauma or haemorrhage. In 55 of these cases (42.3%) CHD was not properly identified neither on the arrival of the patient nor on the medical examination, while in 26 cases (20%), although the adequate identification of the disease, the need for MTD evaluation was not considered. In the remaining 49 cases (37.7%) the patients were submitted to MTD evaluation and in 40 cases (30.8%) antihaemorrhagic treatment was timely administered. Notably, in 17 (13%) of the latter accesses the patients were referred to ED by means of MTD.

At last, in a cool 19.3% of the cases (25) patients with potentially dangerous and even life-threatening events, such as head trauma, or submitted to invasive procedures did not receive nor a properly identification of CHD or a necessary MTD evaluation.

An instrumental diagnostic assessment was performed in 81 cases (62.3%) by means of conventional X rays (66), ultrasonography

(11), CT-scan (9). In 69 cases (53.1%) patients underwent a further consultant evaluation (mostly orthopaedic).

Finally, in most of the cases (87.7%) patients were discharged, while 16 (12.3%) were hospitalized because of severe traumatic or haemorrhagic events.

The revision of our series pointed out a general perception of haemorrhagic risk in CHD patients less than, for example, those in anticoagulation treatment. This often lead to not timely identify the disease and to inadequately manage the risk of complications.

An improvement in the management of these patients is likely expected after a creation of an identification card for patients suffering from CHD and the adoption of intrahospital protocols, aimed to a more accurate reception in ED and a larger demand for MTD evaluation.

P681 Other - Part 2

HEMATURIA, CLINICAL MANIFESTATIONS OF OVERDOSE IN ORAL ANTICOAGULANTS UNDERESTIMATED

A. Chargui, N Noura, K. Majed, K. Zaouche, S. Othmani, A. Ben Hamida, M. Modhaffer, C. Hamouda, N. Borsali-Falfoul
Emergency Department, La Rabta Academic Medical Center, Tunisia

Corresponding author: Mme Noura Mzahma Nour (noura_n1_h2@yahoo.fr)

Key-words: HEMATURIA ; ORAL ANTICOAGULANT ; EMERGENCY DEPARTMENT

AIM: Treatment with oral anticoagulants exposes to a real risk of bleeding. Hemorrhagic episodes are frequent in emergency department, some of which may involve life-threatening. The objective of this study was to assess the incidence of hematuria in overdose in AVK, with special reference to its frequency and severity, and to evaluate its management in emergencies.

METHODS: a retrospective review was conducted in patients treated with acenocoumarol who consulted the emergency department of La Rabta hospital in Tunis for hematuria during five years since January 2005 until December 2009.

RESULTS: 40 patients were collected with a mean age of 56.2 years and sex ratio at 0.79, 24 patients had other associated hemorrhagic manifestations. 3 patients required a filling with colloids, 3 by transfusion of packed red blood cells, two by the PFC, six have received vitamin K, and no patient received PPSB.11 of patients required exploration of this hematuria in a specialized department (urology).

CONCLUSION: Hematuria by overdose in oral anticoagulants is a rare cause of consultation, its initial management in emergency department is symptomatic. It is rarely life threatening. An etiologic research is needed for early diagnosis of urinary tract lesions.

P682 Other - Part 2

EVALUATION OF THE PERCEPTION LEVEL OF THE NURSES ABOUT CODE BLUE IN A TRAINING HOSPITAL

C. EKER (1), E. KARATAŞ (1), Y. KEÇİCİOĞLU (1), A. SÖNMEZ (2)

1. x, Gulhane Military Medical Academy Haydarpasa Training Hospital, Gulhane, Turkey
2. x, Gulhane Military Medical Academy Haydarpasa Training Hos, Gulhane, Turkey

Corresponding author: Mr Kecicioglu Yasemin (yasemin63442@windowslive.com)

Key-words: Code Blue ; Nurse ; Gulhane Military Medical Academy Haydarpasa Training Hospital

Code Blue provides a CPR team to arrive to scene as soon as they can by warning all hospital staff in interventions that requiring emergency. This study was planned to evaluate the perception of the nurses about Code Blue who works in Gulhane Military Medical Academy Haydarpasa Training Hospital. In April in 2012, this descriptive study was achieved with the participation of 189 nurses in Gulhane Military Medical Academy Haydarpasa Training Hospital. Questionnaire form which was prepared by the researches includes 13 questions and results were saved by SPSS and some special test were used. It was determined that 55.56 % of the included nurses are between ages of 30-39, 29.63% of them had worked for 16 or more years. It was seen that 66.14% of nurses has an idea about Code Blue and 80.95% of them thinks Code Blue is necessary and useful. 91.01% of nurses can describe Code Blue; more than 50% of them know situations that categorized Code Blue. More than 1/3 of nurses said that in Code Blue Team there must be doctor, nurse, anesthetist, caregiver and 82.54% of them think that a Code Blue Team must established in our hospital. The questions about perception of the nurses about Code Blue were compared with some parameters like age, work time, education, unit of work, work program and founded significant results. It was determined that the nurses have a high awareness about Code Blue and think the application of Code Blue is necessary in our hospital.

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P684 Pain Management/ Analgesia / Anesthesia

ANAESTHETISTS AND EMERGENCY MEDICINE PHYSICIANS: A SURVEY OF CURRENT PRACTICE IN PROCEDURAL SEDATION AND FASTING IN THE WEST OF SCOTLAND REGION.

EL Hartley, C McKiernan

Emergency Department, Southern General Hospital, Glasgow, United Kingdom

Corresponding author: Melle Hartley Emma (emmalouisehartley@hotmail.com)

Key-words: fasting ; procedural sedation ; emergency medicine

Objective: In view of the lack of guidelines and limited evidence for fasting in procedural sedation a survey of current practice was performed in emergency physicians and compared to anaesthetists to assess any difference in practice and opinion.

Methods: A questionnaire of fasting status and its application to procedural sedation was sent to both Emergency Medicine (EM)

and Anaesthesia departments in the West of Scotland allowing individual practice to be surveyed.

Results: A total of 56 responded from Emergency Medicine and 91 from Anaesthesia. Fifty five (98%) of EM physicians routinely ask about fasting status prior to administering procedural sedation, compared to 88 (97%) of anaesthetists. Fasting status in relation to the high risk patient, non-emergent procedure, depth and length of sedation and use of drugs were also surveyed.

Conclusion: Anaesthetists have a more cautious approach to procedural sedation preferring patients to be fasted. EM physicians put fasting status into context but still ensure adequate safety. In view of no current UK guidelines a risk benefit assessment prior to sedation in each patient needs to be adopted.

P685 *Pain Management/ Analgesia / Anesthesia*

BIOMEDICAL AND PSYCHOSOCIAL FACTORS OF PATIENTS WITH ACUTE MUSCULOSKELETAL PAIN -TOWARDS PREVENTING CHRONIC PAIN-

JG Pierik (1), MI Gaakeer (2), MJ IJzerman (1), AB Van Vugt (3), CJ Doggen (1)

1. Health Technology & Services Research, MIRA Institute for Biomedical Technology and Technical Medicine, University of Twente, Enschede, Netherlands
2. Emergency Department, University Medical Center Utrecht, Utrecht, Netherlands
3. Emergency Department and Department of Surgery, Medisch Spectrum Twente, Enschede, Netherlands

Corresponding author: Melle Pierik Jorien (j.g.j.pierik@utwente.nl)

Key-words: acute musculoskeletal trauma ; biomedical and psychosocial factors ; pain management

BACKGROUND: Acute pain following traumatic injury is one of the most frequent reasons why patients are seeking medical care. Most trauma patients who attend the Emergency Department (ED) have acute musculoskeletal pain. This pain is complex and multifactorial. A combination of biomedical and psychosocial factors may be involved in pain perception and in the transition from acute to chronic pain. Most of these factors can be determined in the emergency setting. Only a few studies assessed these characteristics of patients with musculoskeletal trauma in the ED.

OBJECTIVE: The aim of our study is to describe characteristics of patients with acute musculoskeletal trauma to the extremities.

METHODS: This study is part of an one year prospective follow-up study in about 2000 adult patients with injury (fracture, soft tissue) due to blunt trauma to the extremities of the musculoskeletal system who attend the ED of Medisch Spectrum Twente, the Netherlands. Characteristics of the patient, including psychosocial, biomedical and health related factors, perception of pain and pain management are collected from hospital registration and questionnaires at ED-visit and 6 weeks follow-up.

RESULTS:

From September 2011 till March 2012, 314 patients (50% women; mean age=40.1; SD =15.1) filled out a questionnaire. Sixty-one percent of the patients had an injury to the lower extremities, mostly fractures (36%) and distortions (43%). Fractures were seen most (64%) as injury to the upper extremities.

Pain was in 74% of the patients the main reason to attend the ED after musculoskeletal trauma. Almost half of the patients (47%) attended the ED within 2 hours after onset of pain. Patients reported a high frequency of pain, both on admission (99%) and discharge (97%). Their mean pain score measured on a numerical rating scale changed from 6.3 (SD =2.3) on admission to 5.6 (SD=2.5) at discharge. Moreover, 67% of the patients had

moderate to severe pain at discharge. The pain score at admission according to Manchester Triage System (MTS) was lower, namely 3.5 (SD=1.4). After 6 weeks, 69% of the patients still reported pain. The main score was reduced to 1.7 (SD=1.9).

Pain management was applied in 58% of the patients before attending the ED; 40% cooled their injury, 25% used self-medication and 14% received medication from a professional. Several patients used a combination. Overall, only 10% of the patients received pharmacological pain medication at the ED, 8% received pain medication and a prescription and 9% only received a prescription for pain medication. Nevertheless, more than sixty percent of the patients were immobilized during ED-visit.

Symptoms of anxiety (12%) and depression (7%) were present in patients before injury. Both vital status and health perceptions of the patients before trauma were comparable with the general Dutch population. After 6 weeks kinesiophobia (TSK-DV score>40) was found in 27 % of patients and 4 % showed a clinically relevant level of pain catastrophizing.

DISCUSSION: The present study provides insight in characteristics, pain and pain management of patients with acute musculoskeletal trauma. Multiple factors within this acute pain phase may be responsible for transition from acute to chronic pain after trauma. Those prognostic factors will give us the ability to target high-risk patients already in the acute care setting and provide them with appropriate treatment to avoid the development and subsequently the consequences of chronic musculoskeletal pain.

P686 *Pain Management/ Analgesia / Anesthesia*

PROCEDURAL SEDATION VERSUS HAEMATOMA BLOCK IN THE DISTAL RADIUS FRACTURES IN EMERGENCY DEPARTMENT: A PROSPECTIVE STUDY

V Gavrilă, AN Carstea, G Filip, CL Bartha, A Petrica
Emergency Department, Emergency County Hospital, Timisoara, Romania

Corresponding author: Mr Gavrilă Vasile (gavrilă_vasile@yahoo.com)

Key-words: distal radius fractures ; haematoma block ; procedural sedation

Introduction

The fractures of the distal radius are extremely common in the Emergency Department (ED). Between January 2012 and April 2012, 0,7% of the patients who presented to the ED of County Hospital from Timisoara had fractures of the distal radius. This study compares the efficiency of the haematoma block with procedural sedation and analgesia in adults with distal radius fractures requiring manipulation and reduction in the ED.

Material and methods

This study was prospective, randomised clinical trial with consecutive recruitment of adult patients who presented to the ED of County Hospital from Timisoara between January 2012 and April 2012 with distal radius fractures who required reduction and manipulation. Inclusion criteria: 1) informed consent; 2) no contraindication to any method of analgesia. Exclusion criteria: 1) under 18 years old; 2) open fractures; 3) pregnancy; 4) refused or were unable to give informed consent; 5) known allergy to involved drugs; 6) association with other serious injuries; 7) association with other severe disease. Discharge criteria: 1) normal level of consciousness 2) normal standing position 3) normal range of blood pressure. Patients were randomized into 2 equal groups. The A group received intravenous sedation, and the B group received 10 ml of 2% Lidocaine hydrochloride into the fracture haematoma. Parameters measured: pain perception using the visual analogue scale (VAS), time procedure (the time in the ED, for manipulation

and up to hospital discharge were measured), complications rate and failed manipulation.

Results

64 patients with displaced fractures of the distal radius with a mean age of 54.3 (19-84) years old, M/F rate 1/2.93, left/right hand 1.5/1, between 01 January 2012 and 30 April 2012. The VAS was 0.27 ± 0.2 in group A during reduction and 2.81 ± 0.6 in group B and VAS one hour after reduction was 1.52 ± 0.4 in group A and 1.85 ± 0.5 in group B. The time for reduction was 2.63 ± 0.96 hours in A and 0.90 ± 0.47 hours in B.

Discussion

The characteristic features of ideal analgesia during reduction are determined by safety, simplicity, affectivity and costs. The waiting and manipulation times and resources cost were greater in those receiving a general anesthesia. Instead, procedural sedation is less painful both during and after reduction.

Conclusion

Haematoma block with local anesthetic is a safe and an effective alternative to intravenous general analgesia in the reduction of the distal radius fractures in the ED.

P687

Pain Management/ Analgesia / Anesthesia

CAN A FASCIA ILIACA COMPARTMENT BLOCK BE AN EFFECTIVE ANALGESIC FOR THE ELDERLY WITH A HIP FRACTURE?

F Beije

Emergency department, Isala Klinieken, Zwolle, Netherlands

Corresponding author: Mme Beije Femke (femkefriesema@gmail.com)

Key-words: Fascia Iliaca Compartment Block ; Hip fracture ; Elderly

Background:

In our emergency department about one patient with a hip fracture is diagnosed daily(1). The typical patient with a hip fracture is >70 years of age with co-morbidity and polypharmacy use. Effective analgesia is necessary and prevents stress reactions, prolonged hospital stay and delirium. Providing effective analgesia is challenging in this patient group. NSAID's and opioids can have various side effects especially in elderly. A loco regional nerve block might be a good alternative.

Two methods are described to perform this procedure(2). The first is a femoral nerve block or the more advanced 3-1 nerve block as described by Winnie(3). These procedures are mostly done nerve stimulator or ultrasound guided. The second method, the Fascia Iliaca Compartment Block (FICB), is described below. The puncture side is more laterally and the risk of bleeding or nerve damage is minimal. The clinical question was if a FICB can be an effective analgesic for the elderly with a hip fracture.

Search strategy and outcome:

- Patient: Patient with a hip fracture pre-operative
- Intervention: FICB or femoral block
- Comparison: Systemic analgesia
- Outcome: Pain level, side effects

No relevant guidelines were found in the national guideline clearinghouse. No relevant reviews were found in the DARE-database.

In the Cochrane Library One relevant review was found.

Pubmed search:

(femoral nerve block OR nerve block MeSH) AND (femoral neck fracture OR hip fractures MeSH (neck/intertrochanter): 91 hits

All 91 abstract were read: 85 Could be excluded (previous Cochrane reviews, case reports, studies concerning other type of blocks; sacral plexus, psoasblock, spinal, 3-1block, postoperative pain, 2 were written in Swedish and Danish).

The pubmed search produced 6 hits including the Cochrane review. With the related citations the 7th study was found (Monzon 2010). The final selection of 7 included 2 systematic reviews, 3 double blind RCT's, 1 not blinded RCT and 1 cohort study.

Conclusions

There are no RCT's that compare a FICB with a femoral block or 3-1 block. The FICB in theory has less complications and can be done without ultrasound or nerve stimulator

The FICB:

- Provides in the 2 biggest RCT's (Mozoupoulos and Monzon) an equal pain relief compared with systemic analgesics
- Gives less chance for a delirium
- Is easy to learn
- Has very few complications

But: More research has to be done especially for feasibility for the very old

Clinical Bottom Line:

The FICB can be a safe and effective alternative for pain treatment of hip fractures. It is not proven better than systemic analgesics but there are probably less side effects in the elderly. But more research has to be done before a firm conclusion can be drawn.

Level of recommendation

B

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P688

Pain Management/ Analgesia / Anesthesia

POST-INTUBATION HYPOTENSION WAS ASSOCIATED WITH LIDOCAINE AS ONE OF THE RAPID SEQUENCE INTUBATION PREMEDICATIONS – A COMPARISON BETWEEN TRADITIONAL REGRESSION METHODS AND PROPENSITY SCORE BASED MATCHING METHOD

MT Chiu

Emergency department, Chang Gung Memorial Hospital, Taoyuan county, Taiwan

Corresponding author: Mr Chiu Ming Ta (miltonch777@yahoo.com.tw)

Key-words: lidocaine ; rapid sequence intubation ; propensity

Background: Lidocaine was used as a premedication in rapid sequence intubation (RSI) to blunt the sympathetic stimulation broadly in emergency departments, although the beneficial effects were inconsistent and controversial. Traditional regression methods are commonly used for causal inference in observational studies, despite one of the limitation, multi-dimension, usually limits the statistical power. Propensity score based matching method, which is broadly utilized in public health and clinical research, has yet been widely applied in emergency medicine research.

Objective: To re-examine the association between post-intubation hypotension (PIH) and lidocaine injection by different data mining methods.

Methods: A secondary analysis of a retrospective cohort study with patients consecutive admitted to the ED of a tertiary hospital with RSI. Detailed clinical information was recorded using standardized form. PIH was defined as systolic blood pressure (SBP) < 90 mmHg after intubation. Different matching and subclassification methods based on propensity score of having lidocaine injection generated by pre-intubation vitals, underlying illness and ongoing diseases were utilized, in order to generate a comparable control group to mimic the "quasi-randomized" study population. Outcome models based on logistic regression were compared using original dataset with matched dataset.

Results: among 149 patients with RSI agents, 28 (19%) developed PIH. Among 120 patients received lidocaine injection, 27 (23%) developed PIH, compared to one (3%) of 29 patients who did not (p-value: 0.02). In the traditional regression model adjusting pre-intubation SBP < 140 mmHg, underlying COPD history, ongoing septic status, and body weight as confounders, lidocaine was found to be not significantly associated with PIH (aOR: 1.13, 95%CI: 0.97-1.31, p-value: 0.1). After 1:5 nearest matching with replacement based on propensity score, all measurable potential confounders were comparable in lidocaine treated and control groups, except ongoing heart disease (e.g. atrial fibrillation, coronary artery disease, p=0.03). In the subsequent logistic regression model adjusting ongoing heart disease in the matched dataset, lidocaine was found to be significantly associated with PIH (aOR: 8.47, 95%CI: 0.98-72.92, p-value: 0.047).

Conclusion: Lidocaine injection might be associated with PIH, which merits further investigation. Researcher should consider more than traditional statistical methods while making causal inference.

P689 Pain Management/ Analgesia / Anesthesia

CAN WE IMPROVE PAIN MANAGEMENT IN CHILDREN WITH BURNS & SCALDS BY INTRODUCING A COMPULSORY BURNS PROTOCOL IN PAEDIATRIC EMERGENCY DEPARTMENTS?

C MAPATUNA, F PASHA

EMERGENCY MEDICINE, LEEDS TEACHING HOSPITALS NHS TRUST UNITED KINGDOM, LEEDS, United Kingdom

Corresponding author: Mr Pasha Farooq (drfupasha@doctors.org.uk)

Key-words: BURNS ; PAEDIATRICS ; ANALGESIA

Objectives

To assess whether use of a burns protocol in all children attending a dedicated paediatric emergency department (PED) with burns

and scalds increase documentation of pain score & administration of analgesia.

Methods

The case notes of all children who attended the PED with burns & scalds over a 3 month period were reviewed, after introduction of a paediatric burns protocol. This process assessed the usage of protocol, scoring of severity of pain, administration & usage of analgesia and documentation.

Results

89 case notes were reviewed. The protocol was used in half of the patients. In 38% of children where the protocol was used, there was a documented pain score. This was only 7%, when the protocol was not used. In the protocol used group, 74% had analgesia, of which 31% had intranasal Diamorphine with or without Paracetamol & Ibuprofen. When the protocol was not used, analgesia was administered only to 43% of children, of whom only 11% had Diamorphine.

Conclusion

Documentation of severity of pain & administration of analgesia for children with burns and scalds in a busy PED can be improved by using a compulsory burns protocol.

P690 Pain Management/ Analgesia / Anesthesia

ANALGESIA IN THE EMERGENCY DEPARTMENT: MYTH OR REALITY?

S Pauwels (1), T Schmitz (2), G van Berlaer (2), I Roggen (2), I Hubloue (2)

1. Emergency department, Universitair ziekenhuis Brussel, Jette, Belgium

2. Emergency department, Universitair Ziekenhuis Brussel, Jette, Belgium

Corresponding author: Melle Pauwels Sofie (Sofie.Pauwels@vub.ac.be)

Key-words: pain intensity ; analgesia ; emergency department

Background: Oligoanalgesia is a well-known problem in Emergency Departments (EDs) around the world. Prevalence of pain as well as its intensity tends to be high, but patients are often left under- or even untreated for their pain.

Aim: The aim of the current study was to investigate the pain policy in the ED of a university teaching hospital.

Methods: 180 female and 124 male patients were asked to self-evaluate their pain intensity by means of a Visual Analogue Scale (VAS). Pain medication details were extracted from individual patients' charts and attending physicians were asked if the patient was given a prescription. At discharge the patients scored their satisfaction on a 5-point Likert Scale.

Results: More than 80% of patients (256 out of 304) reported some level of pain at arrival at the ED, of which 77 received an analgesic. Of the 256 patients with pain, 167 experienced moderate to severe pain and in this particular subcategory, only 35% were treated for their pain. Since many patients were left untreated, it was interesting to explore whether these patients were given a prescription for pain medication at discharge of the ED. In total, 54% of all patients were given a prescription for analgesics at discharge. Of all the patients that declared suffering from severe pain, nearly 75% were given such a prescription. This shows that physicians seem to acknowledge the patients' pain, but rather prefer to translate that recognition into a prescription than to provide pain treatment on the spot at the ED. Of all patients with moderate to severe pain who did not receive analgesia, yet 80% still revealed to be neutral to very satisfied with their treatment.

Conclusions: Although patients do not appear to be dissatisfied with their treatment at the ED of a university teaching hospital, many are undertreated for their pain. This could be avoided by the

implementation of a well-elaborated protocol and training sessions in pain management for young residents.

P691 *Pain Management/ Analgesia / Anesthesia*

BARRIERS AND FACILITATORS IN PAIN MANAGEMENT IN TRAUMA PATIENTS IN THE CHAIN OF (PRE)HOSPITAL BASED EMERGENCY CARE

SA Berben (1), CJ Doggen (2), PP Rood (3), AC Scholten (1), L Schoonhoven (4), AH Westmaas (1)

1. Regional Emergency Healthcare Network, Radboud University Nijmegen Medical Centre, Nijmegen, Netherlands
2. School for Management and Governance, Health Technology and Services Research, University of Twente, Enschede, Netherlands
3. Emergency Department, Erasmus Medical Centre, Rotterdam, Netherlands
4. Scientific Institute for Quality of Healthcare, Radboud University Nijmegen Medical Centre, Nijmegen, Netherlands

Corresponding author: Mme Berben Sivera (S.Berben@azo.umcn.nl)

Key-words: Pain management ; Implementation ; Wounds and injuries

Introduction

To improve pain management in trauma patients, professionals in the chain of emergency care recently developed an evidence based guideline. The guideline addresses pain management in trauma patients by general practitioners (GPs), ambulance emergency medical services (EMS), helicopter emergency medical services (HEMS) and the emergency department (ED). Implementation of this guideline is pivotal, as the prevalence of pain is high, and the consequences of mistreatment are serious (chronic pain and disability). Although the guideline is acknowledged by national societies in the Netherlands, implementation seems problematic as it requires a change of behavior of physicians and nurses. Theories on implementation of innovations stress how a tailored implementation strategy should be based on thorough analysis of the setting and target group.

Aim

The aim of the study is to develop a tailored implementation strategy for effective change behavior interventions in order to improve guideline adherence on pain management in trauma patients in the chain of (pre)hospital based emergency care.

Method

The multicentre study is performed in three regions in the Netherlands in the chain of emergency care. We use a multi method approach. We will assess current practice and deviation of the guideline through analyses of patient files (n=700). Barriers and facilitators will be explored through qualitative focus group interviews in each region with GPs, EMS, HEMS and the ED (n=3x4=12), multi-professional simulation meetings (n=3), and patient interviews (n=20). Furthermore, we quantify the identified barriers and facilitators with questionnaires among emergency care professionals (n=510).

Finally, we will develop implementation strategies by the use of intervention mapping (Bartholomew).

Results

The presentation will be focused on the methodology and preliminary results of this ongoing study.

P692 *Pain Management/ Analgesia / Anesthesia*

INVESTIGATION OF EFFECTIVENESS OF METOCLOPRAMIDE IN PATIENTS WITH HEADACHE INCOMING EMERGENCY ROOM.

MK. Erkuran (1), S Karaman (2), O. Odabaş (3)

1. Emergency Department, Şanlıurfa Training and Research Hospital, Şanlıurfa, Turkey
2. Emergency Department, Erzurum District Training and Research Hospital, Erzurum, Turkey
3. Emergency Department, Dışkapı Yıldırım Beyazıt Training and Research Hospital, Ankara, Turkey

Corresponding author: Mr Karaman Serhat (drserhatkaraman@hotmail.com)

Key-words: headache ; metoclopramide ; visual analogue scale of patient satisfaction

Headache is among the most common painful conditions that affect the people and the most common health problem. The aim of this study is to investigate the efficacy of metoclopramide for the treatment of headache at the emergency department.

16-56 years old patients complaining of headache at the Dışkapı Yıldırım Beyazıt Training and Research Hospital Emergency Department included to the study. Emergency department patients presenting with headache because of head injury, haemostatic disorders, high fever, ischemic stroke, transient ischemic stroke, non-traumatic bleeding, seizures, arterial hypertension, intracranial neoplasm were excluded from the study. Of the 306 patients were randomized into three groups. Treatment of paracetamol 1000 mg iv as the first group (Group P), the second group received 10 mg metoclopramide iv (Group M), the third group received 100 cc of normal saline iv (Group SF). Patient satisfaction was scored with visual analogue scale at 15-30-45th minutes. In mild headache group, at 15-30-45th minutes, paracetamol is superior to metoclopramide; only at 15th minutes metoclopramide is superior to placebo, paracetamol is superior to placebo at 15th and 45th minutes. In severe and moderate headache groups, there wasn't any significance between metoclopramide and paracetamol at 15-30 and 45th minutes.

In conclusion, the patients admitted to the emergency department complaining of headache could be treated by metoclopramide.

P693 *Pain Management/ Analgesia / Anesthesia*

COMPARISON OF ICE AND LIDOCAINE- PRILOCAINE MIXTURE CREAM FOR REDUCTION OF THE PAIN DURING PERIPHERAL INTRAVENOUS CANNULATION IN EMERGENCY DEPARTMENT PATIENTS.

H. Aygun, E. Armagan, F. Ozdemir, O. Koksall, S.A. Aydın, K. Selimoglu

Emergency Department, Uludag University Faculty of Medicine, Bursa, Turkey

Corresponding author: Melle Ozdemir Fatma (drfatmaozdemir@yahoo.com)

Key-words: ice ; intravenous cannulation ; emergency department

Objective: We aimed to compare the efficacies of ice, lidocaine-prilocaine mixture cream and classical method in the reduction of the pain observed during intravenous cannulation, which is the most performing procedure in emergency departments, and to define the most effective method.

Methods: One hundred-twenty patients applied to emergency department of Uludag University Faculty of Medicine were included in this presented study. Cannulations were performed after one minute application of ice package at ice group. Patients applied to emergency only for blood transfusion were chosen for lidocaine- prilocaine group and their cannulations were performed at the 60. minute of mixture cream application. Finally none of any applications before cannulation were used as classically for control group. All cannulations were performed from

antecubital region and 18 G cannula were used. Visual analog scale (VAS) and patient satisfaction was scored.

Results: VAS scores for ice, lidocaine- prilocaine and control groups are $2,8 \pm 1,7$, $4,1 \pm 1,8$, $4,4 \pm 1,9$, respectively. VAS score at ice group was significantly low than both lidocaine- prilocaine and control groups ($p < 0,05$). In addition to that there was no statistically significant difference between lidocaine- prilocaine and control group ($p = 0,40$). Eighty percent of patients in ice group and 75% of patients in lidocaine- prilocaine mixture cream group notified that they would prefer the same application before subsequent cannulations.

Conclusion: Ice application method before intravenous cannulation, in addition to its advantages like inexpensiveness, easily obtainment and application, is more effective than lidocaine- prilocaine cream.

P694 Pain Management/ Analgesia / Anesthesia

IS IT POSSIBLE TO MAKE 'VISUAL PAIN SCALE' OBJECTIVE?

AS Girisgin (1), G Calik (1), I Ertas (1), M Ergin (2), B Cander (1), S Kocak (1), S Kebapcioğlu (3)

1. Emergency Medicine, NEU Meram Medical School, KONYA, Turkey
2. Emergency department, NEU Meram Medical School, KONYA, Turkey
3. Emergency Medicine, Mevlana University, KONYA, Turkey

Corresponding author: Mr Girisgin A. Sadik (sgirisgin@yahoo.com)

Key-words: Visual Analogue Scale ; Emergency Medicine ; pain

Background: There are many pain scoring systems developed because people have had difficulty in defining and determining severity of pain. The subjectivity of all scoring systems causes deficiency in evaluation. In this study, a standardization of Visual Analogue Scale (VAS) was achieved by the help of pain resulting from a standard procedure and then renal colic pain was evaluated with 'modified VAS' to find out whether it was more objective scale than VAS or not. Material – Method: This study included 63 patient admitted to Necmettin Erbakan University Meram Medicine faculty Emergency Medicine Department with renal colic pain. The study had a control group including 33 patients admitted due to complaining other than pain. The demographic characteristics were same for both group. All patients with renal colic had physical exam and their pain were questioned with VAS. Then, an intravenous line at antecubital region was performed to treat their pain. Their expression of pain during IV line process were asked in terms of VAS and this was accepted as 'standard pain'. After a standard analgesic treatment, the pain scoring was performed at 0, 15 and 30 min in terms of VAS and modified VAS which was equal to "VAS minus Standart Pain Score". We performed a comparison between VAS and modified VAS. Results: Patients had VAS for their presenting pain between 40-100 while standard pain scores were between 0-70. After analgesic treatment, VAS scores at 0, 15, 30 min were 0-100. Modified VAS (MVAS) scores were equal to 'VAS score – Standart Pain Scores'. There was a statistical difference between VAS scores of all time points ($p < 0,05$). There was also statistical difference in relieving pain between men and women. When MVAS was used to evaluate in relieving pain, there was no statistical difference between gender at 0 and 30 min but statistical difference at 15 min. Also no statistical difference between variances of presenting renal colic pain and standard pain was found. Conclusion: Our results were hopeful about diminishing subjectivity of VAS. When renal colic pain at 0, 15 and 30 min were evaluated by standard VAS, there was a meaningful difference in terms of feeling pain between genders. However, our results showed that there wasn't any difference using MVAS. We thought

that MVAS is especially useful for persons who have low threshold for pain.

This 'early result' of our study including 37 patients was presented at 7th National Emergency Congress Of EPAT.

P695 Pain Management/ Analgesia / Anesthesia

COMPARISON OF THE EFFECTS BETWEEN MEPERIDINE AND DEKSKETOPROFEN IN RENAL COLIC

A Acikalin (1), MO Ay (1), N Kozaci (1), S Satar (1), A Sebe (2)

1. Emergency department, Adana Numune Education and Research Hospital, Adana, Turkey
2. Emergency department, Cukurova University, Adana, Turkey

Corresponding author: Mr Ay Mehmet Oguzhan (droguzhan2006@myynet.com)

Key-words: Analgesic ; Deksketoprofen ; Renal colic

Selection of appropriate and effective analgesic for the patients admitted to emergency services with renal colicky pain is very important. In this study we aimed to compare the analgesic efficacy and the effects on hemodynamic variables between meperidin and deksketoprofen in patients admitted to Cukurova University Medical Faculty Emergency Service. A prospective, randomized, double-blind clinical study was planned and initiated after obtaining the approval of the Ethics Committee of the Board.

The patients between the ages of 18 to 70 with both sexes who admitted to our emergency service and take a diagnosis of renal colic were included in our study. The patients who has NSAİ drug allergy, received analgesic drugs in last 24 hours, with a diagnosis of peptic ulcer, receiving anticoagulant therapy, has a solitary kidney, with moderate or severe hydronephrosis, serum creatinine level determined over 2 mg/dl, pregnant, breast-feeding were excluded from study. Total 52 patients were enrolled. Before drug injection, we randomly chosen deksketoprofen trometamol and meperidine hydrochloride placed in closed envelopes, patients were given a single dose of intravenous infusion of 20 per minute.

Vital signs, laboratory tests and ultrasound findings were compared between meperidine and deksketoprofen drug administration groups. There was no significant statistical differences between the systolic and diastolic blood pressures, pulse rates, respiration rates, BUN, creatinin, WBC, hematuria, leucocyturia values, the detection rate of nefrolithiazis and mild hydronephrosis.

When we look at changes in vital signs before and 30 minutes after application of analgesic drugs, we see that both two analgesic groups made statistically significant decreases in pulse rate, breathing rate, systolic and diastolic blood pressure. Although the reduction of these parameters in the meperidine group is a little bit more than deksketoprofen, there was no significant statistically differences.

According to our study, an opiate drug meperidine and the NSAİ drug deksketoprofen which is used to treat renal colic has similar analgesic efficacy. Meperidin and deksketoprofen has a similar pattern of decline in Visual Analogue Scale and Renal Colic Symptom Score.

In conclusion; the NSAİ drug deksketoprofen can be considered as one of the primary treatment options because of it showed similar analgesic efficacy in renal colic pain, lack of serious side effects, well tolerated by patients.

P696

Pain Management / Analgesia / Anesthesia

INTRATHECAL MORPHINE IS FEASIBLE FOR ACUTE POSTOPERATIVE PAIN MANAGEMENT IN A RESOURCE-CONSTRAINED ENVIRONMENT.

L Ragazzoni, A Ripoll, E Giovagnoni, PL Ingrassia, M Foletti, S Giachello, LB Some, F Della Corte

Research Center in Emergency and Disaster Medicine, CRIMEDIM, Novara, Italy

Corresponding author: Mr Ragazzoni Luca (luca.ragazzoni@med.unipmn.it)

Key-words: intrathecal morphine ; cost reduction ; low-income countries

Background

The lack of knowledge of pathophysiological mechanisms of pain and of the pharmacologic action of analgesic drugs, combined with the scarcity of supplies led to a chronic inadequate control of acute postoperative pain at the Centre Medicale Avancé de Nanoro in Burkina Faso where we recently started a voluntary humanitarian action. The use of morphine was unfamiliar to nurses and the stocks very short for a proper intravenous postoperative analgesia. Several studies have underlined the effectiveness of low-dose morphine administered intrathecally in decreasing postoperative pain intensity and in delaying the request for supplemental analgesia after minor and major surgery under general or spinal anesthesia. Moreover its relative safety and its benefit in reducing costs were demonstrated. This abstract aims to describe the results of the training on the specific use of intrathecal morphine as a treatment option able to make the postoperative pain management feasible through the reduction of costs in such a low-income setting.

Methods

During the humanitarian mission (October 1st-31st,2011) developed as a part of the residency program of Anesthesia and Intensive Care at the University of Eastern Piedmont, a team composed of two residents and one consultant in anesthesia organized a training course on the basic principles of acute postoperative pain management addressed to the operating room staff. A 10hrs teaching was designed in order to cover the following topics: pathophysiology of pain; pharmacokinetics and pharmacodynamics of opioid and non-opioid analgesic drugs; dosage, side effects of morphine and its routes of administration; the specific use of low-dose morphine administered intrathecally and its minor and major risks. After this, a 2-weeks coaching mentoring in the operating room was provided. After our leave, all major and minor surgeries in adult and elderly patients have been registered by local staff from November 1st 2011 to January 31st,2012 and medical records were retrospectively analyzed. Frequencies and proportions of anesthetic techniques, the number of opioids ampoules used were reported and the cost were expressed in Communauté Financière Africaine franc (CFA). No rescue therapy was taken into consideration given the high unreliability of this data depending on the economic availability of patients.

Results

Data from 259 patients, 173 (66,8%) male and 86 (33,2%) female, 212 (81,9%) aged between 18 and 65 and 47 (18,1%) over 65), who underwent major and minor surgery were collected. 241/259 patients (93,1%) were operated under spinal anesthesia with a dose of 0,2mg of it-morphine added to local anesthetic. The procedures included general surgery (36,1%), urologic surgery (23,2%), orthopedic surgery (20,3%), gynecologic surgery (13,7%) and caesarean section (6,6%). 12/18 major surgery performed under general anesthesia were driven with the adjunct of 0,2mg of it-morphine before the induction of anesthesia and 6/18 with

30mg of iv-morphine during the first 24h after surgery. No patient had respiratory depression or other major complications. During the whole period 66 ampoules of morphine were needed [(48)+(18)][(1 flacon per day x 48 working day when administered intrathecally)+(3 flacon per patient when administered iv.)] and 32 of fentanyl for a total cost of 40.700CFA [(350CFAx66)+(550CFAx32)]. If compared with the anesthetic regime (about 2-3 vials of fentanyl per day) in force before the introduction of morphine, the consumption of fentanyl would have been on average 120 vials for an amount of 66.000CFA.

Conclusion

The teaching of the pathophysiology of pain and the principles of analgesic pharmacology has raised the awareness of the hospital medical staff in Nanoro towards the importance of pain management. The training on the use of morphine administered intrathecally has dramatically changed the clinical approach to acute postoperative pain and this choice has permitted the utilization of the few vials available. This technique could be imposed as a solution for the treatment of postoperative pain in low-income countries due to its benefit on lowering costs and not less to its simplicity of utilization and its relative safety. During the next mission to verify also the effectiveness of the control of postoperative pain, basic concepts of pain assessment will be introduced. Through two letters African staff expressed its satisfaction and gratitude for what they have been taught.

P697

Pain Management / Analgesia / Anesthesia

FICB ON PROXIMAL FEMORAL FRACTURES: OPIOID SPARING AND EFFECTIVE ANALGESIC EFFECT?

M Kreeft, N Mullaart-Jansen

Emergency Department, Westfriesgasthuis, Hoorn, Netherlands

Corresponding author: Mr Kreeft Mathijs (mathijskreeft@hotmail.com)

Key-words: fascia iliaca compartment block ; proximal femoral fractures ; pain management

BACKGROUND:

Patients with a femoral fracture are in severe pain on arrival in the Emergency Department and providing sufficient pain relief is a major challenge. Traditionally pain treatment is based on systemic opioids, which have large potential for side effects. Undertreated pain is a predictor for delirium on itself. Recent studies have indicated Fascia Iliaca Compartment Block (FICB) is an effective analgesic for patients with hip-fractures. It also has the potential of reducing the incidence of delirium by better analgesic effect and opioid sparing.

MATERIALS AND METHODS:

From April 2011 until January 2012 all patients in our Emergency Department were possible candidates for an ultrasound guided FICB performed by an Emergency Physician. The effectiveness of the FICB was monitored with the Visual Analogue Scale (VAS), which was recorded before the FICB, after 30 minutes, on admission and every 3 hours after admission. Another primary outcome was the use of rescue medication after the FICB, mostly dipidolor subcutaneously. We also looked at the total use of opioids comparing our study group with a non-FICB control group. Complications were listed in the medical records.

RESULTS:

37 FICB's were done in the study period. VAS-scores showed a clear decline in pain after the FICB, based on VAS-scores of 18 patients that were correctly monitored. 35% of the patients with a FICB had to use rescue medication within 10 hours after the FICB comparing to 65% in the control group. The total use of opioids was lower in

the FICB group compared to the non-FICB control group. No complications were registered.

CONCLUSION:

Results show that FICB is an effective analgesic for patients with a femoral fracture in the Emergency Department. It also reduces the total use of opioids in this fragile group of patients and no complications were noted in our pilot study.

P698 Pain Management/ Analgesia / Anesthesia

WHICH IS MORE EFFECTIVE FOR RENAL COLIC PAIN?

AS Girisgin (1), I Ertas (1), G Calik (1), M Ergin (2), S Kocak (1), M Okumus (3), C Yaylalı (4), B Cander (1)

1. Emergency Medicine, NEU Meram Medical School, KONYA, Turkey
2. Emergency department, NEU Meram Medical School, KONYA, Turkey
3. Emergency Medicine, Sutcu Imam University, Kahramanmaraş, Turkey
4. Emergency Medicine, Diyarbakır State Hospital, Diyarbakır, Turkey

Corresponding author: Mr Girisgin A. Sadik (sgirisgin@yahoo.com)

Key-words: Renal colic ; Analgesia ; Visual Analogue Scale

BACKGROUND: Renal colic pain is one of the cause of most severe pain. Visual Analogue Scale (VAS) used for other pain reasons can be used to determine severity of renal colic pain. After diagnosis, it is appropriate to use analgesics to decrease pain. During last two decade, nonsteroidal antiinflammatory agents have been used as well as spasmolytic agents, both of which are effective in pain relieving. However there are lots of choices in NSAIDs. **METHODS:** The study was double blinded – prospective trial. It was conducted to make comparison between tenoxicam and dexketoprofen in treatment of renal colic pain. Tenoxicam and dexketoprofen group included 31 and 32 patients, respectively. The patients who admitted to ED with complain of renal colic pain was randomly selected in terms of drug choice. After diagnosis of renal colic, their analgesic treatment was begun. The severity of their pain were asked by VAS at 0, 15 and 30 min. There was no statistical difference between groups at the beginning but it was found that there was statistically important decrement in pain relief for dexketoprofen group. **CONCLUSION:** The NSAIDs are useful in pain relief for renal colic patients. We found that dexketoprofen reduced pain more than tenoxicam in a limited number of patients with renal colic. There is a need for further studies with large number patients.

P699 Pain Management/ Analgesia / Anesthesia

PAIN ASSESSMENT BY THE FIRST AID WORKERS : WHICH SCALE?

M Boursier (1), F Briche (2), MP Petit (3), B Auguste (4), D Jost (2), V Lanoë (2), JP Tourtier (5), C Verret (6), L Domanski (7)

1. médecine générale, Hôpital d'Instruction des Armées PERCY, Paris, France
2. service médical, Brigade de Sapeurs-pompiers de Paris, Paris, France
3. Etat Major, Brigade de Sapeurs-pompiers de Paris, Paris, France
4. CMA Paris, Service de Santé des Armées, Paris, France
5. Anesthésie Réanimation, Hôpital d'Instruction des Armées du Val de Grâce, Paris, France
6. CESPA Bégin, Service de Santé des Armées, Paris, France
7. Etat major, Brigade de Sapeurs-pompiers de Paris, Paris, France

Corresponding author: Mme Boursier Marion (marionboursier@hotmail.fr)

Key-words: pain assessment ; first aid workers ; pain scale

Title: Pain assessment by the first aid workers: which scale?

Introduction: First aids of the Fire Department of Paris carry 350 000 victims of trauma or medical pathologies per year. Pain must be assessed as soon as possible to be correctly relieved. Three pain scales can be used in prehospital emergency practice: numeric rating scale (NRS), visual analogue scale (VAS) and verbal rating scale (VRS). First aids of Paris Fire Department usually use VRS. Furthermore, effectiveness of NRS in prehospital settings has been established in several data sets but there have been no studies of NRS or VAS validity in first aids practice. The main objective of this study was to identify the most effective pain scale for the first aid workers practice.

Materials and methods: This multicenter prospective study records information from four questionnaires which were filled out by patients, first aids from nine Fire Brigade centers and nurses from four emergency departments. Trauma patient aged 18 or older with limb trauma were recruited by first aids during 4 months. The first aids were given educational program about pain assessment using verbal rating scale, numeric rating scale and visual analog scale. They assessed patient's pain at their arrival and after initial cares, just before transport. Nurses of the emergency department destination were questioned about their use of the first aids assessment. First aids workers adhesion was evaluated by asking them which scale they prefer. Correlations between these three scales were evaluated by Spearman test.

Results: Ninety-two patients (average aged 45[22,7-65,3]) were included. Among them, 51,1% were female. They had fractures (21%), sprains or dislocations (28,1%) and superficial injuries or contusions (25%). The average value of pain intensity assessed by NRS at the first time was 5,5/10. Pain was assessed with VRS for 96,6% of the patients, with NRS for 96,6% and with VAS for 90,9% at the arrival of the first aid workers. After initial cares, NRS was used in 87,5% and VAS in 71,6% of cases. Strong correlation between NRS and VAS was found ($r=0,79$; $p<0,005$). NRS and VAS was less correlated ($r=0,66$; $p<0,005$).

In our study, 72,5% of the first aids thought that NRS was usable in their practice, 75% thought VAS was usable and only 52,4% though VRS was usable. Thirty four (43,6%) of the 78 first aids who answered preferred EN, 31 (39,7%) preferred VAS. Their arguments were simplicity of comprehension and quality and precision of these scales. They talked about practical aspects when they answered that they prefer NRS. Finally, 59,6% of the 48 nurses questioned said that they didn't use the first aid pain assessment. They argued that they missed information and that there was problem with first aid scale.

Discussion: The French society of Anesthesiology and Resuscitation advises to use the NRS for the prehospital settings for physicians and nurses but first aids are not mentioned. It specifies that a pain scale has to be chosen according to validity, feasibility and agreement of users. The validity of NRS and VAS is well known. However, this study offered the possibility to apply those elements to first aids practice. Indeed, the strong correlation between NRS and VAS and their good feasibility in our study suggest their effectiveness in this setting. Correlation between NRS and VAS and their feasibility were already proven in several studies. Otherwise, first aids who were questioned clearly answered that they prefer NRS because of its ease of use and its accuracy. The last but not least argument for the use of NRS by the first aids is the continuity of care. Indeed, all French emergency departments who participated in our study use NRS for pain assessment. If first aids and nurses use the same pain scale, it will guarantee better communication between partners, better monitoring of pain evolution and so better pain support.

P700 Pain Management/ Analgesia / Anesthesia

PAIN AND ANXIETY DURING LUMBAR PUNCTURE

A. HUTIN, A. SANTIN, B. RENAUD

Emergency Department, University Hospital, CRETEIL, France

Corresponding author: Mme Santin Aline (aline.santin.perso@gmail.com)

Key-words: lumbar puncture ; pain ; anxiety

Introduction: Lumbar puncture (LP) is a routinely performed procedure in the emergency department setting. Systemic analgesia is recommended to prevent pain due to this procedure in oncology patients who are exposed to iterative lumbar punctures. Up to now, few reports have been published regarding the maximal level of pain and anxiety resulting from lumbar puncture. **Objective:** To determine the higher pain and anxiety levels caused by LP in the emergency care setting.

Material and methods: We conducted a prospective observational study in an adult emergency department of a university hospital. All patients requiring a diagnostic lumbar puncture were eligible for inclusion in this study. We excluded patients who denied participation, and patients with previous history of dementia or severe cognitive impairment and those unable to give full informed consent due to encephalopathy or alteration of consciousness for instance. Data collected were: age, sex, body mass index (BMI), as well as procedure duration, performance of pre-procedural analgesia and its nature (systemic or topical). Pain and anxiety levels were obtained by auto-evaluation using analogical visual scale (AVS). We collected the maximum intensity of pain and anxiety before and during LP. We compared patients according to the maximal intensity of pain during LP, below or above 4 (<4 and ≥4 designated group B and A, respectively). Quantitative characteristics were described using mean and standard deviation while for categorical characteristics we reported the number of cases and corresponding proportion. We compared patient characteristics between the 2 study groups using Student t test or Fisher exact test and Pearson's chi 2 test when appropriate.

Results: 19 patients were included (9 in B and 10 in A). Main population characteristics were sex ratio 0.72, age 43 (± 15) years, BMI 24 (3.5) kg/m². Procedural duration was 17.5 minutes (±7.3). 6 (32%) patients had more than one attempt of LP. Mean level of pain and anxiety before procedure were 3.7 (±3.3) and 2.9 (±4.0). 11 (58%) patients had pre-procedural systemic analgesia (Tramadol or Paracetamol) among whom 4 were also administered local analgesia (Lidocain patch). Anxiety level during LP was 4.0 (1.0) Patients characteristics between the 2 study groups, B and A respectively, did not differ with the exception of the following: BMI 26 (3) versus 23 (3) kg/m² (p=0.05), anxiety before LP 1.1 (3.3) versus 4.7 (3.9)(p=0.05), and anxiety after LP 1.6 (3.4) versus 6.4 (3.1) (p<0.01).

Discussion: The levels of pain and anxiety associated with LP were high for most patients. In spite of these levels of procedural pain and anxiety many patients did not receive analgesic medication and no one was administered anxiolytic treatment. LP related pain and anxiety seemed to depend on one another and particularly, procedural pain was associated with patient anxiety before LP. Interestingly, per procedural level of pain was not associated with pre-procedural intensity of pain.

during). Our findings suggest that our management of pain and anxiety related with LP should be improved particularly in patients that required more than one attempt. Improving anxiolytic treatment seemed to be worth of interest.

Conclusion: In the ED setting, our preliminary findings suggest that LP is associated with high levels of pain and anxiety that require

improvement of pre-procedural analgesia and particularly anxiety. Additional patients have to be included to confirm and strengthen these findings.

P701 Other - Part 1

IMPACT OF A WORKING GROUP ON GASTROINTESTINAL DECONTAMINATION OF PEDIATRIC EMERGENCIES IN SPAIN.

YY. ACEDO (1), L. DEL ARCO (1), S. MINTEGI (1), M.

PALACIOS (2), N. SALMON (1), R. VELASCO (3), W.

WORKING GROUP OF POISONINGS OF THE SPANISH SOCIETY OF PEDIATRIC EMERGENCIES (4)

1. PEDIATRICS, HOSPITAL DE CRUCES, BILBAO, Spain

2. PEDIATRICS, COMPLEJO HOSPITALARIO DE NAVARRA, PAMPLONA, Spain

3. PEDIATRICS, HOSPITAL RIO HORTEGA, VALLADOLID, Spain

4. PEDIATRICS, SEUP, SPAIN, Spain

Corresponding author: Mr Roberto Velasco (quetzal1980@yahoo.es)

Key-words: ; ;

INTRODUCTION.

In a study conducted in 2001-02 including 17 pediatric emergency departments (PED) in Spain high variability was detected in management of acute pediatric intoxications and more specifically in gastrointestinal decontamination. Since that time, the Working Group of Poisoning (WGP) of the Spanish Pediatric Emergencies Society (SEUP) designed and spread in different ways recommendations based on international guidelines on scientific evidence about the management of these patients. The objective of this study is analyze the impact of the measures designed by the WGP in the management of acute poisonings in PED.

PATIENTS AND METHODS. Comparative cohort study. We analyze management and, specifically, gastrointestinal decontamination in three time periods in PED included in the WGP Group A: 2001-02, 17 PED, 2157 episodes. Group B: 2008-09, 37 PED, 612 episodes. Group C: 2009-11, 42 PED, 400 episodes).

RESULTS. Of the 3169 episodes recorded, 1031 (32,5%) underwent for a gastrointestinal decontamination procedure (Group A: 34,1%; Group B: 27,8%; Group C: 31,5%). Prior to the creation of the Working Group, activated charcoal was administered to 94,8% of patients in whom gastrointestinal decontamination was performed, 29,1% underwent for gastric lavage, and 22,8% were administered ipecac syrup. Patients in whom ipecac syrup was used decreased drastically in group B (1,7%), and were none in group C. The number of patients who underwent gastric lavage remained constant until last year, when it showed a sharp decline (14,7%), although not statistically significant (p=0,08). Use of activated charcoal remained almost the same in Group B (p8%) and C (96%).

CONCLUSIONS. Recommendations developed and spread by a Working Group have approached the management of acute pediatric poisonings in Spain to international guidelines based on scientific evidence.

P702 Pediatrics

PHYSOSTIGMINE TREATMENT IN AN ADOLESCENT WITH AKINETON OVERDOSE

SS Sahin Sabiha (1), OZ Zorbozan Onur (2)

1. Pediatrics Emergency, Eskisehir Osmangazi University, Eskisehir, Turkey

2. Emergency department, Eskisehir Osmangazi University, Eskisehir, Turkey

Corresponding author: Mme Sahin Sabiha (sabiha.sahin@mynet.com)

Key-words: ; ;

Case: Fourteen-year-old boy who was taken to Paediatric Emergency Department due to hallucinate and agitation has a story of received 12 tablets of akineton which belong to his aunt about 9 hours ago. Before he was referred to our hospital, he applied to a healthcare centre after 2 hours and he treated with gastric lavage and activated charcoal. During the initial evaluation in our Emergency Department, blood pressure (BP) was 110/60, pulse was 84/min, respiratory rate (RR) was 20/min and temperature was 36.8, and euphoric state and visual hallucinations were observed. Poison Information Centre was called considering the biperiden intoxication due to existing symptoms. They said that there is no any toxic dose in biperiden toxicity, the half-life of drug is 8-48 hours, absorption is low and haemodialysis and peritoneal dialysis is ineffective. They noted that toxic effects include somnolence, hallucination, delirium mydriasis, hypertension, urinary retention, slowing in intestinal mobility and respiratory depression. The patient was taken to Paediatric Intensive Care Unit to give physostigmine for delirium if needed and to close follow-up. Diazepam was given due to ongoing agitation. During the intensive care follow-up, physostigmine was introduced two times and his hallucinations and agitations decreased markedly. On the third day of follow-up, his general situation improved and Glasgow Coma Scale (GCS) score was 15. Patient's biochemical parameters and ECG become normal. He was evaluated by paediatric and adolescent psychiatry and he was discharged advising polyclinic control after 15 days.

P703 Pediatrics

MANAGEMENT OF OESOPHAGEAL COINS IN CHILDREN

J Acheson (1), O Nafousi (1), R Pertwee (2), D Roland (1)

1. Paediatric Emergency Department, Leicester Royal Infirmary, Leicester, UK
2. Children's Hospital, Leicester Royal Infirmary, Leicester, UK

Corresponding author: Mr Pertwee Richard (rpertwee@doctors.org.uk)

Key-words: Paediatric ; Oesophageal ; Coin

Purpose

Evidence suggests that asymptomatic children, with no previous oesophageal pathology, presenting within 24 hours of ingestion with an oesophageal coin, can be managed conservatively for up to 24 hours rather than early active removal. Our aims were to determine the number of children this could be applied to and to determine what percentage of asymptomatic coins presenting in the oesophagus will pass spontaneously with no intervention.

Methods

A retrospective analysis was conducted for children presenting with an ingested oesophageal coin to the Paediatric Emergency Department from 2004-2011. Patients were identified by searching for "foreign body in alimentary canal", "ingestion of foreign body" and "oesophageal obstruction" on the Emergency Department Information System (EDIS). Patients < 16 yrs with a confirmed oesophageal coin foreign body were included.

Results

63 patients (26 female and 37 male) presented with a confirmed oesophageal coin and the median age was 4yrs (8months – 13yrs). 25 asymptomatic patients were not admitted. 10 were followed up in the Paediatric ED review clinic the next day and 15 were reviewed in the ENT clinic the same day. All were re-x-rayed within 18hrs, 1 patient was admitted from the ENT clinic for

removal of a coin in the upper oesophagus under general anaesthetic. The rest of the coins had passed.

38 patients were admitted to ENT with 17 asymptomatic and 21 symptomatic. 17 coins were confirmed in the upper oesophagus, 12 in the middle oesophagus and 9 in the lower oesophagus. Symptoms included vomiting (52%) drooling (38%) and coughing (10%). Of the admitted patients 9 were observed and re-x-rayed up to 8 hours later, they were all discharged as the coin had passed. 29 had a general anaesthetic to remove the oesophageal coin.

Conclusion

Patients that are asymptomatic on presentation of a confirmed oesophageal coin could be conservatively managed and re-x-rayed within 24 hours.

P704 Pediatrics

CAN INTRANASAL KETAMINE PROVIDE SAFE AND EFFECTIVE SEDATION AND ANALGESIA IN PEDIATRIC PATIENTS?

MC van Schepen

Emergency department, Isala Klinieken, Zwolle, Netherlands

Corresponding author: Mme Van Schepen Marian Christine (jaarsmafinance@live.nl)

Key-words: intranasal ketamine ; sedation/analgesia ; pediatric patients

Background

Children who need a painful procedure in the ED are often a challenge to the emergency medicine resident. The use of intravenous or intramuscular medication is painful, causes needle phobias and may leave the child with unpleasant memories. We looked for an alternative, not painful route of administration of sedative and analgesic medications. Ketamine has been used widely and in addition to the usual routes of administration, a variety of alternative applications to the buccal and nasal membranes are being tried. The question arose whether intranasal ketamine could provide safe and effective sedation and analgesia in pediatric patients.

Search Strategy and outcome

An extended literature search was done and four relevant articles were found (described in the abstracts document)

Conclusion

During the time this search was done, only one study was published about the intranasal use of ketamine 3 mg/kg as a sedative drug followed by a painful procedure. The other three studies were done as premedication studies to provide smooth separation from the parents and induction of anesthesia. From this search some conclusions can be drawn:

1. The data presented above suggests that intranasal ketamine 3 mg/kg may be an ideal agent for sedation administered via the intranasal route in the pediatric population for brief procedures
2. Recovery time was of short duration
3. Important adverse effects on saturation, haemodynamics, emergence reactions and salivation were not found in these studies

Clinical Bottom Line

According to the publications outlined above intranasal ketamine 3mg/kg can be used as an save and effective agent for sedation in the pediatric population.

P705

Pediatrics

CASE REPORT: A WORM IN THE WORM-LIKE APPENDAGE?

F Beije

Emergency department, Isala Klinieken, Zwolle, Netherlands

Corresponding author: Mme Beije Femke (femkefriesema@gmail.com)

Key-words: ascaris lumbricoides ; appendicitis ; Child

Case:

A 13 year old man presented at out emergency department with a 2 days persisting fever and abdominal pain. One week previously he was treated with mebendazol because of a 33 cm long worm in his stool, later identified as an Ascaris Lumbricoides. One day after finishing his treatment he developed a fever and abdominal cramps.

We saw a sick young man; with a tachypnea, tachycardia and a temperature of 39,4°C. Upon abdominal palpation, rebound tenderness at McBurney's point was present. Further laboratory tests showed a leucocytosis of 14,1x10⁹/l and a C-reactive protein of 41 mg/l. Additionally an ultrasound was made which showed characteristics of an appendicitis. Shortly thereafter the patient underwent an appendectomy during which a necrotizing and perforated appendix was removed. Postoperative an ileus complicated the patient's recovery, after two weeks he could return home. Pathologic analysis of the appendix showed inflammation, perforation an serositis, in particular no worms or worm eggs were found.

Background:

The Ascaris Lumbricoides can be found in up to 25% of the world population, especially children¹). Fertilized eggs which can be found in soil, enter the body through the digestive system. In the small intestine the larvae enter the blood or lymph system through the intestinal wall. Penetration into the lung parenchyma can cause an Ascaris pneumonia. After coughing up and swallowing the larvae, they re-enter the digestive system. The worms mature and produce a few months later eggs, which leave the body with the stool. Now the cycle can be repeated.

Large amounts of worms can cause intestinal obstruction, invasion of the appendix can cause an appendicitis²). Considering the high prevalence of colonization, the risk of appendicitis seems to be very low. Of all appendix inflammations which needed an appendectomy only 0.5 to 7.46% were due to a parasitic infection^{2,4}). One survey observed children with Ascariasis during surgery because of different intestinal complications; 11 patients had a worm present in the appendix but only 3 of them had appendicitis³).

Conclusion:

Our patient developed an appendicitis acuta one week after Ascariasis. We will never know for sure if there was a relation between the two or if it was just a coincidence..... Nevertheless; if a child presents with an appendicitis it is worth considering worm infections, even in the Netherlands.

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P706

Pediatrics

PEDIATRIC CPR LITERACY AND BARRIERS TO TRAINING IN AN URBAN POPULATION

L Moreno-Walton (1), CI Leach (2), CM Zeretzke 3), L Myers (4)

1. Emergency Medicine & Research Genetics, Louisiana State University Health Sciences Center, New Orleans, United States
2. medical student, Louisiana State University Health Sciences Center, New Orleans, United States
3. Pediatric Emergency Department, Our Lady of the Lake Medical Center, Baton Rouge, United States
4. Biostatistics, Tulane University School of Public Health & Tropical Medicine, New Orleans, United States

Corresponding author: Mme Moreno-walton Lisa (DoctorMoreno@gmail.com)

Key-words: Pediatric ; Resuscitation ; Knowledge

Background: Administering CPR in early stage cardiac arrest has been shown to decrease mortality and morbidity of infants and children. Most children who have an out-of-hospital cardiac arrest do not receive bystander CPR.

Objectives: To determine the percentage of parents who know how to effectively perform CPR on infants or children and if, after receiving pediatric CPR training, they would do so.

Methods: A convenience sample of 300 parents of Pediatric ED patients at an urban teaching hospital were enrolled during all shifts. They completed an anonymous survey on pediatric CPR (p-CPR). Data was analyzed using Pearson's Chi Square Test and simple proportions.

Results: 31.3% of parents had a child < 1 year old, 76% had a child 2-12 years, and 23% 13-18 years. 21.3% had a premature infant. 82% could define CPR. 49.3% had trained in p-CPR and 53.3% in adult. Parents of premature infants were more likely to have trained. 5% had performed CPR on an infant, 5% on a child 2-12, and 2.7% on a child 13-18. If trained in CPR, 85% would be willing to perform it on their own child and 76.7% would be willing to perform p-CPR on someone else's child. 52.8% did not know where to go to train or re-train. 30.2% did not know that parents could be trained.

Conclusions: The study is limited by being a single site convenience sample, but demonstrates the need for public education. Not knowing where to train was the greatest barrier to learning p-CPR. Most parents, if trained, would be willing to perform bystander p-CPR.

P707

Pediatrics

CAN INTRODUCTION OF A BURNS PROTOCOL IN PAEDIATRIC EMERGENCY DEPARTMENTS INCREASE APPLICATION OF DELAYED ACTIVE FIRST AID COOLING FOR THERMAL BURNS?

C MAPATUNA, F PASHA

EMERGENCY MEDICINE, LEEDS TEACHING HOSPITALS NHS TRUST UNITED KINGDOM, LEEDS, United Kingdom

Corresponding author: Mr Pasha Farooq (drfupasha@doctors.org.uk)

Key-words: BURNS ; PAEDIATRICS ; PROTOCOL

Background

There is evidence to demonstrate delayed tap water cooling for 20 minutes is effective up to 3 hours from a thermal burn, where initial first aid cooling hasn't taken place.

Objective

To assess whether introduction of mandatory delayed cooling as an integral part of the burns protocol increases detection of thermal burns which would benefit from delayed tap water cooling and application of this first aid measure in PED.

Methods

The case notes of all children who attended the PED with burns over a 3 month period were reviewed, after introduction of the delayed cooling flowchart in to the paediatric burns protocol. This process assessed the usage of protocol, identification of patients who would benefit from delayed cooling (presenting within 3 hours since burn) and application of this first aid measure.

Results

101 case notes were reviewed. In half of the patients with burns, the protocol was used and identified the time since burn in 69% of cases. 85% cases presented within 3 hours since burn & were suitable for delayed cooling. Every third of these suitable patients had documented active tap water cooling for 20 minutes in PED. On the other hand, in the remaining half of the patients, where the protocol was not used, the time since burn was identified only in 29% of cases. Furthermore, none had received documented active cooling in PED, even though majority were deemed suitable for delayed cooling.

Conclusions

Delayed active cooling with tap water for 20 minutes in PED would be useful for a significant number of patients presenting to our department with burns. Usage of the protocol with the flowchart increased the identification of suitable patients for this simple first aid measure & application of it. Furthermore, this would give a good first aid learning experience for the parents to take back to the community.

P708

Pediatrics

CAN WE IMPROVE DETECTION OF POSSIBLE NAI IN CHILDREN WITH BURNS & SCALDS BY INTRODUCING A COMPULSORY BURNS PROTOCOL IN PAEDIATRIC EMERGENCY DEPARTMENTS?

C MAPATUNA, F PASHA

EMERGENCY MEDICINE, LEEDS TEACHING HOSPITALS NHS TRUST UNITED KINGDOM, LEEDS, United Kingdom

Corresponding author: Mr Pasha Farooq (drfupasha@doctors.org.uk)

Key-words: NON ACCIDENTAL INJURY ; PAEDIATRICS ; BURNS

Abstract:

Objectives

To assess whether use of a burns protocol in all children attending a dedicated paediatric emergency department (PED) with burns and scalds increases detection of cause for concern for non-accidental injury (NAI), improve case note documentation and management of cases.

Methods

The case notes of all children who attended the PED with burns & scalds over a 3 month period were reviewed, after introduction of a paediatric burns protocol. This process assessed the usage of protocol, identification & documentation of cause for concern for NAI, paediatric medical referral for further investigation and pain management.

Results

89 case notes were reviewed. The protocol was used in half of the patients. In 86% of children, where the protocol was used, there was documented presence or absence of cause for concern for NAI. This was only 46%, when the protocol was not used. In the protocol used group, 53% had confirmed "no cause for concern" in writing after reviewing a list of indicators for possible NAI. When the protocol was not used, this confirmation was reached only in 18% and 54% had no documentation of presence or absence of cause for concern. 33% had positively identified indicators for possible NAI when the protocol was used and 82% of these children were referred for further investigation. Similarly a substantial improvement was seen in the quality of note keeping, checks with EDT/ previous attendances, pain scoring and usage of analgesia.

Conclusion

Identification & documentation of burns in children with possibility of NAI in a busy PED can be improved by using a compulsory burns protocol along with an increase in emergency medicine seniors' contribution and an improvement in referrals to child protection team for further assessment.

P709

Pediatrics

EMERGENCY DEPARTMENT UTILIZATION BY CHILDREN IN KOREA

J Choi, SY Park, JH Lee, DK Kim, YH Kwak

Emergency Medicine, Seoul National University College of Medicine, Seoul, Korea, (South) Republic of

Corresponding author: Mr Suh Dongbum (dongbumes@naver.com)

Key-words: Child ; Emergencies ; Epidemiology

This study was conducted to know nation-wide utilization pattern of emergency department (ED) by children in Korea. Most EDs from referral hospitals provide their essential ED information to National Emergency Medical Center (NEMC) through the National Emergency Department Information System (NEDIS). We obtained and analyzed the NEDIS data on pediatric visits (< 19 years old) during three years, from 1 June 2008 to 31 May 2010. A total of 2,072,664 children visited the 124 EDs during study period, which comprise 31.2% of total ED visits. Male patients were 59.1%, and the mean age was 5.44 (SD; \pm 5.40) years. Among age groups, 1~4 year group was the largest (42.3%). Most patients visited EDs in the evening (from 18:00 to 24:00, 42.1%) and on weekend (Saturday and Sunday, 44.1%). The most common mode of arrival was non-emergency medical service (EMS)/walk-in (90.7%) and only 4.2% of patients used EMS transport. The most common chief complaints of infants (< 1 year) were fever (37.4%), followed by vomiting (8.0%), however, older children (15~18 years) were brought to EDs mainly due to abdominal pain (15.4%) or headache (4.8%). The ratio of diseases versus injuries as the cause of ED visits was about 2.5:1 (1,480,432 vs. 592,232). Most patients could be discharged (81.2%) and 15.3% of the children were admitted. We report nation-wide epidemiological data on pediatric visits to major EDs in Korea, which will be useful to improve emergency medical service system.

P710

Pediatrics

THE STORY OF A SUMMER HOLIDAY IN TERMS OF PEDIATRIC TRAUMA

M Ergin (1), MR Ozer (1), A Harmankaya (1), Y Durduran (2), I Kayitmazbatir (1), H Nak (1), S Kocak (1), AS Girgin (1), M Gul (1), B Cander (1)

1. Emergency Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

2. Public Health Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

Corresponding author: Mr Ergin Mehmet (drmehtmetergin@gmail.com)

Key-words: Pediatric Trauma ; Trauma Room ; Emergency Service

BACKGROUND: As in the adult age group, trauma is the most common reason of death for 1 year and older children. **MATERIAL - METHOD:** This prospective study included ≤16 year old children admitted to Trauma Room of Emergency Service of Necmettin Erbakan University Meram Medicine Faculty Hospital between 15 June – 15 September 2011. **RESULTS:** There were 317 patients included. 64% of patients were men and their median age was 5 (min-max; 0-16) years old. 31% of patients had inter-hospital transfer after their first evaluation in another hospital. Most of the injuries were at home and due to blunt injuries. Falling from height and bicycle accidents were the most common reasons. There was only one patient for whom child abuse was diagnosed. Isolated head trauma was the most common type of injury. During follow up duration at emergency service, there was no mortality (Table 2). It was found that there was no statistical difference in terms of result of emergency visiting according to genders, types of injury and injured part of body, separately ($P>0.05$). **CONCLUSION:** There was a serious deficiency in terms of protective measures which should be taken to prevent pediatric trauma in Turkey.

P711

Pediatrics

HOME ENTERAL TUBE FEEDING: A CASE BURDEN FOR THE PAEDIATRIC EMERGENCY DEPARTMENT?

JK Smith (1), CE Paxton (2), P Leonard (1), DC Wilson (3)

1. Paediatric Emergency Department, Royal Hospital for Sick Children Edinburgh, Edinburgh, United Kingdom

2. Gastroenterology, Hepatology & Nutrition, Royal Hospital for Sick Children Edinburgh, Edinburgh, United Kingdom

3. Child Life & Health, University of Edinburgh, Edinburgh, United Kingdom

Corresponding author: Melle Smith Jennifer (jsmith64@nhs.net)

Key-words: attendances ; enteral ; unscheduled

Objectives

The contribution of home enteral tube feeding (HETF) issues to Paediatric Emergency Department (PED) workload is poorly understood. We aimed to describe the PED burden of children receiving HETF (attendance rates, presenting complaints, outcomes) and assess trends between timing of attendances and hours of service provided by our Children's Community Nursing (CCN) team.

Design

We searched all 114,606 attendances to PED over three years (April 2008 – March 2011) and reviewed all those involving cases on HETF, correlating them with our regional paediatric nutrition

support team records. Day, time and month of attendance plus presenting triage complaint and outcome were noted.

Results

There were 362 attendances of 131 HETF patients with a mean (SD) annual period prevalence of HETF patients attending the PED on an unscheduled basis of 18(2)%. Mean (SD) attendance rates were 120 (24) per year representing 60 (5) patients. Presenting complaints included gastrostomy tube removal (29%), nasogastric tube removal (27%), jejunal tube removal (5%) hardware fault (6%), tube blockage (12%), infection (9%), leakage (4%), malposition (5%) or other (3%). Only 37 (10.2%) of patients required hospital admission, mostly for surgical reinsertion. 54% of all attendances were outwith CCN service hours. More patients attended on Sundays than any other day ($p=0.003$).

Conclusions

Up to 20% of HETF patients attend PED annually with feeding tube-related problems; 54% attend outwith CCN service hours. Significantly higher attendance rates on the day without CCN service cover highlights a flaw in this service design, given that most HETF problems do not need PED expertise and resources.

P712

Pediatrics

DISASTERS AND PERINATAL HEALTH, CORTISOL INDEPENDENT TRANSFER OF MATERNAL STRESS EFFECTS TO THE FETUS

R Schiffner

Accident and Emergency Dept., Univ. Hospital of Friedrich Schiller Univ., Jena, Germany

2. Institute for Animal Sciences and Welfare, Univ. Hospital of Friedrich Schiller Univ., Jena, Germany

3. Neurology, Univ. Hospital of Friedrich Schiller Univ., Jena, Germany

Corresponding author: Mr Schiffner Rene (rene.schiffner@med.uni-jena.de)

Key-words: Perinatal Health ; Disasters ; Maternal Stress

Introduction:

Maternal stress during pregnancy induces fetal growth retardation and programs neuropsychiatric diseases in later life (Van den Bergh, 2005 / Beydoun, 2008). A single event e.g. disasters is enough to cause this effects (Dencause, 2012). It is assumed that these effects are mediated by maternal cortisol which crosses the placenta and programs hyperactivity of the fetal hypothalamo pituitary adrenal axis (HPAA). However, early stress has the most pronounced effects (Rakers, 2012) when glucocorticoid receptors are not expressed yet (Yang, 1990) and the fetal HPAA is still inactive. We hypothesized that maternal catecholamines, although they virtually do not cross the placenta directly, have major effects on the fetus by decreasing uterine blood flow (UBF).

Materials and Methods:

Five pregnant ewes were chronically instrumented at 125 dGA (days gestational age, term 150 dGA) with maternal and fetal catheters inserted into the carotid artery and the jugular vein and an uterine ultrasound flow probe. At 130dGA, animals were stressed by isolation for 2h before and after an infusion of labetalol, a mixed alpha and beta adrenergic antagonist.

Results and Discussion: Ewes responded to the isolation stress with an increase in maternal blood pressure (MBP) from 83 ± 2.7 to 89 ± 3.9 mmHg (mean \pm SEM) for 9 min ($p<0.05$), an increase in maternal heart rate (MHR) from 98 ± 4.7 to 126.9 ± 6.2 beats per minute (bpm) for 30 min ($p<0.05$) and a transient hyperventilation mediated hypocapnia ($p<0.05$) for 15 min. UBF decreased by 11.8 ± 2.7 % for 75 min ($p<0.05$) with a maximum of 19 ± 3 % reflecting uterine vasoconstriction. The fetus responded with a delayed and prolonged decrease of pH from 7.39 ± 0.01 to

7.36±0.01, increase of lactate from 1.5±0.2 to 1.8±0.2 mmol/L and decrease of oxygen saturation from 75±2.5 to 67±3.6 % starting at 60 min of isolation (p< 0.05).

Labetalol infusion led to a decrease of MBP from 72±1.8 to 64±2.9 mmHg, MHR from 104±8.9 to 91±6.2 bpm and UBF by 23±7.6 % (p< 0.05). Isolation stress increased MBP and MHR in tendency and UBF by 11±3.4 % (p< 0.05) over the entire period of isolation. The latter is a consequence of increased cardiac output in the presence of absent vasoconstriction.

Conclusion: Maternal stress in pregnant sheep induces a catecholamine mediated UBF decrease which is followed by a prolonged fetal lactate increase and decrease in oxygen saturation that may contribute to fetal growth retardation and programming of diseases in later life.

P713

Pediatrics

CHRONIC STRESS DURING PREGNANCY, A RISK FACTOR FOR PRE-AND POSTNATAL EMERGENCY AND INTENSIVE CARE

S. Bischoff (1), R. Schiffner (2), F. Rakers (3), S. Rupprecht (3), H.

Schubert (1), M. Schwab (3)

1. Institute for Animal Sciences and Welfare, Univ. Hospital of Friedrich Schiller Univ., Jena, Germany

2. Accident and Emergency Dept., Univ. Hospital of Friedrich Schiller Univ., Jena, Germany

3. Neurology, Univ. Hospital of Friedrich Schiller Univ., Jena, Germany

Corresponding author: Mr Schiffner Rene (rene.schiffner@med.uni-jena.de)

Key-words: Pregnancy ; Prenatal Health ; Maternal stress

Introduction:

Acute stress in pregnant sheep leads to a catecholamine mediated decrease in uterine blood flow (UBF) and induces prolonged fetal lactate increase and decrease in oxygen saturation. In agreement with, chronic exposure to maternal stress induces fetal growth retardation in sheep (Frauendorf, Reprod Sci, 2011) and humans (Rondo, Eur J Clin Nutr, 2003). We hypothesized, chronic maternal stress attenuates the UBF decrease and fetal lactacidosis due to adaptation to the stressor.

Methods:

Ten pregnant sheep underwent repeated isolation stress between 0.2 and 0.66 gestation (30 and 100 days gestation age, dGA, term 150 days) resulting in a reproducible cortisol increases with only slight habituation. Ten pregnant ewes functioned as controls. Five stressed and five control animals were chronically instrumented with maternal and fetal catheters into the carotid artery and the jugular vein and an uterine ultrasound flow probe five days before acute isolation stress at 0.75 or 0.87 gestation (110 or 130 dGA).

Results: Acute maternal stress at 0.75 and 0.87 gestation transiently increased maternal blood pressure (MBP) and maternal heart rate (MHR) and decreased UBF (p< 0.05). UBF decrease was prolonged in chronically stressed ewes at both gestational ages (p< .05). Fetuses in all groups responded with an increase in lactate (p< 0.05). There was no drop in fetal pH and oxygen saturation at 0.75 gestation. At 0.87 gestation, fetal pH and oxygen saturation decreased. Preceding stress prevented the drop in pH (p< 0.05) probably because of hyperventilation-mediated maternal hypocapnia.

Conclusions: Maternal stress induces a decrease in UBF during the third trimester that is more prolonged with gestational age. The UBF decrease is potentiated by preceding chronic stress during the first and second trimester and persists for 4 weeks after

discontinuation of chronic stress and is a risk factor for pre-and postnatal emergency and intensive care.

P714

Pediatrics

THE FIRST SIGN AND THE SECOND LOOK: WHAT'S HIDDEN BEHIND YELLOW SKIN? THREE DIFFERENT UNUSUAL CASES OF CHILDHOOD JAUNDICE IN ED

D Moldovan, A Balas, A Kovari

Emergency Department, Division of Pediatrics, The Emergency Clinical County Hospital Tîrgu Mures, Tîrgu Mures, Romania

Corresponding author: Melle Moldovan Diana (diana.moldovan@yahoo.com)

Key-words: children ; jaundice ; hyperbilirubinemia

We report the cases of three children with jaundice, each of them brought to ED for an unusual clinical sign for their disease, which could mislead us in reaching the correct diagnosis.

A 5-year old boy was brought by ambulance in ED for seizures. First fever, than hypoglycaemia seemed to be the cause, yet he also had a mild jaundice. Lab tests showed slightly elevated bilirubinemia, on its direct fraction account and its underline condition turned up to be finally a fulminant hepatic failure (FHF). FHF is a rare, but poor prognosis syndrome in children, death occurring in more than a half of these patients.

An 11-year old girl came in ED with her parents for an allegedly sudden onset of a jaw tumor. It was a fairly common dental abscess, although requiring surgical treatment. Physical exam revealed mild to moderate jaundice and slightly elevated indirect bilirubinemia. Further lab tests led to Gilbert syndrome diagnosis. This is a benign and quite common condition, usually diagnosed in puberty.

A 15-year old girl was brought in ED by her parents for insidious abdominal pain, drowsiness and fatigue. She also had an intense yellow-green jaundice, thought to be due to hemolysis, as she had a medical background of microcytic hemolytic anemia. Lab tests showed markedly increased hyperbilirubinemia (38mg/dl), mostly due to increased direct bilirubin. Abdominal ultrasound revealed many small gallstones, which led finally to the diagnosis of obstructive jaundice. Cholelithiasis is uncommon in children, but however, one of its most important etiology is hemolytic.

P715

Pediatrics

A NATION-WIDE SURVEY ON KNOWLEDGE AND PRACTICE OF EMERGENCY AND PEDIATRIC RESIDENTS FOR THE MANAGEMENT OF FEBRILE CHILDREN

J Choi, SY Park, JH Lee, DK Kim, YH Kwak

Emergency Medicine, Seoul National University College of Medicine, Seoul, Korea, (South) Republic of

Corresponding author: Mr Suh Dongbum (dongbumes@naver.com)

Key-words: fever ; children ; physicians

Objectives: Although fever is one of the most common complaints among children visiting emergency department (ED), there are considerable variations of the management of febrile children among health care providers. We conducted a nation-wide survey to know knowledge and practice of emergency (EM) and pediatric (PD) on the management of febrile children, and to understand the

impact of unrealistic fear about fever (fever phobia) on the management.

Methods: We surveyed EM and PD residents on knowledge and practice for fever management using standard questionnaires, from April to May, 2009. The 16 questions were administered to the residents, including general demographic characteristics of the subjects, scientific knowledge about measurement and cut-off value of fever, and management and disposition of febrile children. **Results:** A total of 217 (EM 108, PD 109) residents from 23 hospitals in Korea responded to the survey. When comparing with EM residents, PD residents were more to be female (PD vs. EM, 56.9% vs. 23.2%; $p < 0.001$), and had more experience on the management of febrile children (78.9% vs. 36.1%; $p < 0.001$). Concern on the complications of fever and preference on the measuring method of body temperature were similar between two groups. For the management of febrile children, comparable proportion of the both groups believed that the tepid massage alone is effective (36.7% vs. 37.0%; $p = 0.30$). Although more PD residents had their own standards of body temperature to start antipyretics than EM residents (97.3% vs. 89.8%; $p = 0.026$), the temperature were lower than usually recommended. The PD residents preferred alternative use of antipyretics more than EM residents (89.9% vs. 51.9%; $p < 0.001$), and were tended to permit discharge only after the patients' body temperature was normalized ($p = 0.003$).

Conclusion: We found that the practice of PD and EM residents on febrile children was substantially variable, and influenced by unrealistic fever-phobic idea. A standardized guideline for the management of febrile children in ED is warranted to standardize and improve the management among health care providers.

P716

Pediatrics

A NATIONAL SURVEY ON GUARDIANS' SATISFACTION TO PEDIATRIC EMERGENCY DEPARTMENTS IN KOREA

YH Kwak (2), HY Jang (1), DK Kim (2), SY Park (2), DB Suh (2)

1. Emergency Department, Seoul National University Hospital, Seoul, Korea, (South) Republic of
2. Emergency Department, Soonchunhyang University Seoul Hospital, Seoul, Korea, (South) Republic of

Corresponding author: Melle Park So Young (ttyd00@gmail.com)

Key-words: pediatrics ; emergency departments ; guardians' satisfaction

Study Objectives:

This nation-wide survey was conducted to know the overall satisfaction and relevant factor(s) affecting patient satisfaction among guardians who brought a child to emergency departments (ED) in Korea.

Methods:

This cross-sectional study was performed through web-based, E-mail response system on September, 2011. A standard questionnaire was administered to guardians who have brought a child patient (younger than 19 years old) to EDs of Korea in past three years. The questionnaire included the questions on demographic data of respondents, overall satisfaction on ED utilization, and relative preference on each factor which may be closely related with the overall satisfaction, such as attitude, professional skill, and explanation of ED personnel, quality of facility, fast administrative process, waiting time, and total length of stay. Seven point Likert scale was used to describe relative preference. The point 1 to 3, point 4, and point 5 to 7 were regarded as 'disappointed', 'neutral' and, 'satisfied', respectively.

Results:

A total of 1,000 guardians (mean age: 37.0 ± 9.9 years) all over the country were enrolled. The male to female ratio was 1:1 and the majority of the respondents were parents of the child (54.5%). Among child patients, 531 (53.1%) were younger than 8 years old. To the question on overall satisfaction of ED visits, 40.2% of guardians answered as 'satisfied'. The proportion of the guardians who would re-visit the ED or recommend the ED to others was 34.4%. On multivariate logistic regression analysis of the factors that are associated with more satisfaction, fast administrative process (OR 1.56, 95% CI: 1.34-1.82), attitude (OR 1.44, 95% CI: 1.23-1.70) and professional skill (OR 1.30, 95% CI: 1.11-1.52) of doctors, and length of stay (OR 1.35, 95% CI: 1.16-1.57) showed statistically significant relationship.

Conclusion:

The overall satisfaction of the guardians who visited ED with child patients was relatively low, and can be influenced by administrative process, doctor factors, and length of stay.

P717

Pediatrics

PAEDIATRIC COMMUNITY – ACQUIRED SEPTIC SHOCK: RESULTS FROM THE REPEM NETWORK STUDY.

J Benito Fernandez (1), D Biarent (2), N Boelsma (3), L Da Dalt (4), J De Dooy (5), T Detaile (6), A Dupont (2), B Emerson (7), B Gomez Cortez (1), S Hachimi Idrissi (3), I Iglowstein (8), E Kerkhof (9), I Maconochie (10), H Moll (9), M Mor (11), N Mulle

1. Pediatric Emergency Dep., University Hospital Cruces, Bilbao, Spain
2. Pediatric Intensive Care, University Hospital Queen Fabiola HUDERF, Brussels, Belgium
3. Pediatric Intensive Care, University Hospital Brussels, Brussels, Belgium
4. Pediatric Department, Cà Foncello Hospital, Treviso, Italy
5. Pediatric Intensive Care, Antwerp University Hospital, Antwerp, Belgium
6. Pediatric Intensive Care, university hospital Louvain UCL, Brussels, Belgium
7. Pediatric Emergency Dep., Yale University Hospital, New Haven, United States
8. Pediatric Emergency Dep., Ostschweizer Children's hospital, St Gallen, Switzerland
9. Pediatric Emergency Dep., Sophia Children's Hospital, Rotterdam, Rotterdam, Netherlands
10. Pediatric Emergency Dep., St Mary's Hospital, London, United Kingdom
11. Pediatric Emergency Dep., Schneider Children's Medical Center of Israel, Tel Aviv, Israel
12. Pediatric Emergency Dep. / SMUR, University Hospital Pellegrin, Bordeaux, France
13. Pediatric Intensive Care, Children's hospital CHUC, Coimbra, Portugal
14. Pediatric Emergency Dep., King Faisal Specialist Hospital and Research Center, Riyadh, Saudi Arabia
15. emergency dep, University Hospital Leuven, Leuven, Belgium
16. Pediatric Emergency Dep., UH Ghent, Ghent, Belgium
17. Pediatric Emergency Dep., Children's hospital Yale, New Haven, United States
18. Pediatric Intensive Care, Çukurova University Hospital, Adana, Turkey

Corresponding author: Mr Van De Voorde Patrick (patrick.vandevoorde@ugent.be)

Key-words: Sepsis ; Pediatrics ; shock

Aim: To describe the true epidemiology of severe paediatric 'community-acquired' sepsis and establish the feasibility of a future prospective trial on early goal directed therapy [EGDT] in children. **Methods:** Retrospective study in 18 emergency departments [ED] from 'upper-middle to high income' countries. Children were included if they presented with severe sepsis and signs of decreased perfusion. Consecutive periods were screened until at least 20 cases were included or until before 01/02/2008 or any date before which data quality was insufficient.

Results: 240 cases were included. The estimated prevalence was thus 1/2400 pediatric ED consultations. Significant comorbidity was present in 35% of these. Intensive care admission was deemed necessary in 68%, mechanical ventilation in 27.1% and vasoactive medications in 38.1%. The mean amount of fluid given in the first six hours was 41.8ml/kg. The overall mortality in this sample was 5.8% and 7.1% if associated severe comorbidity. Only 1.8% of the

survivors showed a substantial decrease in Paediatric Overall Performance Category [POPC]. 'Severe' outcome [death or a decrease ≥ 2 in POPC] was significantly related ($p < 0.01$) to among other 'any desaturation below 90%', cardiovascular failure, the length of mechanical ventilation or vasoactive support, the use of packed red cells, a lower Glasgow Coma Scale, a higher lactate and lower base excess, and suboptimal antibiotic therapy.

Conclusion: The outcome in our sample was very good, despite a lack of compliance with EGDT as such. Many children received treatment early in their disease course, so avoiding subsequent intensive care. Future studies might prove difficult to organise in view of our data.

P718

Pediatrics

MANAGEMENT OF DISTAL RADIUS FRACTURES IN CHILDREN IN THE PAEDIATRIC EMERGENCY DEPARTMENT

RL Parish, A Tabner

Paediatric Emergency Department, Queens Medical Centre, Nottingham, United Kingdom

Corresponding author: Melle Parish Rachel (rachelparish@doctors.org.uk)

Key-words: Paediatric ; Wrist fracture ; Management

INTRODUCTION: Distal radius fracture is one of the commonest injury presentations to a Paediatric Emergency Department. Whilst some fractures of the distal radius have a high complication rate and require careful follow-up, others do not. Buckle or torus fractures affecting the dorsal cortex of the distal radius can be safely managed in a Futura splint or similar. All other fractures require plaster of Paris immobilisation. This management strategy is supported by both the available literature and our local guidelines. Outcomes for dorsal buckle fractures treated as above in terms of fracture healing and functional status have been shown to be equivalent. Splinting achieves better patient and parent satisfaction and may involve some cost savings. Inappropriate use of a Futura for other fractures may result in poor healing, potential displacement and increased pain.

METHOD: Notes and imaging from patients presenting to the QMC Paediatric Emergency Department between 01/02/12 and 31/03/12 with a discharge diagnosis of "Closed Fracture – Wrist (excl. Scaphoid)", "Closed Fracture – Radius" and "Closed Fracture – Ulna" were reviewed. Only patients with a fracture site < 2 cm from the articular surface of the wrist were included in this audit. Diagnosis, management plan and job role/grade of treating practitioner were recorded; compliance with local guidelines was determined by two Emergency Medicine trainees (CT3) reviewing independently

RESULTS: Seventy-six patient records were deemed appropriate for inclusion. Of these, 86% were managed in accordance with local guidelines. The majority of the patients were seen by either Senior House Officers (SHO -47%) or Nurse Practitioners (ENP - 42%), with the remainder seen by registrars or consultants. One patient was seen by a locum of unknown grade. ENPs consistently complied with local protocol (91%), with SHOs performing similarly (86%). 75% of patients treated by a consultant and 67% of those treated by a registrar were managed in accordance with local policy.

CONCLUSION: Compliance with the local policy for management of distal radius fractures is variable. Compliance alters with grade/job role of treating practitioner, with ENPs consistently performing above average. The SHOs were based in the Paediatric Emergency Department on a full time basis, whilst all other practitioners worked with both adult and paediatric patients. Those practitioners that regularly work within a paediatric environment

are out-performing those who do not. This is probably due to an increased familiarity with local paediatric policy. We recommend increased exposure to local paediatric policy for all practitioners who may be involved in treating children – perhaps in the form of a regular departmental education programme.

P719

Pediatrics

EVALUATION OF SCORPION STING CASES ADMINISTERED TO PEDIATRIC EMERGENCY DEPARTMENT FOR SEVEN YEARS

S KAYA (1), C KARAKURT (2), O ELKIRAN (3), O AYCAN KAYA (4), A. Karakus (5), G KOC AK (6)

1. Children's Service, Antakya State Hospital, HATAY, Turkey
2. Pediatric Cardiology, Inonu University,, MALATYA, Turkey
3. Pediatric Cardiology, Inonu University, -, MALATYA, Turkey
4. Parasitology, Mustafa Kemal University, Faculty of Medicine,, HATAY, Turkey
5. Department of Emergency Medicine, Mustafa Kemal University, Hatay, Turkey
6. Pediatric Cardiology,, Maltepe University Faculty of Medicine,, Istanbul, Turkey

Corresponding author: Mr Karakus Ali (drkarakus@yahoo.com)

Key-words: Scorpion sting ; pediatry ; emergency department

Aim: In this study, 32 cases of scorpion sting that is admitted to Inonu University School of Medicine Children's Emergency Department between 2001-2007 were evaluated retrospectively.

Material and Method: The cases were evaluated for the clinical findings, laboratory results, treatment and prognosis.

Results: The patients mean age were 8.1 ± 2.2 years, seventeen (53.1%) were female and 15 (46.8%) were male respectively. Most of the cases were in June (25.1%) and most of the bites were at upper extremities (53.1%). The most common findings were rash (eight patients-25.1%), and tachycardia (9.5%). The prothrombin time (PT) was higher in four patients (12.9%). The fluid therapy was initiated the patients that is required the intravenous therapy. Scorpion serum and tetanus vaccine were not applied to 28 patients (87.5%) who in the center is referred that scorpion serum and tetanus vaccine are administered. 19 patients (59.3%) were followed up for a day. 31 cases (96.8%) were discharged without complications and one case (3.1%) were died due to respiratory and circulatory collapse

Conclusions: Our study, scorpion poisoning in childhood was evaluated under the light of literature with regard to epidemiological, clinical, laboratory and prognostic factors.

P720

Pediatrics

SAFETY NETTING IN CHILDREN AT RISK FOR SERIOUS ILLNESS IN PAEDIATRIC EMERGENCY CARE.

D Geurts (1), E Kerkhof (1), H Moll (2), R Oostenbrink (1), N Seiger (2)

1. General Pediatrics, Sophia Children's Hospital-Erasmus MC, Rotterdam, Netherlands
2. General Pediatrics, Sophia Children's Hospital- Erasmus MC, Rotterdam, Netherlands

Corresponding author: Mme Geurts Dorien (d.geurts@erasmusmc.nl)

Key-words: Safety netting ; children ; serious illness

Background:

Fever, dyspnoea and vomiting/ diarrhoea are the most common problems presenting at a paediatric emergency department (ED). In five- ten percent of children with fever without source who

present at the ED a serious bacterial infection (SBI) with a complicated clinical course is described. Children with dyspnoea or vomiting/ diarrhoea can also have a complicated clinical course. As a complicated clinical course can never be surely predicted after ED discharge, clinicians use scheduled follow-up. Evidence on which children are at risk for a complicated clinical course and how to perform follow-up after discharge from the ED is lacking.

Aim:

To describe characteristics of Emergency Department (ED) revisits for children with fever, dyspnoea or vomiting/ diarrhoea at risk for a complicated clinical course after discharge.

Methods:

Children with fever, dyspnoea or vomiting/diarrhoea (1 month-16 years) who attended the ED of Erasmus MC-Sophia, Rotterdam (March-December 2010), Netherlands were included. Standardised questionnaires on disease course were applied by phone to parents three days after ED-discharge. Sequential ED-visits were defined as 'necessary' if requiring diagnostics, therapeutics and/or hospitalisation. We compared frequencies of necessary, scheduled/unscheduled ED-revisits between the three patients groups using Chi-square and multivariate logistic regression.

Preliminary results:

Follow-up data were available for 1178/1519 children (77.6%), median age 22 months (IQR11-47), 56.8% boys.

Seven-hundred- thirty- seven children (62.6%) had fever, 247 children (21.0%) had vomiting/diarrhoea and 194 children (16.5%) dyspnoea.

Total number of revisits was 407 (34.6 %), consisting of 255 children with fever (62.7 %), 89 children with vomiting/ diarrhoea (21.9 %) en 60 children with dyspnoea (14.7%).

Of the 407 revisits, 268 (65.8 %) were unscheduled and 217 (53.3%) revisits were defined as necessary.

An unscheduled revisit took place in 180/ 253 (71.1%) children with fever, in 46/ 59 (78.0%) children with dyspnoea and in 37/ 85 (43.5%) children with vomiting/ diarrhoea. Younger children were more likely to have an unscheduled revisit ($p = 0.02$). Gender, complaint and parental concern did not significantly influence the odds of unscheduled revisit.

Revisit was necessary in 140/ 253 (55.3%) of children with fever, 39/ 59 (66.1 %) with dyspnoea and 32/ 85 (37.6%) with vomiting/ diarrhoea ($p = 0.02$). This was not influenced by age, gender or parental concern.

The proportion of necessary revisits was higher in the unscheduled- revisit- group (40.3%) compared with the scheduled-revisit-group (13.0%) ($p < 0.05$).

Conclusion:

Revisits are common at the ED. Unscheduled revisits are mostly seen in children with fever and dyspnoea and were significantly more necessary than scheduled revisits. Surprisingly, having a revisit was not influenced by parental concern. Hopefully, in the future we will be able to develop evidence- based follow-up programs, which can be used at discharge from the ED, guided by complaint, age and other predictors for complicated clinical course.

Question

In children with gastroenteritis (P) does ondansetron (I) work better against vomiting (O) than metoclopramide (C)?

Background

The use of antiemetics in children with nausea and vomiting after chemotherapy or post-operative is well known. In paediatric patients with gastroenteritis doctors are often reluctant to use antiemetics because of the possible development of neurological side-effects. Acute gastroenteritis is a common cause of morbidity and mortality in paediatric patients. The use of the right antiemetics could reduce vomiting. Moreover the use of antiemetics is cost-effective due to the reduce of the use of expensive intravenous fluids and hospitalisation.

Search strategy

MeSH terms were used and the following search was conducted in Pubmed:

Gastroenteritis (Major topic) AND child AND ondansetron AND metoclopramide.

Using this method, 2 articles were found.

1. From Alhashimi et al, A Cochrane intervention review, published in 2009

2. From Cubbeddu et al, a randomized, double-blind, placebo-controlled, parallel-group study, 1997, which was already included in the Cochrane review.

Conclusion

The small number of included trials provided some limited evidence favouring the use of ondansetron and metoclopramide over placebo to reduce the number of episodes of vomiting due to gastroenteritis in children. Ondansetron was statistically superior to placebo in preventing emesis associated with acute gastroenteritis in paediatric patients, however, metoclopramide has been shown only moderately effective against vomiting associated with acute gastroenteritis in children and was not significant.

Comments

These results were obtained from 1 Cochrane review which included 4 RCT's. Two studies were excluded because one of them was a non randomised controlled trial and the other did not include any of the primary or secondary outcomes. There are two studies awaiting assessment because of incomplete data. After response from the trialists in either of the studies, the Cochrane review will be able to add to the data available and build on the strength of evidence for the planned outcomes specified in the protocol of this review.

The primary outcome specified in the protocol for this review was the time taken from the administration of the treatment measure until cessation of vomiting. None of the included trials provided any data addressing this outcome but some of the secondary outcomes were reported.

Clinical Bottom line

This review showed us that the use of ondansetron favours that of a placebo, therefore ondansetron can be used against vomiting in the paediatric patient with gastroenteritis. The use of metoclopramide was found not significant in the use with paediatric patients with gastroenteritis so therefore should not be used for that purpose. However, the limited numbers of included trials gives implications for more research. Future research should also focus on outcomes that are of relevance to patients and thus the time to cessation of vomiting rather than a reduction in the number of episodes of vomiting as outcomes would appear to be more appropriate.

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P721

Pediatrics

ONDANSETRON VERSUS METOCLOPRAMIDE IN CHILDREN WITH VOMITING DUE TO GASTROENTERITIS.

O. America

Emergency department, Radboud University Nijmegen Medical Centre, Nijmegen, Netherlands

Corresponding author: Melle America O. (o.america@seh.umcn.nl)

Key-words: Vomiting in children with gastroenteritis ; Ondansetron ; Metoclopramide

P722

Pediatrics

ASSESSMENT OF THE INTERVENTION OF PRIMARY CARE PEDIATRICIANS IN A SIMULATED CLINICAL SCENARIO OF ANAPHYLAXIS. STRENGTHS AND WEAKNESSES.

Is luis sanchez santos, ai antonio iglesias vazquez, ac antonio casal sanchez

emergency department, public foundation of emergency health services of galicia 061, santiago, Spain

Corresponding author: Mr Sanchez Luis (luis.sanchez.santos@sergas.es)

Key-words: anaphylaxis ; epinephrine ; fluids

Introduction: Anaphylaxis is a common risk for the babies, primary care pediatricians should be able to recognize and and treat it effectively.

Objective: To assess the attitudes and procedures performed by primary care pediatricians in a simulated clinical scenario of anaphylactic shock, and to design a proccess to improve their performance in the critical key points established by international scientific recomendations.

Methods: An anaphylactic shock scenario based on a real case was designed. The data were obtained from an infant of 10 months treated by one of the authors. The data were implemented in a pediatric advanced simulation system. The scenario was developed systematically into the standard course of advanced medical simulation in pre-hospital pediatric of the Spanish Society of Extrahospitalary Pediatrics (SEPEAP), and analyzed the performance of 42 groups of 4 primary care pediatricians in those courses. The assessment was established by means of: identification, adequation of the initial treatment provided, routes of administration of drugs and fluids, sequential treatment and time to transfer to the referral center.

Results: All groups recognized immediately the clinical problem and the severity of the case. However, most of the groups didn't apply completely the recommended treatment protocols. Oxygen was provided in 90% of the scenarios (with different methods) and the pulse-oxymeter was placed on the first two minutes, while only 50% proceeded to the manual opening of the airway. In 97% of cases the treatment used initially (time range between 1 and 10 minutes) was epinephrine, but the route of administration was subcutaneous in 93%. Along the 20 minute-long clinical scenario, 90% administered two doses of epinephrine, 60% three and 30% four. In 80% of cases intravenous access was peripheral and 20% intraosseous. Liquid replacement (saline bolus at doses of 20 cc/kg) was provided to the 97% of patients, and corticosteroids were administered to the 80% of the patients.

Conclusions: Advanced medical simulation provides a systematic assessment of the clinical performance, and maybe useful to detect the strengths and weaknesses of primary care professionals in a situation of severe anaphylaxis. The main strength shown is the ability to make a correct an immediate clinical identification and triage. Areas detected that need an improvement include the management of the airway and the administration of adrenaline by the appropriate route (intramuscular).

P723

Pediatrics

ADVANCED SIMULATION AS A TRAINING TOOL TO IMPROVE CLINICAL PERFORMANCE OF PRIMARY CARE PEDIATRICIANS: THE CASE OF ASTHMA CRISIS.

ac antonio casal sanchez, ai antonio iglesias vazquez, Is luis sanchez santos

emergency department, public foundation of emergency health services of galicia 061, santiago, Spain

Corresponding author: Mr Sanchez Luis (luis.sanchez.santos@sergas.es)

Key-words: asthma ; dyspnea ; assessment

OBJECTIVE

To assess the performance of various groups of primary care pediatricians in a simulated case of asthma crisis, with the objective to recognize the potential areas for improvement of the professional practice in a relatively common clinical situation.

MATERIALS AND METHODS

A systematic review of the 19 debriefings of the asthma crisis recorded along the first year of the courses of advanced medical simulation integrated in the training program of Pediatrics Primary Care Society of Spain.

In each case, a group of 4 pediatricians should undertake the practical management of a case simulating a bronchospasm, for up to 20 minutes.

RESULTS

Patient management was variable but generally can be considered acceptable, recognized common mistakes such as not raising the head to aerosolize the patient (7 of 19 groups), do not request a transfer to a referral center (8 of 19) and keep the focus on the patient over time (5 of 19). The results allowed the design of an objective rating scale for assessing performance in similar cases.

CONCLUSIONS

Using advanced simulation, primary care pediatricians can benefit from training for the acquisition and maintenance of emergency management skills and simple means of relatively frequent cases such as bronchospasm. The systematic assessment of the performance of simulated cases allows professionals to know their capabilities and areas for improvement, which should focus on continuing education programs.

P724

Pediatrics

THE EPIDEMIOLOGY OF ENTEROVIRUS MENINGITIS IN A PEDIATRIC EMERGENCY DEPARTMENT IN BELGIUM

I Roggen, D Bulckaert, G van Berlaer, I Hubloue

Department of Emergency Medicine, Universitair Ziekenhuis Brussel, Vrije Universiteit Brussel, Jette, Belgium

Corresponding author: Mme Roggen Inge (inge.roggen@vub.ac.be)

Key-words: enterovirus meningitis ; epidemiology ; Belgium

Background

Enteroviruses are the most common cause of meningitis, responsible for 85 to 95% of all cases of meningitis. It is most frequent in infants, but occurs in all age categories. Males-to-female ratio is 3:1. The incidence in Europe and Northern America is the highest in summer and fall.

Objective

We wanted to chart the incidence and characteristics of enterovirus meningitis in our pediatric emergency department (PED).

Methods

Using a retrospective cohort study design, we analyzed all medical records of children below the age of 16 who were admitted to our ED between 1/1/2002 and 31/12/2011 and had a positive

polymerase chain reaction (PCR) or viral culture for enterovirus on cerebrospinal fluid (CSF).

Results

During this 10-year-period 131 children (96 males - 35 females) out of 142,387 PED visits (0.09%), were diagnosed with enterovirus meningitis. Incidence peaks at the age of 0-6 months (13.7%) and from 3 to 6 years old (50.4%). Most cases are reported from mid-May to mid-July (51.9%), with a smaller peak from mid-September to mid-November (19.1%). At least one sign of meningeal irritation was present in 128/131 children: in infants (0-1 year old; n=18) 22.2% had a bulging fontanel and 61.1% were irritable, while in older children (1-15 year old; n=113) 86.7% presented with nuchal rigidity, 90.3% with headache and 29.2% with photophobia.

Median (range) C-reactive protein (CRP) was 7.4 mg/L (0.2 - 67.8), 90.8% had a CRP below 30 mg/L; median leukocyte count of 11,300/mm³ (4,200 - 22,200) and median neutrophil count of 78.6 % (6.0 - 93.0). Leukocyte count was similar in infants and older children, CRP and neutrophil count were significantly lower in the infants: median (IQR) were respectively 2.5 mg/L (1.4 - 10.9) vs. 8.0 mg/L (3.9 - 16.1); p=0.01 and 39% (29 - 45) vs. 80% (73 - 81); p<0.0001. These differences are not linked to the moment of presentation: median (IQR) duration of symptoms is 1 day (1 - 1) for both groups.

CSF PCR returned positive in 129/131 samples, viral culture in 49/131 samples. Sixteen CSF samples were traumatic and were not included in the following results. CSF results show a median glucose of 58.0 mg/dL (43.0 - 84.0); median protein of 32.0 mg/dL (10.0 - 151.0); median RBC count of 4/mm³ (0 - 142), 91.3% had a RBC count below 50/mm³; median WBC count of 96/mm³ (1 - 1600), only 2 children had a WBC count above 1000/mm³. In infants glucose levels in CSF was significantly lower: median (IQR) was 48.1 mg/dL (45.6 - 50.0) vs. 60 mg/dL (53.9 - 65.3); p<0.0001 and protein levels were significantly higher: median (IQR) was 52.3 mg/dL (33.0 - 92.0) vs. 30.1 mg/dL (23.0 - 39.0); p=0.0005. None of laboratory findings correlated with the duration of symptoms.

All but one children were admitted to the hospital; 28 children received IV antibiotics, which was higher in infants (77.8% vs. 12.4%; p<0.0001). Median (range) length-of-stay (LOS) was 2 days (0 - 15). LOS was significantly longer when children received IV antibiotics, regardless the age of the child: median (IQR) 2 days (1 - 2) vs. 4 days (3 - 6); p<0.0001. Eleven (8.4%) children returned to the ED within 5 days after discharge, of which 6 were readmitted. The reason for returning was persisting headache in all 11 cases. Eventually all 131 children left the hospital without any sequelae.

Conclusions

The occurrence pattern of enterovirus meningitis in our PED matches the occurrence in similar regions: a very low incidence; a 3-fold higher incidence in males and peaks during summer and fall, yet a small decrease during summer holidays. Inflammatory parameters tend to be low in all children, with an outspoken difference in leukocyte formula between infants and older children. Though almost all children were admitted, LOS was low in children that did not receive AB, yet with almost 10% of children returning to the ED for persisting headache, we do have to stay alert for adequate pain management and patient information on the natural course of the disease.

P725

Pediatrics

SHORTENING LENGTH OF STAY USING ALTERATION OF DISCHARGE ACTIVITIES IN THE PEDIATRIC EMERGENCY DEPARTMENT

Choi HS(1), Jung JH, Choo JH, Gwak YH(1), Jang YS(1), Jang YS(1), Kim DG(1), Kim JW(1), Lee SY(1), Oh SK(1), Park SY(1), Seo DB(1)

pediatric emergency department, Seoul national university of hospital, Seoul, Korea, (South) Republic of
2. p, Seoul national university of hospital, Seoul, Korea, (South) Republic of

Corresponding author: Mme Kim Juwon (arory81@naver.com)

Key-words: Length of stay ; Prescription ; Discharge

Background

The purpose of this study was to evaluate a factor of delaying discharge in the pediatric emergency department (PED) and to survey satisfaction of emergency care and length of stay (LOS) in the PED after intervention of shortening discharge activities to develop an effective discharge management strategy.

Method

This study was conducted in two phases. The first phase was to find factors delaying of discharge process in the PED from a survey of guardians and medical staffs (pre-intervention group). Base on the survey results, we designed a LOS shortening program and we applied it in our PED. The second phase was to evaluate the LOS shortening in the PED after applying program and to estimate the change of satisfaction of the caregivers and medical teams through a survey (post-intervention group).

Before the intervention, patients received discharge medications only in the hospital pharmacy at discharge and the decision to select discharge agents was made on a case-by-case basis at the discretion of the provider. The program's contents are made up that discharge medications is able to be received in hospital or out of hospital pharmacy by caregiver's preference, the selection of discharge medications is recommended according to set orders, and the guardians watch the video of discharge precautions during discharge waiting.

Survey was conducted using a telephone to caregivers and a questionnaire to medical staffs. Length of stays were defined time from patient registered in the PED to patient discharged, and were checked to review the electronic medical record system.

Results

In pre-intervention group, 100 caregivers and 85 medical staffs were enrolled and 143 caregivers and 69 medical staffs were enrolled in post-intervention group. In caregivers, female were 83(83.0%) in pre-intervention group and 122(85.3%) in post-intervention group, and mean age were 37.5(±6.04) and 34.62(±4.78). Prescription was issued to 35(24.5%) in pre-intervention group, whereas prescription was issued to 96(67.1%) in post-intervention group.

LOS was 7.70(±27.72) and 6.75(±26.8) hours, and from discharge order to discharge time was 2.25(±28.87) and 1.05(±6.16). The statistical results decreased 1.2 hours, but There were no significant differences (p=0.235). At discharge, using the procedure, hospital drug prescription and discharge process for ease of survey data, satisfaction mean scores were 7.41(±1.97) in pre-intervention group and 7.35(±1.74) in post-intervention group, but there were no significant differences (p=0.801). Medical staff's survey, satisfaction increased from 11.8 to 17.4%, dissatisfaction reduced from 31.8 to 24.6%, but there were no significant differences (p=0.464).

Conclusion

Prescription is thought of the main factor of delaying discharge in the PED. After intervention, LOS in the PED and from discharge order to discharge time was shortened, but statistically no significant difference.

P726

Pediatrics

THE CHARACTERISTICS AND TREATMENT PATTERNS OF EMERGENCY DEPARTMENT(ED) BY CHILDREN RETURNING VISIT IN KOREA.

JH Choo, HS Choi, JH Choi, YH Gwak (2), YS Jang, JH Jung, DG Kim

JW Kim, SY Lee, SY Park, DB Seo

Pediatric Emergency Department, Seoul National University of Hospital, Seoul, Korea, (South) Republic of

Corresponding author: Mme Kim Juwon (arory81@naver.com)

Key-words: Pediatric emergency room ; returning visit ; characteristics and treatment patterns

Most EDs from referral hospitals provide their essential ED information to National Emergency Medical Center (NEMC) through the National Emergency Department Information System (NEDIS). We obtained and analyzed the NEDIS data for children 15 years old and younger and revisited ED from 1 January to 31 December, 2011. Revisiting criteria is the patients back to the ED within 48 hours of initial visit, and exclude visits with administrative procedures, computer network problems, and cancellation received of first visit.

A total of 16,751 eligible children visited the EDs during study period, and 570 (3.4%) children returned to EDs. Male patients were 57.4% and the mean age 4.5years.

Among age groups, 3 months to younger than 3 years group was the largest(38.1%). Most patients visited EDs on Sunday (21.8%) ($p<0.001$). The most common revisit reason was worsening or relapse of initial symptoms (60.9%), followed by emergence of new disease (17.4%). The most diagnosis of initial visit was patients with gastrointestinal problem (21.4%), however, in return visit, infectious disease was most common (20.2%). When initial visit, the Emergency Severity Index (ESI) level 2 was 7%, and level 3 was 78.6%, whereas when return visit, ESI level 2 was 8.8%, level 3 was 82.1% ($p<0.001$). In return visit the ED length of stay was significantly longer than in initial visit (671.7 minute vs. 322.9 minute, $p<0.001$). Hospitalization is more than in return visit (1.6% vs. 26.0%, $p=0.029$). The patients younger than 3 years old was easily discharged, however 3 years old and older preferred hospitalization ($p=.002$)

We compared characteristics of the initial visit with of the return visit. Day of the week, the ESI level, diagnosis, and disposition is significantly different between two groups.

BACKGROUND: Propionic acidemia is a metabolic disease which causes the accumulation of propionic acid due to deficiency of propionyl CoA carboxylase. Mild forms may occur due to mutations in PCCA and PCCB genes, and the actual incidence is estimated to be 1/18000. It usually occurs in the neonatal period or early infancy. Mild forms may have delayed appearance. Patients may apply with vomiting, seizures, lethargy, hypotonia, and encephalopathy complains. Early and late-onset (6 weeks before and after) the types are available. Early-onset causes mental retardation and early death. In late-onset group, excessive movement disorders and dystonia develop. The initial symptoms can be movement disorders in patients with propionic acidemia. We are presenting case diagnosed with propionic acidemia during the follow-up after post-traumatic seizures. **CASE:** 7 month old male patient came to the emergency with neck immobility as a result of falling from seat. His physical exam revealed no strength loss of extremities. Cervical X-ray and computed tomography were also normal. Choreiform movements with the arms and legs were developed in the patient for about 2 months after the trauma. The patient was given biperiden because of lack of improvement in movements; phenytoin was loaded to the patient. There was no significant improvement. Patient had normal EEG findings. Nörodol was applied to the patient. Due to the persistence of the complaints his family admitted to our pediatric clinic. He was hypotonic. There was no history of sibling deaths. Cranial MRI was normal. The baby had a history of consanguinity. On tandem mass spectrometric study, C3-propionyl carnitin level was increased, C3/C2 ratio with 2.69 (NR: <0.2), C2 with 21.49 (NR: <6.92). Urinary organic acid analysis revealed increased 3-OH propionic acid, 3-OH butyric acid and propionyl-glycine levels. He was diagnosed as propionic acidemia and recommended protein-restricted diet with oral L-carnitine and biotin supplementations. **CONCLUSION:** Rate of consanguineous marriages is high in our country. So that taken into consideration of the transition of this autosomal recessive disease, congenital metabolic disease propionic acidemia should be remembered in case of healthy inborn but with late movement disorders.

P728

Pediatrics

THE PNEUMONIA INTERFERING WITH ACUTE APPENDICITIS:CASE PRESENTATION

T Acar (1), H Seker (2), M Keser (2), C Dikmetaş (1), K Yavuz (1), B Cander (1)

1. Emergency department, University of Necmettin Erbakan, Meram Medical Faculty, Konya, Turkey

2. Pediatric department, University of Necmettin Erbakan, Meram Medical Faculty, Konya, Turkey

Corresponding author: Mr Acar Tarik (drtarikacar@gmail.com)

Key-words: PNEUMONIA ; INTERFERING ; ACUTE APPENDICITIS

INTRODUCTION: Abdominal pain is a common symptom during the course of various diseases in children. No matter how old the patients are, it is not always possible to understand the cause of the abdominal pain. Since there is no exact borders between quadrants of abdomen, it is difficult to determine localization of pathology.

Children can be brought to the doctor because of abdominal pain in right lower lobe pneumonia. Tachypnea, intercostal and subcostal retractions are observed during physical examination. Crepitation and rhonchi are usually heard during listening in case of bronchopneumonia. In case of lobar pneumonia, breath sounds decreased on that area and tubersuffi is determined in lung fields

P727

Pediatrics

PROPIONIC ACIDEMIA PATIENT THE FOLLOW-UP DUE TO POSTTRAUMATIC EPILEPSY:CASE PRESENTATION

T Acar (1), B Cander (1), S Kocak (1), M Ergin (1), H Caksen (2), H Seker (2)

1. Emergency department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

2. Pediatric department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

Corresponding author: Mr Acar Tarik (drtarikacar@gmail.com)

Key-words: PROPIONIC ACIDEMIA ; POSTTRAUMATIC EPILEPSY ; METABOLIC DISEASE

adjacent to that area. Irritation of the lower intercostal nerves and diaphragm tenderness due to pneumonic infiltrates in the right inferior lobe causes spasm of the anterior abdominal wall muscles and severe abdominal pain. Left lower lobe pneumonia can mimic acute appendicitis. Pain increase with a deep inspiration is typical in these patients. In this study, a case who had suspicion of acute appendicitis but was diagnosed as right lower lobe pneumonia was presented here.

CASE: 3-year-old male patient, previously without any complaint, began to have fever four days ago before admission to ED. He vomited two times in last four days and had abdominal pain. Analgesic and antipyretic regimens were started at another medical center. His complaints didn't regress. Leukocytosis and edema of the wall of intestine on ultrasonography were determined. The patient was referred to our hospital with suspicion of appendicitis. His physical exam revealed diminished lung sounds in the right lower lobe and normal abdominal findings. X-ray of chest and abdomen showed infiltration of right lobe. The contrast enhanced chest computed tomography was reported pneumonic consolidation of the right lung upper lobe and middle lobe, parapneumonic pleural effusion. Abdominal ultrasonography was in normal range.

CONCLUSION: Only 5% of children presenting with abdominal pain require surgery. Auscultation of the lungs and chest X-ray provide clarification of the incident. Overlooking of this situation in the lungs can cause a surgical intervention which can result in unnecessary anesthesia and surgical operation.

P729

Pediatrics

ASSESSMENT OF PATIENTS PRESENTING WITH FOCAL SEIZURE TO DIVISION OF PEDIATRIC EMERGENCY MEDICINE

T Serdar (1), O TEKŞAM (1), G TURANLI (2)

1. Division of Pediatric Emergency Medicine, Hacettepe University Faculty of Medicine Department of Pediatrics, Ankara, Turkey

2. Division of Pediatric Neurology, Hacettepe University Faculty of Medicine Department of Pediatrics, Ankara, Turkey

Corresponding author: Mme Teksam Özlem (oteksam@yahoo.com)

Key-words: Focal seizure, ; febrile seizure, ; brain imaging

The aim of this study was to determine incidence of abnormal neuroimaging findings and to investigate the clinical indicators of these abnormal findings in patients presenting with first focal seizure.

The study consisted of 65 patients who are at the age of 30 days-18 years and presented to Hacettepe University İhsan Doğramacı Childrens' Hospital Division of Pediatric Emergency Medicine between January 2001-February 2012, with febrile or afebrile first focal seizure, without any history of previous seizure other than simple febrile seizure, and had brain computer tomography (CT) and/or magnetic resonance imaging (MRI). Clinical informations about the patients obtained from patient's charts and hospital information system retrospectively and recorded on a standardized data collection form.

Complex focal febrile seizure observed in 33% of patients and afebrile focal convulsion in 67% of patients, 95% of all patients had brain CT and the incidence of abnormal CT scan was 32%, whereas the incidence of focal abnormality was 24%. If three patients who had only MRI were also considered as a first neuroimaging, than the incidence of abnormality was 35%, focal abnormality was 26%. Absence of fever, history of trauma, consistence of neurological or systemic disease, number of seizures, recurrence of seizure in the

emergency and requirement of acute seizure treatment were significantly associated with abnormal neuroimaging findings. In afebrile group, there was association between younger age and abnormal neuroimaging findings. The incidence of acute surgical treatment or intervention was 6.1%.

As a conclusion, when assessing a child with first seizure, carefully examine the child after taking detailed history and than the physician consider the necessity of emergent neuroimaging in the pediatric emergency. The pediatric emergency clinician's main priority is to rule out a life-threatening intracranial condition such as hemorrhage or neurosurgical intervention, deferring nonurgent evaluation to a later time.

P730

Pediatrics

COMPARING SEVERITY OF ILLNESS BETWEEN REFERRED AND SELF-REFERRED CHILDREN IN EMERGENCY CARE

D. Bosman, A. Eikendal, S. Heisterkamp, C. de Kruiff, F. de Lorijn

General Pediatrics, Emma's Childrens Hospital / AMC, Amsterdam, The Netherlands

Corresponding author: Mr De Kruiff Chris (c.c.dekruiff@amc.uva.nl)

Key-words: referral ; emergency ; triage

Objective

Children who are referred and children who are self-referred follow different pathways of care when they present themselves at the Emergency Department (ED) of the Academic Medical Centre (AMC), a tertiary referral centre. Referred children are primarily consulted by a paediatrician whereas self-referred children are, after triage, seen by an emergency physician. The emergency physician decides whether a paediatrician needs to be consulted. This results in a considerable amount of paediatric patients leaving the ED without being consulted by a paediatrician implicating that the type of medical specialist that will primarily consult the patient depends on referral status. Only little evidence is present concerning whether referral status solitarily is an adequate predictor to categorize severity of illness in children.

The first aim of this study is to assess whether referral of children to the ED is associated with greater severity of illness when compared self-referred children.

A second aim of this study is to evaluate whether self-referred children that are only seen by an emergency physician are more severely ill than self-referred children that are seen by an emergency physician and a paediatrician.

With these aims we will assess whether it is justified to base the specialism that will primarily consult the patient solitarily on referral status. Hence we can evaluate whether the current pathways of care deliver adequate quality of care and to make bottlenecks in Paediatric Emergency Healthcare at the AMC intelligible and perceive issues of improvement.

Methods

A retrospective, cross-sectional study of data was performed for all children between 37 weeks of gestational age and 18 years at the moment of inclusion, who were presented at the ED of the AMC during a five month period. We included children with the most prevalent paediatric, non-surgical complaints. These complaints concern the respiratory-, gastro-intestinal- or urogenital tract, the central nervous system or the ear-, nose- and throat region. Data concerning patient demographics, referral status, work diagnosis and treating physician were collected from the electronic medical records and analyzed. Markers for severity of illness that were obtained and analyzed were urgency classification according to the

Manchester Triage System, abnormal vital signs at presentation, admittance, duration of admittance and whether additional diagnostics were performed. Referred children were compared to self-referred children. We corrected for potential confounders like false referral route, age and gender.

Results

First aim: of 941 eligible children, 353 (37.5%) were referred and 588 (62.5%) were self-referred. With adjustment for age and gender, referred patients were significantly more likely to be classified as high urgency ($P<0.001$); to have one or more abnormal vital signs at presentation at the ED ($P=0.003$); to be admitted ($P<0.001$); to have additional diagnostics performed ($P=0.001$) and to have a longer duration of admittance ($P=0.009$) when compared to self-referred patients.

Second aim: of 287 eligible self-referred children, 104 (36.2%) were consulted by an emergency physician and a paediatrician and 183 (63.8%) were only seen by an emergency physician and sent home. With adjustment for age and gender, patients that were consulted by an emergency physician and a paediatrician were significantly more likely to be classified as high urgency ($P<0.001$); to have one or more abnormal vital signs at presentation at the ED ($P<0.001$) and to have additional diagnostics performed ($P=0.001$) when compared to self-referred patients that are only seen by an emergency physician. However, of all the self-referrals that were only seen by an emergency physician and sent home, 41.2% had an urgent triage category and 19.3% had one or more abnormal vital signs.

Conclusion

Referral of children to an ED is associated with a greater severity of illness. However, referral status alone is an average predictor to assess severity of illness.

The aim of future research is to develop more indicators to improve the identification of children at risk, in order to guarantee optimal pathways of paediatric emergency healthcare.

P731 Pre-hospital / EMS / Out of Hospital

RESPONSE TIME EVALUATION FOR EMERGENCY MEDICAL SERVICE AS A PART OF ITS PERFORMANCE

J. Josseume (1), D. Garnier-Connois (2), A. Ricard-Hibon (1), J. Mantz (2), E. Casalino (3), F. Duchateau (2)

1. Emergency Department, Hopital Beaujon, Paris, France

2. Intensive Care Unit, Hopital Beaujon, Paris, France

3. Emergency Department, Hopital Bichat, France

Corresponding author: Mr Josseume Julien (jjosseume@gmail.com)

Key-words: Prehospital medicine ; Response time ; Performance

Introduction: Response time is one of the components of emergency medical service (EMS) performance. Current locations of physician-staffed French EMS units are mainly based on historical and common sense factors and not on the results of previous intervention time evaluation. The study aimed to evaluate the response time of our EMS unit in both first-line and second-line service zones as part of its performance and how best to integrate it into its geographical specificity.

Methods: The study is a retrospective, descriptive record that was conducted over a 1-year period (October 2009-September 2010) in a large urban physician-staffed EMS unit (4 squads) of a teaching hospital covering an area of 6 municipalities as first-line responders and another area of 4 municipalities as systematic second-line responders, but frequently led to intervene in the neighbouring areas as well in case their first-line unit is not available. Response times were calculated based on times given on radio by the

dispatching center when the ambulance left its base and arrived on scene, which are recorded into a FileMarker Pro database, beside the location, the condition, and other characteristics of the intervention. Main criterion was the median response time for each municipality. Results are expressed as median [IQR] and percentage and compared by non-parametric tests for quantitative data and chi-square test for qualitative data. Median intervention times have been also classified as < 5 , < 10 , < 15 and < 20 minutes.

Results: During the study period, 2620 interventions were performed. Median intervention times for the different municipalities of the first-line service zone are presented in the Fig. Noteworthy, some municipalities that are adjacent to the first-line area have relatively low intervention times: 6 [5-8] for St-Ouen, 7 [6-8] for the 17th district of Paris and 7 [6-10] for the 18th district of Paris. Median intervention times did not show any difference between day and night or working days and weekends, as show in Table 2. There was also no difference if the motive of intervention was cardiac arrest (8 [5-10] min) vs any other motive (7 [5-10] min, $p = 0.18$).

Conclusion: Our study shows acceptable response times on the area when our teams are the first-line and second-line responders. Interestingly, because of the particular location next to other districts, response times are in the same range for some municipalities that are adjacent to the first-line service zone. In a new system in which catching areas would not only based on administrative criteria anymore but also on performance evaluation, response times for EMS might be optimized.

P732 Pre-hospital / EMS / Out of Hospital

OUTCOMES OF DISPATCHER-ASSISTED CPR ON SURVIVAL AFTER NON-TRAUMATIC OUT-OF-HOSPITAL CARDIAC ARREST.

M Plodr (1,2), A. Truhlar (2), D. Tucek (3), J. Masek (2)

1. 7th Field Hospital, Hospital Base Hradec Kralove, Czech Armed Forces, Czech Republic

2. Emergency Medical Service of the East Bohemian Region. Hradec Kralove, Czech Republic

3. Emergency Department, University Hospital Hradec Kralove, Czech Republic

Corresponding author: Mr Plodr Michal (plodrmic@seznam.cz)

Key-words: dispatcher-assisted CPR ; OHCA ; emergency medicine

Introduction:

Dispatcher- assisted cardiopulmonary resuscitation (D-A CPR) has an important role in the management of out-of-hospital cardiac arrest (OHCA). This procedure was systematically implemented in to the Emergency Medical Service of the East Bohemian Region from 2006. The aim of this analysis is present results of CPR after OHCA with initiation of dispatcher-assisted CPR.

Methods:

Retrospective data analysis, from 1st January to 31st December 2011 from Emergency Medical Service of the East Bohemian Region. Only non-traumatic etiology of cardiac arrest has been involved. Two groups of patients were compared (Group A: D-A CPR with bystanders and Group B: non-bystanders: CPR by EMS crew). Final data evaluation was made on the basis of medical report and recordings analysis.

Results:

During the 12-month period, a total of 452 patients with non-traumatic OHCA were analyzed. Dispatcher-assisted CPR by bystanders was initiated within 277 (61 %) of patients (Group A), 178 patients (39 %) were EMS-crew resuscitated (Group B). Primary survival rate (admission to hospital with ROSC) for Group A was 35 % (96 patients), for Group B 40 % (72 patients). Incidence of

initial rhythm for these patients was in Group A: VF 56 %, pulseless electrical activity 16 % and asystole: 24 %; In Group B : VF 43 %, PEA 38 %, and asystole 19 %. The overall survival rate to hospital discharge with CPC 1 or 2 was 10,2 % (46 of 452). Incidence of shockable rhythm within patients discharged with CPC 1 or 2 was 80 % (37 of 46).

Conclusion:

Early recognition of cardiac arrest and subsequent initiation of dispatcher-assisted cardiopulmonary resuscitation has important role in prehospital patients management. Dispatchers have to initiate chest compressions as soon as possible. Initial shockable rhythm has significantly better prognosis as to hospital discharge with good neurological status (CPC 1 or 2).

P733

Pre-hospital / EMS / Out of Hospital

INTRODUCING A PARALYTIC RSI SYSTEM TO HUNGARIAN HEMS

P. Temesvari, A. Soti, L. Hetzman

Budaors Base, Hungarian Air Ambulance Nonprofit Ltd., Budapest, Hungary

Corresponding author: Mr Temesvari Peter (petertemesv@gmail.com)

Key-words: Intubation ; Pre-hospital ; HEMS

Advanced airway management and intubation in particular remains a controversial topic in the field of Pre-Hospital Emergency Medicine. Traditionally, physician based and non-physician based Emergency Medical Services in Hungary used an intubation technique - for patients with preserved cardiac output - based mostly on sedation and analgesia, in some sources called a Non-paralytic RSI. Hungarian HEMS introduced a Paralytic RSI system in 2011, after a 6 month survey of the previous practice. Along with muscle relaxants previously unpracticed elements of Clinical Governance were introduced as well. This later includes the use of Standard Operating Procedures that need to be followed - among others - in case of pre-hospital anesthesia.

The aim of the presentation is to highlight the difficulties in introducing a protocol based procedure and SOPs to a system previously based on individual decision making by competent clinicians. We aim to look at human factors, aspects of training and audit.

The secondary aim of the presentation is to look at the first results of Paralytic RSI in HEMS practice in Hungary. We are collecting data regarding indications, the overall success rate and other output measures like the number of attempts, the Cormack-Lehane grade at laryngoscopy, the drug doses, the complications.

As usual in the Pre-Hospital Emergency Medical practice, our case numbers are quite low, but the results are promising. Data collection will be a continuous part of our audit, but we can use the first more than 150 cases to show the differences between a Non-paralytic and a Paralytic RSI system in the same setup with the same clinicians with access to the same equipment. The overall success rate is 98.7% in the first 154 RSI cases.

P734

Pre-hospital / EMS / Out of Hospital

DO WE NEED A PHYSICIAN IN PREHOSPITAL EMS ?

T. Bulikova (1), V. Dobias (2)

1. Prehospital EMS, LSE - Life Star Emergency, Senec, Slovakia

2. Chair of Emergency Medicine, Slovak Medical University, Bratislava, Slovakia

Corresponding author: Mr Dobias Viliam (viliam.dobias@dobiasovci.sk)

Key-words: prehospital EMS ; diagnosis in PEMS ; prehospital management

Number of patients, diagnosis, appearance of dangerous symptoms and number of patients transported to hospital or left home after treatment are not a matter of frequent evaluation. We analyzed 293 cases of emergency call during November 2011 in various regions of Slovakia by 2 crews with physician. There were 159 women with average age 64 (range 2 - 92 years) and 138 men – average age 50 (1 - 94 yrs). Transported after treatment were 143 patients (48%).

From 154 left home 23 deceased before the arrival of crew (7,7%). The most frequent reason for emergency call is hypertension (20% of calls), next are neurological symptoms and vertigo (10%), small psychiatry diagnoses (neurosis, phobia in 9%), acute coronary syndrome (9%), respiratory diseases, psychiatric diseases, stroke, arrhythmias, diabetes mellitus complications (mostly hypoglycaemia), ebriety, medicament and chemical intoxication. When sorted by diagnosis, most frequent transport after primary treatment at home is by stroke (100%), intoxications (89%), ebriety (83%), arrhythmias (77%), acute coronary syndrome (70%), respiratory diseases (68%), psychiatric diseases (psychosis, biphasic disorder and suicidal tendencies), neurological diseases, small psychiatry and diabetes mellitus complications (mostly hypoglycaemia). At the end of the list is hypertension, only 2% of patients were transported with this diagnosis.

To evaluate subjective symptoms we divided them into 3 groups. First group – critical: ECG changeovers, heart failure, cephalaea, stenocardias, hypoxia, bronchospasms, dysarthria, TIA, epilepsy 1. seizure, neurological lateralisation. Second group – potentially dangerous: palpitations, short time stenocardia, dizziness, nausea, disorientation, high temperature by old people, repeated syncope. Third group – chronic: difficulties lasting few days, dizziness, tingling of fingers and face, insomnia, tremor or difficulties that disappeared after self medication.

Highest number of critical symptoms is by stroke emergency calls (100%), intoxications (91%), followed by neurological diseases (69%), cardiovascular diseases (CAD, arrhythmia in 57%), respiratory diseases (53%), psychiatry (40%), ebriety (22%) and hypertension (17%).

All patients with hypertension were divided into 3 groups: left home after treatment, transported to health facility and group with other serious diagnosis except hypertension (myocardial infarction, cerebral stroke, respiratory insufficiency). Highest values of blood pressure were found by group of left at home, then group with other serious diagnosis and lastly group of transported patients. (BP 187/94 mm Hg together, versus 187/101, 181/100 and 186/95).

Discussed problems in lecture are for example high number of ride-outs to hypertension with minimal need of hospitalisation, relatively high number of transports by neurosis and phobia without critical symptomatology and high number of ebriety transports without any serious symptoms endangering life of the patient. In the end we present algorithms how to decrease the number of not indicated ride-outs to diseases with serious symptomatology and how to decrease number of transports to hospital after treating regular neurosis and phobia.

P735 *Pre-hospital / EMS / Out of Hospital*

A DESCRIPTION OF A PUBLIC-PRIVATE PARTNERSHIP EMERGENCY MEDICAL SERVICE IN LAHORE, PAKISTAN.

H Chaudhary (1), K Paziana (1), M Rotte (1), R Naseer (2), H Sule (1), JM Fields (1), B Ku (1)

1. Emergency Department, Thomas Jefferson University Hospital, Philadelphia, United States
2. EMS, Punjab Emergency Medical Services, Lahore, Pakistan

Corresponding author: Mr Chaudhary Hasan (hasan.ahmad.chaudhary@gmail.com)

Key-words: Emergency medical services ; Pakistan ; Development and implementation of Prehospital Emergency response

Study Objectives:

In 2004 in response to the call for structured emergency medical services, the Punjab Province piloted a public-private partnership called the Punjab Emergency Service (PES), otherwise known as Rescue 1122, in Punjab's capital, Lahore. Since its establishment, PES has expanded its service to all 36 districts of the Punjab province, which contains nearly 56% of the country's population. In order to better understand the success of PES we set out to determine the volume and types of calls it receives and responds to.

Methods:

This was a retrospective analysis of a prospectively gathered database collected from 2004 to 2011. Emergency phone calls and rescue operations in Lahore were reviewed during this time period.

Results:

In a 8 year period, PES received a total of 10,830,157 phone calls of which 3.1% required an emergency response via ambulance. The emergency responses were separated into the following categories: road traffic accidents (46.6%), fire (2.8%), building collapse (0.2%), explosions or bomb blasts (0.1%) and medical or other (50.3%). The average response time for rescues was 6.1 minutes and there was an average of 120 responded calls per day. From 2006 to 2011, there was a 266% increase in the number of emergency responses.

Conclusion:

The high volume of emergency calls and increased utilization of services in Lahore suggests the successful implementation of a public-private emergency medical service. PES may prove to be a model infrastructure in other regions of Pakistan in need of emergency services.

P736 *Pre-hospital / EMS / Out of Hospital*

PRO OR CON PREHOSPITAL TROMBOLISIS- EXCLUDING MAJOR CONTRAINDICATIONS

A Amzulescu (1), A Popa (2), L Rotaru (3)

1. ED, Filiasi Hospital, Filiasi, Romania
2. emergency department, County Hospital Craiova, Craiova, Romania
3. emergency department, Medical University, County Hospital Craiova, Craiova,, Romania

Corresponding author: Mme Rotaru Luciana Teodora (lucianarotaru@yahoo.com)

Key-words: prehospital trombolisis for AMI, ; telemedicine and echocardiography ; prehospital trombolisis for PE,

Background

Early reperfusion is the golden standard in managing ACS, massive PE and stroke and the ways to achieve this standard are well known.

Simultaneously time standards in which the therapy is optimal are specified and particular. Excluding major contraindications for trombolisis and therefore the application of this procedure always remains a difficult problem to resolve.

Study purpose

This study's aim is to bring a solid argument for echocardiography as a mandatory standard to exclude aortic aneurism ,aortic dissection, myocardial wall breach or other delay criteria for trombolisis.

Material and method

3 patients received in the Emergency Department of County Hospital of Craiova in one month time: 2 patients (1 male and 1 female) with STEMI and one patient with massive PE.

Case analysis

The two STEMI patients were out of PTCA time ,their presentation in ED happened after five hours and eleven hours from the beginning of the symptoms. Cardiac echography for determination of ejection fraction at the male patient showed an thoracic aortic aneurism which compressed left bronchia.

The female patient with STEMI had another presentation 24 hours before in another hospital for thoracic pain but with no ECG modifications; a new presentation occurred 11 hours after a new episode of thoracic pain for repeated syncope and general clinical deterioration. Regarding long distance towards a PTCA center and in absence of emergency air transport, the solution was land transport with C1 ambulance. At the team arrival, the emergency physician performs an echocardiography and finds fluid intra pericardium. When the image was transmitted at the Cardiology Center, suspicion if myocardial wall breach postponed trombolisis and ulterior thoracic CT confirmed mechanical lesion of myocardial wall due to miocardial infarction of the right ventricle.

At the third patient, echography and thoracic CT showed massive thrombosis of the PA truncus, ASD, aortic, carotid and subclavicular artery thrombosis and the management was anticoagulation followed by cardiac surgery.

Conclusions

1. vascular pathology associated with ACS is possible and often unknown
2. association between obstructive and hemorrhagic elements is also possible.
3. in the presence of a massive floating thrombus, the risk of fragmentation is enormous and that is the reason for anticoagulation as a first option.
4. echocardiography must always be performed to demonstrate these situations and telemedicine may be used for results interpretation.
5. in absence of echocardiography and telemedicine, prehospital trombolisis may be disastrous if one of these situations remains unknown

P737 *Pre-hospital / EMS / Out of Hospital*

EVALUATION OF THE 112 EMERGENCY MEDICAL SERVICES EFFECTIVENESS

S AKAY (1), A AKGUR (1), O DEMİR (2), O ÖNAL (2), G OZBAY YENİCE (3), I PARLAK (1), N Satılmış (4)

1. EMERGENCY DEPARTMENT, BOZYAKA TRAINING AND RESEARCH HOSPITAL, IZMİR, Turkey
2. EMERGENCY DEPARTMENT, BOZYAKA TRAINING AND RESEARCH HOSPITAL, IZMİR, Turkey
3. EMERGENCY DEPARTMENT, BOZYAKA TRAINING AND RESEARCH HOSPITAL, IZMİR, Turkey
4. emergency department, bozyaka training and research hospital, izmir, Turkey

Corresponding author: Mme Özbay Yenice Gökçe (gokce_ozbay@hotmail.com)

Key-words: EMERGENCY MEDICAL SERVICES ; PREHOSPITAL CARE ; AMBULANCE

Introduction: We aim to research effectivity of patient transportation by 112 emergency medical services and compare this with literature.

Method: Our research was performed four different ambulance station which were defined by the local health authority during 01-28 April 2012, between 16.00-24.00 hours at izmir. Datas were recorded by observer at the scene.

Findings: Cases who were analyzed, %50 were male, %50 were female, average of the ages were 53,41+/-23,95. Consistency of the pre diagnose between 112 command and control services and ambulance team was %68, 7. When we inspect the accession of the case between declared the patient to the accession of the patient, average time is 7,49+/-4,26 . Average time between the scene and the hospital was 17,28+/-9,74 minutes was determined. Most finding which was measured was blood pressure, minor finding was fever. %62,2 cases were transported to the hospital. %20,4 cases were treated at the scene. When the team leader was the doctor, treatment at the scene was higher than paramedic leader. When we compare with the team leaders, ratio of vital signs, medical treatment and fluid treatment were not different. %73,8 of the hospitals which were patients transported were tertiary hospitals. %58,8 of the patients delivery were delayed because of fail to reach the doctors who accept the patient.

Results: Time of ambulance reply is better than the literature but evaluation of vital symptoms and administration of stabilization to the multiple trauma patients were defective. When the doctor is team leader at the ambulance, unsuitable transportations were prevented with treatment at the scene. Selection of the hospital which was patient transported is not oriented by the 112 command and control centre.

Key words: 112 emergency medical services, pre hospital care, ambulance, İzmir, Turkey

P738 *Pre-hospital / EMS / Out of Hospital*

EMERGENCY MEDICAL SERVICE VISITS TO ROAD TRAFFIC ACCIDENT VICTIMS' IN LATVIA

E Upite (1), D Klusa (2), G Brigis (3), R Pupele (4)

1. Risk analysis and prevention department, Center for Disease Prevention and Control, Riga, Latvia
2. Unit of EMC organization and development, State Emergency Medical Service of Latvia, Riga, Latvia
3. Public Health and Epidemiology Department, Riga Stradins university, Riga, Latvia
4. Deputy head, State Emergency Medical Service of Latvia, Riga, Latvia

Corresponding author: Melle Klusa Dace (dace.klusa@nmpd.gov.lv)

Key-words: prehospital EMC ; road traffic accidents ; mortality

Background. In Latvia mortality rate from road traffic accidents (RTA) has decreased from 29.5 per 100 000 inhabitants in 2000 to 11.5 per 100 000 inhabitants in 2009. According to assessment of European Commission such decrease of RTA mortality rate has been most rapid during recent years in European Union (EU). However RTA mortality rate in Latvia is above the average in EU. Studies on RTA victims, their injuries and the role of emergency medical service (EMS) response time in RTA victims' mortality have been published worldwide. Establishment of unified State Emergency Medical Service of Latvia (SEMS) in 2009 was the general precondition to initiate research activities in the prehospital emergency medical care field also in Latvia.

Objective. The objective of this retrospective study was to describe RTA victims visited by ambulance team (age, gender, health condition) and characteristics of EMS visits to RTA victims in Latvia from 1th of July to 31th of December, 2010 according to SEMS data.

Material and methods. In this study data from 2 925 medical records of SEMS were analyzed by RTA victim's age, gender, alcohol impairment and injuries. Time and location (urban or rural area) of RTA and EMS response time also were analyzed as factors that could be associated with RTA mortality.

Results. According to analysis, males more often than females were RTA victims (61.2%; $p < 0,001$). Average age of RTA victims, who died in pre-hospital stage (42.8 for males; 45.3 for females), was significantly higher ($p = 0,001$) than average age of RTA victims, who survived (35.4 for males; 40.1 for females). 68.7% of dead were males. Highest incidence of RTA was in age group 20-29 years (194.0 per 100 000 population), but highest mortality rate was in age group 50-59 years (4.9 per 100 000 population). 26.5% from males and 7% of females were under impairment of alcohol according to subjective evaluation of EMS professionals. A proportion of EMS visits to RTA victims under impairment of alcohol was higher on weekends ($p < 0.001$). Emergency calls to RTA more often occurs on Fridays in urban areas and on Saturdays in rural areas, but least often on Thursdays and on Sundays. There is no significant difference in number of RTA victims deaths in prehospital stage by day of week ($p = 0.064$). Proportion of RTA victims' deaths was 4% between 3:00 a.m. and 5:59 a.m., but between 9:00 a.m. and 11:59 a.m. proportion of RTA deaths was 0.8% ($p = 0.008$). Most common injuries of RTA victims were contusions and cerebral commotion (58.2%), dislocations and fractures (23.0%) and opened wounds (8.6%). Open wounds were more often diagnosed to males than females ($p < 0.001$). EMS visits to RTA victims statistically more frequently occurred in urban area (55.5%, $p < 0.001$), but in rural areas statistically more often occurred RTA deaths (71.5%, $p < 0.001$). Odds that victim died in prehospital stage after RTA in rural area was 2.5 times (95% CI 1.5 – 4.4) higher than in urban areas. Average EMS response time in urban areas was significantly shorter (8 minutes) than in rural areas (15 minutes) ($p < 0.001$). There is no statistically significant differences in EMS response time in cases of victims death in pre-hospital stage in comparison with victims who survived neither in urban areas ($p = 0.23$) nor rural areas ($p = 0.16$).

Conclusions. 20-29 years old males more frequently receive EMS as RTA victims. This was also observed in South India and Great Britain. Average age was higher for dead RTA victims, in comparison with those RTA victims, who survived in pre-hospital stage. Highest mortality rate was in age group 50-59 years. Higher proportion of RTA fatalities was observed in rural areas although more often emergency calls due to RTA were received from urban areas. Higher proportion of fatalities was observed between 3:00 a.m. and 5:59 a.m. Males 5.7 times more often than females were under impairment of alcohol. 43% of all EMS visits where alcohol abuse was identified occurred in week-ends. Similar results were also observed by other researchers. Although some studies shows association between EMS response time and increased mortality rates in rural areas, this study didn't confirm such correlation.

In order to completely evaluate quality of medical care provided by SEMS in case of RTA further researches are necessary, including assessment of treatment outcomes of RTA victims in hospital stage.

P739 *Pre-hospital / EMS / Out of Hospital*

ASSESSMENT OF PATIENT SAFETY CLIMATE IN THE NORWEGIAN AIR AMBULANCE SERVICE

HB Abrahamsen (1-3), SJM Sollid (1), L Öhlund (4), GT Bondevik (2,3)

1. Department of Research, The Norwegian Air Ambulance Foundation, Drøbak, Norway
2. Department of Public Health and Primary Health Care, University of Bergen, Bergen, Norway
3. National Centre for Emergency Primary Health Care, Uni Research, Bergen, Norway
4. Faculty of Health and Occupational Studies, University of Gävle, Sweden

Corresponding author: Mr Abrahamsen Haakon Bjorheim (hba@norskluftambulans.no)

Key-words: Hospital Survey on Patient Safety Culture ; pre-hospital ; patient safety climate

Background:

A number of different instruments are used to measure safety climate in industry and healthcare. Hospital Survey on Patient Safety Culture (HSOPSC) is a standardized survey instrument developed to measure safety climate in hospitals. Little information is available on the usefulness of HSOPSC in the context of pre-hospital critical care.

Objective:

Our primary objective is to describe the psychometric properties of the HSOPSC applied to crewmembers in the Norwegian air ambulance services, and thereby to study the usability in a pre-hospital healthcare context. The secondary objective is to compare our findings with similar national and international in-hospital data.

Method:

We used a Norwegian translation of the HSOPSC that was slightly modified to adapt to pre-hospital care. The survey was performed as a cross-sectional study in Norway between May 8th and July 8th 2012. All Helicopter Emergency Medical System (HEMS) physicians, HEMS crew-members (HCM), HEMS nurses and helicopter pilots working in the civilian air ambulance service in Norway at the start of the study, were included. The questionnaires were answered anonymously in a web (QuestBack) or paper based version.

The study was approved by The Regional Ethical Committee and the Norwegian Social Science Data Services.

Results:

208 crewmembers were invited to take part in the study. A total of 171 responses were received of which 22 were paper based. Seven participants had indicated a profession outside HEMS or did not work clinically and were excluded from the sample. The majority of the respondents were physicians (50%), followed by pilots (20%), HCM's (26%) and nurses (4%). The overall response rate was 81% and the corresponding figures for each of the professions: physicians 84% (82/98), nurses 100% (6/6), HCM 91% (42/48) and pilots 65% (32/49). Five percent of the respondents reported they did not have any direct contact with patients, and that questions about patient safety, therefore, were difficult to answer. All these respondents were pilots.

More than two-thirds of the respondents had more than 5 years of experience from pre-hospital work. Only 5% of the crewmembers in the Norwegian HEMS programs had less than 1 year of pre-hospital experience.

Nearly 50 % of the respondents had not filled out and submitted any event reports the past 12 months. Almost 80% perceived that the patient safety in their primary pre-hospital unit was very good or even excellent.

Conclusion:

The overall response rate in this survey was relatively high. Representativeness is critical and makes the data reliable despite the limited sample size. HEMS crewmembers working in Norway

are pretty experienced and their perception of patient safety in the pre-hospital setting is very good, but the crewmembers should be encouraged to report even more errors. The results from our study indicate that greater efforts are needed to make patient care an even more integral part of the HEMS pilot profession.

Statistical analysis regarding the psychometrical properties of this sample is still in progress. We aim to present some of the results on the EuSEM 2012.

P740 *Psychiatry*

BURNOUT, JOB SATISFACTION AND DEPRESSION IN THE HEALTHCARE PERSONNEL WHO WORK IN THE EMERGENCY DEPARTMENT: A STUDY ON A SAMPLE FROM THE CITY OF GAZIANTEP

C Gökçen (1), S Zengin (2), MM Oktay (2), G Alpak (3), B Al (2), C Yildirim (2)

1. Child and adolescent psychiatry, Gaziantep University, Gaziantep, Turkey
2. Emergency Department, Gaziantep University, Gaziantep, Turkey
3. Psychiatry, Gaziantep University, Gaziantep, Turkey

Corresponding author: Mr Zengin Suat (zengins76@gmail.com)

Key-words: Burnout ; job satisfaction ; emergency department personnel

Objective: This study aimed to determine the levels of depression, job satisfaction and burnout and the variables that could be related to them in the healthcare personnel who were working in the emergency department in the sample from the city of Gaziantep.

Method: Study sample included a total of 347 participants, including doctors, nurses, healthcare officers, paramedics and emergency medical technicians (EMTs), who have been working in the emergency department of Gaziantep University Medical Faculty Hospital, in the emergency departments of the state hospitals and 112 emergency services located in the city center of Gaziantep. In the study, we used socio-demographic data form, Maslach Burnout Inventory (MBI), Minnesota Satisfaction Questionnaire (MSQ) and Beck Depression Inventory (BDI).

Results: Of the workers of emergency department, 18.5% (n=50) were working in the university hospitals, 40% (n=108) in the state hospitals and 41.5% (n=112) in 112 emergency services. Of the workers, 23.3% (n=63) were doctors, 31.5% (n=85) were nurses and 45.2% (n=122) were paramedics. Healthcare personnel who were working in the state hospital had significantly higher emotional exhaustion (EE) and BDI scores and significantly lower personal accomplishment (PA) scores compared to the workers of 112 emergency department. Paramedics had significantly lower EE scores compared to both doctors and nurses. In terms of age, it was found that 18-24 age group had significantly lower MBI-EE subscores compared to 25-29 and 30-34 age groups and that 40 and over age group had significantly higher BDI scores compared to 18-24 age group. All scales, except MBI-PA, were significantly different between the subjects who willingly chose the job and those who unwillingly chose the job. Again, all scales, except MBI-PA, were significantly different between the subjects who gave the answer of "I am satisfied with my work environment" and those who gave the answer of "I am not satisfied with my work environment".

Discussion: Evaluating the mental health and working conditions of the people who work in a unit under an intense work pressure, which requires efficient, proper and rapid intervention to the patients, would help to improve the quality of the services given in this field.

P741

Psychiatry

EMERGENCY DEPARTMENT VISITS FOR INTENTIONAL NON-FATAL SUICIDE ATTEMPT IN THE NORTHEASTERN TURKEY, 2006-2008

M. Eroglu (1), M. Uzkeser (2), A. Saritas (2), H. Acemoglu (3), M. Navruz (4), M. Emet (2)

1. Emergency Department, Gulhane Military Medical Academy Haydarpasa Training Hospital, Istanbul, Turkey
2. Emergency Department, Ataturk University Faculty of Medicine, Erzurum, Turkey
3. Department of Public Health, Ataturk University Faculty of Medicine, Erzurum, Turkey
4. Family Health, Fatih Family Health Center, Erzincan, Turkey

Corresponding author: Mr Eroglu Murat (meroglu@gata.edu.tr)

Key-words: suicide attempt ; sociodemographic findings ; prevalence

Objective : To assess suicide attempt rates and trends as well as the epidemiology of suicide attempts.

Methods: This is a cross-sectional study included 893 parasuicide "events" recorded in 17 EDs of state hospitals in two neighbor cities in three years.

Results: Mean parasuicide rates in 2007 per 100,000 inhabitants were 47.7 for females and 17.7 for males, and 32.5 for both sexes combined. Nonfatal suicidal attempt was common among young people, with women outnumbering men. Self poisoning (93.3%) was the main deliberate self harm type. Males differ from females significantly as they use more violent methods ($p=0.002$), marriage ratio is lower and bachelor ratio is higher ($p=0.006$), as males are more employed ($p < 0.0001$); and as hospitalization ratio of males were higher ($p=0.01$). For females, familial problems (29.5%), mental illness (12.0%) and physical domestic violence (8.9%) were the main declared reasons of deliberate self-harm, respectively. For men, they were arranged as familial problems (21.3%), problems with the opposite sex (16.5%) and mental illness (12.0%). Physical domestic violence was a common reason among suicide attempted women aged 15-34 years. Financial difficulties were the only cited reason of suicide attempt that male predominance was seen.

Conclusion: Due to its geographical location, Turkey has long been the bridge between Europe and the East, between the Christian and Muslim worlds. As a result, epidemiology of suicide attempt cases in our region resembles a mixture of both European and Oriental communities' parasuicide characteristics.

P742

Psychiatry

OLANZAPINE INDUCED NEUROLEPTIC MALIGNANT SYNDROME: A CASE REPORT

H Dogan, DN Ozucelik, A Avci, I Uzun, C Simsek, K Aciksari
Emergency department, Bakirköy Dr Sadi Konuk training and research hospital, Istanbul, Turkey

Corresponding author: Mr Dogan Halil (drhalildogan@gmail.com)

Key-words: neuroleptic malignant syndrome ; Olanzapine ; schizophrenia

Introduction

Neuroleptic malignant syndrome (NMS) is a life-threatening condition that occurs as a result of dopaminergic receptor blockage in nigrostriatal pathways. [1] The neuroleptic malignant syndrome (NMS) is a rare but potentially fatal idiosyncratic reaction to

antipsychotic characterised by rigidity, fever, autonomic dysfunction and altered consciousness along with elevated serum creatinine phosphokinase (CPK) levels and leucocytosis [2]

Case Report

A 68- year – old male patient with schizophrenia was admitted to emergency department with complain of poor general health. Patient's vital signs were normal. (BP: 12/8 HR: 78 O2Sat: 99 T: 38.2 °C) Physical examination demonstrated rigidity in both upper extremities and he had mental dimness. The patient's long term psychiatric treatment had been paliperidon 6 mg and biperiden 2 mg. Before 10 days, olanzapin 10 mg was added for treatment.

A head CT scan showed mild cortical atrophy. CK was 5759, CK-MB was 155, WBC were 8300. Transaminases remained normal. A clinical diagnosis of NMS was made.

One day later his body temperature 37,4°C despite of paracetamol treatment.

Discussion

Incidence of NMS side effect induced by olanzapine is extremely rare. [5] Considering these facts, our case of NMS occurred after olanzapine treatment is of interest. NMS is a serious side effect of antipsychotic medications. [6] it may occur with in 10 days after antipsychotic drug use and also at any phase of the treatment. [7] John et al.[8] have reported that in first 2 weeks, the occurrence rate is 80%. In this case, our patient and NMS has been seen on the 10th day of the olanzapine treatment.

Hyperthermia, muscle rigidity, autonomic instability, delirium and increased CPK values are the main symptoms of NMS. [9] In our case CK and CK-MB were high, both upper extremities had muscle rigidity.

Neuroleptic malignant syndrome is the deathly complication of neuroleptic medications. Death usually occurs as a reason of cardiovascular collapse, renal or respiratory insufficiency and dysrhythmias. [9] In this case, with the early diagnosis and appropriate treatment, none of the deathly complications, such as cardiovascular collapse and renal or respiratory insufficiency, has been occurred. Major symptoms had been disappeared 15 days after the neuroleptic drug has been stopped and physical examination and laboratory findings all revealed normal. The patient has been completely cured and discharged from the hospital.

Conclusion

The patients with NMS should admit to emergency services. In differential diagnosis of the patients referred to emergency services with the complaints of muscle rigidity, high fever, unconsciousness and antipsychotic drug use in history, NMS should also be considered. Although it is rare, practitioners need to be aware of that NMS may occur after olanzapine treatment. With early diagnosis and appropriate treatment, NMS that may cause death should be managed successfully

P743

Psychiatry

COMT VAL158MET GENOTYPE AS A RISK FACTOR FOR CONVERSION DISORDER

E. Armagan (1), M. Almacioglu (2), T. Yakut (3), A. Kose (1), N. Kahrman (1), M. Karkucak (3), O. Koksall (1)

1. Department of Emergency Medicine, Uludag University, Faculty of Medicine, Bursa, Turkey
2. Department of Emergency Medicine, Cekirge State Hospital, Bursa, Turkey
3. Department of Medical Genetics, Uludag University, Faculty of Medicine, Bursa, Turkey

Corresponding author: Mr Kose Ataman (ataberk76@yahoo.com.tr)

Key-words: Val158Met genotype ; COMT, ; conversion disorder

Objective: To test the association between the catechol-O-methyltransferase (COMT) Val158Met polymorphism and conversion disorder. We hypothesized that a relation may be found between Val158Met polymorphism and conversion disorder.

Method: 48 patients with conversion disorder and 48 control patients investigated for COMT Val158Met genotype.

Results: In the conversion disorder group 31 patients were Val/Met heterozygotes, 15 patients were Val/Val homozygotes and 2 patients were Met/Met homozygotes. In the control group 32 patients were Val/Met heterozygotes, 16 patients were Val/Val homozygotes. There is no statistically difference between the groups.

Conclusions: COMT Val158Met genotype is not a risk factor for conversion disorder for Turkish population. Due to our study COMT Val158Met genotype is quite common among normal population. Other genetic risk factors may be considered for conversion disorder.

P744

Psychiatry

PATIENTS PRESENTED TO OUR EMERGENCY DEPARTMENT WITH RECURRENT SUICIDAL ATTEMPTS

M. Saritemur, M. Uzkeser, A. Akoz, A. Bayramoglu, M. Emet
Emergency Department, Ataturk University Medical Faculty, Erzurum, Turkey

Corresponding author: Mr Saritemur Murat (muratsaritemur@gmail.com)

Key-words: Emergency Department ; Suicidal Attempts ; Recurrence

Introduction: Suicide is one of the most frequent reasons for emergency admittance. After discharge, patients may re-admit due to recurrent suicidal attempts. We examined the demographic characteristics of the patients admitted to the emergency department (ED) with recurrent suicidal attempt.

Methods: Patients with recurrent suicidal attempt who presented to our ED between 2008 and 2012 were retrospectively reviewed.

Results: A total of 81 patients were included. 50 (61.7%) of patients were women and the mean age was 26.4 ± 8.5 (min: 14, max: 51). 30 (37%) patients came from outside of Erzurum province. According to their settlements, 64 (79%) patients live in the city center, 13 (16%) patients in the counties and 4 (4.9%) patients in the village. On admission, 64 (79%) patients were due to drug intake, 5 (6.2%) patients were due to superficial incisions in the body accompanied by drug ingestion, 5 (6.2%) patients were due to penetrated injury, 4 (4.9%) patients were due to jumping from a high place, and 2 (2.5%) patients were due to hanging, and 1 (1.2%) patient was due to gunshot wounds. 48 (59.3%) patients had attempted suicide with multidrug ingestion.

The most commonly cited causes of suicide were family problems in 24 (29.6%) patients, psychiatric illness in 20 (24.7%) patients, loneliness in 7 (8.6%) patients, and problems with the opposite sex in 6 (7.4%) patients. There was family history of suicide in 9 (11.1%) patients and family history of psychiatric illness in 21 (25.9%) patients. 51 (63%) patients had a previously psychiatric diagnosis. Psychiatric consultations in the ED were requested for 61 (75.3%) patients. As a result of these consultations, there were no definite diagnosis for 34 (42%) patients on initial assessment. 26 (32.1%) patients were diagnosed as impulsive suicidal attempts, 19 (23.5%) patients as major depressive disorder, one (1.2%) patient as obsessive compulsive disorder and one (1.2%) patient as bipolar disorder. 13 (16%) of these re-suicide attempt patients admitted to the ED with recurrent suicidal attempt after being discharged.

Conclusion: The majority of patients with recurrent suicidal attempt refer to the emergency services by drug intake. The main

reasons of suicide attempt are family problems and psychiatric disorders. Patients still continue to encounter situations in which they stated as the cause of suicide attempt and this may lead to recurrent attempts after discharge.

P745

Psychiatry

INCIDENCE OF ADHD AMONG PATIENTS ADMITTED TO EMERGENCY DEPARTMENT DUE TO TRAFFIC ACCIDENT, BOZYAKA TRAINING AND RESEARCH HOSPITAL, EMERGENCY DEPARTMENT, 2012, İZMİR

S Akay (1), M Ardiç (1), B Kalender (1), M Küçük (2), I Parlak (1)

1. Emergency Department, İzmir Bozyaka Research Hospital, İzmir, Turkey
2. Emergency Department, İzmir Bozyaka Research Hospital, İzmir, Turkey

Corresponding author: Mr Ardiç Murat Enis (muratenis@gmail.com)

Key-words: ADHD ; Traffic accident ; Emergency Department

Traffic accidents consist a major group of patients during routine practice in emergency departments, leading to undesired economical and health problems.

This study compares traffic accident victims admitted to İzmir Bozyaka Research Hospital, İzmir, Turkey between December 2011 – April 2012, consisting motor vehicle driver and control group by means of socioeconomic criterias and ADHD incidence. Each group had 81 individuals.

In the motor vehicle driver group, ADHD diagnostic criterias were present for the 17% (n=14) of the victims. For the control group the percentage was 4,9% (n=4). Prevalence of ADHD in normal population is 2-4 %. Although incidence in control group is parallel to the normal population, the percentage was statistically significant in motor vehicle driver group.

When subgroups of Attention Disorder and Hyperactivity dominant types are analysed, attention disorder percentage was significantly higher in motor vehicle driver victims compared with the control group. There was not any statistical significance for the hyperactivity dominant type between motor vehicle driver and control group. On the other hand, there was statistically significance for the latter subtype of ADHD when became a subject of a traffic accident for two and more times.

Motor vehicle drivers should be analysed for ADHD especially when participating frequently in traffic accidents. Therefore preventing one of the reasons of traffic accidents resulting in economical and health problems, limitation of workload in emergency departments may be possible. We consider that analysing traffic accident victims by means of ADHD applying to the emergency department may be beneficial.

P746

Psychiatry

MISDIAGNOSIS OF BUPROPION INTOXICATION CASE PRESENTATION

T Acar (1), H Seker (2), NO Kutlu (2), H Caksen (2), S Sahin (2), M Ergin (1), B Cander (1)

1. Emergency department, University of Necmettin Erbakan, Meram Medical Faculty, Konya, Turkey
2. Pediatric department, University of Necmettin Erbakan, Meram Medical Faculty, Konya, Turkey

Corresponding author: Mr Acar Tarik (drtarikacar@gmail.com)

Key-words: BUPROPION ; INTOXICATION ; MISDIAGNOSIS

BACKGROUND: Bupropion inhibits catecholamine's neuronal reuptake selectively but has a minimal effect on indelamin reuptake. It can be used in the treatment of major depressive disorder and is the first non-nicotine medicine that gains approval in the treatment of smoking cessation. There are two forms of this medicine: fast and constant. **CASE:** A 3½ year old and 15 kg- girl had started vomiting in the evening. Then she had disorders in her speech. After a time, she didn't take breath and stared at one point and had a seizure. In another health care unit, she was diagnosed with epilepsy and diazepam was given intravenously and since seizure couldn't be stopped, phenytoin intravenously was given. After that, the patient was transferred to our clinic for further treatment and evaluation. Upon the repeating seizures, phenytoin was regiven 10mg/kg IV. After loading dose of phenytoin, midazolam IV infusion was performed since her seizure had been continuing. T Since she had a history of falling from height 2.5 week ago, she had magnetic resonance imaging (MR) and diffusion MR and brain computed tomography all of which were reported as normal. During her follow up, the general condition had been getting worse. Her pupillary was fixed and dilated. Although phenytoin loading and midazolam infusion, she had seizures intermittently. When her head was thrown back, her hands trembled. Her anamnesis in terms of drug story was rechecked but, her family didn't give any important data. Due to atypical process in clinical picture, multi drug survey, stomach irrigation and activated charcoal were performed. Pediatric department agreed that her clinical picture wasn't seizure and the possibility of intoxication was higher. Midazolam infusion was stopped. The patient was practiced 0.04 mg/kg biperiden 3 times; since the patient's atypical movements didn't stop. In the multidrug survey, benzodiazepine was positive. The parents were asked to search their home and bring each and every drug in their home. The parent found that Welbutrin XL 150 mg® which patient's mother had used and said that there should be at least 7 pills in the box but there wasn't any more. National Intoxication Center gave information that even just one tablet of the drug is toxic and the patient was admitted to intensive care unit. During 14 day follow up, she was intubated and mechanical ventilation was performed. Her seizure was taken under control. However she had resuscitation for three times due to cardiopulmonary arrest. Fortunately, after successful conservative treatment, she was discharged from ICU without any neurological sequel. **DISCUSSION:** Bupropion overdose mainly affects neurologic, cardiovascular and gastrointestinal system. Neurologic effects are tremor, pain, hallucinations, coma and seizures. Cardiovascular effects are tachycardia and widening in QRS and lengthened QT interval. Gastrointestinal effects are nausea and vomiting. Death cases were reported rarely. In our case, the patient had most of the findings stated above. So that wide QRS tachycardia firstly, then bradycardia and asistol finally had developed. **CONCLUSION:** When child was admitted to emergency service with seizures, their parents must be "asked about intoxication. We shouldn't forget the fact that some member of the family can hide their illness because of various reasons.

P747

Psychiatry

REPEATED EMERGENCY VISITS OF CONVERSIVE PATIENTS AND THEIR DOMESTIC PROBLEMS

M Şinasi (1), C Özpolat (1), OE Onur (2), SE Eroğlu (1), A Denizbaşı (1)

1. Emergency department, Marmara University Pendik Research and Training Hospital, Istanbul, Turkey
2. Emergency department, Marmara University Pendik Research and Training Hospital, Istanbul, Turkey

Corresponding author: Mr Eroglu Serkan Emre (drseroglu@gmail.com)

Key-words: Conversion disorder ; Emergency service visits ; Domestic problems

Objective: Conversion disorder is commonly seen in emergency service (ES) which can be summerized as somatic outcome of psychological stress, even repeated visits with the same diagnosis have been recorded. The aim of this study is to determine the association between frequency of ES visits of these patients and their domestic problems.

Method: This prospective, cross-sectional study is done between 01/01/2012 - 30/06/2012, in patients who had been admitted to the ES with a conversion disorder. All these patients were asked questions to evaluate their domestic relationship problems. Among these patients those who were admitted to the ES with the same diagnosis more than once were included to the study. Statistical analyses were performed by using the SPSS 16.0 program.

Results: 100 patients admitted to the ES with the diagnosis of conversion disorder during the study. Average age was 30,62. Domestic problem was detected in 29 % of the patients. 17 out of 29 patients had medium to severe problems. As hospital records were reviewed, it was determined that 26 patients (89.6%) had visited the ES with the same diagnosis before. It had been noted that the relationship between repeated visits and domestic problems were statistically significant ($p<0,001$).

Discussion: Multiple visits to the ES's by psychologically disturbed patients with domestic problems, increase the emergency crowd and work-load. These visits bring burden not only to the family but also to the public health care. Our proposal is to refer these patients to the social support offices instead of the emergency services, and follow up the family closely by the social network.

P748

Psychiatry

PSYCHOGENIC POLYDIPSIA

B. IŞIK (1), E. Kadioğlu (2)

1. Emergency department, State hospital of Aydın, Aydın, Turkey
2. Emergency department, D.P.Ü Evliya Çelebi Training and Research Hospital, Kütahya, Turkey

Corresponding author: Melle Isik Bahar (drbaharistik7@gmail.com)

Key-words: Psychogenic polydipsia ; polyuria ; psychosis

Object: Psychogenic polydipsia is a specific form of polydipsia and is usually the result of a mental disorder. Psychogenic polydipsia is encountered 80% in the schizophrenic patients. It is rarely observed in patients with mood disorders. It may also occur in individuals who do not have any disease. We wanted to put forward the necessity of taking medical history more detailed in patients admitted to the emergency room with nonspecific complaints such as polyuria.

Findings: 29-year-old female patient was admitted to the emergency department with complaints of polyuria. He had also numbness in fingers, palpitation, restlessness, blurred vision, balance disorder and nausea. For four days she was urinating 30 times a day. When she examined more detailed she said that she had had a request of drinking excecive amounts of water. Previously she had similar symptoms especially when she was depressed. She had a history of psychosis but had stopped using her drugs for a while. Other than her blood sodium level is 128 mmol/land urine

osmolarity is 1006 her physical examination was normal. Her ADH levels were in normal range. After the patient was evaluated she treated only with fluid restriction. When her general condition improved and she was discharged. Next day she came to the hospital to be checked and we showed she had no complaints.

Discussion: There are proponents of the idea that psychogenic polydipsia is an anti cholinergic side effect of psychiatric drugs. Also dopaminergic hyperactivity triggers the thirst field in lateral hypothalamus as well as psychosis. It is thought that psychogenic polydipsia was more frequent during periods of psychotic exacerbation. If blood sodium level is not below the value of 125mmol/l neurological signs don't occur. Headache, blurred vision, weakness, cramps, vomiting, diarrhea, increase in salivation, restlessness, confusion, lethargy, coma may occur in case of psychogenic polydipsia. Death is the result of pulmonary edema or cerebral edema. In most patient fluid restriction treatment is sufficient. In severe cases hypertonic saline solutions, clozapine, propranolol, diuretics may be needed in the form of medical treatment. If the disease is accompanied by psychosis electroconvulsive therapy can be applied.

Conclusion: As a result in the patient who applied to the emergency department with complaint of frequent urination and drinking too much water acute or chronic polydipsia should not be forgotten.

P749

Respiratory Emergencies

ROLE OF METEOROLOGICAL CHANGES IN OCCURENCE OF SPONTANEOUS PNEUMOTHORAX AND CLINICAL CHARACTERISTICS OF OUR CASES

S. Bozkurt (1), M. Tokur (2), M. Okumus (1), H. Kahraman (3), F. Ozkan (4), B. Utku (1)

1. Emergency Department, Kahramanmaraş Sutcuimam University, Medical Faculty, Kahramanmaraş, Turkey
2. Department of Thoracic surgery, Kahramanmaraş Sutcuimam University, Medical Faculty, Kahramanmaraş, Turkey
3. Department of Chest diseases, Kahramanmaraş Sutcuimam University, Medical Faculty, Kahramanmaraş, Turkey
4. Radiology, Kahramanmaraş Sutcuimam University, Medical Faculty, Kahramanmaraş, Turkey

Corresponding author: Mr Bozkurt Selim (selimbozkurt01@yahoo.com)

Key-words: Spontaneous pneumothorax ; atmospheric pressure ; humidity

Background: Pneumothorax is defined as pathological air in the pleural space. Weather changes may influence the incidence of spontaneous pneumothorax. The purpose of this study was to define, role of meteorological changes in occurrence of spontaneous pneumothorax and clinical characteristics of our cases.

Methods: In our study a total 95 cases (87 men, 8 women; 67 primary spontaneous pneumothorax, 28 secondary spontaneous pneumothorax; mean age 36.7±16.7, range 16 to 78 years) with spontaneous pneumothorax were detected between January 2008 to December 2008 and April 2010 to March 2012 years Cases were retrospectively evaluated according to clinical characteristics and day admission to hospital. The day of admission to hospital were accepted as the day in which spontaneous pneumothorax was occurred. The meteorological data were obtained from Kahramanmaraş Meteorological Services. Meteorological data in days spontaneous pneumothorax was occurred was compared to days without. Relationship between meteorological changes and the occurring of spontaneous pneumothorax were investigated.

Results: During the study, the cases were mostly presented in autumn season (31.6%) and least seen in spring season (12.6%).

When we investigate according to month, most cases seen in september and february least cases in april. The average atmospheric pressure, wind speed, rainfall and temperature were not statistically different between days with spontaneous pneumothorax and days without. In days with spontaneous pneumothorax, humidity was lower difference was not significant. In day the maximum-minimum daily humidity difference were higher in the days with spontaneous pneumothorax and this difference was statistically significant (p=0.011).

Conclusion: This study suggested that the risk of occurrence of spontaneous pneumothorax are increased in days presenting high daily humidity difference.

P750

Respiratory Emergencies

MANAGEMENT OF SMOKE INHALATION INJURY IN EMERGENCY DEPARTMENT

MT Gokdemir, H Kaya, O Sogut

Emergency Department, Harran University, School of Medicine, Sanliurfa, Turkey

Corresponding author: Mr Gokdemir Mehmet Tahir (tahirgokdemir@mynet.com)

Key-words: Smoke inhalation ; emergency department ; discharge

Introduction: Carbon monoxide (CO) is an odorless, colorless, tasteless, non-irritating gas formed as a by-product of burning organic compounds. The atmospheric concentration of CO is generally below 0.001%. The affinity of hemoglobin for CO is 200 to 250 times greater than its affinity for oxygen. This results in competitive inhibition of oxygen release due to a shift in the oxygen-hemoglobin dissociation curve, reduced oxygen delivery, and subsequent tissue hypoxia. This study evaluated smoke inhalation injuries admitted to emergency department. Our aim was to determine the criteria's of discharge from emergency department.

Material and Method: Emergency department patients presented with smoke inhalation between January 2009 and November 2011 were included to this retrospective study. Patients with co-morbid diseases such as chronic obstructive pulmonary disease, heart failure were excluded from the study.

Results: A total of 255 patients with smoke inhalation injury were presented to emergency department. Fifty two patients with incomplete records, co-morbid diseases and under eighteen were excluded from study. Two hundred three patients were entered the study [117 (58 %) men, 86 (42 %)]. Ages ranged from 18 to 67 (mean 38) years. 180 (87,3 %) patients were discharged from emergency department. Only 23 patients were hospitalized. 10 of 101 (50,5 %) patients due to coal stove, four of 78 (37,9 %) lahmacun bakehouse, nine of 24 (11,6 %) house fires, related to smoke inhalation were hospitalized. Hospitalization indications were burn ratio > 15 % (N = 11), smoke inhalation (N = 5), carbon-dioxide narcosis (N = 4) and COHb > 15 (N = 3).

Conclusion: Outpatients with short- term exposure (< 7 minutes) to smoke can be discharged without any laboratory confirmation. Long-term exposures has to be observed even if they are outpatients. Hospitalization is required for patients with inhalation burns, carbon-dioxide narcosis, high COHb (> 15).

P751

Respiratory Emergencies

THE USE OF NON-INVASIVE VENTILATION (NIV) IN THE MANAGEMENT OF PATIENTS WITH COPD IN A&E.

SD Parker (1), RA Sayers (2), J Taylor (2)

1. A&E, Queen Elizabeth Hospital, Newcastle upon Tyne, United Kingdom
2. Emergency Department, Queen Elizabeth Hospital, Newcastle upon Tyne, United Kingdom

Corresponding author: Mr Parker Sidney (mongolmedics@gmail.com)

Key-words: copd ; non invasive ventilation ; type 2 respiratory failure

BACKGROUND

Chronic Obstructive Pulmonary Disease (COPD) effects on average 5-15% of patients in industrialised countries worldwide and is expected to become the fifth most common cause of combined mortality and disability by 2020. After diagnosis patient's 10-year survival rate is approximately 50%, more than a third die as a result of respiratory insufficiency.

Non-invasive ventilation (NIV) in selected patients with an acute exacerbation of COPD has been shown to reduce: the need for intubation, hospital stay, complications and in-hospital mortalities. It is associated with a rapid improvement in respiratory acidosis and respiratory rate within an hour of initiation.

The British Thoracic Society (BTS) guidelines recommend using NIV in the management of COPD patients with type 2 respiratory failure within 60 minutes of their hospital arrival following maximum medical therapy.

AIMS

The audit aims to assess the effectiveness of implementing NIV in patients with COPD presenting to A&E with type 2 respiratory failure at The Queen Elizabeth compared to the standards proposed by the British Thoracic Society guidelines.

METHODS

The sample was generated by searching through A&E admissions between 1st November 2012 and 29th February 2012 using the codings: exacerbation of COPD, shortness of breath, breathing difficulties. This found 208 patients with a total of 396 admissions during this period. The online A&E notes were accessed via Windip and analysed for each admission, the case-notes were requested for patients that met the criteria for non-invasive ventilation (NIV):

- Acute exacerbation of COPD
 - Decompensated respiratory acidosis (pH 6kPa)
 - Respiratory acidosis despite maximum medical treatment
- Patients were excluded if they had any of the following contraindications: respiratory arrest, cardiovascular instability, high aspiration risk, recent facial or gastrointestinal surgery, craniofacial burns or trauma, copious secretions.

RESULTS

Of the 34 case-notes only 27 were available to audit. The sample involved 41% (n=11) males and 59% (n=16) females, with a median age of 76 (range 61-94).

NIV was considered in only 74 % (n=20) of the selected eligible patients, of these it was given in 37% (n=10).

The mean time taken from arrival to NIV was 427 minutes, over seven times the recommended time, the median was 357 (range 138-1366) minutes. When this was broken down into tasks it took the following mean times: time between arrival and 1st ABG 29 minutes; time between first and second ABG 101 minutes; time taken from 2nd ABG to NIV 297 minutes. Following the delay to NIV three DNAR's were signed and one patient died. The patient who died waited 330 minutes from their arrival waiting for a transfer to ward 4 for NIV by this time the patient was too agitated to tolerate the treatment and subsequently died.

The NIV was administered on ward 4 in 90% (n=9) and 10% (n=1) on HDU. 25% (n=2) of the NIV treatments recorded did not exceed the minimum recommended duration of treatment (6 hours).

CONCLUSIONS

The audit has highlighted the need for an improvement in care needed for the management of type 2 respiratory failure in patients with COPD presenting to The Queen Elizabeth hospital. The standards have not been met because of the time taken to take 2 ABGs and waiting for NIV beds on other wards. All of the above patients could have received NIV and should have been considered, the poor rate indicates the need for an A&E protocol to ensure these patients receive the required treatment within the time for a maximum chance of recovery. An NIV in A&E would provide rapid treatment for the patients waiting for transfer to a medical ward. Many of the patients do not tolerate the NIV due to becoming too agitated waiting to receive it, hence the poor duration of treatment.

This was compounded by the fact that in the current system in order to be admitted to NIV beds on ward 4 the patients have to be first seen by a senior member of the medical team. One way of negating this delay would be to have NIV machines available in the Emergency Department (ED) so those patients could be started on NIV as soon as it is indicated whilst waiting for specialist beds to become available. The decision as to whether to start NIV could be made by a senior ED doctor and would require a clear plan as to what to do if NIV was unsuccessful or not tolerated.

P752

Respiratory Emergencies

A CASE REPORT OF SPONTANEOUS PNEUMOTHORAX IN WEGENER'S GRANULOMATOSIS

H Kahraman (1), S Bozkurt (2), N Koksall (1), M Tokur (3), M Okumus (2), F Ozkan (4)

1. Department of Chest, Kahramanmaraş Sutcuimam University, Kahramanmaraş, Turkey
2. Emergency Department, Kahramanmaraş Sutcuimam University, Kahramanmaraş, Turkey
3. Department of Chest Surgery, Kahramanmaraş Sutcuimam University, Kahramanmaraş, Turkey
4. Radiology, Kahramanmaraş Sutcuimam University, Kahramanmaraş, Turkey

Corresponding author: Mr Kahraman Hasan (drhasankahraman@hotmail.com)

Key-words: Wegener's granulomatosis ; pneumothorax ; cavitary mass

Wegener's granulomatosis, is a multiorgan system disease of unknown etiology and characterized by systemic vasculitis (polyangiitis) with necrotizing granulomatous inflammation of the upper and lower respiratory tracts, systemic necrotizing vasculitis, and necrotizing glomerulonephritis. Other organ systems that may be involved in Wegener's granulomatosis include: Joints, eyes, skin, nervous system, heart, and less commonly, the gastrointestinal tract, lower genitourinary tract, parotid glands, thyroid, liver, or breast. Depending on the case series, the most commonly reported chest radiograph findings are nodules that may cavitate (20 to 90 percent), patchy or diffuse opacities that sometimes with an air bronchogram (20 to 50 percent), lobar or segmental atelectasis. Other less common findings include pleural effusions, hilar adenopathy, and spontaneous pneumothorax that induced by rupture of cavitary nodule. A 32-year-old man admitted to otolaryngologist with complaint of facial paralysis and hearing loss at August 2011 and with treatment of corticosteroid, he became well. At November 2011, he complained swelling and pain of both ankle and he attended to orthopedics and then Rheumatology clinic. At rheumatology clinic, he diagnosed as granulomatosis with polyangiitis and he was treated with cyclophosphamide 1 gr monthly and prednisone 80 mg daily. He was followed up our Chest

and Rheumatology Clinics since January 2012. his chest radiogram showed a mass like lesion presenting cavity and lobulated clear boundaries at upper zone of left lung. At April 2012, he referred to our Emergency Department with sudden onset complain of breathlessness and dry cough. On physical examination, he was appeared as dyspneic and breath sound was diminished on left side. Blood pressure was 120/80 mmHg, pulse rate was 110/min. Plain chest film was taken and left cavitary mass and pneumothorax were detected. Chest tube was inserted and he was hospitalized, but left lung did not re-expanded through 30 days. Then wedge resection was conducted to left lung and he has been followed up. As a result pneumothorax, although is seen quiet rarely in Wegener's granulomatosis, are possible especially in cases with cavitated mass or nodules close to pleura.

P754

Respiratory Emergencies

THE ROLE OF THE MPV LEVELS OF THE PATIENTS WHO HAVE BEEN DIAGNOSED PULMONARY EMBOLISM

M. Memis (1), G. Kurtoglu Celik (2), A. Sener (2), H. Sahin Kavakli (2), F. Icme (2), O. Karakayali (3), H. Yildirim (4)

1. Emergency department, Teaching and Research Hospital in Urfa, Urfa, Turkey
2. Emergency department, Ataturk Training and Research Hospital, Ankara, Turkey
3. Emergency department, Teaching and Research Hospital in Kocaeli Derince, Kocaeli, Turkey
4. Radiology, Ataturk Training and Research Hospital, Ankara, Turkey

Corresponding author: Melle Kurtoglu Celik Gulhan (kurtoglugulhan@yahoo.com)

Key-words: pulmonary tromboemboli ; mean platelet volume ; computed tomografi anjiografi

Aim; Pulmonary embolism (PE) is a very common disease which is hard to diagnose and treat and has high mortality rates. In this work we aimed to determine the role of the MPV levels of the patients who have been diagnosed PTE, and association between the PABTOİ and MPV levels in prediction of the severity of the PTE. We also intended to show if MPV levels can be an alternative marker in identification of patients who has right ventricle disfunctioning due to acute PTE.

Materials and methods: In this study, 120 patients who were administered to hospital from 2009 to 2011, and diagnosed PTE had been evaluated retrospectively. In addition to general characteristics of the patients; symptoms, physical examination signs, comorbid disease, MPV, troponin, D-dimer arterial blood gas analysis, chest radiography, electrocardiogram, transthoracic echocardiograph, lower and upper extremity venous dopler USG findings were recorded. We also calculated the by interpreting the pulmonary artery computed tomography index ratio (PACTOIR) for each case using the model of Qanadli at al.

Result: Of the patients 59 (%49,2) were men and 61 (%50,8) were women. Mean age of the patients were 61,4±15,7 years. There was a significant negative association between MPV and platelet count. However, there was a significant positive association between MPV and troponin, pulmonary artery pressure, right ventricle dilatation($p < 0,05$). In this study, we found that there was a positive correlation between MPV and PABTOİR in statistical meaning ($p < 0,05$). In the category of MPV ($< 8,5$ fl), the averages of the PACTOİR was found to be 25; in the category of MPV ($> 8,5$ fl), the averages of the PACTOİR was found to be 45. In this category (respectively MPV $< 8,5$; MPV $> 8,5$) the averages of PACTOİR for differentiation analysis was found to be significant($p=0,03$), for the averages of d-dimer, there was no significant differentiation analysis ($P=0,127$)

Conclusion: MPV, that is a fast, noninvasive, inexpensive and easily available biomarker which provides accurate prognostic

evaluation is valuable in diagnosis of pulmonary thromboembolism but we need to more prospective studies to support our study.

P755

Respiratory Emergencies

EARLY OR DELAYED DIAGNOSIS OF PULMONARY EMBOLISM: DOES IT MAKE ANY DIFFERENCE ?

I Cabello, J Jacob, C Ferre, F Llopis, C Martinez, S Jordan, JR Perez Mas, M Velasco, I Bardés

Emergency department, Hospital Universitari de Bellvitge, Barcelona, Spain

Corresponding author: Mme Cabello Irene (jjacob@bellvitgehospital.cat)

Key-words: Embolism pulmonary ; Mortality ; Emergency department

Background: pulmonary embolism (PE) may be an elusive diagnosis with a significant mortality. As far as we know, it has not been reported whether there is any difference in terms of mortality between early diagnosis of PE in the emergency department (ED) or delayed diagnosis during hospitalization.

Objective: to compare the general characteristics and outcome of patients with PE diagnosed in the ED or hospitalization units.

Methods: Design: descriptive and retrospective study. Setting: a 7000-bed tertiary-care teaching hospital in the metropolitan area of Barcelona, Spain. Period: one year from november 2010 to November 2011. Patients: all patients with a diagnosis of PE according to CT scan or scintigraphy findings. Data were collected for demographic variables, comorbid conditions, PE extension (either massive or segmental), echocardiographic findings, troponin level, type of treatment, admission to the Intensive Care Unit (ICU), mean stay and mortality rate.

Results: during the study period, PE was diagnosed in 147 patients. Mean age was 64.7 (SD 14.8) years, and 70 were men (47.6%). PE was diagnosed at the ED (early diagnosis) in 123 cases (84%) and 24 cases (16%) during hospitalization (delayed diagnosis). When compared early and late diagnosis groups: CT scan was performed in 112 (84,2%) patients vs 21 (87,5%) and lung scintigraphy in 11 (8,9%) vs 3 (12,5%); PE was massive in 50 cases (40,7%) vs 6 (25%), segmental in 68 (55,3%) vs 15 (62,5%) and unknown in 2 (1,6%) vs 2 (8,3%); 31 (25.5%) vs 7 (29.2%) patients had cancer; echocardiography was undertaken in 44 (35,8%) vs 3 (12,5%); troponin was determined in 38 (30,9%) vs 2 (8,3%). Standard low-weight molecular heparin was administered in 106 (86,2%) vs 20 (83,3%) cases, thrombolytic therapy in 10 (8,1%) vs 1 (4,2%), and inferior vena cava vein filter was placed in 6 (4,9%) vs 3 (12,5%); 25 (20,3%) vs 7 (29,2%) patients were admitted to the ICU; mean stay was 14 vs 23,6 days and mortality was 13 (10,6%) vs 3 (12,5%). Differences were observed for echocardiography ($p=0,03$), troponins ($p=0,024$) and length of stay ($p=0,044$) but no statistical differences were found in mortality or other variables.

Conclusions:

1. In our study, PE diagnosis in the ED is associated with a shorter length of stay
2. No differences in terms of PE extension, type of treatment, need of ICU care or mortality were found between early and late diagnosis of PE.

P756

Respiratory Emergencies

THE EFFICACY OF HIGH DOSE INHALED STEROIDS ON THE ACUTE EXACERBATION AND EMERGENCY ADMISSION OF SEVERE AND VERY SEVERE CHRONIC OBSTRUCTIVE PULMONARY DISEASE PATIENTS

DM yavşan (1), E Maden (1), z karakurt (2), E sulu (2), O Taşolar (2), H Turker (2)

1. pulmonary medicine, meram medical faculty, konya, Turkey

2. pulmonary medicine, sureyyapaşa thoracic surgery and chest disease education hospital, istanbul, Turkey

Corresponding author: Mr Maden Emin (eminmaden@yahoo.com)

Key-words: chronic obstructive pulmonary disease ; treatment ; corticosteroid

AIM: In this study we evaluated the effect of high dose inhaled steroids (2000mcg) treatment on frequency of exacerbations and emergency admissions, pulmonary functions, arterial blood gas (ABG) parameters and carbon monoxide diffusion capacity (DLCO) in severe and very severe chronic obstructive pulmonary disease (COPD) cases, especially in cases with emphysema.

MATERIALS AND METHOD: Fifty four cases with severe and very severe COPD were evaluated. They were divided into two groups by randomizing as group I receiving salmeterol(S) / Fluticasone Propionate (FC) (200/2000 mcg) and group II receiving salmeterol (SAL) (200 mcg). The number acute exacerbations, emergency admissions in six months period and variations in the DLCO, PFT and ABG parameters between the beginning of therapy and the sixth month of therapy and number of acute exacerbation were investigated.

RESULTS: The mean age of the patients was 60,24 ±7,26 in group I and its was 57,08±7,82 in group 2. The number of acute COPD exacerbations and number of emergency admission significantly decreased in high dose inhaled steroid group. Also there was significant difference between the variations of values (as liters) of initial forced expiratory volume in the 1 second (FEV1), forced vital capacity (FVC) of the cases and the values derived at the sixth month of the therapy in two groups [FEV1 variation; group I=(0,118) and group II=(-0,019), p=(0,036); FVC(lt) variation; group I=(0,314) and group II=(0,030), p=(0,05)]. However, there was no positive significant difference between ABG and DLCO% values of two groups.

CONCLUSION: we demonstrated that use of high dose inhaled steroids in severe and very severe COPD significantly decreased the acute exacerbations and emergency admission of the COPD patients and also it resulted with significant increment in pulmonary function parameters.

P757

Respiratory Emergencies

IS INCREASED MEAN PLATELET VOLUME A RISK FACTOR IN PATIENTS WITH ACUTE PULMONARY EMBOLISM?

BO BILIR (1), EG ERSUNAN (2), KA KALKAN (2), YS YENİOCAK (3), GB GIAKOU (4)

1. emergency department, Recep Tayyip Erdogan University, Medical Faculty, rize, Turkey

2. emergency department, Recep Tayyip Erdogan University, Medical Faculty, rize, Turkey

3. Emergency Service, Haseki Training and Research Hospital, istanbul, Turkey

4. emergency department, Recep Tayyip Erdogan University, Medical Faculty, rize, Turkey

Corresponding author: Mr Ersunan Gökhan (gokhanersunan@gmail.com)

Key-words: Pulmonary embolism ; mean platelet volume ; platelet activation

BACKGROUND: Pulmonary Embolism (PE); obstruction of the pulmonary artery and its branches with different nature emerging clinical entity substances. The most common substance that causes blockage of veins and venous blood flow through the lungs, reaching the break and then thrombus.(1). Mean Platelet Volume (MPV) is an indicator of platelet activation, which has an important role in the pathophysiology of thrombosis (2). Therefore, increasing values of MPV pathogenesis role in thrombus is seen as a simple tool for monitoring oynağı different events.The purpose of this retrospective study was to compare MPV between the patients with PE and control subjects.

METHODS: Between the Emergency Department January and December 2011 of patients preliminary diagnosed with PE were included. Data were collected retrospectively from the patients medical records. The study group consisted of 42 patients with newly diagnosed acute PE. An age and gender control group consisted of 42 patients with normal findings. We compared the mean platelet volume in patients with PE and control participants.

RESULTS: There was no significant difference between the study and control groups in mean platelet volume (8.2±2.0 vs 8.8±1.4 fl, respectively; p>0.05). Age, gender and platelet count (p > 0.05) were statistically similar in both groups.

CONCLUSION: There was no significant difference in mean platelet volume between

patients with acute PE and the control group.Previous studies have demonstrated that platelet activation occurs in patients with acute PE (3). According to our result, we propose that mean platelet volume should not be considered as an index of acute PE.

P758

Respiratory Emergencies

A RARE CASE IN EMERGENCY DEPARTMENT: DECOMPRESSION SICKNESS

C Katı (1), HU Akdemir (1), L Duran (1), Y Şahin (1), F Çalıskan (1), C Şahin (2), B Türköz (1)

1. Emergency Department, Ondokuz Mayıs University Medical Faculty Hospital, Samsun, Turkey

2. Emergency Service, Samsun Training and Research Hospital, Samsun, Turkey

Corresponding author: Mr Akdemir Hızır Ufuk (hufukakdemir@hotmail.com)

Key-words: Decompression ; Hyperbaric oxygen ; Emergency department

Objective: The vast majority of dives are completed without incident. However, there are physiologic effects and injuries are secondary to pressure changes on the submerged human body and the breathing of compressed gas. The most common diving injuries: barotrauma of descent (otic, sinus, and pulmonary), barotrauma of ascent, [decompression sickness (DCS, "the bends") and arterial gas embolism], immersion pulmonary edema, oxygen toxicity, and nitrogen narcosis. We herein present a patient case with symptoms consistent with decompression sickness.

Case: A 20-year-old, previously healthy, male patient was referred to our emergency department with prediagnosis of intraabdominal organ perforation and decompression sickness from other hospital that he admitted with complaints of abdominal pain, loss of vision and altered mental status. There was a history of scuba diving in 7-8 m depth and there was an acute abdominal pain, loss of vision and altered mental status since he started toscubadiving 7 hours ago. We learned that he had a tonic seizure at the patient transportation to our department and diazem 10 mg was administered. He had complaints of nausea, vomiting, headache and loss of visual at admission to our department. In his physical examination, there was no abnormal finding without total right

blindness and abdominal rigidity. WBC: 35000/uL, Hb: 19.7 g/dL, plt: 305000/dL were found in his pertinent laboratory tests and the patient's arterial blood gas showed a pH of 7.29, a pCO₂ of 34 mmHg, a pO₂ of 79 mmHg, a HCO₃ of 16 mmol/L and an oxygen saturation of 95%. His ECG showed heart rate 100 beats/min and a sinus tachycardic rhythm. There was no prominent feature in his chest radiography (Image 1). In his direct abdominal radiography, there was no free air under the diaphragma (Image 2). There was no pathological findings in his performed abdominal ultrasonography. After general surgery consultation, upper and lower abdominal CT with oral-intravenous contrast was performed (Image 3). There was no pathological finding. There was no acute pathology according to general surgery. The brain CT of patient with altered mental status was unremarkable (Image 4). Neurology consultation was requested because of possibility of brain damage due to decompression sickness. To illuminate the patient clinic, brain diffusion magnetic resonance imaging (MRI) (Image 5) was performed after request of consulting physician from neurology. There was no limitation of acute diffusion. In patient's follow up, he was tachypneic and his oxygen saturation decreased, so thorax CT was performed. Thorax CT showed (Image 6, 7) free mediastinal air image that extends to neck region (pneumomediastinum) and its thickness was about 1 cm. There was a bilaterally pneumothorax in the apical and middle lobes of both lung and lingular segment (it was about 12 mm). In addition, minimal free air was observed in left major fissure. Therefore thoracic surgery consultation was requested. While he was followed up with O₂ treatment by thoracic surgery, bilaterally chest tube was inserted (Image 8) because of need of hyperbaric O₂ treatment. However after detection of total right blindness, ophthalmology consultation was requested. According to ophthalmological examination, swelling around the optic disc and appearance compatible with ischemia were detected and eye USG and optic coherence tomography (OCT) was performed. They showed normal findings. There was no additional advice without hyperbaric O₂ treatment by ophthalmology. The patient was referred to nearest center due to the need of hyperbaric O₂ treatment, because in our hospital there was no possibility for hyperbaric therapy.

Conclusions: Emergency physician should be able to think this diagnosis in patients who has a physical examination and imaging findings compatible with decompression sickness and should be able to manage the patient appropriately according to this diagnosis. After determining indications of hyperbaric O₂ treatment

P759

Respiratory Emergencies

ESOPHAGEAL FOREIGN BODY CAUSING ACUTE RESPIRATORY FAILURE

H. Hocagil, Ş. Ardic, EG. Gençer, Ö. Güneysel

Emergency Department, Dr. Lütfi Kırdar Training and Research Hospital, İstanbul, Türkiye

Corresponding author: Mme Hilal Hocagil (drhocagil@gmail.com)

Key-words: Esophageal foreign bodies ; Tracheal obstruction ; Respiratory failure

Introduction and objective: Foreign body aspiration is one of the most important causes of emergency admissions. Esophageal foreign bodies are commonly seen in especially pediatric patient populations. 28-68 % of the gastrointestinal foreign bodies are seen in esophagus (1). Because of the anatomical structures esophagus is the most common place of the foreign body obstruction (2).

We present a case that esophageal food plug caused external pressure and resulted in respiratory failure.

Case report: 6 year old boy brought to our hospital by ambulance. Major complaint was respiratory distress and failure to swallow. According to the information obtained from the family members and the ambulance team, his complaints was begun while eating meat. At the health care center that they admitted just after his complaints has begun; Heimlich maneuver was performed and tried to give oral liquids.

On the initial physical examination he was conscious, cooperative and oriented. At the time of the arrival his vital signs were as follows; blood pressure 90/50 mmHg, heart rate 130/minute, respiratory rate 10/minute, oxygen saturation 85 % at room air and Glasgow Coma Score was 15. He had inspiratory stridor and disability to speech. Because of the deterioration of respiratory and mental status rapid serial intubation has performed. Direct laryngoscopy revealed completely open tracheal passage. Although an esophageal foreign body (a piece of meat) that obstructing trachea by the external pressure was detected. Foreign body removed by the Magill forceps under the endoscopic visualization. On the cervical and thoracic CT scans no additional foreign body resembled. There was intraalveolar fluid collection in the both lower lobes spreading through the upward. Appearance thought to be because of liquid aspiration.

Discussion: Esophageal foreign bodies may cause tracheal obstruction and respiratory failure. Radiological findings are extremely important on the diagnosis. Therapeutic interventions should be performed as soon as possible following the diagnosis.

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P760

Respiratory Emergencies

EARLY PREDICTORS OF HOSPITAL ADMISSION IN EMERGENCY DEPARTMENT PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE

H Hedhli (1), S Souissi (1), K Mbarek (2), H Ghazali (1), Y Yahya (3), MA Cherif (1), M Chkir (1), B Bouhajja (1)

1. Emergency department, Regional Hospital, Ben Arous, Tunisia

2. Unit of pneumology, Regional Hospital, Ben Arous, Tunisia

3. Emergency department, Regional hospital, Ben Arous, Tunisia

Corresponding author: Mr Souissi Sami (samisouissi@yahoo.fr)

Key-words: COPD ; predictors ; hospitalization

Background :

The growing burden of COPD in the world is increasing the need for emergency departments (EDs) to manage acute exacerbations.

Early identifying the need for hospital admission for acute exacerbation of COPD in the ED episode of care has important clinical and organizational implications.

Objective:

The aim of this study was to identify early factors predictive of hospital admission in ED patients with COPD exacerbation.

Methods:

In a prospective monocenter cohort study, consecutive ED patients with COPD acute exacerbation were enrolled. Patients with respiratory distress on arrival who required mechanical ventilation were not included.

Patients characteristics, physiological data on arrival and ED management were compared between discharged and admitted patients.

Binary logistic regression analysis was used to examine factors predictive of hospital admission.

Results :

During nine months period (October 2011 - June 2012), 374 patients were enrolled. Mean age = 65 +/- 11 years, 80 % were males, 52 patients (14%) were hospitalized.

There was no significant difference between the two groups (admitted and discharged) regarding age, duration of the obstructive disease and dyspnoea grade in the stable state

Factors available on ED arrival associated with increased likelihood of admission were:

Male sex [Odds Ratio (OR), 2.28; 95 % confidential interval (CI), 1.17 – 4.41], signs of respiratory dysfunction: respiratory rate greater than 25 breaths per min (OR, 2.2; 95% CI, 1.42– 3.47), arterial oxygen saturation less than 90% (OR, 1.58; 95% CI, 1.03– 2.42), use of accessory muscles of ventilation (OR, 1.71; 95% CI, 1.09 – 2.68), heart rate greater than 100 beats per min (OR, 1.93, 95% CI, 1.28- 2.91), drowsiness (OR, 7.06, 95% CI, 1.87- 26.6) and pH < 7.38 (OR, 1.83; 95% CI, 1.1– 3.04).

Conclusion:

Streamlining the ED care of patients with COPD exacerbation by early identification of objective predictors of hospital admission may reduce the overcrowding of the ED and allows early and appropriate orientation of those patients.

P761

Respiratory Emergencies

RUPTURED LUNG HYDATID CYST AT PREGNANCY WHICH MIMICKING TENSION HYDROPNUMOTHORAX

CM TULAY (1), A CEYLAN (2), IE ÖZSOY (1)

1. THORACIC SURGERY, ŞANLIURFA EDUCATION AND RESEARCH HOSPITAL, ŞANLIURFA, Turkey

2. EMERGENCY DEPARTMENT, ŞANLIURFA EDUCATION AND RESEARCH HOSPITAL, ŞANLIURFA, Turkey

Corresponding author: Mr Tulay Cumhur (cumhurtulay@hotmail.com)

Key-words: hydatid cyst at pregnancy ; tension hydropneumothorax ; tachypnea

Respiratory failure and hemodynamic instability are responsible for up to 80% of the obstetric admissions to the ICU. We report an unusual case of a multigravida with ruptured pulmonary hydatid disease which mimicking tension hydropneumothorax. A 21-year-old multigravida, at 34 weeks of gestation, presented with syncope, vomiting and respiratory failure. She told us that the symptoms had been continued for 10 days. She had gone to some medical centers, but doctors told her about symptoms which could be related to last period of pregnancy. There were not any thoracic imaging up to now. Her physical examination revealed severe respiratory distress with a respiratory rate of 35/min, tachycardia of 160-183/min, fever of 38.0°C, blood pressure of 90/60 mmHg, no breath sounds at the left hemithorax. Oxygen saturation was 90% with facemask at 10 L/min. Chest X-ray taken on presentation to the referring hospital revealed huge air-fluid level which was surrounded by thick membrane at left hemithorax with sliding of trachea and heart to right hemithorax which mimicking tension hydropneumothorax. Toracentesis was made carefully to exclusion of hydropneumothorax and neither fluid nor air were aspirated from left hemithorax. A decision was made to proceed with caesarian section followed by left thoracotomy to save both the mother and the baby. Ruptured pulmonary hydatid cyst

should be considered in patients living in endemic areas with suggestive radiologic findings, especially during pregnancy.

P762

Respiratory Emergencies

THE ROLE OF NURSE ASSESSMENT IN CASE OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE

D Barna (1), C Barna (2), I Solomon (1), A Golea (1)

1. Emergency Department, Spitalul Clinic Judetean de Urgenta Cluj, Cluj Napoca, Romania
2. Internal Medicine, Spitalul Clinic de Urgență „Prof. Dr. Octavian Fodor”, Cluj Napoca, Romania

Corresponding author: Mr Barna Daniel (danibarna@gmail.com)

Key-words: COPD ; nurse ; assessment

Objective

Evaluation of the nurses role in case of patients with acute exacerbations of chronic obstructive pulmonary disease (COPD) in emergency department (ED).

Methods

It is a prospective, observational study over a period of three months, which comprise 40 patients with acute exacerbation of chronic obstructive pulmonary disease (AE COPD) received in Emergency Department Cluj Napoca, Romania. All the patients were adults, over 18 years old, accusing dyspnea as the main symptom in triage and were already diagnosed with COPD. We analysed historical data of patients, associated symptoms and clinical respiratory parameters during emergency therapy.

Results

Most of the patients were men, over 70 years old, and came from the rural side. The pathology associated with COPD was mainly cardiac. SpO2 was for 65% patients under 90% O2 in prehospital and when they left ED just 10 % of patients had under 90% O2 . 52% patients came with normal vital signs from prehospital area . The most used oxygenotherapy administration in prehospital was simple face mask, in case of 76% patients. 70% patients had hypoxia (PaO2: 23-75mmHg) and 42% had an abnormal PaCO2 value (46-90mmHg) at the arrival in ED. In the ED, the mainly oxygenotherapy used was through Venturi mask (92%) and only 25% of patients had indications for CPAP and benefited from it in ED.

Conclusions

1. Prehospital oxygen administration by nurses improves SpO2 value at admission in ED, but it is not in direct concordance with PaO2 value.
2. Choosing a proper method of oxygen administration improves the level of PaO2 and PaCO2.
3. This study is helpful in identifying proper nursing measures for adequate assessment of COPD patients.

P763

Respiratory Emergencies

VALUE OF CARDIAC TROPONIN I FOR PREDICTING IN-HOSPITAL OCCURRENCE OF HYPOTENSION IN HEMODYNAMICALLY STABLE PATIENTS WITH ACUTE PULMONARY EMBOLISM

WY Kim, MH Lee, CH Sohn

Emergency Department, Asan Medical Center, Seoul, Korea, (South) Republic of

Corresponding author: Mr Sohn Chang Hwan (schwan97@gmail.com)

Key-words: pulmonary embolism ; hemodynamically stable ; troponin I

Background: Although cardiac troponin I (cTnI) elevation during acute pulmonary embolism (PE) predicts in-hospital death, the role of cTnI measured at emergency department (ED) admission can predict occurrence of in-hospital hypotension, is unknown. The aim of the present study was to evaluate whether an increased level of cTnI can predict the in-hospital development of hypotension (SBP <90 mmHg) within 24 h, which may benefit from intensive monitoring and treatment, in hemodynamically stable patients with acute PE. **Methods:** Study subjects included all consecutive patients with acute PE, as diagnosed by chest computed tomography angiography, in the ED from January 2009 through December 2011. All patients underwent cTnI tests at ED admission and were divided into two groups based on the occurrence of hypotension within 24 h.

Results: Of 237 stable patients with acute PE admitted in ED during the study period, 188 patients were included. Within 24 h of hospitalization, 13 (6.9%) patients developed hypotension. The mean value of serum cTnI was significantly higher in patients developed hypotension than in patients did not (0.98 vs. 0.10 ng/mL, $P < 0.00$). The prevalence of thrombolysis, 28 day mortality and 6 month mortality were significantly higher in patients who developed hypotension. Moreover, elevated level of cTnI (>0.05 ng/mL) on admission was independently predictor for developing hypotension within 24h in patients with stable acute PE at the time of ED admission (odds ratio 11.0, 95% CI 2.8–43.8, $p = 0.00$).

Conclusions: In stable patients with acute PE, an elevated cTnI can predict the in-hospital development of hypotension within 24 h. This finding may be of value in selecting patients who benefit from intensive clinical surveillance and escalated treatment.

P764

Respiratory Emergencies

MICRORNA EXPRESSION PROFILE IN A MURINE MODEL OF OLEIC ACID-INDUCED LUNG INJURY

S Hong (1), S Jeong (2), I Kim (2), SM Lee (3)

1. Dept of Emergency Medicine, Daejeon St Mary's Hospital, Daejeon, Korea, (South) Republic of
2. Dept of Emergency Medicine, Daejeon St Mary's Hospital, Daejeon, Korea, (South) Republic of
3. Dept of Anaesthesia and Pain Medicine, Daejeon St Mary's Hospital, Daejeon, Korea, (South) Republic of

Corresponding author: Mr Hong Sungyup (emhong@gmail.com)

Key-words: Acute lung injury ; Oleic acid ; MicroRNA

Introduction: Oleic acid (OA) essential fatty acid may initiate and/or exacerbate acute lung injury (ALI) via a process like pulmonary thromboembolism (PTE). It has direct toxicity to vascular and alveolar wall, activate immune system and eicosanoid pathway (EP). The mechanisms of ALI by oleic acid is not completely understood. MicroRNAs are short, non-coding RNAs that are recognized as important regulators of gene expression. They have important role in regulation of inflammation. In this study we examined the effect of oleic acid on microRNA expression in the lungs.

METHODS: 20mg/kg OA diluted with 25% ethyl alcohol was injected to male SD rats through tail vein for 20 min. Control mice underwent 25% ethyl alcohol injection. Rats were sacrificed 6 or 24 hours after ALI. Total RNA was extracted from whole lungs. Lactate dehydrogenase (LDH), leukocyte count was estimated from bronchoalveolar lavage fluid. Histologic exam was done. The expression profile of 1020 microRNAs was assessed using microRNA microarrays. The results were validated with mirVana qRT-PCR miRNA detection Kit and qRT-PCR primer sets.

RESULTS: We found seven microRNAs differentially expressed in rats exposed to OA compared to controls. The expression of five microRNAs was increased by two fold after 6 hours, and, in two of them, a decrease of at least 50% was apparent. In the same samples increased levels of LDH, leukocyte counts, histologic changes. Among the microRNAs identified to be differentially expressed several known to be associated with regulation of inflammation.

CONCLUSION: Our results show that OA is associated with altered expression in the lung of several microRNAs, including some known to be involved in EP. Therefore microRNAs may play an important role in acute lung injury resulting from OA.

P765

Respiratory Emergencies

PULMONARY EMBOLI WHICH IS IMPROVING IN THE PATIENT UNDER TREATMENT OF ANTIKOAGULAN

E Kadioglu (1), S Karaman (2), B İşık (3), E Ozer Unal (4)

1. Department of Emergency Medicine, D.P.Ü. Evliya Celebi Training and Research Hospital, Kütahya, Turkey
2. Department of Emergency Medicine, Erzurum Regional Training and Research Hospital, Erzurum, Turkey
3. Department of Emergency Medicine, Aydın State Hospital, Aydın, Turkey
4. Department of Emergency Medicine, D.P.Ü. Evliya Celebi Training and Research Hospital, Kütahya, Turkey

Corresponding author: Mme Kadioglu Emine (dreminekadioglu@gmail.com)

Key-words: antikoagulan ; pulmonary ; emboli

INTRODUCTION AND PURPOSE : Incidence of PE in the U.S.A. is 650.000/year. Each year over 2000.000 patient die. The deaths of 1/3 happen in the first hour. Despite the treatment over 16.000 patients die. The mortality rate of patients who are treated due to PE is %2-10. More than %50 of PE are diagnosed in autopsy. Before 50 years of age PE often happens in men more than women. Most of the reasons of PE is thromboemboli. Pulmonary thrombosis are rare. DVT of sub-extremities is the reason of events and this especially relates to the central venous catheter. Other resources of PE include pelvic vein thrombosis, right heart thrombosis, and amniotic or oil emboli. Septic emboli can also be seen.

CASE : Forty-eight-year old woman patient applied to Emergency Service with complaining about a qualified severe chest pain which began nearly 1 hour before. In her background it was learnt that hypertension and mitral regurgitation was made approximately one month before. Patient used to use aspirin 100mg 1x1, 1x1 coumadin 5mg, diltiazem 5 plus 1x1 regularly. In physical examination, blood pressure was 150/90 mmHg, heart rate was 80/minute (rhythmic), respiration number was 20 / minute, fever was 36.7 °C. The patient's condition was good, conscious was clear, oriented and cooperative. In patient's laboratory investigation, whose systematic examination and neurological examination was in the normal limits, Hb 7.8 g / dL, Hct 23.5%, WBC 6,800 / mL, Plt 240.000 / mL, d-dimer 845 UG / L, there is no found any pathology in her biochemical investigation, APTT 73.2 sec, PTZ 46.5 sec, INR was measured as 4.00. In patient's electrocardiogram, heart rate was approximately 93/minutes and rhythm was in the normal sinus rhythm. Even though patient's PA-AC Function Test was determined in the normal limits, in her computerized tomography which was taken from on the purpose of advanced investigation, filling defect, which was compatible with the emboli in left main pulmonary artery, was detected. On the purpose of advanced investigation and treatment the patient was sent to the Chest Diseases Service.

RESULT : In the diagnosis of pulmonary emboli (PE) ; clinical suspicion, aware of predisposing factors, tests used in the diagnosis of PE

are necessary to interpret together. In unexplained chest pain, dyspnea, or the existence of taşipne should always be thought the possibility of PE. The risk of emboli is very high in patients with mechanic prostate cardiac valve. Even in patients under treatment with appropriate antikoagulan this ratio is about %2-4. Emergency doctor thinks emboli in the patients receiving treatment antikoagulan in anemnez and/or physical examinations findings and he/she must reach definite diagnosis as using further examine methods.

P766

Respiratory Emergencies

PARAOXONASE-1 GENE IN PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE INVESTIGATION Q192R AND L55M POLYMORPHISMS

S. Gurbuz (1), M. Yıldız (1), M. Kara (2), K. Kargun (2), M. Gurger (1), M. Atescelik (3), OD. Alatas (1)

1. Emergency Department, Firat University, Elazığ, Turkey
2. Department of Genetic, Firat University, Elazığ, Turkey
3. Emergency Department, Numune Hospital, Sivas, Turkey

Corresponding author: Mr Gurbuz Sukru (doktorsukru@yahoo.com)

Key-words: COPD ; paraoxonase ; polymorphism

The effect of increased oxidative stress in development of chronic obstructive pulmonary disease (COPD) is well known. One of the antioxidative systems against oxidative stress in human body is paraoxonase (PON) enzyme that protects low density lipoproteins (LDL) against oxidation. In this study we aimed to search the polymorphisms on PON1, Q192R, L55M genes of patients with COPD.

The DNAs extraction was obtained from blood samples of the 50 patients pastly diagnosed with COPD and 50 patients as control group who were presented to emergency clinic. Genotypes were obtained with polymerase chain reaction (PCR) and Alw I and Hsp92II restriction enzymes were used for Q192R and L55M polymorphisms, respectively. Analysis of data was done with Chi-Square and Fisher's exact tests.

A statistically significant difference regarding Q192R polymorphism was found between COPD patients and control group ($P = 0.05$). There was no statistically significant difference about L55M polymorphisms in patient and control groups ($P > 0.05$). There was a significant correlation with Q192R polymorphism on PON1 gene and cigarette usage however other risk factors did not show significant correlation with this polymorphism. Though L55M polymorphism had significant correlation with family history and tuberculosis, no significant correlation was found with other risk factors.

The importance of our study is due to it is the first study in literature searching Q192R and L55M polymorphisms on PON1 gene in COPD patients. We believe that more studies are needed in this subject.

P767

Shock

COMPARISON OF ULTRASONOGRAPHIC METHODS AS A MARKER OF BLOOD LOSS

P.H. Kara (1), E.E. Unler (1), O. Limon (1), N. Vandenberg (1), O. Yavaş (2), K. Kayayurt (2), B. Uzun (3)

1. Emergency Department, İzmir Katip Çelebi University, Atatürk Research and Training Hospital, İzmir, Turkey

2. Emergency Department, Rize State Hospital, Rize, Turkey
3. Blood center, İzmir Katip Çelebi University, Atatürk Research and Training Hospital, İzmir, Turkey

Corresponding author: Melle Kara Pinar Hanife (hpinarkara@hotmail.com)

Key-words: IVC collapse index ; RVOT fractional shortening ; blood loss

Background: We aimed to assess the correlation of right ventricular outflow tract (RVOT) fractional shortening and inferior vena cava (IVC) collapse index for estimating blood loss in healthy volunteers. **Methods:** The values of the sonographic IVC collapse index and RVOT fractional shortening were compared prior to and after blood donation. The correlations between the mean arterial pressure (MAP), pulse rate, IVC collapse index and RVOT fractional shortening were analysed using SPSS version 15.0 and G power version 3.1.

Results: Fifty-five consecutive blood donor participants with a mean age of 36.38 ± 8.87 years (%95 CI 33.98-38.85) were recruited for this study. Six volunteers had orthostatic hypotension after blood donation. The percent change in RVOT fractional shortening and MAP yielded a Pearson cc of 0.342 ($p=0.011$). The percent change in the IVC collapse index and pulse rate revealed a Pearson cc of -0.150 ($p=0.273$). The percent change in the IVC collapse index and MAP yielded Pearson cc of -0.078 ($p=0.572$). The percent change in MAP and pulse rate revealed Pearson cc of -0.067 ($p=0.628$). RVOT fractional shortening and the IVC collapse index were well correlated in the group with orthostatic hypotension after blood donation (Pearson cc:0.48) as well as pulse rate and MAP (0.38 and 0.83 for RVOT; 0.53 and 0.40 for IVC, respectively)

Conclusion: Although the IVC collapse index is a valuable parameter to determine of hypovolemia, RVOT can be an early marker for the detection of orthostatic hypotension and a valuable diagnostic test in trauma.

P768

Shock

PENETRATING HEART INJURIES AND COMMON DIFFICULTIES ENCOUNTERED DURING EMERGENCY SURGERY

M Tokur (1), M Ergin (2), C Kurkcuglu (3)

1. Thoracic Surgery Department, Sutcu Imam University Medicine Faculty, Kahramanmaraş, Turkey
2. Emergency Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey
3. Thoracic Surgery Department, Harran University Medicine Faculty, Sanlı Urfa, Turkey

Corresponding author: Mr Ergin Mehmet (drmehtemtergin@gmail.com)

Key-words: Heart Injury ; Penetrating Trauma ; Emergency Surgery

BACKGROUND: Penetrating heart injuries are seldom but are highly lethal traumas. In-house cardiac surgery teams and adequate technical equipment are generally not found outside of major health institutions in Turkey. We evaluate the diagnosis and treatment of penetrating heart injuries, the difficulties encountered during surgical treatment of such conditions as well as problems faced by hospitals with limited cardiac surgery manpower and lacking adequate equipment to deal with such incidents. **METHODS:** The diagnosis of 'penetrating heart injury' between 1 January 2008 and 31 December 2009 was scanned through hospital data processing system. Eleven patients presenting to Kahramanmaraş State Hospital were retrospectively evaluated. **RESULTS:** Three (26%) of the patients presented with signs of hypovolemia, four (37%) with progressive shock and four

(37%) with shallow respiration in addition to progressive shock. The etiology of the injuries were edged and sharp objects in 9 (82%) cases, puncture from a fractured sternum and/or ribs in 2 (18%) case. The total mortality was 63% in our case series. **CONCLUSION:** Cardiac injuries are the types of trauma that require rapid surgical intervention. However, combination of a lack of specialized surgical teams and/or the time for rapid intervention at the initial health care facility reduces the possibility of surviving patient.

P769

Shock

CHANGE OF HEMOPEXIN LEVEL IS ASSOCIATED WITH THE SEVERITY OF SEPSIS IN ENDOTOXEMIC RAT MODEL AND THE OUTCOME OF SEPTIC PATIENTS.

SY Park, D Suh, JY Jung, DK Kim, YH Kwak

Emergency Medicine, Seoul National University College of Medicine, Seoul, Korea, (South Republic of

Corresponding author: Mr Suh Dongbum (dongbumes@naver.com)

Key-words: Septic shock ; Hemopexin ; Mortality

Background: Sepsis is a pathologic condition do not control systemic inflammatory response to infection and organ damage. Free heme is potent pro-oxidant in case of exposure to blood and accelerates tissue damage with septic condition. Hemopexin is a serum protein for eliminating free heme by binding directly heme. In sepsis condition, serum hemopexin levels are correlated to patient's prognosis in some study, but there is little evidence about that.

Purpose: The purpose of this study is to identify the prognostic power of hemopexin from clinical study in septic shock patients and to identify differences in change of serum hemopexin level pursuant to the sepsis severity from pre-clinical study.

Methods: 1. clinical study : A prospective, cohort study conducted in an emergency intensive care unit (EICU) of a tertiary referral hospital. We enrolled consecutive patients who were admitted to the EICU with septic shock from February 2006 to May 2010. After collecting datas with respect to demographic findings, diagnosis, APACHE II scores, basal lactic acid and 28 days mortality, the enrolled patients were divided into two groups according to the mortality, 28 days survival groups(survivors) and 28 days death groups(non-survivors). We measured septic enrolled patients' serum hemopexin levels at the time of admission to the ICU 2. pre-clinical study : Male Sprague-Dawley rats (300-400g) were used. Rats were categorized into three groups ; 1) Control (n=6, normal saline), 2) low grade sepsis group (LGS group, n=18, 5mg/kg LPS), 3) high grade sepsis group (HGS group, n=20, 10mg/kg LPS). Rats of each group were infused saline, LPS and then we checked the serum hemopexin levels, TNF- α , IL-6 by time course (1, 3, 6 hrs).

Results: 1. clinical study : Among 142 enrolled patients, 100 were survivors and 42 were non-survivors. The APACHE II score and initial lactic acid level of survivors were lower than non survivors. (respectively $p < 0.001$, $p < 0.001$) Initial serum hemopexin level of non-survivors was lower than that of non-survivors ($p < 0.001$). The AUC of the hemopexin was 0.754 (95% confidence interval, 0.670 - 0.839). In multivariate logistic regression, hemopexin levels have inverse relationship with 28 days mortality. ($p = 0.032$) 2. pre-clinical study : There are significant differences in change in serum hemopexin levels between HGS group and LGS group. ($p = 0.013$) Especially, serum hemopexin levels of HGS groups at 6 hours are significant lower than LGS group. ($p=0.002$) Also, there are significant differences in change in serum TNF- α levels between two groups. ($p < 0.001$) Serum TNF- α levels of HGS groups at 3, 6

hours are significant higher than LGS group. ($p = 0.002$ 3h, $p = 0.002$ 6h) Finally, there are significant differences in change in serum IL-6 levels between two groups. ($p < 0.001$) Serum IL-6 levels of HGS groups at 1, 3, 6 hours are significant higher than LGS group. ($p = 0.026$ 1h, $p = 0.026$ 3h, $p = 0.002$ 6h)

Conclusion: Initial low serum hemopexin concentration is significantly associated with higher 28 days mortality of patients with septic shock. In pre-clinical study, there are significant in change of serum hemopexin levels pursuant to the sepsis severity. Especially, serum hemopexin levels of HGS groups at 6 hours are significant lower than LGS group after LPS infusion.

P770

Shock

JUGULAR INDEX: A NEW NON-INVASIVE METHOD FOR EVALUATION OF PATIENTS WITH GASTROINTESTINAL HEMORRHAGE

NB Akıllı (1), R Köylü (1), H Mutlu (1), E Akıncı (1), G Güngör (2), B Cander (1)

1. emergency department, Konya Training and Research Hospital, konya, Turkey

2. Gastroenterology department, Konya Training and Research Hospital, konya, Turks and Caicos Islands

Corresponding author: Mr Akıllı Nazire Belgin (drbelginakilli@hotmail.com)

Key-words: jugular index ; gastrointestinal hemorrhage ; shock

INTRODUCTION: Gastrointestinal hemorrhage is one of the most important medical emergencies. It can lead serious hemorrhagic shock as a result of acute loss of blood. An enough definition of risks can not be estimated unless an endoscopic attempt is made, although some of the bad prognostic criteria have been determined. Therefore, we aimed to investigate any correlations between acute loss of blood either with diameter of jugular vena and with jugular index (Jugular Index=JI=respiration driven alterational percentage of diameter of jugular vena to area of jugular vena) with other shock parameters or involvement with an ongoing hemorrhage and endoscopic classification or any connection with mortality in patients with gastrointestinal hemorrhage.

METHODS: Patients who submitted to the Emergency Department of Konya Education and Research Hospital with a doubt of gastrointestinal hemorrhage were taken for this study. And the control group was formed from healthy volunteers. All the patients under 18 years old or those administered with IV fluid/blood and directed from another unit or those suffering from heart failure, chronic pulmoner disease, cor pulmonale, cardiac valvular disease, radiotheraped on neck, operated or profound venous thrombosis in upper extremite were excluded. During a respiratory cycle, both diameter and area of internal jugular venous measurements were recorded before IV fluid administration at the end of expirium and inspirium in the healthy volunteers and patients. Then, JI was calculated. These measurements were made by two experienced expert with double blind technic and average value of them was recorded. At the hospital admission, values for tension arteriel, pulse, shock index, haemoglobin, haemotocrit, urea, creatinin, lactate and base access were recorded. Endoscopy was made to the patient simultaneously. All the figures from endoscopic results, endoscopic procedures, hospitalization period of the patient, requirement for transfusion, undergone an operation or not, mortality rates were recorded and then compared with jugular venous diameter and JI.

RESULTS: The number of healthy volunteers and patients with gastrointestinal hemorrhage in the study were respectively 30 and 26. Average ages were similar to each other for both groups($p >$

0,05). Systolic tension, pulse, shock index and JI were significantly different between these two groups. The diameter and area values were statistically different from each other except the transverse diameter and area of jugular vein during the period of expirium. In the group of gastrointestinal hemorrhage, no correlation between jugular venous diameter and area values and JI arrival tension arterial, pulse, haemoglobin, urea, lactate were detected ($p > 0,05$). Shock index was found to be correlated with JI of transvers diameter, JI of AP diameter and transvers diameter during inspirium ($p < 0,05$, $r=0,41$, $0,45$ ve $0,40$). While no relevance was observed between JI, diameter and hospitalization periods, amount of transfusion was found correlated with AP diameter value in inspirium and AP diameter, JI, expirium diameter and area values in both inspirium and expirium ($p < 0,05$, $r=0,51$, $0,51$, $0,66$, $0,52$, $0,62$). Additionally, area, diameter and JI measurements were not correlated by Rockall scoring, a correlation in AP diameter was noted by JI Forrest classification ($p < 0,05$, $r=43$). No correlation was found for the lactate values and JI Forrest classification ($p > 0,05$). Only two patient were died, the relationship between jugular venous diameter, area and JI with the mortality were not evaluated.

CONCLUSION: In a previous study carried out on blood donors who have been used as class-I haemorrhagic shock model, measurements from JI, jugular venous diameter and area were suggested to be indicators for acute blood loss and state of volume. If so, this pilot study supports this hypothesis. Correlations with amount of transfusion and especially correlation of AP diameters, JI by forrest classification could guide the clinician on evaluation of a patient with acute blood loss and active hemorrhage just on arrival as a simply applicable and a non-invasive method. Apparently JI diameter and area seem to be more advantageous since lactate and shock index have no correlation with the parameters above. New studies employing larger patient groups are needed.

P771 Shock

THE ISSS STUDY

A. Navío (1), F. Ayuso (2), E. Alvaro (3), M. Ayuso (1), C. Gargallo (4), M. Cuesta (5), I. Gil (6), E. Gonzalez de Linares (7), P. Guallar (8), C. Martin (9), O. Ortigosa (10), G. Palacios (11), R. Perales (12), A. Pérez (11), M. Riesco (13), A. Rodríguez

1. Emergency Department, La Paz Hospital, Madrid, Spain
2. SUMMA 112, Pre-hospital Emergency, Madrid, Spain
3. Emergency Department La Fe, Hospital, Valencia, Spain
4. Emergency Department, Dr. Peset Hospital, Valencia, Spain
5. Emergency Department, Cruces Hospital, Bilbao, Spain
6. Emergency Department, Reina Sofia Hospital, Murcia, Spain
7. Emergency Department, Valdecilla Hospital, Santander, Spain
8. Emergency Department, Soria Hospital, Castilla Leon, Spain
9. Emergency Department San Pedro de Alcántara Hospital, Cáceres, Spain
10. Emergency Department, Miguel Servet Hospital, Zaragoza, Spain
11. Emergency Department, Calahorra Hospital, La Rioja, Spain
12. Emergency Department, Albacete hospital, Castilla la Mancha, Spain
13. Emergency Department, Salamanca Hospital, Castilla Leon, Spain
14. Emergency Department, Puerta del Mar Hospital, Cadiz, Spain
15. Emergency Department, Reina Sofia Hospital, Córdoba, Spain.

Corresponding author: Mme Ana Navío (navio.ana@gmail.com)

Key-words: SHOCK, SCORE, TIME ; EMERGENCY DEPARTMENT, DYNAMICS ; MORTALITY, MORBIDITY, LIFE

Shock means generalized inadequacy of blood flow throughout the body to the extent that the tissues are damaged because too little flow, especially too little delivery of oxygen and other nutrients to the tissue cells.

The mortality of the patient's in shock is estimated between 40 and 80 % this percentage change with the etiology, severity and the speed in start the treatment of the shock and its cause.

In the shock, several inflammatory responses are triggered; these responses will determine the prognosis. It is why the time that the patient is in shock is vital for his/her evolution: the sooner, the emergency physicians diagnosis the shock, the better for the patient.

This way to treat the patient in shock is against our normal practice, first diagnosis and after treatment but the stabilization of the patient's vital signs is a priority in these kind of patients so the initial management of the patient in shock must be directed to stabilize the vital signs even before we know the cause of the shock and at the same time, we should perform any test that can confirm the cause of the shock to be able to treat it.

The organic response to a shock will try to revert the effect of the hypo perfusion, perhaps when the hemodynamics parameters, we are used to manage with patients in shock, at the emergency department were between normal intervals. For that the body activated some compensatory physiologic mechanisms to improve the cardiac index, the blood pressure and the priority.

Some of these mechanisms are: increase of the heart rate and the cardiac contractibility, systemic arterial vasoconstriction, selective venous vasoconstriction of the spleen, kidneys and striated muscle. Due to some hormonal effect, there is water and salt retention by the kidneys, There is a increment of the glucose and lipids availability and release of multiple substances responsible for the inflammatory changes. When we are unable of reverting the hypo perfusion effects or these effects have been affecting the organs for long time, the dysfunctions of the organs become irreversible.

The aim of the initial resuscitation of the shocked patient in the Emergency department is reduce the damage provoked by the hypo perfusion, trying of improve the vital signs as soon as possible and at the same time treat the cause of the shock.

There are different ways to classify the causes of the shock; a simple way is classified it in 3 types: hypovolemic shock, shock due to vasodilatation and cardiogenic shock. In the two first kind of shock there is an inadequate venous return to the heart. This inadequate return can be due to a reduction of the blood, (hypovolemic shock) as in hemorrhagic shock or in dehydration or due to vasodilatation or loss of vascular tone, (septic, anaphylactic, neurogenic and toxic shocks, and the terminal phase of any shock).

The cardiogenic shock is due to a failure of the cardiac pump, it can be provoked by, loss of miocardic contractibility, reduction of the end of diastolic volume, dysrhythmias or reduction of the flow, (pulmonary thrombus embolism, cardiac tamponate, obstructive valvulopathies).

At the moment we do not have a precise clinical definition of when a patient is in shock, as well we do not have scales to evaluate the evolution of the shocked patient and his/her prognosis.

We know that when the symptoms are obvious we can do the diagnosis of shock easily, but it can happen to late, we do not know when the shock starts. That is why there are several kind of scales and evaluations and the differences between clinical trials on treatments which have failed after working in experimental models, but in these models we knew when the shock started.

Objectives

- To create a simple scale, based in clinical and physiologic signs, and laboratory test to know the initial severity and the response to the treatment and repeat at time of contact with the patient, six and twenty for hours later, because, everything in the shock syndrome is dynamic.

There is a prospective, observational, study in which collaborate, the following countries: Argentina, Colombia, Venezuela, Costa Rica, México, Paraguay and Spain.

The statistical treatment is gone begun July the first, by a team, which has nothing to do with the Spanish Group of Shock. Because different events, some of the countries, cannot contribute with the subjects we estimated, at the beginning of the study, and as the international coordinator of the study, we have decided to make the validation of the score, by the Argentine group. Of course, it would be amazing, to make this kind of study with European countries and see if there were differences.

P772

Shock

THE EFFECTS OF $\alpha 1$ -RECEPTORS ON THE AREAL-DEPENDENT AUTOREGULATION OF CEREBRAL BLOOD FLOW (CBF)

S. Bischoff (1), R. Schiffner (2), F. Rakers (3), S. Rupprecht (3), H. Schubert (1), M. Schwab (3)

1. Institute for Animal Sciences and Welfare, Univ. Hospital of Friedrich Schiller Univ., Jena, Germany
2. Accident and Emergency Dept., Univ. Hospital of Friedrich Schiller Univ., Jena, Germany
3. Neurology, Univ. Hospital of Friedrich Schiller Univ., Jena, Germany

Corresponding author: Mr Schiffner Rene (rene.schiffner@med.uni-jena.de)

Key-words: Cerebral Blood Flow (CBF) ; Redistribution ; severe haemorrhage

Introduction:

In previous studies during an umbilical cord occlusion (UCO) in fetal sheep (Fig. 1) and at a controlled hypovolemia in adult sheep (Fig. 2) showed a distribution of an areal specific autoregulation of Cerebral Blood Flow (CBF). That's contrary to the previous knowledge. We demonstrate that a redistribution of CBF exists. The microperfusion of the cerebral cortex in favor of phylogenetically older regions (thalamus) exists ($p < 0,05$). Hypothesis: $\alpha 1$ -receptors are involved in cerebral autoregulation during a controlled hypovolemia and areal distribution specific.

Method:

2 sheep were instrumented under general anesthesia and provided with central catheters. Laser Doppler Flow probes were implanted in the cortex and subcortex after small trepanation for the continuous analysis of the CBF changes. A controlled severe haemorrhage was induced by intravenous administration of a selective $\alpha 1$ -receptor antagonist (urapidil) by the removal of 40% of estimated total blood volume.

The density of $\alpha 1$ -receptors in cerebral arterioles were examined with an immunohistochemical workup.

Results:

Hypovolemia in adult sheep during severe haemorrhagic shock with selective $\alpha 1$ -receptor antagonist (urapidil) leads to a decrease in CBF in the parietal cortex and in the subcortex, $n = 2$, MW (Fig. 3)

In accordance with the decreased CBF in the cortex but not in the subcortex, during UCO is the distribution density of the $\alpha 1$ -receptors in fetal sheep in the cortex significantly higher than in the subcortex ($p < 0,05$).

Conclusion:

The detectable areal-dependent autoregulation of cerebral blood flow capacity can be explained by a cerebral areal $\alpha 1$ -receptor-dependent stocking. Further immunohistochemical and biochemical studies are needed to understand this phenomenon better. Furthermore, this finding has a direct impact on the use of catecholamines in emergency and critical care medicine.

P773

Shock

EPIDEMIOLOGIC FEATURE AND OUTCOMES OF EMERGENCY PATIENTS MANAGED IN THE RESUSCITATION ROOM

HK Choi, MJ Choi, MJ Choi, MY Kim, JY Lee, IH Park, IH Park, SD Shin

Emergency Department, Seoul National University Hospital, Seoul, Korea, (South) Republic of

Corresponding author: Melle Lee Jiyeon (fourfood@naver.com)

Key-words: Resuscitation ; mortality ; cardiac arrest

Objectives

The resuscitation room is the critical space equipped with medical devices and staffed with trained professional providers for emergency care for critically ill patients. This study aimed to investigate the epidemiologic features and outcomes of emergency patients managed in the resuscitation room.

Methods

Emergency patients with level 1 emergency severity index were enrolled from Jan. 2009 to Dec. 2011, who were managed in the resuscitation room in an urban, tertiary, academic hospital emergency department. Data were collected from electronic medical record system for demographics and designed resuscitation room registry (RRR) for specific risk factors for patients managed in the room which were recorded by emergency registered special nursing staffs.

We classified patients with emergency condition groups; out-of-hospital cardiac arrest (OHCA), emergency department cardiac arrest (EDCA), neurologic emergency (NE) (altered mentality), medical emergency (ME) (shock and respiratory failure), and multiple trauma (MT). Potential risk factors were age, gender, ambulance use, injury or disease, systolic blood pressure, respiratory rate, and mental status (AVPU).

Primary outcome was hospital mortality. Secondary outcome was ED mortality. We compared the demographics and outcomes by emergency condition groups. Adjusted odds ratios (ORs) and 95% confidence intervals (95% CIs) for outcomes were calculated adjusting for potential risk factors.

Results

Eligible population was 2,543, excluding less than 15 years (46,572), non-RRR group (112,028), and death on arrival patients (556). Of these, OHCA was 230 (9.0%), EDCA 97 (3.8%), NE 525 (20.6%), ME 1,434 (56.4%), and MT 257 (10.1%), respectively. ED mortality was 4.6% for total group, 32.6% for OHCA, 25.8% for EDCA, 1.7% for NE, 0.4% for ME, and 0.8% for MT group, respectively. Hospital mortality was 16.1% for total group, 51.3% for OHCA, 57.7% for EDCA, 10.7% for NE, 10.8% for ME, and 9.3% for MT group, respectively. Adjusted OR (95% CI) for hospital mortality was 4.13 (2.28-7.46) in EDCA, 0.15 (0.09-0.23) in NE, 0.16 (0.11-0.25) in ME, 0.14 (0.07-0.27) in MT compared with OHCA group, respectively.

Conclusion

ED and hospital mortality for emergency patients managed in the resuscitation room was 4.6% and 16.1%. EDCA showed significantly higher hospital mortality while NE, ME, and MT group showed significantly lower hospital mortality than OHCA.

P774

Shock

ANAPHYLAXIS IN EMERGENCY DEPARTMENT: FACTORS ASSOCIATED WITH SHOCK

S Kooli, S Souissi, NE Noura, S Bellili, N Laamouri, S Chiboub, A Raddaoui, B Bouhajja

Emergency department, Regional Hospital, Ben Arous, Tunisia

Corresponding author: Mr Souissi Sami (samisouissi@yahoo.fr)

Key-words: anaphylaxis ; shock ; emergency

Anaphylaxis in emergency department: factors associated with shock

Background: The aim of this study was to investigate the clinical characteristics and the factors associated with anaphylactic shock in anaphylaxis.

Methods: Data were prospectively collected from patients with anaphylaxis for 2 years.

Study (June 2010 – May 2012).

Subjects were enrolled if the diagnosis of anaphylaxis was retained on the criteria proposed by Simpson and al [1]. All the study subjects were divided into shock and nonshock groups.

Anaphylactic shock is diagnosed in case of Systolic blood pressure lower than 90 mmHg requiring the use of intravenous adrenaline.

Results: 186 patients were included. The mean age was 41 +/- 15 years old, and females comprised 116 patients (62%). There were 46 patients (25 %) in the shock group and 140 patients in the nonshock group.

There was no difference in age, sex and comorbidities between the two groups.

Most frequent Causes of anaphylaxis were drugs in the shock group (76 %), drugs and food in the nonshock group (respectively 55 %, 35%).

Antibiotics were the most common cause of drug induced anaphylaxis in the shock group (77%). Nonsteroidal anti-inflammatory drugs were most frequent in nonshock group 32% vs 11% in shock group.

Factors associated with the anaphylactic shock were: previous episode of anaphylaxis (OR, 1.85; 95% CI, 1.09 – 3.07), antibiotic drugs (OR, 2.39; 95% CI, 1.24 – 4.61), parenteral route of administration of allergen (OR, 4.38; 95% CI, 1.87 – 10.27) and neurological symptoms at admission (OR, 3.56; 95% CI, 1.16 – 10.85).

Conclusion: patients with anaphylaxis induced by antibiotic drugs administered parenterally and which have neurological symptoms at admission were at risk for the development of shock. Early recognition of anaphylactic shock by physicians in the ED is critical for adequate treatment.

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P775

Shock

MEDICAL CLINICAL MULTITRAUMA PATIENTS ADMITTED TO INVASIVE LABORATORY VALUES AND THE TRADITIONAL NON-INVASIVE ASSESSMENT OF THE POTENTIAL BLOOD LOSS COMPARISON OF THE MEASURED LABORATORY VALUES

E Kadioglu (1), S Karaman (2), B Işık (3)

1. Department of Emergency Medicine, D.P.Ü. Evliya Çelebi Training and Research Hospital, Kütahya, Turkey

2. Department of Emergency Medicine, Erzurum Regional Training and Research Hospital, Erzurum, Turkey

3. Department of Emergency Medicine, Aydın State Hospital, Aydın, Turkey

Corresponding author: Mme Kadioglu Emine (dreminekadioglu@gmail.com)

Key-words: trauma ; bleeding ; pulse of hemoglobin

Trauma takes place in the causes of the important among the major causes of mortality and morbidity in a productive period of population. However, it brings a serious burden on the country's economy formed by loss of manpower and financial losses brought. Trauma patients with occult (silent) bleeding in the detection and exclusion is the difficult and error-prone business emergency service. More common in emergency departments, and the effective use of ultrasound reduces the problems and still contains several deficiencies in both ultrasound and other diagnostic methods. In this study we aimed to compare the values of the possible non-invasive method of blood loss with hemoglobin values tended to invasive laboratory methods among admitted emergency room trauma patients. If a significant difference between the results arise both in terms of both cost in terms of time, especially in trauma patients in the emergency department evaluation of potential blood loss, which might be easier in terms of diagnosis and early treatment, we will make it easier to monitor the hemoglobin value.

For these purposes, on 48 patients who have suffered a variety of reasons multitrauma arrival of the first clock pulse, and hemoglobin values were measured three times, for the second time, and hemoglobin in laboratory tests were performed simultaneously. In addition to the vital parameters were recorded and included in the analysis.

Among our patient's population there is no serious bleeding was detected. Our group of patients coming first, second, the blood and pulse measurements in parallel with the measured values of the hemoglobin remains. It was found to be highly significant correlation ($r_0 = 0,992$, $r_1 = 0,997$, $r_2 = 0,994$, $p < 0,001$) between the mean values of hemoglobin. With the measured values of the hemoglobin in the blood as measured by pulse-hour follow-up. It has not been significant changes in blood pressure and pulse rate measurements with studying the effectiveness of vital parameters in patients with re-investigation.

In the light of all this information in multitrauma patients brought to the emergency room in the light of all this information and the other, especially during the diagnosis in patients suspected of acute blood loss in the first case we have not detected abnormal findings of physical examination and in the vital hemoglobin monitoring even if we make 15% of patients with blood loss was compensated by the body, even if determined necessary in the early other diagnostic methods, using the necessary treatment without delay and we can put the patient's diagnosis.

It is extremely important when they are evaluated in terms of working conditions in the emergency service. In terms of both cost and time to gain usefulness extremely similar technologies. However, larger studies are needed for the reliability of the data.

P776

Simulation in EM

RESULTS OF A TRAINING PROGRAM FOR PRIMARY CARE PAEDIATRICIANS IN SPAIN IN EMERGENCIES WITH A MOBILE ADVANCED SIMULATION MANNEQUIN

ac antonio casal sanchez, ai antonio iglesias vazquez, ls luis sanchez santos

emergency department, public foundation of emergency health services of galicia 061, santiago, Spain

Corresponding author: Mr Sanchez Luis (luis.sanchez.santos@sergas.es)

Key-words: training ; pediatrics ; simulation

Objective

Advanced simulation tends to be focused on hospital and emergency health staff. Primary care paediatricians (PCP) rarely face true emergencies, but they need to be prepared to respond to a wide range of serious events in children. In many cases, access to simulation centres and/or simulation courses is not easy for PCP. This study reports the results of the Spanish Society of Primary Care Paediatrics (SSPCP) project on mobile advanced simulation for PCP.

Methods

A program of travelling courses in Spain that was sponsored, and credited by the SSPCP. The Simbaby® system was chosen. The course content was designed after considering the special needs of PCP. At the end of each course, the participants answered an anonymous questionnaire about the main aspects of the course. Each item was scored on a scale from 0 to 10. This program began in May 2008, and still goes on (75 activities). Results presented are from May 2008 to May 2009.

Results

The course program included an introduction to the simulation system and six scenario-debriefing sessions, with a total duration of 8 hours (in one day or two half-days). Cases were selected and programmed after collecting data from real patients. The main learning objective was to be able to detect the potentially seriously ill children, and to initiate emergency treatment and stabilization with the resources available at a primary care facility. Twelve courses were carried out in 12 cities. Total number of participants was 192 and 178 (92.7%) completed the questionnaire. Mean (SD) score of the main items were: general organization 9.2 (0.5), objectives related to personal expectations 9.3 (0.4), course useful for work demands 9.4 (0.4), scenarios resembling reality 9.1 (0.4), good instructor-participant relationship 9.6(0.2).

Discussion

A mobile paediatric emergencies advanced simulation course is feasible. Our course has been very well accepted by PCP and our results indicate that simulation programs may be very useful, provided that the course contents and learning objectives are adapted to the specific target population

P778

Toxicology

USE OF LACTATE CLEARANCE IN DETERMINING SERUM LACTATE LEVELS AND EFFECTIVENESS OF TREATMENT IN CARBON MONOXIDE POISONINGS

E Akıncı (1), H Ramadan (2), Y Yüzbaşıoğlu (3), E Atayık (4), F Coşkun (2)

1. Emergency department, Konya Training and Research Hospital, Konya, Turkey
2. Emergency department, Ankara Training and Research Hospital, Ankara, Turkey

3. Emergency department, Atatürk Training and Research Hospital, Ankara, Turkey
4. Department of Allergy and Immunology, Cumhuriyet University School of Medicine, Sivas, Turkey

Corresponding author: Melle Akinci Emine (emineakinci@yahoo.com)

Key-words: Carbon monoxide poisoning ; lactate clearance ; hyperbaric oxygen therapy

Introduction

Carbon monoxide (CO) poisonings are among the clinical problems seen in emergency departments (EDs) with significant mortality and morbidity rates. The PaO₂ and PCO₂ levels in the blood gas analysis and oxygen saturation levels are usually measured as normal; however this condition does not accurately reflect the tissue hypoxia (1). Metabolic acidosis can develop secondary to lactic acidosis, which is seen following ischemia in CO poisonings (2). This study aims to determine the feasibility of using the rate of lactate clearance to evaluate the metabolic response to treatment in patients with CO poisoning after their lactate levels were measured on initial presentation to the ED.

Metod

Patients, older than 18, who consecutively presented with CO poisoning to the ED of Ankara Training and Research Hospital between November 2010 and February 2011. Lactate levels upon admission (Lactate-1) and after 6 hours of treatment (Lactate-2) were compared to calculate the lactate clearance rate. Lactate by 1.7 mmol/l or greater was considered as positive.

A total of 100 patients were enrolled in the study (62 females and 38 males). We found that 94% of patients had elevated lactate levels on admission to the ED. When lactate levels and CO values were compared, the CO values were found to be significantly higher in the elevated lactate level group compared to non-elevated patients. The rate of lactate clearance was 52% in the standard oxygen therapy group compared to 64% in the hyperbaric oxygen therapy (HOT) group, which suggests a faster removal of lactate with this treatment modality.

Conclusion

We conclude that lactate levels increase in patients with CO poisoning, and that those levels are correlated with COHb levels. The rate of lactate clearance can be used to evaluate the effectiveness of therapy. Patients with significantly increased lactate and metabolic acidosis should be referred for HOT in early phases of management.

P779

Toxicology

SUPRAVENTRICULAR TACHYCARDIA ASSOCIATED WITH ACUTE CARBON INTOXICATION

S Zengin, MM Oktay, B Al, E Yavuz, C Yildirim

Emergency Department, Gaziantep University, Gaziantep, Turkey

Corresponding author: Mr Zengin Suat (zengins76@gmail.com)

Key-words: Carbon monoxide poisoning, ; Supraventricular tachycardia ; Emergency department

Carbon monoxide (CO) is a toxic gas produced by the incomplete combustion of carbon-containing compounds. Exposure to high concentrations of CO can be lethal and is the most common cause of death from poisoning worldwide. Cardiac manifestations after exposure to CO, including myocardial ischemia, heart failure, and arrhythmias, have been reported. A 28-year-old patient was admitted to our emergency department with altered consciousness as a consequence of acute domestic exposure to CO from a stove. His carboxyhemoglobin level was 39%. The oxygen treatment was started promptly, and therapeutic red cell exchange was

performed. An electrocardiogram revealed supraventricular tachycardia (SVT), and an echocardiographic examination demonstrated normal cardiac functions. To the best of our knowledge, this study is the second to report a case of SVT attack due to acute CO intoxication. This paper discusses the management of this complication in patients poisoned with CO.

P780

Toxicology

ACUTE HEPATITIS ASSOCIATED WITH THE USE OF HERBAL TEA (FENNEL AND CUMIN)

S Zengin, MM Oktay, M Kamalak, B Al, C Yildirim
Emergency Department, Gaziantep University, Gaziantep, Turkey

Corresponding author: Mr Zengin Suat (zengins76@gmail.com)

Key-words: Hepatotoxicity; herbal tea; fennel and cumin

Herbal preparations have become increasingly popular throughout the globe as a result of disappointment with conventional medicines. They are often regarded as harmless by the public. However, some of these products or their metabolites can cause adverse effects such as liver damage. This case study describes two women that developed acute hepatitis due to drinking an herbal tea.

A 26-year-old woman and a 30-year-old woman were admitted to our department with symptoms of nausea, vomiting, anorexia and weakness. Serum alanine aminotransferase and aspartate aminotransferase levels were increased; all serological tests for viral hepatitis and autoimmune disorders were negative. They had consumed an herbal tea containing fennel and cumin to increase lactation everyday for 3-4 weeks. Discontinuation of the herbal tea resulted in normalization of liver enzymes four-five weeks later.

To the best of our knowledge, this is the first report of hepatitis possibly related to use of an herbal tea containing fennel and cumin. Fennel and cumin are used for the treatment of many different diseases worldwide. They have hepatoprotective and antioxidant activity but as these cases suggested they can also possibly cause acute hepatitis.

Clinicians faced with a case of acute hepatitis that is not readily diagnosed should question patients about herbal use.

P781

Toxicology

THE MANAGEMENT OF SNAKE ENVENOMATION AT THE EMERGENCY DEPARTMENT OF STEVE BIKO ACADEMIC HOSPITAL

L Botha, A Engelbrecht

Emergency Medicine, Steve Biko Academic Hospital, University of Pretoria, Pretoria, South Africa

Corresponding author: Mr Engelbrecht Andreas (dries.engelbrecht@up.ac.za)

Key-words: Venom: a toxic fluid substance secreted by certain snakes, spiders, bees, wasps and scorpions and transmitted by their stings or bites; Venom ophthalmia: an eye condition that is caused by the introduction of venom into the eyes of an animal or human being. It is typically caused by spitting cobras spraying their venom into the eyes of a human or animal; Neurotoxin: A venom or toxin adversely affecting the nerves or nervous system. A neurotoxic snake envenomation is typically associated with paralysis of the respiratory and skeletal muscles leading to hypoventilation, apnoea, hypoxia and death if left untreated

Introduction:

There are around 140 species and subspecies of snakes in South-Africa. Approximately 25 of these species can cause medically significant envenomation with only 12-14 species causing potentially fatal bites. A polyvalent antivenin produced by the South-African Vaccine Producers are effective against the venom of the following snakes: Puff adder (*Bitis arietans*); Gaboon adder (*Bitis gabonica*); Rinkhals (*Haemachatus haemachatus*); Green mamba (*Dendroaspis angusticeps*); Jameson's mamba (*Dendroaspis jamesoni*); Black mamba (*Dendroaspis polylepis*); Cape cobra (*Naja nivea*); Forest cobra (*Naja melanoleuca*); Snouted Cobra previously 'Egyptian cobra' (*Naja annulifera*) and the Mozambique spitting cobra (*Naja Mossambica*). SAVP remains the only producer of a monovalent antivenin effective against the bite of the Boomslang (*Dispholidus typus*). An antivenin for the Exotic Saw-Scaled Viper (*Echis carinatus/ocellatus*) is also produced. Our Hospital is a major referral facility in the region and our Emergency Department have all three antivenins in stock. We look at four recent case studies and the lessons learned from them.

Case 1:

The first case is a female in her thirties living on a smallholding close to Pretoria (Gauteng). She felt a painful sting in her left 1st toe standing next to her bed. She then observed that a large snake was biting her on that toe. She struggled to shake it off her foot. It eventually let go of her foot and disappeared underneath a cupboard. She phoned relatives who arrived shortly, found and killed the snake and administered first aid that included cutting into the bite wound and attempting to remove venom by sucking the wound. She was transported to our hospital by ambulance. On her way she received 10mg of Morphine in total for the excruciating pain in her left leg. The dead snake was transported with her. In our ED she was seen by a junior doctor who noted that she was "sleepy" and could not open her eyes "probably due to the morphine dose." A senior Emergency Physician also saw the patient and determined that the sleepiness was in fact ptosis due to the neurotoxic effect of the envenomation. A snake expert was consulted and he confirmed that the dead snake was a snouted cobra. 10 Units of polyvalent antivenin was administered according to our protocol. The patient gradually improved over the next few hours and the ptosis eventually disappeared. She made a good recovery and was discharged home after a few days in hospital.

Case 2:

A man came to our ED after being bitten on both hands by a small black snake. The snake was brought along for identification. He had severe pain and swelling of both hands. We treated him with simple analgesia and elevation of the hands. A snake expert was brought in to identify the snake. It was confirmed to be a stiletto snake, also known as a side stabbing snake due to the position of its fangs. No antivenin was indicated and the patient improved on simple analgesia and elevation of the hands.

Case 3:

A 5 year old boy was brought in to our ED after he was bitten by a snake on his left hand. Two red puncture marks were observed on his left index finger. The parents refused to have the child admitted and took him home with oral analgesics. During the night the child's hand started swelling progressively. His parents found the snake and killed it. They brought the child back the next day with the killed snake. The snake was identified as a baby puff adder. It was decided to withhold antivenin because of the mild degree of envenomation and the long time lapse since the bite. The child made a full recovery.

Case 4:

A patient collected wood in an open veldt where he was confronted by a large black and white snake. It sprayed venom into the patient's eyes. The patient arrived in our ED with severe pain and redness in his left eye. He was treated with copious rinsing of the eye. We used 1 ampoule of polyvalent antivenin diluted in a

litre of ringers lactate to rinse the eye. No corneal erosions were identified and he received an antibiotic eye ointment. He followed up at our ophthalmology service and made a full recovery in 48 hours.

Lessons learnt and discussion:

1. Incision and suction of the wound is ineffective first aid and added to the local tissue damage caused by the snake venom.
2. The administration of opiate analgesia can complicate the clinical picture of neurotoxic snake envenomation and add to depression of respiration. It should be used judiciously if at all.
3. Clinicians should be made aware of ptosis as an important sign of neurotoxic envenomation.
4. An expert in snake identification can make a useful contribution by identifying the snake species when it is available.
5. The stiletto snake cannot be handled safely because of the location of its fangs. Polyvalent antivenin cannot be used to treat its bite and elevation and analgesia is usually sufficient.
6. Baby snakes are dangerous and can cause significant envenomation.
7. Copious rinsing is the best method to treat venom ophthalmia. Referral to an ophthalmologist to do follow up slitlamp examinations is usually indicated.

P782

Toxicology

THE PROFILE OF THE PSYCHOACTIVE DRUG CONSUMER THAT REACHES THE EMERGENCY ROOM

AM Busan, C Geormaneanu

Emergency department, UMFC, Craiova, Romania

Corresponding author: Melle Busan Alina Mihaela (alina_busan@yahoo.com)

Key-words: profile ; psychoactive ; drugs

The number of people who use psychoactive substances increased lately, especially since legislation in Romania has named some of these drugs to be legal.

The purpose of this study is to develop a consumer profile of psychoactive drug that reaches the Emergency Department of Hospitalul Clinic Judetean No. 1 of Craiova, in order to facilitate determining the diagnosis of acute intoxication with psychoactive drugs.

Methods: We conducted a retrospective study over a period of 16 months, during 01.01.2011--31.03.2012, a group of 108 patients, 0.09% of all patients who arrived in the emergency room, representing all patients intoxicated with psychoactive substances. More parameters were followed so that we can achieve a more accurate profile of psychoactive drug users.

Results:

81% of them were male patients. Patients were aged between 11 and 52, with a peak at 19 and 21 years, with limits: 14-29 for women and 11-52 for men. 76% of all patients have a urban residence, of whom 85% in Craiova, while 18% come from rural areas and for the remaining 6% we could not determine the origin, due to lack of cooperation.

Regarding the time when these patients present in the emergency room stands a peak in September and November, with a minimum in June, December 2011 and January 2012. A large number of presentations were on Thursdays and Saturdays, with a minimum on Fridays. 71% of them end up in the emergency room between 18:00 - 6:00, with a peak between the hours of 9:00 p.m. to 11:00 p.m.

Symptoms that these patients present are varied: 47% - anxiety, 12% - psychomotor agitation, 11% - dizziness, 8% - tachycardia, 8%

- palpitations, 6% - dyspeptic syndrome, 5% - headache, 3% - aggression.

Association with alcohol was found in 24% of cases without a clear differentiation by age or gender.

The method of administration of the drug is known for only 19% of cases, of these, 10% - snuffed and 90% inhaled.

The average number of minutes of hospitalization was 228, with a minimum of 15 minutes and a maximum of 1105. 56% of patients were discharged on medical advice, 18% on demand, the rest being transferred to ICU service - 14% psychiatry - 7%, pediatric - 4%, 1% neurology.

Discussion:

We conclude that the patient admitted in the emergency room for psychoactive drug use is a male, with urban residence, aged 19-21 years, presents mainly on Thursdays and Saturdays, the months of autumn, and less in winter, from 9:00 p.m. to 11:00 p.m. hours. In terms of symptoms, he presents with anxiety syndrome. Association with alcohol consumption is neither common nor occasional.

P783

Toxicology

ACCIDENTAL INTOXICATION WITH VERATRUM ALBUM: A CASE REPORT

G Filip (1), V Gavrilă (1), RD Gavrilă (2), FI Turcu (1)

1. Emergency Department, Emergency County Hospital, Timisoara, Romania

2. Department of Family Health Care Providers, Romanian National Society of Family Medicine, Timisoara, Romania

Corresponding author: Mr Gavrilă Vasile (gavrilă_vasile@yahoo.com)

Key-words: accidental intoxication ; Veratrum album ; veratrum alkaloids

Introduction

Veratrum album, commonly known as the False Hellebore (also known as European White Hellebore, White Hellebore, White Veratrum) is a poisonous medicinal plant of the Liliaceae (lily family) or Melanthiaceae which is native to Europe. In Romania the plant is known under various popular names: steregoaie, stirigoaie. All parts of the plant are poisonous, with the root and rhizomes being the most poisonous. The rhizome extract has been used as insecticide for the treatment of sheep's scab. Pharmaceutical preparations of this herb were used in rheumatism, gout, as a sedative in nervous disorders, in eclampsia, as a hypotensive and anticonvulsant. Case report We present the case of a 31-years-old man, a shepherd, who accidentally ingested about 100 ml decoction of the Veratrum album roots, used as disinfection solution for sheep. Shortly after ingestion, he developed sweating, tremor, difficulty in breathing, abundant salivation, diarrhea, nausea, vomiting, oral paraesthesia, blurred vision, dizziness, diplopia. On admission to the hospital he suffered an episode of bradycardia (40 beats/min) and hypotension (the initial systolic blood pressure was 60 mmHg). His vital signs improved after the administration of atropine sulfate. He was treated with activated charcoal, antiemetics (metoclopramide) and intravenous electrolytic solution. Laboratory findings were unremarkable. EKG: initial sinus bradycardia; after 8 hour sinus tachycardia, sinoatrial block. The patient was admitted for observation of toxicity signs. After the symptomatic treatment, the response to therapy was favorable, with normalization of blood pressure and heart rate. The patient recovered completely within 12 hours and was discharged from the hospital. Conclusion Veratrum album contains at least 20 highly toxic steroidal alkaloids, known as veratrum alkaloids, including provera, protovera, protoverina, veratramine, veratradine, cevadine, rubijervina, pseudojervina, jervine and

various acids (chelidonic, veratric, acetic, butyric acid, alpha-methyl-butyric, tiglic, angelic). These alkaloids act by increasing the permeability of the sodium channels. Following the symptomatic treatment these patients were discharged well improved, 24-48 hours after ingestion.

P784

Toxicology

FATAL ALUMINIUM PHOSPHIDE POISONING: A CASE REPORT

V Gavrilă (1), G Filip (1), RD Gavrilă (2), A Petrică (1)

1. Emergency Department, Emergency County Hospital, Timisoara, Romania
2. Department of Family Health Care Providers, Romanian National Society of Family Medicine, Timisoara, Romania

Corresponding author: Mr Gavrilă Vasile (gavrilă_vasile@yahoo.com)

Key-words: aluminium phosphide ; poisoning ; metabolic acidosis

Introduction

Aluminium phosphide (AIP) is a solid fumigant which has been in extensive use as insecticide and rodenticide since the 1940s. Acute aluminium phosphide poisoning is an extremely lethal poisoning. The toxicity of aluminium phosphide is attributed to the liberation of phosphine gas which is cytotoxic and causes free radical mediated injury. Both, aluminium phosphides and phosphine have corrosive actions.

Case report

We report a case of a 54-years-old man who presented to the Emergency Department (ED) about 3 hours after having ingested 6 g of Phostoxin in suicidal purpose. On arrival in the ED, the patient was agitated, irritated, with signs of shock: clammy skin, cyanotic, HR=105/min, BP=65/40 mmHg, RR=35-40/min, SpO₂=75%, prolonged capillary refill time, a burning sensation in the throat, violent chest pain, abdominal pain, nausea, vomiting, diarrhea. Laboratory: metabolic acidosis (pH=7.26, EB=-10.9). ECG: atrial fibrillation, negative T waves in all leads. He was treated with intravenous fluids in bolus (sodium chloride 0.9% 1.500 ml) and colloid, 100 g activated charcoal, 250 mg methylprednisolone, 40 mg famotidine, 10 mg metoclopramide, 2g magnesium sulfate and 50 mmol sodium bicarbonate. After 3 hours: BP=70/40 mmHg, HR=95/min, SpO₂=75%, the metabolic acidosis has worsened (pH=7.06, EB=-22.9). Subsequently, after the transfer in the Intensive Care Unit (ICU), he developed respiratory distress syndrome (requiring rapid sequence intubation and mechanical ventilation), renal failure, liver failure and disseminated intravascular coagulation. Evolution was unfavorable and the patient died after 17 hours from the ingestion of poison.

Conclusion

Aluminium phosphide poisoning affects most of the organs and a variety of signs and symptoms can appear in the clinical presentation of the patients. Severe metabolic acidosis and resistant hypotension are characteristic for severe poisoning and have poor prognosis; AIP poisoning has a high mortality rate which is directly proportional with the ingested dose and the degree of shock. The management continues to be unsatisfactory, because there is not a specific antidote and it remains only supportive.

P785

Toxicology

ROLE OF HEMODIALYSIS AND FLUMAZENIL IN BACLOFEN OVERDOSE

NB Akıllı, E Akıncı, MO Gonen, R Köylü, B Cander

Emergency department, Konya Training and Research Hospital, Konya, Turkey

Corresponding author: Melle Akıncı Emine (emineakinci@yahoo.com)

Key-words: hemodialysis ; flumazenil ; baclofen intoxication

Introduction

Baclofen, a lipophilic analog of gamma-aminobutyric acid, is clinically used to control spasticity. Management of baclofen overdose is primarily supportive. Several studies have noted that hemodialysis can alleviate clinical symptoms of baclofen overdose. We present a patient with baclofen overdose presenting to the emergency department with coma and successfully treated with an infusion of flumazenil and hemodialysis treatment

Case report

19 years old female patient was admitted to emergency department with take baclofen (Lioresal®, Novartis) 10 mg 30 tablets for suicide. Vital signs were heart rate 100, tension 130/70, respiratory rate 19 fever 36,7 degree Celsius. Physical examination was general status worse, consciousness off. Glasgow Coma Scale was eight. The patient was intubated and nasogastric tube inserted. 50g of activated charcoal was given after Gastric lavage by 3000cc saline. The patient was admitted to the toxicology intensive care and ventilated. Laboratory results were: arterial blood pH:7,29, HCO₃:15,5 mmol, pO₂: 44,8 mmHg, pCO₂:33 mmHg, oxygen saturation:67,7. Other results were in normal levels. The patient consulted to National poison control center (UZEM). UZEM proposed dialysis. The patient dialysed for 3 hours. IV 0.01mg/kg/hour flumazenil infused to the patient for four hours. The Patient's consciousness was opened. Glasgow Coma Scale was fifteen and extubated. Laboratory results metabolic acidosis improved. The patient didn't dialysis again. The patient was discharged the 4th day of hospitalization with consulted to psychiatry.

Discussion

Baclofen is a lipid-soluble derivative of gamma-aminobutyric acid (GABA). It acts as an inhibitory neurotransmitter primarily at a spinal level to reduce muscle tone, along with some supraspinal activity. It is commonly used in conditions like spasticity, dysfunctional voiding, intractable hiccups, palatal myoclonus, and trigeminal neuralgia. Ingested baclofen is absorbed rapidly and completely, thereafter 69-85% is excreted without changes in urine and 15% is metabolized by the liver. The half-life is between 4.5 and 6.8 hours in healthy subjects. Baclofen is moderately lipophilic, 30% of the drug is protein bound, and can penetrate the blood-brain barrier. Common manifestations of baclofen toxicity are change in level of consciousness, hypotonia, hypotension, bradycardia, abdominal pain, nausea, and vomiting; symptoms usually resolve when baclofen is stopped. Management of baclofen overdose is primarily supportive. Treatment consists of symptomatic and supportive care, intravenous fluids, inotropes, and mechanical ventilation if necessary. Several studies have noted that hemodialysis can alleviate clinical symptoms of baclofen overdose and shorten the recovery time in patients with end-stage renal disease (ESRD). Low protein binding (31%) and low volume of distribution (2.4 l/kg) lead to efficient removal of baclofen by dialysis. While improvement in mental status was shown to parallel the fall in serum concentration in one study, Lipscomb et al., noted that serum elimination half-life may not reflect a slower elimination rate from the central nervous system. Delayed diffusion across the blood-brain barrier is thought

to account for the lag of a few hours in clinical recovery observed in some people. Most of previous reports document management of baclofen overdose with supportive measures and mechanical ventilation. Hemodialysis has been tried only in patients with chronic kidney disease (CKD). Dias et al. are the first reported case where hemodialysis was tried in a patient with normal renal function. Also our patient has normal renal function but metabolic acidosis was developed and hemodialysis treatment was successful.

It has also been reported that flumazenil, a specific benzodiazepine antagonist, may counteract the central neuronal inhibitory effects of baclofen without interfering with its muscle relaxant properties. Again, this has not been confirmed in other case reports. Flumazenil in this case led to a dramatic improvement in patient's consciousness and she could be extubated within 8 hours of baclofen ingestion.

Conclusion

Emergency physicians should consider baclofen overdose in patients presenting with acute loss of consciousness, flaccidity and hyporeflexia even in the absence of history about suicidal ingestion. Emergency treatment of baclofen overdose should be considered in hemodialysis and flumazenil.

P786

Toxicology

OXIDANT/ANTIOXIDANT STATUS IN CASES SCORPION STINGS

S Zengin (1), B Al (1), P Yarbil (2), M Orkmez (3), S Taysi (3), C Yildirim (1), N Aksoy (4)

1. Emergency Department, Gaziantep University, Gaziantep, Turkey
2. Emergency Department, 25 Aralik State Hospital, Gaziantep, Turkey
3. Biochemistry Department, Gaziantep University, Gaziantep, Turkey
4. Biochemistry, Harran University, Şanlıurfa, Turkey

Corresponding author: Mr Zengin Suat (zengins76@gmail.com)

Key-words: scorpion sting ; paraoxonase ; arylesterase

Objective

The aim of this study was to investigate serum paraoxonase (PON), arylesterase (ARLY), ceruloplasmin (Cp), and myeloperoxidase (MPO) activity and lipid hydroperoxide (LOOH) and total sulphhydryl group (-SH) levels in patients with scorpion sting.

Method

The study was conducted at Gaziantep University, School of Medicine, Departments of Emergency and Clinical Biochemistry, between 2009 and 2010. Thirty-six patients with scorpion sting (Group 1) and 36 healthy volunteers as the control group (Group 2) were enrolled in the study. Plasma PON, ARLY, Cp, and MPO activity and LOOH and -SH levels were measured. In addition, the lipid parameters of all groups were determined with routine laboratory methods.

Results

The patients with scorpion sting had lower PON and ARLY activity and -SH levels than the control group (all $p < 0.001$), and higher MPO and Cp activity and LOOH levels (all $p < 0.001$). Clinical characteristics of the patients with scorpion sting and the control group were comparable in terms of age, sex, body mass index, and lipid parameters.

Conclusions

The patients with scorpion sting had decreased antioxidant (PON, ARLY, and -SH) and increased oxidant (MPO, LOOH) levels. While we determined that the oxidative/antioxidative balance shifted toward oxidative status because of scorpion envenomation, prospective studies with larger groups are needed to investigate

this issue further. Therapy with antioxidants may lead to an increase in the antioxidant defense system and, thus, improvement in clinical symptoms of scorpion envenomation.

P787

Toxicology

PLASMA EXCHANGE AS A COMPLEMENTARY APPROACH TO SNAKE BITE TREATMENT: AN ACADEMIC EMERGENCY DEPARTMENT'S EXPERIENCES

S Zengin (1), M Yilmaz (2), B Al (1), C Yildirim (1), P Yarbil (3), H Kilic (4), S Bozkurt (5), A Köse (6)

1. Emergency Department, Gaziantep University, Gaziantep, Turkey
2. Hematology Department, Gaziantep University, Gaziantep, Turkey
3. Emergency Department, 25 Aralik State Hospital, Gaziantep, Turkey
4. Emergency Department, Malatya State Hospital, Malatya, Turkey
5. Emergency Department, Sütçü İmam University, Kahramanmaraş, Turkey
6. Emergency Department, Uludağ University, Bursa, Turkey

Corresponding author: Mr Zengin Suat (zengins76@gmail.com)

Key-words: Snake bite; envenomation ; therapeutic plasma exchange ; emergency department

Background and objective: Snake bites are leading causes of morbidity and mortality worldwide, especially in rural areas. Therapeutic plasma exchange has been used in the treatment of many different conditions such as immunologic diseases, toxicologic disorders, and snake envenomation. The aim of this study is to evaluate the efficacy of plasma exchange treatment on clinical status, outcomes, and discharge of patients who were bitten by venomous snakes.

Method: The study was conducted retrospectively in the Emergency Department of Gaziantep University from January 2002 to December 2011. Thirty-seven patients were included in the present study. Routine biochemical and hematologic laboratory parameters were studied before and after plasma exchange. Demographic data, clinical status, and outcomes of patients were recorded. Plasma exchange was performed by using centrifugation technology via an intravenous antecubital or subclavian vein catheter access. Human albumin/fresh frozen plasma was used as replacement fluids.

Results: A significant correlation was seen between therapeutic plasma exchange and improvement of laboratory results. None of the study patients lost their limbs. Eight patients were sent to the intensive care unit. The mean length of the hospital stay was 12.2 days (4-28). All patients were discharged with good recovery. No complications were seen during the 3 months following discharge.

Conclusion: Plasma exchange appears to be an effective treatment intervention for snake bite envenomations, especially in the management of hematologic problems and in limb preservation/salvage strategies. In addition to traditional treatment methods, plasma exchange should be considered by emergency physicians in cases of snake bite envenomation as a therapeutic approach to facilitate rapid improvement.

P788

Toxicology

OXIDANT/ANTIOXIDANT STATUS IN CASES SNAKE BITES

S Zengin (1), B Al (1), P Yarbil (2), S Taysi (3), H Bilinç (4), C Yildirim (1), N Aksoy (5)

1. Emergency Department, Gaziantep University, Gaziantep, Turkey
2. Emergency Department, 25 Aralik State Hospital, Gaziantep, Turkey
3. Biochemistry Department, Gaziantep University, Gaziantep, Turkey
4. Biochemistry Department, Akçakale State Hospital, Şanlıurfa, Turkey
5. Biochemistry Department, Akçakale State Hospital, Şanlıurfa, Turkey

5. Biochemistry Department, Harran University, Sanliurfa, Turkey

Corresponding author: Mr Zengin Suat (zengins76@gmail.com)

Key-words: snake bite envenomation ; paraoxonase ; arylesterase

Background: Snake bites are an important cause of mortality and morbidity worldwide, especially in rural areas.

Objective: The aim of this study was to investigate serum paraoxonase (PON), arylesterase (ARLY), ceruloplasmin (Cp) and myeloperoxidase (MPO) activity and lipid hydroperoxide (LOOH) and total sulfhydryl groups (-SH) levels in patients with snake venom poisoning.

Method: The study included 49 patients with snake bite envenomation (Group 1) and 39 healthy volunteers as the control group (Group 2). Plasma PON, ARLY, Cp and MPO activity and LOOH and -SH levels were measured. Laboratory measurements of 20 patients with snake bite envenomation (Group 3) were performed again after treatment.

Results: PON and ARLY activity and -SH levels was significantly decreased in group 1 compared with those of group 2. Cp and MPO activity and LOOH levels were significantly elevated in group 1 compared with those of group 2. PON and ARLY activity was significantly elevated in group 3 compared with that of group 1. Cp and MPO activity and LOOH levels were significantly decreased in group 3 compared with those of group 1.

Conclusion: Patients with snake bite envenomation had increased oxidants (MPO, LOOH) and decreased antioxidants (PON, ARLY and -SH) status. The results obtained in this study showed that the oxidative/antioxidative balance shifted toward oxidative status because of snake bite. Therapy with antioxidants may lead to the increase in the antioxidant defense system and thus improvement in clinical symptoms.

P789

Toxicology

ASSESSMENT OF OXIDANT/ANTIOXIDANT STATUS AND OXIDATIVE STRESS INDEX LEVELS IN PATIENTS WITH CARBON MONOXIDE POISONING.

S Zengin (1), S Kartal (1), B Al (1), M Orkmez (2), S Taysi (2), C Yildirim (1)

1. Emergency Department, Gaziantep University, Gaziantep, Turkey
2. Biochemistry Department, Gaziantep University, Gaziantep, Turkey

Corresponding author: Mr Zengin Suat (zengins76@gmail.com)

Key-words: Carbon monoxide poisoning, ; total antioxidant status, ; total oxidant status,

Objective: The purpose of this study is to evaluate the variations of pre- and post-treatment total antioxidant status (TAS) and total oxidant status (TOS) levels in carbon monoxide poisoning (COP), and is find out more about the pathophysiology of COP.

Methods: One-hundred-thirteen patients admitted to our emergency department with acute COP between 2011 and 2012 and 50 healthy volunteers as control group were included in this study. Serum, plasma, and erythrocyte packages were prepared for all patients with COP at the first application and at the controls after 90 and 180 minutes. The all samples were stored under -80° in the freezer. Serum oxidant/antioxidant status levels were measured.

Results: No correlation was observed between age, gender, carboxyhemoglobin (COHb) and the levels of TAS, TOS and OSI. TOS and OSI arrival levels were higher than healthy volunteer group levels and control levels taken after 90 and 180 minutes (p<0.001 for all). On the other hand, no statistical differences were observed

in TAS arrival levels of study and control group, and there were no changes with treatment (p>0.05 for all).

Conclusion: Our results show that serum TOS and OSI levels increase in COP. We think that reactive oxygen species play a role in the pathophysiology of COP. Therapy with antioxidants may lead to an increase in the antioxidant defense system and, thus, improvement in clinical symptoms of COP.

P790

Toxicology

IMPACT OF SCORPION STINGS ON ELECTROCARDIOGRAPHIC CHANGES AND RELATIONSHIP WITH BODY OXIDANT AND ANTIOXIDANT STATUS

B Al (1), V Davutoğlu (2), S Ercan (2), P Yarbil (3), C Yildirim (1), S Zengin (1)

1. Emergency Department, Gaziantep University, Gaziantep, Turkey
2. Cardiology Department, Gaziantep University, Gaziantep, Turkey
3. Emergency Department, 25 Aralik State Hospital, Gaziantep, Turkey

Corresponding author: Mr Zengin Suat (zengins76@gmail.com)

Key-words: Scorpion stings ; electrocardiogram changes ; oxidant/antioxidant

Objective: The aim of this study is to establish the electrocardiogram (ECG) changes due to scorpion stings and investigate the association between oxidant/antioxidant system and the electrocardiogram changes.

Methods: 44 patients admitted to the emergency department for scorpion sting and without history of heart failure, renal failure, chronic obstructive pulmonary disease, diabetes mellitus, malignancy or history of drug use are included and a control group of age and gender matched 20 persons were included to the study. ECGs promptly was taken in the most painful phases of patients. The heart rate, PR interval, QRS, prolonged Corrected QT Interval, corrected shortened QT interval, QT dispersion, corrected QpT value, minimum P wave duration, maximum P wave duration and P wave dispersion were measured. Erythrocyte packages were prepared and stored in a freezer at -80 °C to detect toxin/antioxidant levels. Spearman's rank correlation coefficient was used to identify all the calculated values while Tukey's multiple comparison test was employed for multiple comparisons. Values with p < 0.05 were considered statistically significant.

Results: Of the 44 patients, half of them were male and the others were female. Average age of the patients was 45.22 ± 17.99. None of the patients required intensive care and none of them had limb losses. PR interval, UQTc, QTd, QpTc, Pmin values of the patients in electrocardiogram were higher than those of the control group (p < 0.05). Difference between those with changed ECG and unchanged ECG in terms of the values of total antioxidant status (TAS), total oxidant status (TOS), and oxidative stress index (OSI), were not statistically significant (p> 0.05).

Conclusion: Scorpion stings are associated with an ECG changes including increased PR interval, QT dispersion, corrected QpT value and minimum P wave duration. The mechanism of this relationship is not related with the status of oxidant and antioxidant capacity. Increased QT dispersion warrants further study in terms of potential serious arrhythmias in scorpionism.

P791

Toxicology

DETERMINATION OF RELATIONSHIP BETWEEN NATRIURETIC PEPTIDE AND CARDIOTOXIC DRUGS POISONING

E Karakilic (1), F Buyukcam (2), A Solakoglu (1), A Gurbay (3)

1. Emergency Department, Ankara Numune Training & Research Hospital, Ankara, Turkey
2. Emergency Department, Ankara Diskapi Yildirim Beyazit Training & Research Hospital, Ankara, Turkey
3. Pharmaceutical Toxicology, Hacettepe University, School of Pharmacy, Ankara, Turkey

Corresponding author: Mr Karakilic Evvah (evvahka@gmail.com)

Key-words: toxicology ; brain natriuretic peptide ; cardiac effect

OBJECTIVE: Brain natriuretic peptide (BNP) is a sensitive indicator of ventricular dysfunction in symptomatic and asymptomatic patients. The level of BNP is associated with the severity of dysfunction and the value of 100 pg/ml is considered as the cut off point for the cardiac failure. Serum BNP levels rise due to cardiac effects such as pulmonary hypertension, valvular heart disease, heart rhythm disorders, acute coronary syndrome, cardiac inflammatory diseases, restrictive myocarditis, constrictive pericarditis and cardiogenic syncope.

In case of poisoning with cardiotoxic drugs such as tricyclic antidepressants, beta blockers, calcium channel blockers, and digoxin, the most frequent problem observed for the mortality and morbidity is the clinical condition due to cardiovascular influence. Overdose of these drugs decrease the myocardial contractility, and also worsen the known cardiac insufficiency. In order to understand the severity of the intoxication, early recognition of these effects is important. In the literature, blood BNP levels have been using to determine the cardiac effects of numerous diseases by several researchers. However, there are few investigators that evaluate the cardiac effects of drug intoxications by blood BNP level. The aim of this study was to investigate the relationship between blood BNP levels and the severity of the cardiotoxic drugs intoxication.

MATERIAL AND METHODS: The patients admitted to the emergency department with intoxication of cardiotoxic drugs like tricyclic antidepressants, beta blockers, ca-channel blockers, and cardiac glycosides were included in the study. The patients which had history of chronic diseases were excluded from the study. If the patient was conscious, the informed consent was signed by the patient; if not, the informed consent was signed by their relatives. Twenty-four patients were included in the study. Blood BNP levels were determined in the first 24 hours using by Triage BNP kit and BNP concentrations over 100 pg/ml were accepted as a positive result. To determine the cardiovascular effects, the arterial blood pressure and electrocardiogram findings (PR, QRS and QT durations, rhythms) were evaluated. Statistical relationship between cardiac effects of these drugs and the level of BNP was investigated.

RESULTS: 19 patients were intoxicated by TCA. 1 patient with digoxin, 1 patient with calcium channel blocker, 3 patients were intoxicated with beta blockers. 10 of 24 patients (41.7%) were hypotensive. Hypotension was observed in 7 of 8 patients that BNP was detected above the reference value. BNP was significantly higher in hypotensive patients ($p < 0.05$). BNP levels were significantly higher in patients with QRS duration over 100 msc in the same way that patients with high BNP levels and QRS duration was significantly longer ($p < 0.05$), but the PR and QTc prolongation didn't associated with BNP elevation.

CONCLUSION: Today, in spite of using many methods to identify cardiac dysfunction, BNP is a frequently used method in the emergency departments because it is easy to reach and a rapid

diagnosis is possible. To show the cardiac exposure of tricyclic antidepressant and other cardiotoxic drugs objectively it is useful to look at the level of serum BNP.

P792

Toxicology

EARLY WARNING: LETHAL EFFECTS OF 4-METHYLAMPHETAMINE.

K Anseeuw (1), P Blanckaert (2), KE Maudens (3), H Neels (4)

1. Emergency Department, ZNA Stuivenberg, Antwerp, Belgium
2. Belgian Early Warning System on Drugs, Scientific Institute of Public Health, Brussels, Belgium
3. Toxicological Centre, University of Antwerp, Antwerp, Belgium
4. Toxicological Laboratory, ZNA Stuivenberg, Antwerp, Belgium

Corresponding author: Mr Anseeuw Kurt (kurtanseeuw@yahoo.com)

Key-words: 4-methylamphetamine ; emerging drug ; lethal

The emergency medical services were called out to a 34-year old female suffering from an epileptic fit after using ketamine, cocaine and amphetamines during the previous 24 hours. On arrival at the scene, the medical team found a patient in cardiorespiratory arrest. Resuscitation was started, including intubation, artificial ventilation and cardiac massage. Blood was drawn for toxicological analysis before administering any drugs. The patient was found to be hyperthermic (39 °C), hypercapnic (ET CO₂ 19 mmHg) and mydriatic. Initial heart rhythm was an electromechanical dissociation. During resuscitation increasing body temperature was observed despite efforts to control body temperature (external cooling, muscle relaxation, benzodiazepines, acetaminophen). The patient also developed a marked muscle rigidity. After 50 minutes of resuscitation core body temperature was determined to be higher than 45 °C and the patient was declared dead. Hetero-anamnesis revealed that the patient suffered from hyperactivity, agitation, palpitations, nausea and tremor, in the hours leading to the epileptic fit. A white-yellow powder was found in the possession of the patient. Toxicological analysis of this powder revealed amphetamine (11%) and 4-methylamphetamine (4-MA) (25%). Toxicological analysis of the pre-mortem blood sample showed 4-MA levels of 620 ng/ml and amphetamine levels of 480 ng/ml. In the period August 2011 – April 2012, three severe cases of intoxication and five deaths have been reported in Flanders involving the use of 4-MA. The deaths related to 4-MA are disproportionally high considering the total number of drug-induced deaths (78 in 2008 in Flanders). 4-MA is a substituted amphetamine-derivative, and belongs to the class of new psychoactive substances, as defined by the European Monitoring Centre for Drugs and Drug Addiction. We hypothesize that the presence of 4-MA in these samples is probably due to a change of the precursors used for the illegal synthesis of amphetamine. No human toxicological data regarding 4-MA are available in scientific literature, only limited pre-clinical information from rodent studies (Pubmed search, 20/05/2012). Amphetamine-type stimulants target monoamine transporter proteins by acting as substrates and triggering the efflux of monoamine transmitters, especially dopamine (DA) and norepinephrine. 4-MA is non-selective with regard to in vitro potency as a releaser of DA and serotonin, in sharp contrast to amphetamine, which is a potent DA releasing agent. 1 Amphetamine intoxication is characterized by mydriasis, central nervous system symptoms (hyperactivity, confusion, agitation, bruxism, insomnia), cardiovascular symptoms (vasoconstriction, hypertension, tachycardia, chest pain, palpitations) and nausea. 4-MA (or mixtures of 4-MA and

amphetamine) intoxication can result in the above symptoms; moreover, due to the pronounced serotonergic action of 4-MA, there is a supplementary risk of developing a serotonin syndrome, characterized by, among other things, tremor and extreme hyperthermia.^{1,2} Several amphetamine-induced deaths have been described in medical literature with mean lethal blood amphetamine concentrations of 2000 ng/ml. The amphetamine concentrations described in the deaths in Belgium are significantly lower, indicating that most likely, amphetamine intoxication was not the sole cause of death. Data on lethal concentrations of 4-MA are currently unavailable, but 4-MA-related toxicity seems to be, at least in part, responsible for the observed deaths. The severe hyperthermia could potentially be caused by the dopaminergic, noradrenergic and serotonergic effects of combined amphetamine/4-MA use.^{2,3} Since mixtures of 4-MA and amphetamine are sold on the street as "speed", this puts a significant population at risk of exposure to 4-MA. We want to warn the medical community about this new dangerous and potentially lethal designer drug. An early and aggressive treatment, targeted at lowering the body temperature, seems warranted where 4-MA toxicity is suspected. References: 1. Kelly JP. Cathinone derivatives: a review of their chemistry, pharmacology and toxicology. *Drug Test Anal* 2011; 3:439-453 2. Rothman RB and Baumann MH. Monoamine transporters and psychostimulant drugs. *Eur J Pharmacol* 2003; 479 :23-40 3. Jones WA, et al. Quantitative analysis of amphetamine in femoral blood from drug-poisoning deaths compared with venous blood from impaired drivers. *Bioanalysis* 2011; 3:2195-204

P793

Toxicology

EMERGENCY MEDICINE ADMISSIONS OF PEDIATRIC INTOXICATED CASES

N Kozaci

acil tip, adana NEAH, adana, Turkey

Corresponding author: Mme Kozaci Nalan (drkozac@yahoo.com)

Key-words: Emergency ; Intoxication ; Pediatrics

Objective: In this study, we aimed to analyse the demographic features and the mortality rates of the pediatric patients admitted to the emergency department and diagnosed intoxication.

Material and Methods: Patients, admitted to the pediatric emergency department and diagnosed intoxication during 12.1.2009 and 12.31.2010 were included in the study. Patients were evaluated from the patient cards. The specialties, including age, sex, reason of the poisoning, time till admission, time after poisoning treatment till admission, treatment after admission, administration route, mortality rates were recorded.

Results: In our study 1029 cases were included. 66.47% of the patients were female. Poisoning was the most 13- 18 years group (% 56.17). Patients were admitted mostly in spring. The most reason of poisoning was administration of drugs. Suicide rate was 56.07%, and 54 patients (5.2%) had the second suicide attempt. 85,71% of the patients admitted to the emergency room the first 2 hours.

Conclusion: For decreasing the poisoning rate, preventive measures, education of the family, where a more secure storage of drugs, pharmaceutical companies produce drugs more prudently in boxes, and regional epidemiological studies should be the prevention of childhood poisonings is necessary.

P794

Toxicology

FACTORS AFFECTING THE PROGNOSIS IN ACUTE INSECTICIDE INTOXICATIONS CONTAINING ORGANIC PHOSPHORUS

N Kozaci

acil tip, adana NEAH, adana, Turkey

Corresponding author: Mme Kozaci Nalan (drkozac@yahoo.com)

Key-words: organic phosphorus ; intoxication ; prognosis

Objective: The goal of the study was to investigate the complications encountered during the follow up and treatment of the patients intoxicated with insecticides that contain organic phosphorus and assess the effects of these complications on the treatment periods of these patients.

Material and Methods: Patients who presented to the tertiary care emergency department with the diagnosis of intoxication with insecticides containing organic phosphorus (OPi) between March 2004-September 2005 were included in the study.

Results: Thirty four patients were included into the study. Seven of them underwent mechanical ventilation due to respiratory failure. The Glasgow Coma Scale (GCS) score was found to be 300 U/L. The total dose of atropine used in these patients and the duration of hospital stay were found to be higher than in the other patients.

Conclusion: The clinical presentation and course of the patients especially with respiratory failure and hyperamylasemia are observed to be more serious, their atropine needs are greater and they have longer hospital stays. GCS is a useful parameter in determining the need for intubation.

P795

Toxicology

RAPID REVERSAL OF ANTICOAGULANTS EFFECT OF WARFARINE IN ED: PROTHROMBIN COMPLEX CONCENTRATES

M Ergin, B Cander, S Kocak, AS Girisgin, M Gul, L Ozturk, MR Ozer, MA Onal, C Dikmetas

Emergency Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

Corresponding author: Mr Ergin Mehmet (drmehtemtergin@gmail.com)

Key-words: Prothrombin complex ; Hemorrhage ; Warfarine overdose

INTRODUCTION: Reversion of the anticoagulant effect of vitamin K antagonists (VKAs) in cases of symptomatic overdose, active bleeding episodes, or need for emergency surgery is the most important indication for human prothrombin complex concentrates (PCCs) and this effect of PCCs appears to be more complete and rapid than that caused by administration of fresh frozen plasma. **CASES:** We are presenting four cases of hemorrhage associated with warfarin use (Table). **DISCUSSION:** In an in-vivo study, PT/INR was restored by either 3- or 4- factor PCCs in plasma with INR 3.0, but they were more effectively corrected by 4-factor PCC than 3-factor PCC in plasma with INR 10.3. Effects of free frozen plasma (FFP) were similar to 0.3 U/ml of PCCs in terms of PT, but FFP was less efficacious than PCCs in recovering thrombin generation or factor II levels. In flow experiments, the onset of thrombus formation was shortened by either PCC, but not by FFP, contrary to shortened PT values. For warfarin reversal 20% volume

replacement with FFP is inferior to PCCs. In another study from Italy, 3-factor-PCCs was found to be effective and safe in rapidly reversing the effects of VKAs, although it was not always administered in accordance with international or national guidelines. A study on trauma patients, it was found that PCCs, when added to FFP and vitamin K, resulted in a more rapid time to reversal of the INR. On the other side, it was suggested that there is a low but quantifiable risk of thromboembolism in VKA-treated patients receiving PCCs for anticoagulation reversal. But these findings should be confirmed in randomised, controlled trials.

P796

Toxicology

LIPID THERAPY IN VERAPAMIL AND PROPRANOLOL POISONING: REPORT OF TWO CASES

S. Acehan (1), A. Açıkalin (2), E. Çağlıyan (3), M. Gülen (4), S. Satar (5)

1. Emergency Medicine, Adana Numune Education and Research Hospital, Adana, Turkey
2. Emergency Medicine, Adana Numune Education and Research Hospital, Adana, Turkey
3. Radiology Department, Adana Numune Education and Research Hospital, Adana, Turkey
4. Emergency Medicine, Adana Numune Education and Research Hospital, Adana, Turkey
5. Emergency medicine, Adana Numune Education and Research Hospital, Adana, Turkey

Corresponding author: M. Acikalin Ayca (aycaacikalin@yahoo.com)

Key-words: Poisoning ; lipid therapy ; Cardiovascular

Introduction: Verapamil and propranolol, drugs used in cardiovascular medicine, may cause death due to conduction abnormalities and drug refractory shock in high doses. Cardiotonic drugs are usually required for therapy. However, cardiogenic shock may deteriorate in spite of cardiotonic drugs in serious intoxications.

Case Report: Drug refractory cardiogenic shock had evolved in two separate patients admitted to our emergency department due to verapamil and propranolol intoxication. Vasopressor therapy failed in both patients and 100 mL of bolus 20 % lipid solution was given without delay followed by 1mL/kg infusion given in 1 hour. Shock findings resolved in both patients after lipid therapy (ILT).

Discussion: Application of ILT before generation of multi-organ dysfunction due to perfusion deterioration and usage of positive inotropic drugs may be reasonable. Also, its application before performing extracorporeal excretion methods is less invasive. Further prospective and controlled studies are required to determine the dosage and duration of ILT.

P797

Toxicology

A RARELY SEEN POISONING IN THE EMERGENCY DEPARTMENT: GLYPHOSATE

S. Acehan (1), A. Açıkalin (2), F. Bektaş (3), M. Gülen (4), S. Satar (5)

1. Emergency Medicine, Adana Numune Education and Research Hospital, Adana, Turkey
2. Emergency Medicine, Adana Numune Education and Research Hospital, Adana, Turkey
3. Emergency Medicine, Akdeniz University, Antalya, Turkey
4. Emergency Medicine, Adana Numune Education and Research Hospital, Adana, Turkey
5. Emergency medicine, Adana Numune Education and Research Hospital, Adana, Turkey

Corresponding author: M. Acikalin Ayca (aycaacikalin@yahoo.com)

Key-words: Glyphosate ; Poisoning ; Toxicology

Introduction: Glyphosate is a non-selective organophosphate herbicide which has a wide spectrum and systemic effects and used widely in many countries including Turkey. Glyphosate which was produced by Monsanto at the beginning of 1970s is commonly used for especially crabgrass control in agricultural areas.

Case: Seven male patients who work in the same workplace admitted to our emergency department as they noticed that they had added herbicide, glyphosate that they used in the field, into the meal instead of oil. They were conscious and cooperated on admission. They had no complaints except nausea. No pathologic findings were found on their physical examination. A vascular access was opened and fluid replacement was initiated. Gastric irrigation was done and activated carbon was given. All patients were monitored in emergency department. A reduction was detected in platelet and hemoglobin values of the first patient on the first day of hospitalization. Peripheral blood smear examination was consistent with the detected platelet values. The patient had no complaints and spontaneous hemorrhages. The patient was discharged with instructions as his platelet and hemoglobin values tended to elevate on the third day of hospitalization. The first patient was invited for control on the seventh day of glyphosate intake. His platelet (243.000/mm³) and hemoglobin values (14.3 g/dl) were within normal ranges. Creatinine values of the second and the third patients were detected to elevate on the second day of hospitalization (1.3 mg/dl and 1.5 mg/dl, respectively). Urinary output of the patients was monitored. No reduction occurred in urine volume. The patients were administered IV fluid replacement therapy. Control values were normal on the third day of hospitalization. Remaining four patients were discharged with instructions as they did not have any complaints and normal biochemistry and hemogram values 24 hours after hospitalization. The first three patients were hospitalized for three days and other patients were hospitalized for two days.

Results: To conclude; GlySH is an available, commonly used herbicide of which poisoning may be fatal. Clinical findings are closely related with plasma GlySH concentration and vary from asymptomatic findings to fatal manifestations. Securing airway and initiating supportive treatment in the early period would contribute perfusion of all organs and significantly reduce mortality.

P798

Toxicology

EFFECT OF INTRAVENOUS LIPID EMULSION THERAPY ON SERUM PSEUDACHOLINESTERASE IN EXPERIMENTAL MODEL OF DIAZINON INTOXICATION

M Ayan (1), U Tas (2), E Sogut (3), M Esen (1), N Basol (1), T Alatlı (1)

1. Department of Emergency Medicine, Gaziosmanpaşa University, Faculty of Medicine, Tokat, Turkey
2. Department of Anatomy, Gaziosmanpaşa University, Tokat, Turkey
3. Department of Biochemistry, Gaziosmanpaşa University, Tokat, Turkey

Corresponding author: Mr Ayan Murat (ayan421975@windowslive.com)

Key-words: diazinon ; pseudocholinesterase ; lipid

Introduction: This study aimed to research the positive effect of intravenous lipid emulsion (% 20 lipid solution) on serum pseudocholinesterase in the intoxication model of diazinon. Organophosphate poisoning has a different importance among patients with poisoning, which admitted to the emergency service. The most commonly used organic phosphorus compounds, diazinon, malathion, and parathion. Intravenous lipid emulsion

(ILE) treatment is used as a new treatment method in cases of systemic toxicity caused by local anesthetics.

Materials and Methods: 21 male Wistar albino rats, (weighing 180–200 g) randomly divided into three equal groups. Groups organized as; Group I control, Group II diazinon, Group III diazinon + lipid emulsion treatment. Group I, only 1 ml corn oil was given by gavage. Group II, 335 mg/kg diazinon were given by gavage. Group III, in addition to diazinon 20% lipid solution (3 ml/kg) were administered via tail vein into rats. At the end of the experimental period blood sample were taken from animals and Serum pseudocholinesterase levels were measured.

Results: When the pseudocholinesterase levels were analyzed, no significant difference was found between diazinon and diazinon + lipid emulsion treatment groups. However, a significant difference was found between control and the others.

Conclusion: In our study we could not detect a positive effect of lipid treatment on serum pseudocholinesterase. Toxication models with lower doses can try in future studies.

P799
Toxicology

MASSIVE INGESTION OF CLOPIDOGREL AS A SUICIDE ATTEMPT

F Yilmaz, C Kavalci, A Demir, M Ozlem, A Solakoglu, ED Arslan, E Karakılıç

Emergency Department, Numune Training and Research Hospital, Ankara, Turkey

Corresponding author: Mr Yilmaz Fevzi (fevzi_yilmaz2002@yahoo.com)

Key-words: Clopidogrel ; suicide ; overdose

A 55 year old male patient admitted to our emergency department taking oral 56 pills of clopidogrel (plavix 75 mg) (total 4200 mg) after psycho-social stress. He has no significant medical history and currently he is not on medication. He had shown no coagulation test anomalies with the rates of PT:13.3 sec, APTT:35.7 sec, INR:0.99, fibrinogen 350mg/dl.

Reports of overdose of clopidogrel were very rarely reported in the literature. Overdose symptoms may include vomiting, feeling exhausted or short of breath, and blood in your stools or vomit, unusual bruising or bleeding. He was observed in our emergency room for 48 hours. No complications were observed. Patient was discharged safely.

P800
Toxicology

EPILEPTIC SEIZURE CAUSED BY CARBAMAZEPINE OVERDOSE: A CASE REPORT

H Barut (1), D Aksoy (1), M Esen (2), M Ayan (2), M Barut (3), E Gokce (4)

1. Department of Neurology, Gazi osmanpasa University , Faculty of Medicine, Tokat, Turkey
2. Department of Emergency Medicine, Gazi osmanpasa University University , Faculty of Medicine, Tokat, Turkey
3. Department of Internal Diseases, Gazi osmanpasa University , Faculty of Medicine, Tokat, Turkey
4. Department of Radiology, Gazi osmanpasa University , Faculty of Medicine, Tokat, Turkey

Corresponding author: Mr Ayan Murat (ayan421975@windowslive.com)

Key-words: Epilepsy ; Carbamazepine overdose ; Drug blood level

Introduction: Carbamazepine (CBZ) is used for the treatment of partial and generalized epilepsies, bipolar affection disorder, trigeminal neuralgia, post herpetic neuralgia, phantom extremity pains. CBZ poisoning is occasionally seen in emergencies and could be vital. In the event of intoxication neurologic symptoms such as nystagmus and cardiac arrhythmia, breathing depression can be noted extending to even coma. It requires support treatment since it does not have a specific antidote. In this report, a patient who has increased frequency of seizures due to high doses of carbamazepine taken for epilepsy treatment is presented.

Case: A 22 years old male was brought to our emergency department with increased focal motor seizures during last 24 hours. Two days ago, after a partial seizure, patient's dose of CBZ treatment was increased to 1000mg/day in the emergency department. His examination has not yielded anything specific other than a slight mental retardation and mild paresis of the right arm which was previously known. Hemogram, biochemistry and ECG tests were all normal. After noting the drug level in the blood as 24microgr/ml. (normal:4-12microgr/ml.), a treatment against the drug overdose was started and CBZ dose was reduced. The blood drug level was determined as 12 microgr/ml a few days later. And the seizures were not repeated.

Conclusion: In clinical practice, it is important to monitor the drug levels in the blood for the patients with epilepsy. The increased frequency of the seizures does not necessarily indicate the inadequate drug dose; it can also be an indication of drug overdose.

P801
Toxicology

EPIDEMIOLOGY OF DRUGS OR POISONOUS SUBSTANCES USED IN SUICIDE ATTEMPTS BY SUBJECTS ADMITTED TO THE MILITARY HOSPITAL OF TUNIS

M. Ben Lassoued, O. Djebbi, M. Ben Salah, M. Haggui, G. Ben Jrad, H. Kefi, K. Lamine

Emergency department, Military Hospital of Tunis, Tunis, Tunisia

Corresponding author: Mr Ben Lassoued Mehdi (mehdi.benlassoued@gmail.com)

Key-words: epidemiology ; drugs or poisonous substances ; suicide attempts

Introduction :

It is very important to know the epidemiology of drugs or poisonous substances used in suicide attempts. This epidemiology varies according to the type and location of the health care facilities. The objective of this study is to determine the incidence of suicide attempts (SA), their characteristics and mode of management through a retrospective study carried out over a period of 4 years.

Material and methods :

This retrospective study covered the period going from January 2007 to December 2010. Data were retrospectively collected from the files of the department of psychiatry of the military hospital of Tunis where most the victims of suicide attempts were hospitalized. We included in the study all patients aged > 15 years admitted for deliberate self-poisoning. We excluded from the study victims aged < 15 years admitted and victims of therapeutic errors or accidental poisoning. Were also excluded incomplete hospital records lacking important data.

Results :

There were 52 recorded suicide attempts during the study period. Incidence of SA by deliberate self-poisoning accounted for 0.6 per thousand patients in the emergency department and for 51 per thousand in the psychiatry department. Sex ratio was 1.36. Mean

age was 32 + 9 years. A history of mental disturbances was noted in 65% of cases. Thirty-six patients used a medication, mainly a psychotropic drug (44%), as a means for suicide. Nineteen patients used a poisonous substance other than a medication for their suicide attempt; chlohalose was the most used (13.4%). A combination of poisonous substances was used in 39% of cases.

Conclusion :

Patients admitted to emergency departments for suicide attempts represented 0.6 per thousand of the total number of admitted patients against 51 per thousand patients admitted to the department of psychiatry. Psychotropic drugs and chlohalose are the most incriminated poisons.

P802

Toxicology

SECURITY AND EFFICACY OF THE ANTIVENOM PRODUCED WITH THE FRACTION FAB2 IN THE TREATMENT OF POISONOUS SNAKEBITES OF CROTALUS GENERA

R Marquez Martin (1), GE Muñoz Maldonado (2), E Pérez Rodríguez (2)

1. Emergency Department, Hospital Universitario, Monterrey, Mexico
2. General Surgery, Hospital Universitario, Monterrey, Mexico

Corresponding author: Mr Marquez Martin Rodolfo (romarque@hotmail.com)

Key-words: Antivenom ; Poisonous snakebites ; Fabotherapy

SUMMARY

Every year The University Hospital of Nuevo Leon admit in average 45 patients by poisonous snakebites. A study was done to evaluate the security and efficiency of the Antivenom Antivipmin® produced with the Fab(2) fraction.

MATERIAL AND METHODS

Was an open, prospective study.

Inclusion criteria were: Adult patients with II, III or IV degree on poisoning. No administration of antivenom, steroids or antihistaminic previous to arrive, written consent to participate in the study.

Exclusion criteria: Pregnancy or lactation, patients under 16 year old, hypersensitivity to horse products derivatives, negation to participate in the study.

The patients receive 10 vials of Antivipmin® intravenous by one hour as an initial doses, and receive extra doses when were necessary. We take samples for laboratory tests including basal and one hour post antivenom infusion for serum levels of venom and antivenom. All patients receive antibiotics, analgesics, tetanus prophylaxis, and various medications as necessary.

Data analyzed were: Demographic data, evolution time, symptomatology, laboratory tests, morbidity and mortality.

RESULTS

23 patients had inclusion criteria. 80% arrived within the first 3 hours of evolution. Pain, edema, and ecchymosis, were present in all the cases. Site of the bite: Legs: 12 cases, upper limb 11 cases.

Serum levels of venom showed important decrease between basal level and 1 hour post antivenom infusion. Laboratory exams and clinical evolution showed significant statistic improve. The morbidity was 17%, Hospital stays average of 2.8 days.

CONCLUSIONS

The fabotherapeutic Antivipmin® is safe and decrease the complications when in comparison with other antivenoms, and is efficient because improve all clinical and laboratory parameters.

P803

Toxicology

THE EFFECT OF "TRIS-HYDROXYMETHYL AMINOMETHANE" (THAM™) TREATMENT ON SURVIVAL OF RATS ON WHICH EXPERIMENTAL METABOLIC ACIDOSIS WAS DEVELOPED BY INTRAGASTRIC INGESTION OF HYDROCHLORIC ACID

V Ozaydin (1), G Ersoy (2), E Ocmen (3), H Ciftcioglu (2), O Yilmaz (4), N Gokmen (5), A Celik (4), K Ozturk (6)

1. Emergency Medicine, Ministry of Health, University of Medeniyet, Education and Training Hospital of Goztepe, Istanbul, Turkey
2. Emergency Medicine, University of Dokuz Eylul, School of Medicine, Izmir, Turkey
3. Department of Anesthesiology and Intensive Care, University of Dokuz Eylul, School of Medicine, Izmir, Turkey
4. Laboratory Animal Science, University of Dokuz Eylul, School of Medicine, Izmir, Turkey
5. Anesthesiology and Intensive Care, University of Dokuz Eylul, School of Medicine, Izmir, Turkey
6. Emergency Medicine, Education and Training Hospital of Okmeydanı, Istanbul, Turkey

Corresponding author: Mr Ersoy Gurkan (gurkan.ersoy@gmail.com)

Key-words: Metabolic acidosis ; hydrochloric acid ; tris-hydroxymethyl aminomethane

Introduction and goal

We aimed to compare the efficiency of "tris-hydroxymethyl aminomethane" (THAM) with saline treatment on mortality of rats with metabolic acidosis created experimentally by intragastric ingestion of hydrochloric acid.

Material and methods

Following anesthesia, neck dissection of 14 rats, a. carotis interna was cannulated and basal blood samples were drawn. Then, oesophagus of rats were penetrated with branule, 1ml/rat hydrochloric acid was injected into the gaster and waited for 30 minutes to see if acidosis was occurred. Later rats were separated into two groups (THAM and saline) and treatment was started. On the 30th and 60th minutes of treatment pH, PaO₂, HCO₃, PaCO₂ and base deficit parameters were checked. On the second hour of the experiment, the variation of blood gas parameters according to the treatment and the mortality of rats was observed and the experiment was terminated.

Results

Six in saline, 4 rats in THAM group died before the study was over. When THAM and saline groups were compared on behalf of body temperature, blood pressure and heart rate, PaCO₂ and PaO₂, there was no statistically significant difference between groups. Survival of rats in the THAM group differed statistically significant compared to saline group. pH on 60th minute was statistically significantly lower at THAM group and base deficit values on 30th and 60th minutes were statistically significant when compared to the saline group.

Discussion

We observed that IV tris-hydroxymethyl aminomethane (THAM) treatment prolonged the survival of rats with metabolic acidosis, created by intragastric ingestion of hydrochloric acid, compared with the group treated with saline.

P804

Toxicology

RHABDOMYOLYSIS SECONDARY TO QUETIAPINE AND OLANZAPINE INTOXICATION

E Akinci (1), R Köylü (1), NB Akıllı (1), O Koylu (2), E Atayık (3), B Cander (1)

1. Emergency department, Konya Training and Research Hospital, Konya, Turkey
2. Biochemistry Department, Konya Training and Research Hospital, Konya, Turkey
3. Department of Allergy and Immunology, Cumhuriyet University School of Medicine, Sivas, Turkey

Corresponding author: Melle Akinci Emine (emineakinci@yahoo.com)

Key-words: Rhabdomyolysis ; Olanzapine ; Quetiapine

Introduction

Quetiapine and olanzapine are antipsychotic drugs used most in the treatment of behavioral disorders. Its indications include treatment of schizophrenia, moderate or severe manic episodes and major depressive episodes in bipolar disorder (not the prevention of recurrence of manic or depressive episodes). Among its most frequent adverse effects (>10% of the patients) are those that affect the CNS (dizziness, somnolence and headache), alterations (dyslipidemia) and gastrointestinal (xerostomy and weight gain) metabolic, although different alterations may be produced with much less frequency: leukopenia, increase in transaminases, blurred vision and others.

We present the case of a 49-year old male who take a lot of olanzapine and Quetiapine for suicidal purpose has developed rhabdomyolysis early due to drugs.

Case report

Forty nine years old male patient was submitted to emergency department with complain of taking excessive amount of drug in order to commit suicide. By anamnesis, it was found out that the patient has taken 20 number of each of olanzapine (10 mg) and Quetiapine (300 mg). No emesis has been informed, either. In brief history of his life, he was also found out that he had been previously diagnosed with bipolar disorder with the finding that the drugs in question were also prescribed to him.

By physical examination, a midlevel of general position, in a state of being confused, having tendency with sleeping, 14 GCS, 36 C fever, 70/min pulse, 12/min breathing number, 120/80 mmHg blood pressure were detected. Systematic physical examination was evaluated as normal. As to laboratory analysis, the results were as below: Hgb:13,5gr/dl, AST:157 U/L, ALT:56 U/L, CK:7761 U/L, CKMB: 178 U/L, Troponin:0,03ng/ml, pH 7,44, pCO₂:34,8mmHg, pO₂: 31,1 mmHg, HCO₃: 22,9 mmol/L and Lactate: 0,50 mmol/L. The other parameters were within the normal limits. After applying standard decontamination procedure to the patient, an infusion of saline (250 ml/hour) was began. Mannitol 4x50 g, furosemide 3x20 mg and NaHCO₃ 40meq were added to the therapy. The patient who had been using the medicines (olanzapin 10mg/day, Quetiapine 300mg/day) for two years has not been come across that high levels for enzymes which had not previously been detected by laboratory analysis. During hospitalization, no renal function disorder or metabolic acidosis occurred. Levels for urea and creatine have been detected in physiologic limits. In second day the results were like that: CK:4008 U/L, CKMB: 100 U/L, and in third day: CK:1924 U/L, CKMB: 86 U/L and in forth day CK:1510 U/L, CKMB: 80 U/L. Therapy with diuretics and NaHCO₃ was gradually reduced and finished. On the fifth day of hospitalization, the patient who has been evidenced with no problem by the monitoring has been discharged with recommendations after consultation with psychiatry.

Discussion

Elevations of creatine kinase (CK) have been described previously in patients with schizophrenia, mania and psychotic depression. In these patients, the elevations of CK during the acute psychotic episode are not necessarily related with an elevated physical activity during the episodes but are a manifestation of a variety of neuromuscular dysfunctions characteristic of psychotic patients (especially those with schizophrenia). Other causes of elevation of CK in psychiatric patients are intake of drugs, seizures, traumatism and different infectious diseases.

Quetiapine and olanzapine have been held responsible for neuroleptic malignant syndrome, rhabdomyolysis or elevation of serum creatine kinase, and overdose of olanzapine is associated with acute muscle toxicity. We consider that rhabdomyolysis developed not because of chronically usage but utilization of an excessive amount of these drugs.

Conclusion

After taking excessive amount of atypical antipsychotic drugs, patients should necessarily be followed for the risk of developing of rhabdomyolysis.

P805

Toxicology

CLINICAL PRESENTATION OF GAMMA HYDROXYBUTYRATE INTOXICATION: A RETROSPECTIVE, OBSERVATIONAL STUDY.

K Anseeuw (1), G Dieltiens (1), H Neels (2), E Van Turnhout (1)

1. Emergency Department, ZNA Stuivenberg, Antwerp, Belgium
2. Toxicological Laboratory, ZNA Stuivenberg, Antwerp, Belgium

Corresponding author: Mr Anseeuw Kurt (kurtanseeuw@yahoo.com)

Key-words: GHB ; Predictors GHB toxicity ; Clinical manifestations GHB

Gamma hydroxybutyrate (GHB) is a drug of abuse that is used for its euphoric, stimulant, sedative and sexual effects. Being inexpensive and easily to manufacture, GHB is readily available. It is often used as a recreational drug, being taken at social gatherings, clubs and bars. Co-ingestion with other recreational drugs, such as cocaine, cannabis and alcohol, is common. GHB occurs naturally as a metabolite and precursor of gamma-aminobutyric acid (GABA) and interacts mainly with GABA-B receptors and GHB-specific receptors.

GHB is rapidly absorbed and metabolized with nonlinear and dose-dependent pharmacokinetics. Absorption and elimination are capacity-limited. Onset of effects, often abrupt, begin within 15 minutes after oral consumption and peak after 30 – 90 minutes. GHB has a short, dose-dependent half-life of 30 minutes.

Clinical effects may be triphasic, with initial stimulant-like effects (with reported agitation and hallucinations) followed by sedation as blood concentrations rise, consequently followed by another stimulant phase with amphetamine-like effects. Clinical effects include somnolence, confusion, amnesia, loss of consciousness, hypotension, bradycardia, coma and respiratory depression. Sudden onset of effects, as well as abrupt awakening and resolution of effects, frequently occur.

Literature suggests that the steep dose response, variable effects and abuse liability of GHB may result in substantial morbidity and mortality. Though for this finding, systematic data on GHB mortality and morbidity seem to be lacking.

We did a retrospective review of our emergency department cases between 01/03/2009 and 31/12/2011. Patients admitted to our department with a clinical picture of drug poisoning are regularly screened for common drugs by urine and/or serum analysis.

Inclusion criteria were all patients with a GHB-positive plasma screening.

Data retrieved for each patient were age, gender, time of admission, plasma GHB level, agitation, pupils, respiratory rate, heart frequency, blood pressure, Glasgow Coma Scale (GCS), length of stay (LOS) in hospital, admission to ICU, LOS ICU, intubation, signs of aspiration, means of transport, ethanol level and toxicological screening. The objectives were to determine predictors of hospital LOS, need for intubation and ICU admission. We included 28 patients, 86% males and 14% females. Mean age was 26,2 (SD 6,9) with mean plasma GHB-levels of 201,4 (SD 104,7) mg/L. Median (Q1,Q3) GCS was 3,5 (3,8). One third (29%) of patients was agitated and one patient was found in cardiorespiratory arrest. 50% of patients presented with mydriasis, 36% had pinpoint pupils and 7% had normal pupils. Median ethanol level was 12 (0,91) mg/dl. Urine toxicological screening revealed 25% of patients positive for cannabis and 18% for cocaine. Ten (36%) patients were intubated and 4 (14%) patients showed signs of aspiration. Median hospital LOS was 269 (128, 557) minutes, with 7 (25%) patients admitted to ICU with median ICU LOS of 466 (360, 1779) minutes. 93% of patients were transported to the hospital by emergency medical services, with 17 (61%) requiring medical support.

We performed a univariate analysis to detect statistical significant ($p < 0.05$) relationships between these variables. Risk of aspiration was univariately correlated with GHB-level, lower blood pressure, ethanol level, ICU admission and hospital LOS; mydriasis with agitation; ethanol level with intubation, risk of aspiration and ICU admission; intubation with GCS, ethanol level, cannabis in urine and ICU admission; risk of aspiration with GHB-level, lower blood pressure, ethanol level, ICU admission and LOS.

Multivariate analysis showed that aspiration ($p=0.004$), low heart rate ($p=0.001$), low respiratory rate ($p=0.050$) were the significant risk factors for hospital LOS. Main predictors for ICU admission were intubation ($p=0.005$) and low respiratory rate ($p=0.047$). Cannabis in urine ($p=0.004$), male sex ($p=0.004$), ethanol level ($p=0.026$) and aspiration ($p=0.033$) were the predictors for intubation.

Our study demonstrates that co-ingestion of drugs of abuse is common in GHB-users. Most patients remained at the emergency department overnight. Prolonged LOS were associated with pulmonary aspiration and deep sedation. One third of the patients required intubation and ventilation. The severity of clinical symptoms seems rather be related with concomitant use of ethanol or other drugs of abuse than plasma GHB-levels.

risk of ischemic heart disease events, heart failure and arrhythmias. We have studied the potential association of short term exposition to particulate matter and Emergency Department admissions for atrial fibrillation and flutter (AF).

In a retrospective study, we examined the admissions in the Emergency Department of Verona for Atrial Fibrillation and Flutter (International Classification of Disease, 9th ed. (ICD-9): 427.3) from Jan 2008 to Apr 2012. We recorded the number of ED admissions for AF on the day when limit values were exceeded (t0), the following day (t1), as well as 2 (t2) and 4 (t4) days later. For each case we considered: gender (male/female), age (>15 years old), date of ED admission and diagnosis. In all the cases ECG registration confirmed the presence of atrial fibrillation/flutter. Particulate Matter (PM) values collected by the 2 detection unit in the urban area of Verona were provided by ARPAV - Regional Agency for Environmental Prevention and Protection of Veneto. PM limit values were, accordingly to the World Health Organization (WHO) Air Quality Guidelines (AQG) and the European Union health based standards and objectives for pollutants in air (EU 2008/50/CE), PM10: >50 $\mu\text{g}/\text{m}^3$ 24 hour mean and PM2.5: >25 $\mu\text{g}/\text{m}^3$ 24 hour mean. For each of the two pollutants we compared the daily number of cases in presence of 24-hour-mean-values up to the WHO/EU limit and in case of exceeding those limits.

The study population was divided into 3 age groups: 16-64; 65-74 and over 75 years old. In the oldest group women were more than men (1,041 vs 673) with a mean age of 71 years old. The mean age of the youngest group of patient was 54.9 years old with reverse gender distribution (female 302 vs males 685). The middle group age was 69.7 years old with females equal to males (584 vs 583). During the study period we recorded a total of 3,868 ED admission for atrial fibrillation and flutter: 987 in the 16-64 years old group, 1,167 in the 65-74 years old group and 1,714 in the over 75 years old group. During the consecutive 1,582 days of the study period, PM10 exceeded the limit value in 438 days and PM2.5 in 602 days; in 94 days we had no available data for PM2.5 and they were excluded from the analysis for the PM2.5 effect. Data showed an increased incidence of AF in all the age groups only for PM10 (16-64 yrs: t0: +11.5%, t1: +22%, t2: +15%, t4: +6.6%; 65-74 yrs: t0: +29.4%, t1: +15.5%, t2: +18.6%, t4: +14.1%;

□ 75 yrs: t0: +15.4%,

+16.3%, t2: +14.4%, t4: +18.4%). The comparison of AF ED admissions for normal and elevated PM2.5 values did not show any difference. Gender distribution for both the pollutants was the same as in the study population age groups.

Atrial fibrillation is uncommon in younger population, doubles with each decade of adult life afflicting about 10% of the population in the elderly. Distribution of atrial fibrillation in our population study reflects literature data with figures increasing accordingly with the age groups. Our study included atrial fibrillation ED's admission for studying the population as a whole. It is possible that short duration episodes or subclinical arrhythmias have been missed nevertheless we included a large number of atrial fibrillation events. It had been previously reported that arrhythmias occur within a few hours of increased levels of air pollutants. We observed an increase of arrhythmic events admissions already in the day that the thresholds had been exceeded. The preliminary data from this study confirm the potential association of exposure to large particulate matter pollutants and arrhythmias. Previous studies found the lack of association in PM2.5 levels and atrial fibrillation hospitalizations. The major finding from our data is that PM10 pollution effect on supraventricular arrhythmias onset involves also young patients with an effect size similar to that in the elderly patients. Although atrial fibrillation is not usually considered a lethal rhythm, it is associated with increased risk of stroke and premature mortality. Consequently, an increased risk of atrial fibrillation due to acute exposure to elevated air pollution in the general population would have a relevant attributable effect on young adults too.

P806

Toxicology

PARTICULATE MATTER POLLUTION AND ATRIAL FIBRILLATION EMERGENCY DEPARTMENT PRESENTATION FROM 2008 TO NOWADAYS: PRELIMINARY REPORT

M Zannoni (1), MC Bonito (1), R Codogni (2), E Formaglio (2), S Puglisi (2), C Tobaldini (2), G Ricci (1)

1. Emergency Department, Azienda Ospedaliera Universitaria Integrata, Verona, Italy
2. Postgraduate School in Emergency Medicine, University of Verona, Verona, Italy

Corresponding author: Mr Zannoni Massimo (massimo.zannoni@ospedaleuniverona.it)

Key-words: Particulate Matter ; Atrial fibrillation ; Pollution

Epidemiological studies support a positive relationship between exposure to air pollution and cardiovascular disease. Previous studies showed that short-term exposure to elevated concentrations of particulate matter (PM) air pollution increases

P807

Toxicology

A RESTLESSNESS AND CARDIAC ARRHYTHMIAS REVEALING THE CRACKING OF A CAPSULE OF COCAINE IN A BODY-PACKER

I MALAJATI, H EZZOUINE, B CHARRA, A BENSLAMA, S MOTAOUAKKIL

MEDICINE INTENSIVE CARE, CHU IBN ROCHD, CASABLANCA, Morocco

Corresponding author: Melle Malajati Ibtissam (ibtissamalajati@hotmail.fr)

Key-words: BODY-PACKER ; COCAINE ; CARDIAC ARRHYTHMIAS

Cocaine is a narcotic product which consumption is steadily increasing all over the world. The transport intradigestif, intrarectal or intravaginal in capsule form, exposed to many complications particularly acute poisoning due to a cocaine crack a capsule, gastrointestinal obstruction or death.

This is a patient of 31 years, from Nigeria, who has been intercepted by the customs authorities at the airport for transporting 82 packets of cocaine. At admission, the patient was conscious, agitated, tachycardia to 120 beats / min, high blood pressure SBP / DBP = 190/100 mm-Hg, eupneic in the open air SpO₂ = 98%, pleuropulmonary auscultation was normal. The blood analysis had demonstrated elevated rate of CPK = 18 497 and LDH = 1136. The ECG has showed a sinus tachycardia, with sub-ST segment at 3 leads (V3, V4 and V5), a troponin was negative.

The Abdominal x-Ray has objectivated the presence of many capsules in the colon, prevailing in the left colon and sigmoid, the abdominopelvic CT scan also revealed the presence of multiple training spontaneously hyperdense in the digestive tract, oval and limited, place of a few air bubbles, at the left and right transverse colon, the sigmoid and rectum, corresponding to capsules of cocaine.

The management was :rehydration 4 liter / day, laxatives, with the completion of abdominal x-Ray daily, associated with antihypertensive therapy made from nicardipine (2 mg / h in electric syringe according to blood pressure). The evolution was marked by the emission of capsules of cocaine from the first 24 hours of hospitalization, with Stabilisation of the hemodynamic status. The patient was moved from the ICU on day 7.

The transport in corpore of cocaine body-packer exposed to serious complications. A conservative treatment by accelerating the transit using laxatives is usually sufficient. Surgical evacuation may nevertheless become necessary and urgent because of complications that may develop life-threatening.

P808

Toxicology

ACUTE NUTMEG INTOXICATION: A CASE-REPORT

K Anseeuw (1), K Dechamps (2), LJ Mortelmans (1)

1. Emergency Dept, ZNA Stuivenberg, Antwerp, Belgium
2. Emergency Medicine, ZNA Stuivenberg, Antwerp, Belgium

Corresponding author: Mr Mortelmans Luc (luc.mortelmans@zna.be)

Key-words: nutmeg ; intoxication ; poisoning

Introduction

We report a case of a rare poisoning.

Case description

A 31-year-old male attended the emergency department with an 11 hour history of nausea, vomiting, abdominal pain and hallucinations. He admitted drinking tea, made from the powder of three nutmegs, for aphrodisiac reasons seventeen hours ago.

Symptoms including nausea, vomiting, dry mouth, abdominal pain and urinary retention, developed six hours after ingestion. Physical examination revealed an agitated man with visual hallucinations and stable vital signs (tachycardia of 105/minute; normotensive; respiratory rate of 18/minute). No fever. Miotic, light reactive pupils and normal neurological examination. Abdominal examination revealed a vesical globe and hypoperistalsis. Electrocardiography showed a sinustachycardia and laboratory investigations were normal.

Treatment consisted of urinary catheterization, fluid administration, benzodiazepines and antiemetic drugs. His altered state of mind and gastrointestinal symptoms persisted for about 9 hours (26 hours after ingestion). He was discharged after an observation period of 15 hours without sequelae.

Discussion

Nutmeg is a well-known household spice, which also possess euphoric, hallucinogenic and anticholinergic effects. The main psychoactive constituents of nutmeg are myristicin and elemicin, both having anti-cholinergic and psychotropic properties.

An acute nutmeg poisoning causes mostly gastrointestinal symptoms (nausea, abdominal pain and vomiting). Other clinical features resemble anticholinergic toxicity, with facial flushing, tachycardia, hypertension, dry mouth, blurred vision and delirium. Symptoms usually begin about 3-6 hours after ingestion and may last up to 24-36 hours.

Treatment is mainly symptomatic and supportive: hydration, antiemetics and sedatives. Gastric decontamination measures are usually unnecessary because of delayed presentation.

Conclusion

When nutmeg is taken in excess, a typical clinical syndrome resembling an anti-cholinergic syndrome occurs. Emergency medicine physicians should be aware that household spice may provoke clinical intoxications.

P809

Toxicology

AMOUNTS OF TOXIN IN AMANITA PHALLOIDES ALBA

R Bayram (1), S Colakoglu (2), S Karahan (3), E Kaya (3), A Saritas (4), KO Yaykasli (5)

1. Pharmacology, Abant İzzet Baysal School of Medicine, Bolu, Turkey
2. Anatomy, Duzce University School of Medicine, Duzce, Turkey
3. Pharmacology, Duzce University School of Medicine, Duzce, Turkey
4. Emergency department, Duzce University School of Medicine, Duzce, Turkey
5. Medical Genetic, Duzce University School of Medicine, Duzce, Turkey

Corresponding author: Mr Saritas Ayhan (a_saritas_@hotmail.com)

Key-words: Amanita phalloides alba ; mushroom intoxication ; HPLC

Introduction and Purpose:

Alba type which is a sub-species of Amanita Phalloides is very rarely grown, and some of the poisonings is consisted of these sub-species. In this study, we aimed to measure of alpha, beta and gamma amanitin with phalloidin and phalloidin toxin concentrations at different zones of Amanita Phalloides Alba.

Material and Methods:

Six Amanita Phalloides mushrooms were gathered from the wooded area of town Yeşilyayla-Gümüşova-Düzce-Türkiye in 17 November 2011. These mushrooms were divided into two parts as sagittal, each of them were weighted, and dried under stream of

air to 50 °C in 24 hours. A piece of the dried mushroom was analyzed totally. The other piece's cup, gills stipe and volva were left, and analysis was performed separately on the each of these parts. Dried materials were ground, per 1 gram is waiting in extraction solution for one day, extraction was achieved. Methanol + water + 0.01 m HCl (5:4:1 v/v/v) were used for extraction solution. At the end of the extraction, by centrifugation at 4000 rpm for 5 minute, it was injected into 20 µL HPLC device. Results were given as the amount for every 1 gram of dry mushroom. Also, the amount of toxin in wet mushroom was calculated from the ratio. Measurements were performed by HPLC device. Alpha, beta and gamma amanitin with phalloidin and phallocladin were analyzed. As the mobile phase, 50 mM ammonium acetate + acetonitrile (90+10, v/v) were used 1mL/minute flow rate. 150x4,6 mm C18 reverse phase column (5µm particle) was used. Results were given as mean ± SD.

Results:

For each material, toxin results by applying data (obtained from HPLC chromatograms) in the calibration graph were given in Table 1.

Conclusion:

There is no any data about toxin analysis associated the Amanita Phalloides Alba in literature. Amount of toxin in Amanita Phalloides Alba was published first.

P810

Toxicology

AMOUNTS OF TOXIN IN AMANITA PHALLOIDES MUSHROOM

R Bayram (1), S Colakoglu (2), S Karahan (3), E Kaya (3), A Saritas (4), KO Yaykasli (5)

1. Pharmacology, Abant İzzet Baysal School of Medicine, Bolu, Turkey
2. Anatomy, Duzce University School of Medicine, Duzce, Turkey
3. Pharmacology, Duzce University School of Medicine, Duzce, Turkey
4. Emergency department, Duzce University School of Medicine, Duzce, Turkey
5. Medical Genetic, Duzce University School of Medicine, Duzce, Turkey

Corresponding author: Mr Saritas Ayhan (a_saritas@hotmail.com)

Key-words: Amanita phalloides ; mushroom intoxication ; HPLC

Introduction and Purpose:

Amanita phalloides is the type of factor in most fatal cases of mushroom poisoning. The amount of toxin in this mushroom has been varied. In this study, we aimed to measure of alpha, beta and gamma amanitin with phalloidin and phallocladin toxin concentrations.

Material and Methods:

Six Amanita Phalloides mushrooms were gathered from the wooded area of town Yeşilyayla-Gümüşova-Düzce-Türkiye in 24 November 2011. These mushrooms were divided into two parts as sagittal, each of them were weighted, and dried under stream of air to 50 °C in 24 hours. A piece of the dried mushroom was analyzed totally. The other piece's spores, mycelium, cup, gills stipe and volva were left, and analysis was performed separately on the each of these parts. Dried materials were ground, per 1 gram is waiting in extraction solution for one day, extraction was achieved. Methanol + water + 0.01 m HCl (5:4:1 v/v/v) were used for extraction solution. At the end of the extraction, by centrifugation at 4000 rpm for 5 minute, it was injected into 20 µL HPLC device. Results were given as the amount for every 1 gram of dry mushroom. Also, the amount of toxin in wet mushroom was calculated from the ratio. Measurements were performed by HPLC device. Alpha, beta and gamma amanitin with phalloidin and phallocladin were analyzed. As the mobile phase, 50 mM

ammonium acetate + acetonitrile (90+10, v/v) were used 1mL/minute flow rate. 150x4,6 mm C18 reverse phase column (5µm particle) was used. Results were given as mean ± SD.

Results:

Sample HPLC chromatogram of toxin analysis was given in Figure 1. For each material, toxin results by applying data (obtained from HPLC chromatograms) in the calibration graph were given in Table 1.

Conclusion:

The amount of toxin varies according to climate and environmental conditions. Herein, the amount of toxin in spores of amanita phalloides was published the first, and this is the only study about amount of toxin in mushrooms grown in Turkey.

P811

Toxicology

ORGANOPHOSPHATE POISONING CASES TREATED WITH HIGH-DOSE OF ATROPINE IN INTENSIVE CARE UNIT AND NOVEL TREATMENT APPROACHES

A Karakus (1), M Murat Celik (2), M Karcioglu (3), K Tuzcu (3), E Sukru Erden (4), C Zeren (5)

- Mustafa Kemal University, Faculty of Medicine
1. Department of Emergency Medicine, Hatay, Turkey
 2. Department of Internal Medicine, Hatay, Turkey
 3. Department of Anesthesia, Hatay, Turkey
 4. Department of Chest Diseases, Hatay, Turkey
 5. Department of Forensic Medicine, Hatay, Turkey

Corresponding author: Mr Karakus Ali (drkarakus@yahoo.com)

Key-words: Organophosphate poisoning ; Atropine . Alternative treatments ; Intensive care

Being responsible for symptoms due to the cholinergic effects organophosphate poisonings are life-threatening cases. Clinical status and blood levels of cholinesterase are used in diagnosis. While atropine and pralidoxime (PAM) appear as essential medications, haemofiltration treatments and lipid solutions have been widely studied in recent years. In this study, the importance of high-dose atropine therapy and early intervention, and novel treatment approaches are discussed.

Records of the 25 patients treated for organophosphate poisoning in the intensive care unit between April 2007 and December 2012 were evaluated retrospectively.

Out of 25 patients, 14 (56%) were male and 11 (44%) were female with a mean age of 34.8±17.66 years (range: 14-77 years). The patients most frequently admitted in June (n:4) and July (n:4) (16%). Twenty-two patients (88%) were poisoned by oral intake, 2 (8%) by inhalation and 1 (4%) by dermal route. Twenty patients (80%) took organophosphates intentionally for suicidal purposes while 5 (20%) cases poisoned due to accidental exposure. The Glasgow Coma Scale of 9 patients (36%) was below 8 point on admission to hospital. The highest dose of atropine given was 100mg intravenously on admission and 100 mg/kg/day during follow-up. The total dose given was 11.6 g/12 days. Eleven patients (44%) were on mechanical ventilation for a mean duration of 5.73 ± 4.83 days. The mean duration of intensive care unit stay was 6.52 ± 4.80 days. Twenty-three patients (92%) were discharged in good clinical condition and one patient (4%) was referred to another hospital.

This study suggests that, atropine can be administered until secretions disappear and intensive care should be exerted in follow-up of these patients. In addition, in case of necessity for high doses, sufficient amounts of atropine and PAM should be available in hospitals.

P812

Toxicology

PROTECTIVE EFFECTS OF EBSELEN AGAINST IRON-INDUCED CARDIOTOXICITY IN RATS

A Karakus (1), C Zeren (2), F Sefil (3), H Gokce (4), S Motor (5), M Murat Celik (6)

Mustafa Kemal University, Faculty of Medicine
1. Department of Emergency, Medicine, Hatay, Turkey.
2. Department of Forensic Medicine, Hatay, Turkey.
3. Department of Physiology, Hatay, Turkey.
4. Department of Pathology, Hatay, Turkey.
5. Department of Biochemistry, Hatay, Turkey.
6. Department of Internal Medicine, Hatay, Turkey.

Corresponding author: Mr Karakus Ali (drkarakus@yahoo.com)

Key-words: Ebselen ; heart influences ; iron induced toxicity

Objective: Ebselen, a substance with glutathione peroxidase-like activity, shows antioxidant, anti-inflammatory, neuroprotective and immunomodulatory effects. The purpose of this study was to find out the effects of ebselen against iron-induced cardiotoxicity in rats.

Material and Method: After obtaining ethical committee approval, fifty-six male Wistar Albino rats were divided into seven groups. Serum iron, ferritin, lactate dehydrogenase, creatine kinase and creatine kinase-MB (CK-MB) levels were measured biochemically. Iron accumulation in cardiac tissue samples was measured using inductively coupled plasma atomic emission spectrometry (ICP-AES). Comparison of iron accumulation histopathologically performed using Prussian blue stained sections by semi-quantitative method.

Results: Serum LDH levels in ebselen+iron, iron+deferrioxamine and iron+deferrioxamine+ebselen groups were significantly higher compared to control group, while significant difference was observed between serum CK-MB level of iron+deferrioxamine+ebselen group and control samples ($p < 0.001$). Serum iron levels in iron+deferrioxamine and iron+deferrioxamine+ebselen groups were highly significantly higher than controls, and serum ferritin levels in iron, ebselen+iron, iron+deferrioxamine and iron+deferrioxamine+ebselen groups were significantly higher compared to control group ($p < 0.001$). Iron levels of cardiac tissue measured by ICP-AES in iron, iron+deferrioxamine and iron+deferrioxamine+ebselen applied groups were highly significantly different compared to those in controls ($p < 0.001$), while a relatively less significant difference observed between ebselen+iron group and control ($p < 0.05$). Iron accumulation was found to be decreased in ebselen and deferrioxamine given groups when histopathologically compared to iron applied group.

Conclusion: In conclusion, obtained findings indicated the efficacy and utility of ebselen treatment on iron induced cardiotoxicity. In this regard, ebselen might contribute to treatment in β -thalassemia and sickle cell patients, and those in need of frequent blood transfusion.

P813

Toxicology

DOES EPIDEMIOLOGY OF POISONING CHANGE OVER TIME IN AN ACADEMIC EMERGENCY DEPARTMENT?

A Meulemans (1), M Sabbe (1), L van Gennep (2)

1. Dept of Emergency Medicine, University Hospitals, Leuven, Belgium
2. Medical Sciences, University of Groningen, Groningen, Netherlands

Corresponding author: Mr Sabbe Marc (lea.vanroelen@uzleuven.be)

Key-words: poisoning ; epidemiology ; emergency department

Introduction: To approach and treat poisoned patients optimally, it is necessary to be aware of the actual poisoning characteristics and trends during the last years. The goal of this study was to examine recent evolutions and to compare them with previous data.

Methods: The study was approved by the ethical committee of the university hospital. In this study, poisoning characteristics were prospectively collected in 2011 and compared with historical data (1993-1996). Both studies are performed in the same emergency department of a university hospital in Leuven – Belgium. The data for 2011 are a convenience sample in two blocks of three months (February-April; October-December). Data are compared using chi-square tests on SPSS software.

Results: 550 patients were included in 2011, 3167 patients from 1993 until 1996. Products most frequently responsible for intoxications in 2011 were alcohol, benzodiazepines and analgesics. In contrast, alcohol, benzodiazepines and carbon monoxide were most frequently registered from 1993 until 1996. From 1993 until 1996, only 15.7% of intentional intoxications were committed by men, but in 2011 this number increased up to 26.8%. Remarkable changes are found between the two study periods.

Conclusion: Our study demonstrates important changes in poisoning characteristics between 1993 until 1996 and 2011. It is necessary to obtain up-to-date information about poisoning regularly, to improve approach and treatment of poisoned patients. It is possible that these data are not representative for every ED in Belgium. To acquire current information about poisoning in Belgium, it would be useful to organize a national registration period for one week.

P814

Toxicology

INVESTIGATION OF EFFICIENT CAUSES ON REPETITIVE SUICIDE ATTEMPTS

O. Karakayali (1), G. Kurtoglu Celik (2), A. Ahmedali (2), I. Ertok (2), T. Oz (2), M. Yilmaz (2)

1. Emergency department, Teaching and Research Hospital in Kocaeli Derince, Kocaeli, Turkey
2. Emergency department, Ataturk Training and Research Hospital, Ankara, Turkey

Corresponding author: Melle Kurtoglu Celik Gulhan (kurtoglugulhan@yahoo.com)

Key-words: Suicide ; resuicide attempt ; emergency department

INTRODUCTION: Suicide is one of the major public health problem, besides one of the leading causes of death around the world. In our study, we propose detecting effective causes and taking preventive measures for repetitive suicide.

RESULTS: 266 patients with suicide attempts including a percentage of 0,26 of total 98.658 patient appealing to our emergency service, were admitted in our emergency department for one year period. The patients consisted of 155 (67,4%) woman and 75 (32,6%) man. In our study we observed 32 patients (13,8%) have past attempted suicide.

In this study, we observed 84,4% of patients were attempting suicide by taking drug. Our observations show that 49 patients (25,4%) has re-suicide attitude, in addition 19 patients (8,3%) have committed suicide attempt.

We observed patients who re-suicide attitude after discharge attempting suicide most frequently with sharp objects contact (47,3%). Observation of study shows 13 of 91 patients that have not been consulted with a psychiatrist during emergency service

follow up process have re-suicide attempt. In addition, 7 of 133 patients that have been consulted with a psychiatrist have re-suicide attempt.

While re-suicide attitude ratio is rising in patients that have not been consulted with a psychiatrist against patients that have been consulted with a psychiatrist. There was no statistically significance. 13 patients (16,7%) of known history of psychiatric illness have re-suicide attempt after discharge from emergency service. Patients who has a psychiatric illness have a greater ratio of resuicide than the group of not known psychiatric illness and a statistically significant difference between resuicide ratio of both groups could be found ($p < 0.005$).

We determine that 55,2% of patients were totally healed in emergency service after investigation of etiology and therapy, 18,3% of patients were discharged with their own or family request, 11,3% of patients were hospitalized at least one service, 6,5% of patients were dispatched to another hospital because of inadequate amount of intensive care bed capacity, 6,1% of patient were hospitalized in intensive care unit, 2,6% of patients were death in emergency service.

Nine patients (64,3%) who hospitalized in intensive care unit, 21 patients (50%) who discharged with their own request, 6 patients (40%) who being dispatched to an intensive care unit of another hospital have an opinion on re-suicide attempt. Patients who is hospitalized in intensive care unit or want to be dispatched from emergency service with their own requests has an elevated ratio of suicide attempts against the other patients and this difference is significant statistically ($p < 0.005$).

Although, there were 4 patients (28,6%) hospitalized in intensive care and 7 patients (16,7%) discharged with their own request who had a history of re-suicide, there was just only one patient (3,8%) hospitalized in an another service who had an attempt to suicide again.

Patients who is hospitalized in intensive care unit and want to be dispatched from emergency service with their own requests has an elevated level of re-suicide ratio against the other patients and this difference is significant statistically ($p < 0.005$).

50,9% of cases did not follow up psychiatry examination for one year period after dischargement and 47% (55 patients) of this group have re-suicide attempt opinion. Although 18 patient (15,3%) who did not follow up psychiatry examination have an attempt of suicide, there were just 2 patients (1,8%) attempt to suicide again in the psychiatry controlled group. Patients who do not attend to a psychiatry controlled programme has a greater ratio of re-suicide attempt against psychiatry controled group and this difference is significant statistically in both group ($p < 0.005$).

CONCLUSION: The results of our study suggest that there is a close relationship with resuicide attempt and the groups of patients who known psychiatric illness history, who have not been consulted with psychiatry clinic before being discharged, who did not follow up psychiatry examination after dischargement and who hospitalizing in intensive care unit or discharged by their own request. Accordingly, We think that an emergency service doctor has an effective role for preventing suicide attempts.

P815

Toxicology

ANTICHOLINERGIC INTOXICATION DUE TO DATURA STRAMONIUM

P Sert (1), A Kose (1), E Armagan (2), T Inal (1), S Akkose (1)

Department of Emergency Medicine, Uludag University, Faculty of Medicine, Bursa, Turkey

Corresponding author: Mr Kose Ataman (ataberk76@yahoo.com.tr)

Key-words: Datura stramonium ; anticholinergic effects ; poisoning

Datura stramonium mentioned with many different names in our country is commonly known as tatula. This plant including atropine, hyoscyamine and scopolamine can cause serious anticholinergic poisoning after inappropriate and unconsciously usage. In this article, we would like to present an approach, accompanied by literature, to the poisoning case for a 69-year-old man who appealed to the emergency service with the symptoms of conscious disturbance and agitation after drinking Datura stramonium tea. As a result, wild plant poisoning has to be considered in every patient admitted to emergency services with the unexplained anticholinergic symptoms and complaints, every patient should be examined and evaluated accordingly.

P816

Toxicology

PROLONGED BLEEDING: SUPERWARFARIN POISONING

A. Kose, S. Eraybar, E. Armagan, E. Ahun, F. Ozdemir, O. Koksall

Department of Emergency Medicine, Uludag University, Faculty of Medicine,, Bursa, Turkey

Corresponding author: Mr Kose Ataman (ataberk76@yahoo.com.tr)

Key-words: Suicide ; Superwarfarin ; , bleeding

INTRODUCTION: Superwarfarins are anticoagulant rodenticides similar to warfarin, but which have various substituted phenyl groups replacing the terminal methyl group, resulting in a fat-soluble, long-acting anticoagulant that is nearly 100 times more potent than the parent compound. There were 3 major categories of exposure or poisoning: accidental ingestion (in children), attempted suicide, and deliberate selfpoisoning with denial (Munchausen syndrome). Superwarfarins inhibit the carboxylation of vitamin K dependent factors (II, VII, IX, and X) in the liver. Coagulopathy might manifest as epistaxis, gingival bleeding, hematemesis, hematuria, hematochezia, menometrorrhagia, ecchymosis, petechial hemorrhages, intracranial hemorrhages, or bleeding that is not in proportion with the level of the injury.

CASE: A 32 years-old previously healthy woman presented to emergency department with vaginal bleeding. She had no personal or family history of bleeding disorder, additional symptoms or suspected pregnancy. Laboratory studies werenotable with prolonged prothrombin time (PT) and international normalized ratio (INR). She was given two fresh frozen plasma but did not achieve normal values. During follow up learned that 2 months ago she had hospitalized in intensive care unit for brodifacoum ingestion.

DISCUSSION: Superwarfarin ingestion can be a serious problem resulting in life-threatening bleeding. Many reviews of the problem have been published, and even though the awareness of the condition has increased, the incidence is not decreasing. The knowledge of ingestion is usually not available initially during the patient's presentation, and therefore a high threshold of suspicion is warranted in any patient with bleeding issues or prolonged coagulation assays

P817

Toxicology

MAD HONEY POISONING PRESENTING WITH VENTRICULAR TACHYCARDIA AND ACUTE MYOCARDIAL INFARCTION: CASE REPORT

T Ocak (1), A Duran (1), M Basturk (2), I Sahin (3)

1. Emergency Medicine, Abant İzzet Baysal University, Medical Of Faculty, Bolu, Turkey
2. Emergency department, Bagcilar Research and Education Hospital, Istanbul, Turkey
3. Cardiology, Bagcilar Research and Education Hospital, Istanbul, Turkey

Corresponding author: Mr Ocak Tarik (drtarik1977@gmail.com)

Key-words: Mad Honey ; Ventricular Tachycardia ; Acute Myocardial Infarction

Abstract

Cases presenting with severe hypotension, bradycardia, atrioventricular block and asystole have been reported following ingestion of honey in northern parts of Turkey, and certain parts of Japan, Brazil and Nepal. Herein, we report a case presenting with ventricular tachycardia and acute inferoposterolateral myocardial infarction developing after ingestion of mad honey (grayanotoxin), being reported for the first time in the literature.

Case Report

39 year old female patient who did not have any complaints before was admitted to the emergency department with nausea and feeling of fainting. When she was questioned in detail, it was learnt that she had ingested 2 teaspoonfuls of mad honey and her complaints began 45 minutes later. On admission, arterial blood pressure was 75/50 mmHg, heart rate was 49 bpm. ECG revealed sinus bradycardia. 0.9% NaCl infusion was commenced. 0.5 mg iv atropine administration was begun when the heart rate decreased to 40 bpm. Her heart rate and blood pressure returned to normal following atropine administration; however, she developed polymorphic VT after approximately 45 seconds. 2% lidocaine 100 mg iv was administered as bolus. On control ECG, ST elevation was observed on the inferior and lateral derivations and ST depression was observed on the V1-V2 derivations. Her condition was stable on the follow-ups and she was discharged without any complications.

Mad honey poisoning should be excluded in cases presenting to the emergency unit with unexplained hypotension, bradycardia and even acute myocardial infarction, especially in endemic areas.

lethargy, seizures, coma and death and it has high mortality and morbidity rates. 1-4.

Salicylates are also used for non medical purposes in food and agricultural industry 5. In this paper we present a case of salicylate intoxication due to accidentally use of commercial bag form of powdered salicylic acid which is used for making pickles.

CASE

A 63 year old female patient has prepared a solution with 10 grams of salicylic acid and drinking water in order to use it for making pickles (165 mg / kg) and has drunken it by forgetfulness. She was brought to our emergency department by her relatives with complaints of nausea, vomiting, tinnitus and loss of hearing. Ten hours was passed after she had drunken it.

The patient was conscious, cooperated and vital signs were normal and GCS was 15. No abnormality was detected on the electrocardiogram. Neurological examination was normal except horizontal nystagmus on the right and other signs were normal in the physical examination. In the laboratory tests, blood urea nitrogen was 54 mg / dL and creatinine was 1.48 mg / dL and no other pathological findings were observed. Blood levels of salicylate was 33.4 mg/dL.

Gastric irrigation was applied to the patient and 50 g of activated charcoal was given. A supportive treatment with NaHCO₃ and KCl was continued in order to maintain the urine pH at 7.4 and serum potassium levels over 4 to 4.5 mEq / L. The patient was followed in the emergency department for 24 hours. After complaints of the patient ameliorated and control salicylate levels decreased to 15.4 mg / dl, she was discharged and her relatives were informed about emergency situations.

DISCUSSION

Salicylates can be bought from drugstores without prescription and it has been used in the food industry as well as for medical reasons. The content of non medical preparations is generally similar to those of medical types. Therefore in case of oral intake of these commercial products no clinical difference is expected. But except seeing the package or patient's story, it is difficult to consider intoxication depending on only the clinical signs and symptoms.

Signs and symptoms of salicylate intoxication depends on the amount of the salicylate intake. Under 150 mg / kg acute doses clinical signs of toxicity may not be seen or mild symptoms may be seen such as tinnitus, deafness, gastric irritation, nausea and vomiting. The doses at 300 mg / kg or above may cause severe symptoms of intoxication such as seizures, coma, pulmonary edema and renal failure.

Intake of salicylates at doses of 150 mg / kg or above requires emergency treatment. There is no antidote for medication and the treatment includes administration of activated charcoal in order to decrease absorption, intravenous hydration and correcting electrolyte imbalance. In order to increase renal excretion of salicylate urine pH should be increased to exceed 7.5 by alkalization of urine (NaHCO₃) and blood pH should be titrated to be above 7.4 but not to exceed over 7.55. Potassium replacement is required in order to maintain a blood level of 4 to 4.5 mEq / L.

CONCLUSION

It should be kept in mind that salicylates are used also for non-medical purposes. In such cases seeing empty packets or boxes of different commercial products is important. In our case, there was no difference between medical and commercial preparations in terms of clinical features and management.

P818

Toxicology

A RARE CAUSE OF SALICYLATE INTOXICATION: PRODUCING PICKLES AT HOME

A Ahmetali, M Aktoklu, S Becel, I Ertok, F İçme, O Karakayalı, A Şener

Emergency Department, Republic of Turkey Ministry of Health Ankara Atatürk Training and Research Hospital, Ankara, Turkey

Corresponding author: Mr Sener Alp (alpsener@yahoo.com)

Key-words: Salicylate intoxication ; Home made pickles ; Different package

INTRODUCTION

Salicylates are widely used for their analgesic, antipyretic, anti-inflammatory and antithrombotic properties. In cases of acute high-dose intake and chronic use it may lead to clinical situations such as nausea, vomiting, tinnitus and hearing loss, respiratory alkalosis, metabolic acidosis, hypoglycemia, hyperthermia,

P819

Toxicology

CARBON MONOXIDE INTOXICATION AND HYPERBARIC OXYGEN THERAPY

F İçme (1), N Kozacı (2)

1. Emergency department, Ankara Atatürk Training and Research Hospital, Ankara, Turkey
2. Emergency department, Adana Numune Training and Research Hospital, Adana, Turkey

Corresponding author: Mr İçme Ferhat (ferhaticme@gmail.com)

Key-words: Carbon monoxide poisoning ; hyperbaric oxygen therapy ; lactate

Purpose: The purposes of this study are to compare the clinical and laboratory findings of the patients who admitted to emergency department and sent to hyperbaric oxygen (HBO) therapy and who received only normobaric oxygen (NBO) treatment due to carbon monoxide (CO) intoxication, and to investigate the relationship between the increase of lactate, an indicator of tissue hypoxia, and the severity of clinical findings.

Material and Methods: In this retrospective study 201 patients who were diagnosed with CO intoxication were enrolled. The levels of consciousness, physical examination findings, ECG findings, laboratory results (arterial blood gas and the carboxy-hemoglobin (COHb), CK-MB, troponin I, lactate) on admission and applied treatments were recorded for each of the patients. The Glasgow Coma Scale (GCS) was used to assess the level of consciousness.

Results: 201 patients were enrolled in this study who were diagnosed with CO poisoning. In 5% of patients (10 patients) GCS was <15. In 5% of patients (10 patients) both CKMB and troponin I were elevated. 17.4% of the patients (35 patients) received HBO treatment whereas 82.6% (166 patients) received NBO therapy. All of the cases in which Troponin I and CKMB were elevated together and GCS <15 were sent to HBO therapy. COHb, lactate, CKMB and Troponin I levels were higher in patients who referred for HBO therapy than the other patients. COHb and lactate levels were significantly higher in patients with GCS<15 than the ones with GCS= 15. Lactate levels of the patients whose both troponin I and CKMB levels increased were higher than the other patients, whereas COHb levels were not different.

In all of the patients enrolled in the study a positive correlation was observed between the lactate levels and COHb ($r: 0.331, p = 0.001$), CKMB ($r = 0.449, P = 0.001$) and troponin I ($r: 0.313, p: 0.001$) levels whereas we found a negative correlation between the levels of lactate and GCS ($r: -0.325, p = 0.001$). We also found a negative correlation between the levels of COHb and GCS ($r = -0.267, p = 0.001$) and there was no correlation between the levels of COHb and CKMB ($r: 0.073, p: 0.342$) and troponin I ($r = 0.053, p = 0.491$).

Conclusion: The findings of our study showed that blood lactate levels predicate the clinical severity better than COHb levels, consequently we suggest that blood lactate levels can be used together with COHb in defining indications for HBO treatment.

P820

Toxicology

SEVERE HYPONATREMIA DEPENDING ON OXCARBAZEPIN USING

E Acar, S Karaman, CS Tanrikulu, O Delice

Emergency department, Erzurum district education and research hospital, Erzurum, Turkey

Corresponding author: Mr Acar Ethem (dr.ethemacar@hotmail.com)

Key-words: Oxcarbazepine ; Hyponatremia ; Altered consciousness

Introduction

It has been reported that it should be followed closely for hyponatremia. It is known that Oxcarbazepine (OCBZ) compared to Carbamazepine, it is better tolerated. Hyponatremia frequently is defined as serum sodium (Na) value below 135 mEq / L. It does not generally give clinical findings until it is dropped below 125 mEq / L. Hyponatremia is mostly asymptomatic in patients, treated with OCBZ, and it is very rarely severe enough to require stopping medication. When serum Na value falls below 120 mEq / L, serious complications may develop, such as headache, seizures, brain edema, herniations, and death.

Case

65-year-old female patient was admitted to Emergency Department because some complaints continued for 1 week, such as nausea, vomiting, increasing lethargy, and malnutrition. According to her medical history, she has no and disease except epilepsy, and she has been using 2x1 OCBZ 600mg for a long time. When she came to emergency services, she tended to fall asleep. When she woke up, she became kopere. There were no stiff neck and fever. Other system examinations were natural. Sinus heart rhythm rate was 84 beats / minute in her TA: 140/100mmHg Electrocardiograph. Blood test results were natural except Na: 120 mEq / L. According to her last week records, Na was 125 mEq / L and she had nausea. The patient was considered drug-induced chronic hyponatremia. OCBZ was changed by Neurology services. Drowsiness tendency passed when Na value dropped below 125 mEq / L with isotonic solution. She began feeding and she did not have vomit problem. There was no additional complaint, so patient was discharged with instructions.

Result

When hyponatremia, depended on OCBZ, appropriately treated, it can cause serious complications, such as nausea, vomiting, altered consciousness, seizures, encephalopathy, and even death. For this reason, especially elderly patients should be closely monitored when they take OCBZ and serum Na levels.

P821

Toxicology

MAD HONEY POISONINGS IN THE MIDDLE BLACK SEA REGION IN TURKEY: A 5 YEARS ANALYSIS

C Katı (1), T Yardan (1), HU Akdemir (1), L Duran (1), N Başol (2), M Yılman (3), P Henden (1)

1. Emergency Department, Ondokuz Mayıs University Medical Faculty Hospital, Samsun, Turkey
2. Emergency Department, Gaziosmanpaşa University Medical Faculty Hospital, Tokat, Turkey
3. Emergency Service, Samsun Gazi State Hospital, Samsun, Turkey

Corresponding author: Mr Akdemir Hızır Ufuk (hufukakdemir@hotmail.com)

Key-words: Mad honey poisoning ; Bradycardia ; Emergency department

Introduction: Mad honey poisoning is a little known outside of Turkey, but it is well-known phenomenon, frequently observed in Black Sea Region of Turkey. This phenomenon is caused by ingestion of grayanotoxin-contaminated honey. Low doses of the toxin may cause dizziness, hypotension, and bradycardia whereas high doses may result in impaired consciousness, seizures, and several degrees of atrioventricular (AV) blocks due to vagal stimulation. Complete recovery after hospital admission is normally the rule, because hypotension usually responds to appropriate fluids, and correction of bradycardia and conduction defects, which usually respond to atropine treatment.

Material and Methods: This is a retrospective study, that scanning the files of patients with mad honey poisoning who admitted to Ondokuz Mayıs University Emergency Department, from January 2006 to May 2011 Patients' demographic datas such as age and gender, clinical findings, laboratory values, vital signs, treatment protocols and clinical outcomes were recorded by using survey questionnaire. Patients aged 18 years and older were included in the study. All data recorded using SPSS 15.0 (Statistical Package for Social Sciences) computer program.

Results: The 29 of the 37 patients were males (78.4%), 8 of the 37 patients were females (21.6%). The mean age of the patients was 52.7 ± 17 years. The beginning of symptoms was 2 ± 1.1 hours after ingestion. The systolic blood pressure mean value was 92.7 ± 19 and the diastolic blood pressure mean value was 56.3 ± 13 . There was no abnormality about blood biochemical markers levels. All patients were hydrated with saline, in addition 51.4% of the patients were treated with atropine. The patients did not require any external pacemaker. The mean heart rate of the patients was 45.7 ± 7.5 , and respiratory rate was 21 ± 1.9 . The 94.6% of the patients were hospitalized in emergency department and 5.4% of the patients were hospitalized in cardiology department. The mean duration of hospital stay of the patients was 1 ± 0.2 days.

Discussion: Mad honey intoxication is rarely fatal and complete recovery after hospital admission is normally rule. Mad honey poisoning may cause a wide variety of dysrhythmias, such as nonspecific bradycardia, sinus bradycardia, nodal rhythm, second degree AV block, complete AV block and asystole. In this reason, emergency clinicians should be awake for dysrhythmias in mad honey poisoned patients.

P822

Toxicology

MERCURY INTOXICATION:CASE REPORT

B CANDER, C DIKMETAS, M ERGIN, AN GOKAL, M GUL, M. KASA, MA ONAL

Emergency Department, Necmettin Erbakan University Meram Medicine Faculty Hospital, Konya, Turkey

Corresponding author: Mr Dikmetas Cesareddin (cesareddindikmetas@hotmail.com)

Key-words: Mercury ; Intoxication ; Emergency

Mercury is the only metal that is liquid at room temperature but it can evaporate easily. Metallic mercury (elemental mercury), is used inorganic and organic mercury compounds such as paper, leather, paint industry and electric devices, such as thermometers, batteries, measuring stuff, antiseptic stuff and in dentistry. However, schools can be had mercury for the experiment. It is an easy-to-get Mercury metal. The type and seriousness of poisoning mercury is due to form of mercury that is because of the technical specifications different exposure path of pharmacokinetics. All chemical forms of mercury can cause toxic findings. **CASE:** 23 years old male patient came to emergency service due to accidentally swallowing mercury piece. Patient said that the amount of mercury he swallowed was as large as the size of a walnut. The physical exam was in normal range. Abdomen X ray being taken at standing identified opacities of mercury. Patients were followed up on the emergency observation unit. The laxatives was given to the patient till patient got away mercury from his body. At 5th day after being discharged, Abdomen Xray for control identified that mercury was totally missing. In this presentation, we want to demonstrate elemental mercury poisoning via the gastrointestinal tract and discuss treatment and follow up with up dated literature.

P823

Toxicology

HYPOGLYCEMIA FOLLOWING A GLIMEPRIDE OVERDOSE IN A SUICIDE ATTEMPT

Y Aydin (1), A Bicer (1), G Celbek (2), F Ermis (3), A Kutlucan (1), L Kutlucan (4), A Saritas (5), T Soysal (1)

1. Internal Medicine, Duzce University, Duzce, Turkey
2. Department of Internal Medicine, Duzce University, Duzce, Turkey
3. Internal Medicine, Gastroenterology, Duzce University, Duzce, Turkey
4. Anesthesiology and Reanimation, Duzce University, Duzce, Turkey
5. Emergency Medicine, Duzce University, Duzce, Turkey

Corresponding author: Mr Kutlucan Ali (dralikutlucan@gmail.com)

Key-words: glimepiride ; suicide ; hypoglycemia

Sulfonylureas are the oldest oral anti-diabetic agents which are used at treatment of type 2 DM. Major risk factor associated with sulfonylureas is hypoglycemia, especially at elders it's the result of wrong usage. Utilization of sulfonylureas for suicidal purpose is uncommon, but it is associated with high mortality and morbidity rate. Cases reported about long lasted hypoglycemia due to suicidal purpose are mostly associated with 1. generation sulfonylurea. Previously, cases about newly developed hypoglycemic and neurologic symptoms as a result of usage of gliclazide, glibenclamide and tolbutamide are reported. We presented case about usage of high dose glimepiride for suicidal purpose. 26 years old female patient with no medical history, has applied to emergency room after 16 hours that she used 15 pills of 3 mg glimepiride. She came to her with cold sweating, weakness and somnolence. Patient's general condition was fair, conscious and has confusion. Her blood glucose: 39 mg/dl, parameters at blood gas analyze pH: 7.28 (7.35-7.45), pCO₂: 58.9 mmHg (35-48), pO₂: 20.9 mmHg (83-108), HCO₃: 27.3 mEq/L (21-26) lactate: 20 mg/dl (4.5-12.4). At emergency room infusion of 5% intravenous dextrose treatment has given after 50 cc 50% dextrose intravenous injection cause of continue to have low blood sugar. Patient has monitored in the way of hypoglycemia with one hour periods at our clinic. Intravenous 10% dextrose infusion treatment has started at our clinic after patient's blood glucose has leveled 55 mg/dl. Intravenous 20% dextrose infusion treatment given after patient's 5 hour blood glucose has leveled 41 mg/dl. Low blood glucose level has continued in despite of patience normal oral nutrition and 20% intravenous dextrose infusion treatment. During first day of 100cc/h 20% intravenous dextrose infusion treatment, max blood sugar interval was 100-110 mg/dl. Hypoglycemia symptoms are observed. During second day of treatment which hypoglycemia symptoms are still observed, arterial blood gas parameters were pH: 7.43 (7.35-7.45), pCO₂: 34.7 (35-48), pO₂: 104 mmHg (83-108), HCO₃: 22.6 mEq/L (21-26), lactate: 14 mg/dl (4.5-12.4). 3 day of 20% intravenous dextrose treatment, patient's blood sugar has leveled 130-150 mg/dl, because of this treatment has stopped and hasn't observed hypoglycemia. Patient has discharged healthy because of blood sugar interval which has leveled 100-120 mg/dl at 4 and 5 day of treatment. Hypoglycemia due to sulfonylureas is determined especially at the first generation of sulfonylureas and among the elderly population. But in our case, extending up to 72 hours of hypoglycemia, due to usage of high doses glimepiride for suicidal purpose should be taken into account. In the second generation of sulfonylureas gliclazide usage at 2.8 gr and 1gr doses for suicidal purpose were reported before but related with high doses of glimepiride usage for suicidal purpose was not reported. Although in our case any complications were not developed, it has reported that neurological, renal, hepatic complications can occur due to the usage of high dose sulfonylurea and patients should be closely monitored.

P824

Toxicology

TNF- α BLOCKING AGENT INDUCED THROMBOCYTOPENIA IN A MAN WITH ANKYLOSING SPONDYLITIS: A CASE REPORT

S Ataoglu (1), E Celebi (1), H Demirin (2), A Kutlucan (3), M Ozsahin (1), A Saritas (4)

1. Physical Medicine and Rehabilitation, Duzce University, Duzce, Turkey
2. Biochemistry, Duzce University, Duzce, Turkey
3. Internal Medicine, Duzce University, Duzce, Turkey
4. Emergency department, Duzce University School of Medicine, Duzce, Turkey

Corresponding author: Mr Saritas Ayhan (a_saritas_@hotmail.com)

Key-words: Thrombocytopenia ; TNF- α blocking agents ; toxic

Case: A 36-year-old male with an 11-years diagnose of ankylosing spondylitis (AS) was presented at a physical medicine and rehabilitation clinic with routine control. He was being treated with infliximab (3 mg/kg every 8 weeks) for approximately four years. During the physical examination of the patient, lumbar Schober's Test was 2 cm, chest expansion was 3 cm, and lumbar spinal motions were limited in all directions. Anteroposterior pelvis radiography showed grade 3 bilateral sacroiliitis. He had no severe back pain or stiffness complaint, however, epistaxis repeated up to 3-4 times in last two months, consequently he referred to emergency unit of a local hospital.

In the laboratory tests, erythrocyte sedimentation rate (ESR) was found to be 11 mm/h, C-reactive protein (CRP) was 0,69 mg/L (normal 0.1–0.5) and other biochemical parameters were within normal ranges, as well. A complete blood count (CBC) showed thrombocytopenia (24000 cells/ μ L) with normal hemoglobin, white blood cell count and coagulation tests.

With no other additional drug use, TNF- α blocker (infliximab) was accused to be the reason for his thrombocytopenia. He was also consulted to an internalist, and no other concomitant pathology was found in terms of explaining the thrombocytopenia. Thus, TNF- α blocker was ceased. His thrombocytopenia recovered approximately in three months. After this period, another TNF- α blocker, adalimumab (40 mg every other week) was given due to his re-emerged complaints.

TNF- α blocking agents (infliximab, etanercept, adalimumab, etc.) are used for treatment of a variety of inflammatory diseases such as rheumatoid arthritis, ankylosing spondylitis, psoriatic arthritis and Crohn's disease. The most important side effects of those treatments are as follows: infections, malignancies, congestive heart failure, demyelinating diseases, lupus-like syndromes, autoantibody formation, injection site and infusion reactions. Although they do not have common potential side effects, drug-induced thrombocytopenia can also occur. However, thrombocytopenia was reported in a study to occur in psoriatic patients due to use of these agents (5,97%). The precise mechanism of thrombocytopenia is still unclear. Thrombocytopenia is detected occasionally by platelet count monitoring or may be manifested as symptomatic petechiae, purpura, gingival bleeding and epistaxis, as in the present case.

Conclusion: Use of TNF- α blocking agents is expanding all over the world, and consequently the incidence of concerning complications speeds up. Clinicians especially emergency physicians should be aware of the possible complications may occur in patients receiving anti-TNF- α therapies. CBC of emergency patients with onset of petechiae, purpura, gingival bleeding and epistaxis should be performed in terms of thrombocytopenia misdiagnose.

P825

Toxicology

PNEUMOMEDIASTINUM; BECAUSE OF ECSTASY OR CARDIAC MASSAGE?

E. Altinbilek, D. Oztürk, M. Koyuncu, I. Ikizceli

Department of Emergency Medicine, Sisli Etfal Education and Research Hospital, Istanbul, Turkey

Corresponding author: Mr Altinbilek Ertugrul (ertugrualtinbilek@gmail.com)

Key-words: MDMA ; Pneumomediastinum ; Cardiac massage

MDMA (3, 4-methylenedioxymethylamphetamine) which is called Ecstasy is an amphetamine derivative and is a substance commonly abused. It has forms which are used orally and is illegal that in various shapes and brands. The most important effect of ecstasy is to create euphoria and to cause changes in consciousnesses. These effects are related to the intake dosage and the mood that person has.

Pneumomediastinum is formed due to passing of mediastinal air following the perforation of organs of respiratory system or digestive system. It is a clinical condition which are seen in mainly young patients and mostly regressed spontaneously.

We intend to present our case since the pneumomediastinum development associated with ecstasy use is a rare case.

CASE

A male patient at the age of 22 applied to emergency service with complaints of unexpected anxiety, pain in the neck, and palpitation 36 hours later taking ecstasy. In his history he expressed that he has used the drug for the first time and after he felt cardiac rhythm disorder approximately 30 minutes later taking the drug following a cardiac massage for 5 minutes had been performed by his friend its rhythm returned to normal and he got better. In the meantime he stated that he never lost his consciousness and he only had nausea. In the physical examination he had swelling and redness in the neck, subcutaneous crepitation, and roughening of his voice. In his electrocardiogram no pathology was detected except for sinus tachycardia (130 pulse/minutes). The complete blood cell count, biochemical examinations, and bleeding and coagulation parameters carried at emergency service were normal. Following determination of subcutaneous emphysema in the PA chest radiography, pneumomediastinum was monitored in addition to subcutaneous emphysema in the thoracic computerized tomography. For the purpose of advanced examination contrast-enhanced esophagography was planned. No contrast substance escape was detected in the esophagography. The patient referred to the thoracic surgery was applied second generation cephalosporin as IV. The patient whose complaints regressed and who progressed stable for 72 hours was discharged from the hospital to come for daily checkup. The patient did not have any complaints in the checkups and in the PA chest radiography taken 7 days later it was determined that subcutaneous emphysemas were completely recovered.

DISCUSSION

Pneumomediastinum is a case generally formed by high intrathoracic pressure in conditions such as epileptic attack, asthma, and positive pressure ventilation. At first the alveolar laceration which causes pulmonary interstitial emphysema is formed. This laceration can develop with various mechanisms which cause for transmural differential pressure between alveolar and interstitial spaces. On the other hand alveolar pressure increases with vomit and high physical activity developed in associated with materials taken to increase the euphoria. The clinical manifestation in the patients with spontaneous pneumomediastinum is sudden onset chest pain and dyspnea,

dysphagia, dysphonia, subcutaneous emphysema, possible neck and back pain. In our patient pneumomediastinum following taking ecstasy is determined. However a certain consensus is not reached that developing pneumomediastinum happens due to whether vomiting following taking ecstasy or cardiac massage performed by reason of rhythm disorder. PA chest radiography, thoracic computerized tomography, and esophageal passage radiography are used in the diagnosis. So we took PA chest radiography, following determination of subcutaneous emphysema in the radiography we took thoracic computerized tomography and we determined pneumomediastinum in the tomography taken. In monitoring it is seen that the symptoms of the patients regress rapidly and the patients who progress stable can be discharged from the hospital.

Consequently since the usage of ecstasy increases each passing day we should pay attention to the complications. The nausea and physical activities with increasing euphoria, which occur by using ecstasy, increase the interalveolar pressure. Eventually it should be kept in mind that pneumomediastinum might develop as well as pneumomediastinum might occurs with pressure increase due to cardiac massage.

P826

Toxicology

THE ROLE OF HUMAN FATTY ACID BINDING PROTEIN (H-FABP) IN EMERGENCY DEPARTMENT FOR EARLY DETECTION OF CARDIAC DAMAGE IN CARBON MONOXIDE INTOXICATION

E. Ahun, O. Köksal, E. Armagan, H. Yıldırım, F. Özdemir, S.A. Aydın, A. Köse, V.A. Durak

Emergency Department, Uludağ University Faculty of Medicine, Bursa, Turkey

Corresponding author: Mme Köksal Özlem (koksalozlem@gmail.com)

Key-words: Carbon monoxide intoxication ; Human Fatty Acid Binding Protein (H-FABP) ; Cardiac damage

Introduction: Carbon monoxide (CO) intoxication constructs disseminated tissue hypoxia and leads to cardiac damage. Some electrocardiographic changes and biochemical indicators were reported in cardiac occurring due to carbon monoxide intoxication. In this study, it is aimed to reveal whether Human Fatty Acid Binding Protein (H-FABP) provide advantage in early period in presenting cardiac damage depending on carbon monoxide intoxication.

Method: Carboxihemoglobin (COHb) levels, electrocardiographic (ECG) changes, creatinine kinase, creatinine kinase-MB, troponin I and H-FABP levels were investigated in 60 patients presenting to Emergency Department and diagnosed with CO intoxication.

Findings: Average COHb levels of the patients were determined as 22.7±9.7%. Negative T wave in ECG of 24 patients and ST segment elevation in ECG of 1 patient were detected. Cardiac biochemical indicators and H-FABP levels of the patient with ST segment elevation were positive. Also the biochemical indicators of the patient with ST elevation and myocardial infarction had an increase.

Results: In a number of studies, H-FABP has been shown as a reliable early period indicator together with cardiac chemical indicators in cardiac damage. In this study, sufficient data could not be reached whether H-FABP provides advantage in early period in presenting cardiac damage depending on carbon monoxide intoxication.

P827

Toxicology

A RARE COMPLICATION ASSOCIATED WITH THE USE OF WARFARIN SODIUM : LINGUAL HEMATOMA

I Beydilli, N Bozdemir, F Güngör, R Guven, M. Şaşmaz, V Sayraç

Emergency department, Antalya Training and Research Hospital, Antalya, Turkey

Corresponding author: Mr Beydilli Inan (inan_beydilli@hotmail.com)

Key-words: Warfarin ; Lingual hematoma ; INR

Anticoagulation is effective for prevention of thromboembolic events. In patients receiving long-term warfarin therapy, including intracranial hemorrhage rate of major bleeding that causes death or hospitalization rate per year is 1.2% -8.1% (1,2). Warfarin sodium is the best known and most frequently used oral anticoagulant. Despite the risk of bleeding, warfarin utilization rate increased by 9% every year (3). Oral anticoagulants are frequently used in clinical situations, such as atrial fibrillation, valvular heart disease, cerebrovascular accident and deep vein thrombosis. Warfarin acts by inhibiting the synthesis of K-dependent clotting factors (II, VII, IX,X) (4). Warfarin has no effect on the existing thrombus, prevents more clot formation and secondary thromboembolic complications (4). The mean half-life of warfarin is 20-60 hour, duration of action is 2-5 days. Increased levels of INR, approximately 24-36 hours after ingestion of the first dose is observed. Bleeding is the most common and serious complication of the use of warfarin sodium. External bleeding and bleeding into the tissues due to prolonged bleeding time may be at a level that even this can be life-threatening bleeding. INR is the level of the main determinants for bleeding. The diagnosis and treatment of excessive intake of warfarin sodium is determined by looking at levels of INR. Age and specific comorbid diseases has been reported to be risk factors for bleeding (Table-1) (5,6).

Lingual hematoma is important clinically because it may cause airway obstruction (7,8,9). Looking at the literature, resulting from excessive use of Warfarin Sodium airway obstruction caused by lingual hematoma, intubation and tracheostomy for some cases were made to ensure the stability of the airway. Other cases do not require invasive method for the airway, due to vitamin K and fresh frozen plasma has been improvement in levels of INR (7,8,9,10,11,12).

62-year-old patient, 3 years ago had undergone mitral valve replacement and 3 years using warfarin sodium 5 mg daily. The patient's vital signs were normal values and the INR was 13.1. There was no source of bleeding in his body except for the lingual hematoma. The patient was treated with fresh frozen plasma, and any invasive procedure was not needed for the stabilization of the airway.

Our purpose for doing the presentation of this case is to emphasize during use of oral anticoagulants can be life threatening bleeding. Lingual hematoma due to use of warfarin sodium is one of a rare but potentially life-threatening bleeding.

P828

Toxicology

OUTDOOR CARBON MONOXIDE POISONING DEVELOPED AFTER BURNING BRAZIER

O Dikme (1,2), H Topacoglu (2), C Gulsan (1), GA Karadana (1)

1. Emergency Department, Haseki Training and Research Hospital, Istanbul, Turkey
2. Emergency Department, Istanbul Training and Research Hospital, Istanbul, Turkey

Corresponding author: Mme Dikme Ozlem (ozlemakinci80@yahoo.com)

Key-words: carbon monoxide ; poisoning ; brazier

Karbon monoksit (CO) karbon içeren yakıtların tam yanmaması sonucu ortaya çıkan, renksiz, kokusuz, iritan olmayan bir gazdır. Hemoglobine bağlanarak karboksihemoglobin (COHb) haline dönüşür, oksijen taşıma kapasitesini ve hemoglobinin dokulara oksijen sunumunu azaltır. Direkt hücresel toksindir. CO zehirlenmesi, doku hipoksisi nedeniyle birçok organı etkiler ve çeşitli semptomlara neden olur. Semptom ve bulgular erken dönemde ortaya çıkabileceği gibi haftalar sonra da görülebilir. Başlıca semptomlar nöropsikiyatrik ve kardiyovasküler semptomlardır. Ülkemizde de olduğu gibi genellikle havalandırması yetersiz kapalı alanlarda karbon içeren yakıtların yakılması sonucu (soba, şöfen, mangal ya da otomobil eksozu gibi) kaza ile meydana gelen bir zehirlenme çeşididir.

OLGU SUNUMU

22 yaşında erkek hasta beş saattir devam eden baş ağrısı, bulantı, halsizlik şikayetleri ile acil servise başvurdu. Hastanın öyküsünde yaklaşık sekiz saat öncesinde açık havada mangal yaktığı öğrenildi. Hasta mangalı kendisinin yakıldığını, bir buçuk saat boyunca mangalın başında kaldığını ve 1-2 saat sonrasında şikayetlerinin başladığını ifade etti. mangal kömürünü paketli halde marketten aldığını belirtti. Öz ve soy geçmişinde özellik yoktu. Alışkanlıkları sorgulandığında sigara ve nargile içmediği öğrenildi. Vital bulgularında kan basıncı 120/80mmHg, nabız: 80/dk, solunum sayısı:18/dk, aksiller vücut ısı:36,5 °C ve periferik oksijen saturasyonu %99 olarak ölçüldü. Fizik muayenesinde baş boyun, kulak burun boğaz ve nörolojik muayenesi olağandı, ense sertliği yoktu. Yapılan diğer sistem muayenelerinde anormallik saptanmadı. Hastanın EKG ve biyokimyasal tetkikleri normal olarak değerlendirildi. Arteriyel kan gazı değerlerinde COHb düzeyi %4.5 bulundu (normal değer %0.5-2.5). Hastaya geri solunması maske ile %100 oksijen verildi. Dört saatlik oksijen tedavisi sonrasında hastanın yakınması kalmadı. Alınan kontrol arteriyel kan gazında COHb düzeyi %2.3 bulundu. Hasta asemptomatik olarak önerilerle acil servisten taburcu edildi.

TARTIŞMA

CO zehirlenmesi, ülkemizde çoğunlukla kış aylarında görülen ve ölümle sonuçlanabilen önemli bir morbidite ve ölüm nedenidir. Kaza sonucu gelişen zehirlenme, çoğunlukla gazla çalışan ısıtma ve aydınlatma aygıtlarının hatalı kullanımından ya da mekanik hatalarından, kapalı yerlerde soba ve mangal yakılması veya otomobil eksoz dumanının solunması ile meydana gelmektedir. Olgumuzda ise zehirlenme, literatürde sık görülen biçimden farklı olarak yaz döneminde ve açık havada mangal yakma sonrasında gerçekleşmiştir.

Olgumuzda olduğu gibi hafif CO zehirlenmelerinde halsizlik, baş ağrısı, baş dönmesi, bulantı ve kusma gibi nonspesifik bulgular gözlemlendiğinden bu hastalara kolaylıkla gribal enfeksiyon, besin zehirlenmesi, gastroenterit gibi yanlış tanımlar koyulabilmektedir. Bu nedenle ayrıntılı hikaye alınmasının hastanın tanısının konulmasındaki önemi aşikardır.

Normalde COHb düzeyi erişkinlerde %0.5-1.5, yeni doğanlarda %3-7 ve sigara içenlerde %4-9 civarındadır. Zehirlenmenin klinik bulguları COHb düzeyi %10 civarında iken başlar, toksik düzey %20-50 iken öldürücü düzey %50'nin üzerindedir. Ancak klinik bulgular, özellikle nörolojik bozukluklar, ile COHb düzeyleri arasında korelasyon bulunmamaktadır. COHb düzeyinin %4-5 olduğu olgularda kognitif bozukluklar saptandığı bildirilmiştir.

Kanda COHb düzeyi olabilecek en kısa sürede ölçülmelidir. Kişiden kişiye farklılıklar olmakla birlikte kanda CO düzeyi hafif yüksek olanlarda bile belirgin zehirlenme bulguları ortaya çıkabilir. CO'e maruz kaldıktan sonra uzun bir süre geçmişse veya destekleyici oksijen tedavisi uygulanmışsa kanda CO düzeyi düşük saptanabilir. Oda havasında COHb yarılanma süresinin 320 dk olduğu göz önüne alındığında ve hasta başvurusunun sekiz saat sonra olması nedeniyle COHb düzeyini olması gerekenden daha düşük saptanmış olabileceği düşünülebilir.

SONUÇ

Ülkemizde karbon monoksit zehirlenmesi kış aylarında sıklıkla kömür sobası kullanılan evlerde kömürün tam yanmaması sonucu ortaya çıkan karbonmonoksit gazı ile oluşan bir zehirlenme çeşididir. Ancak yaz aylarında nargile içimi yada mangal yakma sonrasında baş ağrısı, bulantı, halsizlik gibi ılımlı şikayetleri olan kişilerde CO zehirlenmesi akılda tutulması gereken tanımlar içinde olmalıdır.

P829

Toxicology

DRUG ABUSE-ETHNOBOTANICAL USE: OBJECTIVE POPULATION STUDY

E Butnaru (1), DC Cimpoesu (1), M Corlade-Andrei (2)

1. Emergency Department, University of Medicine and Pharmacy Gr.T.Popa, Iasi, Romania
2. Emergency Department, Hospital St.Spiridon, Iasi, Romania

Corresponding author: Melle Cimpoesu Diana (dcimpoesu@yahoo.com)

Key-words: ethnobotanical ; population study ; drugs

Aim: To identify the risk factors for the use of ethnobotanicals and the people at risk of becoming users. **Material and methods:** The study was performed in Iasi, in 5 information points, opened in the street, for distributing information leaflets and answering questions, during the "Day against drugs" (25th of June, 2011)- a project done by the Emergency Medicine Department and the local authorities. Five emergency medicine residents administered to volunteers a 13-item questionnaire, with 8 open questions and 5 closed questions. **Results:** We collected 89 filled in anonymous questionnaires, so the study included 89 subjects aged 14 to 42 years. 19.10% of the subjects admitted using ethnobotanicals, most of them being 20-25 years old (35.29%), males (82.35%), with an average educational level, and unmarried. It should be noted that 23.52% of the users were underage. 85.15% of the subjects first used ethnobotanicals out of curiosity, 29.41% under the influence of friends (94.11% of them having friends that use these products). 11.76% of the respondents stated that they did not know what they used, the product being offered to them by friends as a cigarette or candy. Favorite places for consumption were: at home (64.70%), parks and public areas (23.52%), coffee shops and night clubs (11.76%). Cigarette was the preferred method of use (70.58%), followed by joint (23.52%) and "bath salt" (5.88%). The described effects were: hallucinogen (35.29%), aphrodisiac (29.41%) and relaxing (23.52%). To strengthen these effects, most users associated alcohol and tobacco (70.58%) or other illegal drugs (7.14%). According to this study all users were familiar with the risks associated with the use of these products, but only 64.70% agreed to the decision that the weed-shops be closed. **Conclusions:**

The profile of ethnobotanical user is the curious friendly young unmarried man. The obtained data are of help in initiating prevention and rehabilitation programs in school and colleges.

P830

Toxicology

ACUTE MYOCARDIAL INFARCTION AFTER SILDENAFIL INTAKE

BV Boz (1), M Candar (2), M Cikman (1), E Kaya (3), A Kutlucan (4), A Saritas (5)

1. Emergency department, Duzce University, Duzce, Turkey
2. Emergency Medicine, Duzce University, Duzce, Turkey
3. Pharmacology, Duzce University School of Medicine, Duzce, Turkey
4. Internal Medicine, Duzce University, Duzce, Turkey
5. Emergency department, Duzce University School of Medicine, Duzce, Turkey

Corresponding author: Mr Saritas Ayhan (a_saritas@hotmail.com)

Key-words: Sildenafil ; chest pain ; acute coronary syndrome

Introduction: Erectile dysfunction is a sexual dysfunction characterized by the inability to develop or maintain an erection during sexual performance. It is seen currently in men more than 45 years old and main reasons are vascular and neurogenic disorders. Type 5 (phosphodiesterase 5) inhibitors are often used in impotence treatment.

Case: A 62 year old male patient admitted to emergency department with burning and compressive characterized chest pain which had been started 45 minutes before arrival. We learnt that chest pain disperses to left shoulder and left arm. The pain of the patient was not altering with breathing and told that the pain level was same from the beginning. His vital signs were: Tension arterial: 160/90 mmHg, pulse: 90 bpm, respiration was 14 /min. His body temperature was measured as 36.90C. The electrocardiograph was in sinus rhythm, but V1-4 derivations showed 3 mm ST elevation.

As medical history, patient had hypertension and dyslipidemia as the risk factors.

After detailing anamnesis it was learnt that the patient had taken two doses of 50 mg sildenafil preparation 60 minutes before the symptoms. Acute anterior myocardium infarction was thought for the patient and after initial treatment in emergency department, he was transferred to the coronary intensive care unit.

Conclusion: In patients who have cardiovascular disorders, erectile dysfunction is more often seen according to the normal population. While prescribing the patients who have cardiovascular disorders, have to be inspected comprehensively in terms of having coronary artery diseases. The patients who are going to be prescribed fosfodiesterase type 5 inhibitors, has to be informed about the usage instruction and warned about the hazards of inappropriate usage. Furthermore authorities should make community conscious of the hazards of inappropriate sildenafil usage.

P831

Toxicology

ANTICHOLINERGIC SYNDROME CAUSED BY HYOSCYAMUS NIGER

H Oguzturk (1), MG Turtay (1), O Ciftci (2), OH Miniksar(1), K Turgut (1)

1. Toxicology department, Inonu University, Malatya, Turkey
2. Emergency department, Inonu University, Malatya, Turkey

Corresponding author: Mr Oguzturk Hakan (oguzturk@hotmail.com)

Key-words: Poisoning ; Emergency department ; Anticholinergic syndrome

Herbal poisoning is one of the most important type of poisoning in patients applied Emergency department. In the east of Turkey, *Hyoscyamus niger*, traditionally named as 'ban otu', is used for the treatment of asthma, diarrhea, abdominal pain and urinary incontinence. This herb containing hyosiyamin, hyosin, hyospikrin, for that faulty used this causes the anticholinergic syndrome.

In this case, three person of the same family have eaten *Hyoscyamus niger* and they applied The emergency department of Turgut Ozal medical center with dizziness, tachycardia, dispense and emesis complaints. In this patients, we aimed to determination of the important early diagnosis and treatment in anticholinergic syndrome.

P832

Toxicology

MAD HONEY... DOES IT HAVE AN ADDICTIVE EFFECT?

A Denizbaşı (1), SE Eroğlu (1), OE Onur (2), O Urgan (1)

1. Emergency department, Marmara University Pendik Research and Training Hospital, Istanbul, Turkey
2. Emergency department, Marmara University Pendik Research and Training Hospital, Istanbul, Turkey

Corresponding author: Mr Eroglu Serkan Emre (drseroglu@gmail.com)

Key-words: Mad honey ; Poisoning ; Grayanotoxin I

BACKGROUND: A toxin made from plants in the Ericaceae family, found in certain geographical regions can turn honey (also called as "Mad Honey"), into a cause of poisoning. Our study is aimed at analyzing the patients diagnosed with this poisoning and their behaviors towards consumption of this honey afterwards.

METHODS: This prospective study was based on complaints and findings about mad honey poisoning. Patient information and findings at the time of admission were compared with those at one month after discharge through telephone interviews. They were asked if they or their relatives continued consuming the same honey.

RESULTS: 38 patients were participated in this study. The most common complaint of patients was dizziness and unconsciousness while the initial hospital finding for all of the patients was sinus bradycardia. 18 of the patients had to be followed up in coronary intensive care unit. We were able to reach 34 patients by phone after discharge. It was found that 12 (75%) of 16 patients discharged after 6 to 10 hours of emergency unit observation or their close relatives were continuing to consume mad honey, whereas 16 (88.9%) of 18 patients under coronary intensive care had discontinued consuming mad honey. The difference in the continuation of mad honey consumption between patient groups followed up in intensive care unit and those discharged after emergency observation was statistically significant.

CONCLUSIONS: Hazards associated with and serious consequences of consumption of mad honey must be clearly explained to patients who are found to be consuming mad honey.

P833

Toxicology

ACUTE HYPONATREMIA CAUSING ALTERED MENTAL STATUS DUE TO MEXICAN CHILLY PEPPER

EG. Gençer, Ş. Ardic, H. Hocagil, Ö. Güneysel

Emergency Department, Dr. Lütfi Kırdar Training and Research Hospital, İstanbul, Türkiye

Corresponding author: Mme Hilal Hocagil (drhocagil@gmail.com)

Key-words: Acute hyponatremia, ; : Altered mental status, ; : Mexican chilly pepper

Introduction: The increasing incidence of obesity in the last century leads the contemporary people to medical and paramedical solutions. Mexican chilly pepper is very commonly preferred for slimming and easily available in the herbalist stores. The import and commerce of the product is not under any kind of control. Commercially available products that containing Mexican chilly pepper are rarely reported cause of toxicity. Inappropriate use of this product that imported from Southern Asia is presenting with nausea, vomiting, diarrhea and abdominal pain even in the therapeutic doses. Excessive use of this product may cause altered mental status and coma.

We report an acute onset hyponatremia as the only clinical condition to explain the cause of mental alteration.

Case report: 34 year old female was brought to our emergency department with alteration in mental status and agitation. According to her husband several hours ago she ingested 7-8 of slimming pills and unknown amount of pasty nutritional support product in a suicidal attempt. Content of the product was Mexican chilly pepper.

On the initial examination vital findings and blood glucose level were in the normal range. She was conscious but disoriented and uncooperated. The physical examination revealed hyperkinetic bowel sounds. Physical examination was completely normal otherwise.

Orogastric lavage has not been performed. She was hospitalized for close observation with the initial diagnoses of encephalitis and intoxication. Electrocardiogram, blood gases, count of blood cells and coagulometric parameters were completely normal. Serum sodium level was the only pathological finding (120 mEq/l). Four milligrams of Midazolam was given via intravenous route for the agitation; and brain CT and MRI were performed. On the radiological studies no pathology has been detected. She was referred to the intensive care unit due to the condition of consciousness. After the sodium replacement her mental status improved and discharged healthy.

Discussion: Gastrointestinal side effects of Mexican chilly pepper is well known and commonly reported. But acute and symptomatic hyponatremia was not found in the literature. Pathophysiology of hyponatremia may be concerned with the clearance of the urine but we could not demonstrate because of the lack of urine Na analyzes. Therefore we objected to emphasize there is not sufficient information about the adverse effects and the hazardous potential of herbal products.

P834

Toxicology

OUR EXPERIENCES ABOUT HYPERBARIC OXYGEN THERAPY IN CARBON MONOXIDE POISONING

G Afacan (1), O Akdur (2), S Can (3), S Zeren (4)

1. Emergency Medicine, Çanakkale Onsekiz Mart University Medical Faculty Emergency Medicine, CANAKKALE, Turkey

2. Emergency Medicine, Çanakkale Onsekiz Mart University Medical Faculty Emergency Medicine, CANAKKALE, Turkey
3. Emergency, Çanakkale Onsekiz Mart University Medical Faculty Emergency Medicine, CANAKKALE, Turkey
4. Hyperbaric Medicine, Çanakkale Onsekiz Mart University Medical Faculty, CANAKKALE, Turkey

Corresponding author: Mr Okhan Akdur (oakdur@erciyes.edu.tr)

Key-words: Carbon Monoxide Poisonings ; Emergency Treatments ; Hyperbaric Oxygen Therapy

Carbon monoxide poisonings appear in the first lines of poisonings with fatal progress which are already in place in our country and the world. Requirement of hyperbaric oxygen therapy (HBO) in these cases is decided by debating of a lot of factors after an attentive evaluation. Discussions about which of these patients with carbon monoxide poisoning will be able to gain favor from this therapy are attending in spite of a lot of clinical study made in recent times. We aimed to evaluate the sharing of patients between Emergency Service and Hyperbaric Medicine Clinic by investigating the patients appealed with carbon monoxide poisoning to our Emergency Service and applied HBO by consulting with Hyperbaric Medicine Clinic. Six carbon monoxide poisoning cases received the HBO in our clinic since the date 13.12.2011 on which the hyperbaric oxygen therapy started in our hospital. Transfer to the Hyperbaric Medicine Clinic for HBO after the first treatment planned in these cases according to history, examination, laboratory and the clinical status of the patients. The treatment was applied by breathing %100 oxygen two times in a day, under the 2-3 ATA (atmosphere absolute) for 120-135 minutes. Five of these carbon monoxide poisoning cases to which HBO was applied were women and five of these cases again were from the towns. The mean of ages of the patients was 50.6±26.8. Carbon monoxide source caused to poisoning were stoves in four cases and water heaters in two cases. Referral complaining was lost of consciousness in five cases; the nausea and vomiting in one case. There was no abnormal finding in vital signs except tachycardia (114/min) in one case. In their physical examination; the lost of consciousness was seen in one case and the confusion in another; other five cases had no abnormal finding. In laboratory signs; there was hypoxia (PaO₂ 65 mmHg) in the patient who has confusion; the hemoglobin value of the patient has lost of consciousness was 10.6 and the WBC value 14.5. The time between referral and the acceptance to the HBO was 42.5±14.7 min.; the numbers of the treatment seances applied to patients were 2.8±1.7. The follow-up for all patients received hyperbaric oxygen therapy performed in Emergency Clinic. Observation times of the patients were 52±18.0 hours on average and the all cases were discharged by recovery. We think that the planning in emergency services by consulting with a hyperbaric medicine specialist for patients with serious poisoning findings and high risk who are thought HBO need can bring serious benefits the clinical progress of these cases.

P835

Toxicology

GHB INTOXICATION: BE AWARE OF THE POTENTIATING EFFECT OF SOME DRUGS

P Bilbault (1), M Gandoin (1), JE Herbrecht (2), M Mihalcea (1), H Slimani (1)

1. Emergency departement, Hopital Hautepierre, Strasbourg, France
2. Intensive Care Unit, Hopital Hautepierre, Strasbourg, France

Corresponding author: Melle Mihalcea Mihaela (mihalcea78@yahoo.com)

Key-words: coma ; GHB ; potentiating effect

Introduction: Liquid ecstasy, also known as «fantasy» is the street name of gamma-hydroxybutyric acid (GHB), a physiological neurotransmitter synthesised as an alternative anaesthetic because of its ability to induce sleep and reversible coma. Acute overdose leads to profound alteration of mental status and variable degree of respiratory depression. With proper management, most patients fully recover within 6 hours. However, respiratory arrest and death have been reported in severe GHB intoxication. We describe the case of a patient with HIV infection treated by antiretroviral treatment, who experienced a nearly fatal reaction from a small dose of GHB.

Case report: A 40-year-old man was admitted to the emergency department after been found comatose in his car stopped on road. He was diagnosed recently with a HIV infection treated by Atripla. On admission, the patient had a Glasgow Coma Score of 6 without focal signs. The pupils were miotic but reactive. He presented one episode of vomiting. The heart rate was 45 bpm and the blood pressure was 88/42 mmHg. He had moderate hypothermia 35,5°C. A 12-lead electrocardiogram showed a sinus bradycardia. There was no acidosis in blood gases. A test at Naloxone was initiated with no significant improvements in the level of consciousness. Because of a rapidly installation of respiratory distress with apnea, an endotracheal intubation was performed and the patient was transferred to the Intensive Care Unit. Blood tests were normal. The toxicological screening was negative for ethanol, barbiturics, acetaminophen, tricyclic antidepressants, opiates and cannabis. The cranial CT scan, as well as the lumbar puncture was normal. Six hours later, the rapid recovery of complete consciousness allowed extubation. The patient acknowledged that someone had poured an unknown liquid in his glass of soft drink that evening. Toxicological analysis of that liquid confirmed GHB. The supposed ingested dose was about 350mg of GHB. The patient was discharged home after 6 hours of observation.

Discussion: GHB, together with cocaine, ecstasy, amphetamines, LSD, phencycline and ketamine are the most-characteristic "club drugs". GHB intake may lead to crimes such as robbery and rape, and is used frequently by homosexual men as aphrodisiac during sex. The effects of GHB usage depend on the dose and on any other co-ingested substances. Studies correlating level of consciousness with oral dose, found that 50-70mg/kg induces coma in adults.

Despite the small dose of GHB ingested (5,38mg/kg), our patient presented a coma with respiratory depression that required mechanical ventilation. This fact is explained by his antiretroviral treatment. Efavirenz contained in Atripla, like most of antiretrovirals drugs, is known to inhibit the cytochrome p450 system, which may decrease first-pass hepatic metabolism of GHB, leading to potentiation of its effects.

Conclusion: Severe GHB poisoning should be included in the differential diagnosis of unknown origin coma cases admitted to the ED. In the patients receiving antiretroviral therapy, a small dose of GHB can induce coma. Emergency physicians should be familiar with presentation, pharmacology and management of GHB-related emergencies.

P836

Toxicology

ANALYSIS OF CARBONMONOXIDE POISONINGS ADMITTED TO OUR EMERGENCY DEPARTMENT FOR LAST ONE YEAR

K Uz (3), M BULUT (1), A SAK (2), S KAYA (2), F YILDIRIM (2), HO OZKAN (2)

1. Department of Emergency Medicine, Bursa Şevket Yılmaz Education and Research Hospital, BURSA, Turkey

2. Department of Emergency Medicine, Bursa Şevket Yılmaz Education and Research Hospital, BURSA, Turkey
3. Department of Emergency Medicine, Bursa Şevket Yılmaz Education and Research Hospital, BURSA, Turkey

Corresponding author: Mme Bulut Mehtap (mbulut94@yahoo.com)

Key-words: Carbonmonoxide poisoning ; Carboxy haemoglobin level ; Normobaric and hyperbaric oxygen therapy

Objective: Carbonmonoxide (CO) poisoning is a common problem in Turkey. While CO inhalation is a common method of suicide in some countries, in Turkey most deaths caused by CO poisoning result from accidents. Especially in the winter months, leaks from coal heaters are the major culprits. With our defining study, we aimed at finding out the distribution and demographic features of cases of CO poisoning applied to emergency department (ED).

Material and methods: From March 2011 through March 2012, the patients admitted in suspect of CO intoxication to Bursa Şevket Yılmaz Education and Research Hospital ED investigated retrospectively. The following data were collected for patients: age, sex, source of CO and exposure duration, initial vital signs, symptoms and Glasgow Coma Score at admission, blood carboxy haemoglobin (HbCO) level at admission measured using Rad-57 signal extraction pulse CO-oximeters (Masimo Corporation, Irvine, CA), ECG evaluation, administered therapies (normobaric and hyperbaric oxygen therapy) recorded from ED patient assessment forms.

Results: Total patients were 473 (male 30,23% and female 69,76%). The mean age was 36,09. The mean exposure duration was 3,38 hour (1-34 hours) and main exposure agents were coal stove (75,6%) and natural gas heaters (19,02%). No intentional or suicidal attempt caused by CO intoxication was reported. As to seasonal distribution, winter season mostly detected as 32,3% December, 21,5% January, 17,7% February. The initial mean HbCO level was 19,2% (6-38). The mean GCS at admission was 14,5. 84,5% (400) of patients had normal sinus rhythm and 15% (71) had sinus tachycardia in ECG. Application complaints were 46% (271) nausea/vomiting, 30,6% (176) headache and 9,6% (56) dizziness. One patient obtained hyperbaric oxygen therapy and 472 patients obtained normobaric oxygen therapy. 99,3% of patients discharged, 0,34% admitted to hospital and 0,21% dead.

Discussion and conclusion: Signs and symptoms of CO poisoning are frequently uncertain which cause misdiagnosis and delayed treatment. Diagnosis is placed by anamnesis, clinical situation and detecting HbCO level. In our country, especially for more frequent regions such as Bursa, CO poisoning should be asked to patients admitting to ED in winter season. We think that remarkable there was only one patient had hyperbaric oxygen therapy in our study. Hyperbaric oxygen therapy should be provided to those who have proper indication.

P837

Toxicology

A CASE REPORT: ALUMINIUM PHOSPHIDE POISONING IS ONE OF THE UNCOMMON POISONINGS

MF KAYNAK (3), F YILDIRIM (2), M BULUT (1), E OZDOGAN (4), S KAYA (2)

1. Department of Emergency Medicine, Bursa Şevket Yılmaz Education and Research Hospital, BURSA, Turkey

2. Department of Emergency Medicine, Bursa Şevket Yılmaz Education and Research Hospital, BURSA, Turkey

3. Emergency department, . Bursa Şevket Yılmaz Education and Research Hospital, BURSA, Turkey

4. Emergency department, . Bursa Şevket Yılmaz Education and Research Hospital, BURSA, Turkey

Corresponding author: Mme Bulut Mehtap (mbulut94@yahoo.com)

Key-words: Aluminium phosphide ; pesticide ; emergency department

Introduction: Acute poisoning due to pesticide is one of the health problems in the world. Aluminium Phosphide (AP), which is toxic at %37-100 mortality level is a pesticide. We would like to present this case report since AP has a high mortality rate and it isn't known much in our country.

Case report: A 22-year-old female was brought to the emergency department (ED) because of taking 6 gr AF that was used for suicide. She had no disorder in medical history. She was confused. She had nausea and vomiting. Vital signs were recorded as blood pressure: 66/48mmHg, pulse:80 beats/min, respiratory rate:16 breaths/min, temperature: 37

Nasogastric lavage was performed and active charcoal was given. The electrocardiogram was considered to be within normal limits except for sinus tachycardia of 110 beats/min.

After 1500cc saline infusion, the blood pressure was recorded as 110/70mmHg but then she was hypotensive. Vasopressor treatment was started besides fluid resuscitation. Her arterial blood gas analysis was as follows; pH:7.147, HCO₃:12.5mmol/L and methemoglobin level:2.9%. NaHCO₃ infusion was performed at intervals on patient. The biochemical tests were normal limits except leukocytosis and hyperglycemia. National Poison Information Center was called. They didn't recommend PAM or atropin. Supportive care and intensive care unit follow-up was recommended by the center. The patient fell into a coma after 1 hour later from her admitted and she was intubated. And then, she was cardiopulmonary arrest. Cardiopulmonary resuscitation (CPR) was started. Patient didn't respond to CPR and ultimately, she died.

Discussion and result: Pesticide poisonings continue to be one of the most commonly encountered poisoning cases in our country as become in the world. However, AP related pesticide poisonings are rarely seen in our country. Because of this, the teor knowledge and experiences of ED doctors about this phenomenon is inadequate. Clinical presentation of AP poisonings were serious vomiting, persistent hypotension, metabolic acidosis, and multi-organ failure. ED doctors should be familiar with this kind of poisonings, rapid and adequate treatment should be applied.

ingestion of Kirkdamar herb (plantae cryptogames). She had no disorder in medical history. The vital signs were stable, except pulse rate (Pulse:110 beats/minute). Systemic examination was normal except epigastric tenderness. Sinus tachycardia was observed at ECG. Potassium was found 6mEq/L in laboratory, complete blood count and other biochemical tests were normal. National Poison Information Center was called if the finding is associated with the herb. Center notified that herb may cause electrolyte imbalance, kidney failure, Gastrointestinal tract irritation, blood glucose regulation disorder and acute leukemia in animal experiments in longterm. There was no patient in center's database for Kirkdamar herb ingestion. Medical treatment was arranged for hyperkalemia. After internal medicine consultation, patient admitted to service for observation. No hyperkalemia found at followup. Patient discharged after 72 hours.

Discussion and result: Intoxications are common diseases in ED. However, the agent may not be detected in non-drug toxications. As far as we know, there is no case in literature informing Kirkdamar herb ingestion. Serious medical disorders may occur due to eating/drinking various plants. For all patients admitted to ED, emergency physicians should ask herb consumption in anamnesis, should advise with National Poison Information Center and if necessary admit to hospital for follow-up.

P839

Toxicology

OPHTHALMIC FINDINGS IN ACUTE ACCIDENTAL MERCURY POISONING IN ADULTS: A CASE SERIES STUDY

L. Aslan (1), S. Bozkurt (2), M. Aslankurt (1), M. Okumus (2), A. Aksoy (1), H. Bolat (1), D. Dilsizoglu (1)

1. Department of ophthalmology, Kahramanmaraş Sutcu Imam University, Faculty of medicine, Kahramanmaraş, Turkey
2. Emergency Department, Kahramanmaraş Sutcu Imam University, Medical Faculty, Kahramanmaraş, Turkey

Corresponding author: Mr Bozkurt Selim (selimbozkurt01@yahoo.com)

Key-words: Mercury poisoning ; ophthalmic finding ; public health

Purpose: Adult persons exposed to accidental mercury poisoning referred to our clinic from the emergency department (ED) were evaluated in terms of ophthalmic findings.

Methods: Forty eight subjects exposed to mercury and age-sex matched 30 healthy controls were enrolled study. Full ophthalmologic examination including best corrected visual acuity, external eye examination, reaction to light, a slit-lamp examination, fundoscopy, intraocular pressure measurements, visual field and color vision test were performed after two days from admitted to ED and 6 months follow up period.

Results: The visual acuity decreased 2-3 line in Snellen chart in 6 (12.5%) patients, reduction of the light reaction in 4 (8.3%) patients, color vision impairment in 5 (10 %) patients were determined after the ophthalmic examination. The parametric values of visual field, both mean deviation and pattern standard deviation in subjects exposed to mercury compared with the control group were found statistically significant differentiations (respectively $p<0.001$, $p<0.001$). There wasn't any correlation between ocular findings and the urine and blood mercury levels. The ophthalmic findings were not change in the six-month follow-up period

Conclusion: The mercury widely dispersed in nature may be cause hazard effect on visual systems such as impairment of visual acuity, color vision and visual field. We emphasized that the importance of public education on potential hazards of mercury for preventive community health.

P838

Toxicology

HYPERKALEMIA DUE TO INGESTION OF KIRK DAMAR HERB: A CASE REPORT

K CELİK (2), M BULUT (1), A SAK (3), E UYGUN (2), S KAYA (3), K UZ (4)

1. Department of Emergency Medicine, Bursa Şevket Yılmaz Education and Research Hospital, BURSA, Turkey
2. Emergency department, Bursa Şevket Yılmaz Education and Research Hospital, BURSA, Turkey
3. Department of Emergency Medicine, Bursa Şevket Yılmaz Education and Research Hospital, BURSA, Turkey
4. Department of Emergency Medicine, Bursa Şevket Yılmaz Education and Research Hospital, BURSA, Turkey

Corresponding author: Mme Bulut Mehtap (mbulut94@yahoo.com)

Key-words: intoxication ; plantae cryptogames ; hyperkalemia

Objective: Herbs are frequently consumed on treating illnesses in Turkey. However, inappropriate use of those kind of herbs may cause serious complications. We would like to present a case who admitted to emergency department (ED) after consuming a herb and detected hyperkalemia.

Case report: A 37 year old female patient presented to our ED with nausea, vomiting, weakness and palpitation six hours after

Key words: Mercury poisoning, ophthalmic finding, public health

P840

Toxicology

OCCULT CARBONMONOXIDE INTOXICATION INCIDENCE IN EMERGENCY DEPARTMENT

A AKGUR (1), G Aydınok (2), Z Doğan (3), G OZBAY YENİCE (4), I PARLAK (1), N Satılmış (5), E YILDIRIM (6)

1. EMERGENCY DEPARTMENT, BOZYAKA TRAINING AND RESEARCH HOSPITAL, IZMİR, Turkey
2. emergency department, bozyaka eğitim araştırma hastanesi, izmir, Turkey
3. emergency department, bozyaka eğt. arş. hastanesi, izmir, Turkey
4. EMERGENCY DEPARTMENT, BOZYAKA TRAINING AND RESEARCH HOSPITAL, IZMİR, Turkey
5. emergency department, bozyaka training and research hospital, izmir, Turkey
6. EMERGENCY DEPARTMENT, BOZYAKA TRAINING AND RESEARCH HOSPITAL, IZMİR, Turkey

Corresponding author: Mme Özbay Yenice Gökçe (gokce_ozbay@hotmail.com)

Key-words: CARBONMONOXIDE INTOXICATION ; WINTER ; EMERGENCY DEPARTMENT

Introduction: During winter, research the frequency of occult CO intoxication from the patients who apply to the emergency services for different signs and symptoms

Method: Research was performed between 15.03.2012-21.03.2012, during 24 hours, from the patients who apply to the emergency services, COHb level was recorded via pulseoximetry at the triage noninvasively.

Findings : Research patients who were determined CO intoxication 47 % are male, 53 % are female, average of ages are 36,74+/-16,98. The cases of the age groups are 19-64 ages (81,8%) determined the most. Application time ranges the mostly (55.5%) 16.00-00.00. Most co-morbid disease assigned was HT(%12.7) . CO intoxication patients with coronary artery disease have chest pain %66.7. The patients who do not smoking CO intoxication determined significant (%83.6). The patients who smoking average of the COHb level was (11,29+/-1,11) significantly high compare with not smoking. The most warming source was stove(%84,5). The most presenting complaints were head pain (%29,1) and weakness(%19,1). CO intoxication patients have tachycardia (%32,7) that was significantly high from the normal population.

Results: During winter months, occult CO intoxication incidence is significantly high from the patients who applied to the emergency services for any complaint. CO intoxication is usually between 16.00-24.00 time intervals and exposure resource is mostly the stove. CO intoxication is seen highly probable from the patients who is complaining of head pain, weakness and cough. CO intoxication patients often have tachycardia frequent than non CO intoxication patients.

Key words: carbonmonoxide intoxication, pulse oximetry, winter months, izmir, turkey

Introduction: Attempted suicide by drug overdoses is a public health issue, psychiatric but also somatic. Indeed, 90% of the attempted suicides are done by drug overdose and most of those patients arrive directly or through SAMU (mobile emergency unit) in emergency departments. However, there is no national register of drug overdoses. Knowledge on this subject is then exclusively based on national monocentric studies or studies from abroad. Some of them have shown that responsible pharmaceutical classes have changed in the last decades and a decreasing trend in the use of activated charcoal or gastric lavage. Nonetheless, to assess and actualize epidemiological characteristics of drug overdoses seems essential in order to improve our medical care and to elaborate better ways of preventing those behaviors.

Material & methods : We did a one year retrospective study on all patients arriving in the emergency department of our teaching-hospital for a drug overdose. We analyzed through their computerized medical record demographic and medical data such as details concerning drugs, clinical evolution and care modalities.

Results : In 2011, n=204 patients consulted in the emergency department for a drug overdose. It represents approximately 1% of all medical consultation per year. Sex ratio was 0.4. Mean age was 37±13 y.o. A large majority of the overdoses (68.6%) are due to 2 or more drugs. Benzodiazepines, hypnotic drugs and serotonin reuptake inhibitors were the 3 classes the most represented. For 29.9% of our patients, an alcoholic intoxication was also associated. 75.5% had psychiatric history but only 35.8% had a current psychiatric follow-up. Out of 144 patients (70.6%) for whom we could assess time of ingestion when took in charge, median delay was 3 hours (mean delay=4.55±5.14 hours). 10 patients needed antidote. Finally, 10 patients received activated charcoal (all but one inappropriately) and one patient had an inappropriate gastric lavage. Even though 5.4% needed intensive care unit, a majority of them were taking in charge ambulatory (55.4%). We also observed that 17.2% couldn't be taking care of since 7.4% refused hospitalization and 9.8% ran away.

Discussion: Our study confirms some of the demographic data presented in abroad studies. However it highlights that patients coming to the emergency department for a deliberate drug overdose are frequently known from psychiatric services but somehow escape psychiatric follow-up which should in fact help in preventing those events. Efforts must be concentrated on this particular population. Moreover, our study shows the weaknesses in medical care especially concerning activated charcoal or gastric lavage, care modalities that could easily be improved by appropriate training. This pilot-study is the first stone of a multi centric study that will improve our understanding of deliberate drug overdoses, their medical management and help us elaborate key-actions in order to improve prevention. It is also a first step towards the elaboration of a national register.

P842

Toxicology

ASSOCIATION BETWEEN THE MENSTRUAL CYCLE AND SUICIDE ATTEMPTS IN EMERGENCY DEPARTMENT

Y. ZENGİN (1), A. CEYLAN (2), M. ÇALIK (3), F. BÜYÜKCAM (4), A.B. ERDEM (5), J. ŞEN (6), O. ODABAS (7)

1. Emergency department, Dicle University, Diyarbakir, Turkey
2. Emergency department, Şanlıurfa Training And Research Hospital, Şanlıurfa, Turkey
3. Emergency department, Hospital of Bursa, Bursa, Turkey
4. Emergency department, The Ministry of Health, Diskapi Yıldırım Beyazıt Training and Research Hospital, Ankara, Turkey
5. Emergency department, Konya Numune Hospital, Konya, Turkey
6. Emergency Department, Nevşehir Dr.İ.Şevki Atasagun Hospital, Nevşehir, Turkey
7. Urology department, D.Y.B. Training and Research Hospital, Ankara, Turkey

P841

Toxicology

EPIDEMIOLOGY OF DELIBERATE DRUG OVERDOSES IN AN EMERGENCY SERVICE

W. Nahmias, A-L. Feral-Pierssens, P. Juvin, S. Beaune
Emergency Department, European George Pompidou Hospital, Paris, France

Corresponding author: Mme Feral-pierssens Anne-laure (anne-laure.feral-pierssens@egp.aphp.fr)

Key-words: drug overdose ; epidemiology ; intoxication

Corresponding author: Mr Zengin Yilmaz (yilmazzengin79@mynet.com)

Key-words: menstrual cycle ; menstruation ; suicide attempt

INTRODUCTION: The aim of this study is to investigate whether there is a relationship between the menstrual cycle and suicide attempts in Emergency Department.

MATERIALS AND METHODS: This prospective and cross-sectional descriptive study was carried out through examination of 102 patients. Inclusion criteria were fertility(16-45 age), regular menstrual cycles of 28

contraceptive or other gonadal hormones. To determine the menstrual phase for each participant, serum hormones(LH, FSH, progesterone and estradiol) measured within 24 h of the attempt as described in endocrinology literature and with question the patient about whether she was menstruating at the time of assessment the date of last menses.

RESULTS: In our study, 14.7% patients have a history of prior suicide attempts and 35.3% patients have a history of psychiatric illness. All of the patients with suicidal attempt were detected by drug intake. The most common cause of suicide attempts were mental depression(47.1%). Period of menstruation, the average 28-day cycle of 6-7 days as the largest portion of 62.7% but contained suicide. The reason is that this period may be hormonal, estrogen and progesterone in women is the lowest phase. Menstrual period, cases of attempted suicide about ¼ of customs 2 and 3 days, performed it.

DISCUSSION: The explanation for this may be the reasons just mentioned, hormonal and social. Menstrual period as a result of both mind and physically distressed women in particular face difficulties understanding the psychological approach can decrease suicide attempts.

P843

Toxicology

FLUVOXAMINE INDUCED LAMOTRIGINE TOXICITY :A CASE REPORT

Y. ZENGİN, M. İÇER, E. OZCETE, A. SEN, N. GORMELİ KURT, H. GURBUZ

Emergency department, Dicle University, Diyarbakir, Turkey

Corresponding author: Mr Zengin Yilmaz (yilmazzengin79@mynet.com)

Key-words: lamotrigine ; an inhibitor of cytochrome P450 isoenzymes ; QT-interval prolongation

Introduction: Lamotrigine inhibits sodium channels in the central nervous system neurons and likely has the same effect in the heart. However, serious neurologic and cardiovascular toxicity has been reported following lamotrigine overdose, usually with coingestants. Neurologic toxicity can include provoking of seizures, status epileptics, and coma. Cardiac toxicity can include QRS-complex widening and QT-interval prolongation. A growing list of anticonvulsants is being utilized to treat bipolar and schizoaffective disorders in conjunction with antidepressants and neuroleptics. Some of these serotonergic specific re-uptake inhibitors (SSRIs) are noted to have potent cytochrome P450 inhibition with expected drug-drug interactions Ziprasidone has a moderate inhibitory effect on cytochrome P450. A case is described wherein the schizoaffective patient had been maintained on lamotrigine with the addition of Fluvoksamine and ziprasidone toxic effects was noted.

Case Report: A 24-year-old male had been treated with Ziprasidone 120 mg, Fluvoksamine 200 mg, Lamotrigine 200 mg

and Klomipramin 37.5 mg for five years for an obsessivecompulsive disorder, schizoaffective disorder and antisocial personality disorder.He was taken to the emergency unit with an semi unconscious situation. It was learned from his roommate and patient when conscious that he took high doses of Ziprasidone (480 mg), Fluvoksamine (1000 mg), Lamotrigine (4000 mg) approximately 4 hours before being admitted to the emergency department. On physical examination, he had a temperature of 37°C, a heart rate of 85 bpm, a respiratory rate of 18 breaths/min, and a right upper extremity manual blood pressure of 110/70 mm Hg in the supine position. Electrocardiography was evaluated as QT-interval prolongation. Gastric lavage was performed via a nasogastric catheter of 16 G. As the aspiration material was not enough we decided to give 50 grams of active charcoal via the nasogastric catheter in the supine position. The patient was monitored and followed by ECG-hour. We used magnesium sulfate for QT-interval prolongation. Parenteral fluid was administered for symptomatic treatment He was discharged from hospital later two days with healing.

Conclusion: Lamotrigine, an antiepileptic drug of the phenyltriazine class, is metabolized predominantly by glucuronidation. The major inactive urinary metabolites isolated are a 2-N-glucuronide (76%) and a 5-N-glucuronide (10%). The aromatic ring is deactivated by the presence of chlorine atoms toward aromatic oxide formation. Fluvoksamine is an inhibitor of cytochrome P450 isoenzymes, especially CYP1A2. Fluvoksamine has a moderate inhibitory effect on CYP2C19 and CYP3A4. Ziprasidone has a moderate inhibitory effect on CYP2D6 and CYP3A4. It is conceivable that in the presence of Fluvoksamine and Ziprasidone (an inhibitor of glucuronidase enzyme) the concentration of the reactive are ne oxide intermediate may be increased due to the reduced capacity of glucuronidase to metabolize lamotrigine. Multi-drug poisonings, a drug can increase the toxic effects of another drug by reducing degradation. This situation should be kept in mind.

P844

Toxicology

MAD HONEY POISONING: A CASE REPORT

M. İÇER, Y. ZENGİN, H.M. DURGUN, M.N. GÜLLÜ, E. GÜNDÜZ, A. ÖZHASSENEKLER

Emergency department, Dicle University, Diyarbakir, Turkey

Corresponding author: Mr Zengin Yilmaz (yilmazzengin79@mynet.com)

Key-words: bradycardia ; dizziness ; mad honey

Introduction: Mad honey poisoning is common in the eastern Black Sea region of Turkey. The poisoning is due to the concentrated grayanotoxine (andromedotoxine) content of the honey made by the bees from the wild flowers of the rhododendron species. The most frequent symptoms of the intoxication are hypotension and bradycardia. We report a case of mad honey poisoning where the patient visited our emergency room with bradycardia and hypotension.

Case Report: A 56-year-old woman visited our emergency room complaining of weakness, profuse sweating, nausea and dizziness. Upon history-taking from patients relatives, we learned that the symptoms had begun within 1 hours of eating a few spoons of honey, which was known as "mad-honey", Turkish honey from the Black Sea coast of Turkey. She had a previous history of hypertension and aspirin, angiotensin-converting enzyme inhibitors used. On physical examination, the patient had a temperature of 37°C, a heart rate of 50 bpm, a respiratory rate of 13 breaths/min, and a right upper extremity manual blood pressure of 80/50

mmHg in the supine position. The electrocardiogram showed sinus bradycardia. Her routine haematological and biochemical parameters were within normal limits. Parenteral fluid was administered, and atropine (0.5 mg) were given for symptomatic treatment of hypotension and bradycardia. Five minutes later her heart rate increased to 70 beats per minute. Half an hour later her blood pressure increased to 110/60 mmHg. She was then monitored in the emergency room. The patient became clinically asymptomatic, she was discharged after eight hours.

Conclusion: The mechanism of toxicity is related to attachment of grayanotoxin to sodium channels, which are involved in voltage dependent activation and inactivation, in the cell membrane. The toxic effects of may honey poisoning are rarely fatal and last for no more than 24 hours. Generally, it induces dizziness, weakness, perspiration, salivation, nausea, vomiting, hypotension, bradycardia, atrioventricular block, and syncope. Mad honey induced bradycardia and hypotension can be treated with intravenous fluids and atropine.

P845

Toxicology

PARAPARACAIN TOXICITY CAUSED BY THE DRUG ABUSE: A CASE REPORT

L. Aslan (1), S. Bozkurt (2), M. Aslankurt (1), M. Okumus (2), A. Aksoy (1), H. Bolat (1), D. Dilsizoglu (1)

1. Department of ophthalmology, Kahramanmaraş Sutcu Imam University, Faculty of medicine, Kahramanmaraş, Turkey

2. Emergency Department, Kahramanmaraş Sutcu Imam University, Medical Faculty, Kahramanmaraş, Turkey

Corresponding author: Mr Bozkurt Selim (selimbozkurt01@yahoo.com)

Key-words: Alcain drop ; drug abuse ; eyes

Seventeen years old male patient was admitted to the emergency department with decreased visual acuity in both eyes and complaints of burning pain and photophobia. The patient was consulted to ophthalmologist. On the ophthalmological examination, visual acuity was found 0.1 in the right eye and counting fingers from two meter in the left eye. Biomicroscopic examination, ciliary injection, corneal opacity, epithelial defect and anterior chamber the right eye and left eye for about 1-2mm hypopyon, which found levels of about 3mm. Patient was admitted to ophthalmology department. The patient's detailed medical history, Because the industry working pain in the eyes of that from time to time

and to resolve several times a day paraparacain (alcain) drops used, recently drop even more because of increased pain, reached more frequently used information. One week of the patient's artificial tears, antibiotics, and nonsteroidal anti-inflammatory treatment decreased anterior chamber reaction, epithelial defects were closed

corneal opacity, but not lost. Topical anesthetics prescribed by some doctors or obtained from pharmacies without prescription has been using unconsciously by patients due to the temporary relaxing effects. These patients need more frequently instillation on over time because of increasing pain and eventually dependency occurs. When these drugs are used unconsciously for a long time they can lead to thinning, opacification and even perforation on cornea and sclera.

Key Words: Alcain drop, drug abuse, eyes

P846

Toxicology

ACUTE DYSTONIA INDUCED BY HIGH DOSES OF CITALOPRAM: A CASE REPORT

L Akgüç (1), I Beydilli (2), F Güngör (2), R Guven (2), M. Şaşmaz (2)

1. psychiatry, Mediterranean university faculty of medicine, Antalya, Turkey

2. Emergency department, Antalya Training and Research Hospital, Antalya, Turkey

Corresponding author: Mr Beydilli Inan (inan_beydilli@hotmail.com)

Key-words: dystonia ; citalopram ; serotonin

INTRODUCTION

Citalopram is an antidepressant selective serotonin reuptake inhibitors group (1). There are four case reports of extrapyramidal system(EPS) side effects of citalopram in the literature (2). We present a case of acute dystonia induced by high doses of citalopram intake in this article .

CASE PRESENTATION

The case is 20 years old, women and university students. She admitted to psychiatric outpatient clinic due to depressive symptoms about a week ago. Citalopram 20 mg/day is proposed to be given to the patient followed up as outpatients. The patient received citalopram 42 (20 mg) tablets for suicidal purposes in the evening. After about three hours after drug intake advanced contraction of neck and sensation in the throat, swallowing difficulty, and excessive yawning complaints. The patient was admitted to emergency service. Priority was considered as a diagnosis of acute dystonia. Patient was monitored. Acute dystonia was stopped by applying intramuscular administration of 5 mg biperiden. The patient was admitted to intensive care after being evaluated by psychiatrist as a suicidal impulse.

DISCUSSION

The most common side effects of EPS associated with the use of SSRIs are akathisia, dystonic reactions, parkinsonism and tardive dyskinesia-like conditions. The precise mechanism of EPS side effects associated with antidepressants is not known (2).

In our patient had developed an acute dystonic reaction. Acute dystonia in particular, the use of typical antipsychotics, metoclopramide, the use of antidepressant medications, head trauma and can occur in cases of an emergency situation affecting the extrapyramidal system (3). Anticholinergic agents used to treat the symptoms of EPS induced by antidepressants. In the treatment of our patients, anticholinergic (biperiden) were used, and antidepressant use has been interrupted.

CONCLUSION

Serotonin reuptake inhibitors are often used by clinicians. Extrapyramidal side effects before prescribing these drugs should be considered.

P847

Toxicology

ALCOHOL WITHDRAWAL MIMICKING ORGANOPHOSPHATE INTOXICATION: A CASE REPORT

N.R. Disel, Z. Kekec

Department of Emergency Medicine, Cukurova University Faculty of Medicine, Adana, Turkey

Corresponding author: Mme Disel N.rana (ranalpay@gmail.com)

Key-words: Alcohol ; Organophosphate ; Withdrawal

Organophosphate (OP) intoxication is one of the most frequent intoxications in our region. OP insecticides are easy to find because of the city we live in is the agriculture center of South of Turkey. It is not difficult to diagnose OP intoxicated patients when they have the history of exposure in any route and the obvious physical findings such as fasciculation, diaphoresis, bradycardia, myosis, and other cholinergic manifestations. But it may be sometimes confusing when you easily diagnose without revising other possible diagnoses or you may overdiagnose although there is no illness.

In our case, a 60-year old man who worked as a farmer for over 40 years, admitted to our clinic with some complaints overlapping OP intoxication after spraying OP insecticide. Besides having chronic OP exposure, he had some cholinergic findings. Having decreased serum pseudocholinesterase level, so he was started atropine and oxime treatment. But it was difficult to manage the patient, his anxiety and agitation. When he became awake and cooperative after sedation with repeated doses of benzodiazepines and haloperidol on the 6th day of hospitalization, tremors in his hands made us to investigate alcohol consumption.

The physical findings of a patient is sometimes more than it seems. Focusing on the most probable diagnosis, especially when you are familiar with some frequent situations such as OP intoxication in our region, may cause conflicts if you do not overlook gross. Here we want to emphasize the importance of past medical history and ongoing illnesses and habits of a patient and differential diagnoses of OP intoxication.

P848
Toxicology

CARDIO TOXICITY A RARE EFFECT OF MERCURY POISONING

YA Altuncı, M Ersel, F Karbek Akarca, S Kiyan

Emergency Department, University of Ege Faculty of Medicine, Izmir, Turkey

Corresponding author: Mr Altuncı Yusuf Ali (draltuncı@yahoo.com)

Key-words: Cardiotoxicity ; mercury ; toxicity

Introduction

Mercury is an element which commonly used in health, chemistry and electricity sector. The dangerous effects of mercury on human health are as effective as its silver brightness. There are three forms of mercury from a toxicological point of view: inorganic mercury salts; organic mercury compounds; and metallic mercury. It is toxic in any of these forms. The source of elemental mercury can be broken thermometer. According to literature broken thermometers could be responsible for mercury poisoning. Our aim is to report suicidal mercury ingestion and evaluate its toxic effects.

We report cardiac effect of suicidal oral mercury ingestion which commonly cause mild symptoms like diarrhea

Case

A twenty seven years old female patient admitted to our emergency(ER) due to mercury ingestion. She broke two thermometers with mercury (totally about 1 gr) and ingested it for suicide. Her vital signs were blood pressure: 122/74 mmHg, pulse: 105/min and no significant pathology seen in initial examination. Gastric lavage and charcoal applied. She monitored in ER intensive care unit. Opaque materials were in plan abdomen radiography. Her first electrocardiogram evaluated as normal sinus rhythm. At her fifth hour in ER bradycardia, first degree AV block and hypotension were developed and T waves changed in V1-4 derivations. After 1 lt %0.9 NaCl infusion bradycardia and hypotension improved but during the follow up period ECG did not

improved. Blood cardiac enzyme and other biochemical levels were all in normal range. Vital instability and another ECG changes have not seen during the follow period. She discharged safely at her 36th hour of admission but negative T waves persist at her ECG.

Discussion

Before 1950s elemental mercury has been using in the treatment of bowel obstruction by physicians. They thought orally administered mercury could force to open bowel by virtue of its weight. Intact gastrointestinal mucosa can protect patient from local or systemic mercury intoxication which administered orally.

Previously published case reports showed that elemental mercury was ingested by, or spilled in, patients with intact gastric mucosa, the mercury was safely evacuated without complication. In the literature there is a case of elemental mercury retained in the appendix in which conservative management alone resulted in its elimination without the development of appendicitis or clinical signs of mercury poisoning. During the patient's stay in ER any of systemic symptoms developed. We think that her intact gastrointestinal system protect her.

Mercury intoxication's cardio toxic effects have seen in some of case reports. Both of them are self injection of mercury. For our patient we thought that the toxic effect may be due to inhalation of mercury when the thermometer was broken or trace amount of gastrointestinal absorption. One study estimated that mercury effect cardiovascular conduction according to free radicals the other one suggested that mercury may have affected parasympathetic dysfunction. But both of these reports evaluated the chronic mercury exposure. Our case is acute toxicity. One of experimental study found that mercury affects heart rate and atrioventricular conduction, has arrhythmogenic effects, decreases arterial blood pressure and increases autonomic neurotransmitter activity. Like in our case mercury cause bradycardia and first degree AV block.

The forbidding of the use of thermometers with mercury will minimize intoxications. In our country ministry of health prohibited the using of mercury thermometers.

Conclusion

Supportive therapy was effective for our patient. Physicians should be aware of mercury's arrhythmogenic effects and close follow up is sufficient for asymptomatic oral elementary mercury ingested patients.

P849
Toxicology

WATER PIPE SMOKING PLEASURE CAN BE END AT HYPERBARIC OXYGEN CENTER

YA Altuncı, O Bozkurt, M Ersel, F Karbek Akarca, S Kiyan

Emergency Department, University of Ege Faculty of Medicine, Izmir, Turkey

Corresponding author: Mr Altuncı Yusuf Ali (draltuncı@yahoo.com)

Key-words: Water pipe ; carbon monoxide ; near syncope

Introduction

Water pipe smoking has been a tradition for centuries in the Eastern Mediterranean. The fact that the inhaled smoke is going through water causes a misinterpretation that it is less harmful or has less addictive effect. Considering the toxins involved, a period of water pipe smoking when compared with a single cigarette smoking exposes the individual to a 3-9 fold more CO.

Our aim is to present the case about a young healthy woman who attended emergency medicine department with a near syncope and had CO intoxication due to water pipe smoking and to remind that patients who attend emergency medicine departments with

nonspecific symptoms could have CO intoxication. Innocent water pipe could be a reason of life threatening CO intoxication with hyperbaric oxygen requirement.

Case

The 22-year old woman with blurred vision, dizziness, and near syncope after smoking the water pipe, attended the emergency medicine department. The vital findings of the patient in the first examination were measured as arterial blood pressure: 95/65 mmHg, pulse: 76/min, breath rate 16/min, satO₂: 99%. The woman's, who was totally healthy and had no specific diagnosis at her history, Glasgow Coma Score evaluated as E4M6V5. However, the dizziness and feeling of nausea was sustained. In the neurological examination, no pathology was detected and the other system examinations were normal as well. In the arterial blood gas examination the results were; pH: 7.38 pO₂: 105 mmHg, pCO₂: 33.2 mmHg, sO₂: 98.8, FCOHb: 30.7%. her initial ECG and blood glucose level were normal.

The patient who was given 100% nasal oxygen for six hours had a control arterial gas evaluation as; pH: 7.40, pCO₂: 30 mmHg, pO₂: 110 mmHg, sO₂: 98.4%, FCOHb: 2.8%. In the follow up, the patient did not have symptoms like unconsciousness, headache or vomiting. The patient whom the clinical findings recovered quickly and discharged safely.

Discussion

Interestingly, the prevalence of water pipe smoking among medical school students has been found to be 20-28% in different studies conducted at different countries. Similarly, our case was also a university student. We found two case reports about CO intoxication due to water pipe their patients' and ours admission CO levels were similar

A study comparing the exposed CO levels after water pipe smoking and cigarette smoking found that the CO levels are to be much higher after water pipe smoking The vaporized smoke of water pipe and the fruit flavored tobacco makes smoking less irritant and takes longer time of nicotine intake for the satisfaction of the smoker. For these reasons, water pipe smokers are exposed to increased amounts of CO. The concentration of the inhaled toxins depends on the frequency of smoking, depth of inhalation and total smoking duration. Besides, CO levels may also increase with the effect of the coal used to light the tobacco of the water pipe.

In CO intoxication, patients in addition to non specific symptoms like headache, nausea, vomiting and blurred vision may present with serious clinical findings like coma, convulsion and syncope

Conclusion

In young patients who admit emergency medicine departments with syncope or near syncope, the questioning of a potential CO exposure, especially water pipe smoking, may speed up diagnosis and treatment and provide efficient patient management. Water pipe smoking should be questioned in serious CO poisoning.

P850

Toxicology

A SERIOUS COMPLICATION ASSOCIATED WITH EXTACY: HYPERTHERMIA/EXTACY, HYPERTHERMIA, COMPLICATION

S GÖKHAN, M TAS, C YAYLALI

Emergency Department, Diyarbakir Training and Research Hospital, Diyarbakir, Turkey

Corresponding author: Mr Gökhan Servan (servan.gokhan@yahoo.com)

Key-words: extacy ; hyperthermia ; complication

INTRODUCTION: Commonly used in recent years particularly by young people at parties and night clubs and publicly known as extacy, 3,4-Methylenedioxyamphetamin (MDMA) is a

synthetic amphetamine derivative. Extacy frequently exhibit some psychologic (e.g. confusion, sleep disorders, severe anxiety) and physiologic (e.g. increased heart rate and blood pressure, blurred vision, nausea, vomiting, and syncope) side effects. Higher doses may lead to hyperthermia, serious systemic injuries and death due to rapid body temperature increase. In this paper we report a 19-year-old male patient presenting to the emergency department with hyperthermia 2 hours after taking extacy.

CASE REPORT: A man of allegedly good health was brought to the emergency department with loss of consciousness and excessive body heat. Medical staff has been informed that the patient had had agitations followed by seizure and gradual loss of consciousness after taking 2 tablets of extacy. On arrival he was unconscious (GCS 9/15), body temperature was 41.6°C, heart rate 180 bpm, blood pressure 150/90 mmHg, and respiratory rate 18/minute. On physical examination, his skin was dry and warm; wide-spread muscle fasciculations were observed. Urine color was dark. He had two short-lasting generalized tonic clonic seizures in emergency room. Baseline laboratory results were as follows:

Na⁺: 146 mmol/L, K⁺: 6,8 mmol/L, BUN 121 mg/dL, creatinine 2,2 mg/dL, CK 13659 IU/L, glucose 158 mg/dL, ALT 169, and AST 147. He was cooled by means of cooled intravenous fluid (1 L of normal saline) in addition to ice bags. Calcium gluconate and insulin-dextrose infusions were begun for hyperkalemia. Diazepam was administered during seizure activities. He was admitted to intensive care unit. Body temperature started to fall at 6th hour. General status and laboratory tests gradually returned to normal at day 2. No neurologic deficit developed and he was discharged at day 3.

DISCUSSION: Hyperthermia associated with extacy use is a common and life-threatening complication. It may develop independent of the dose taken. MDMA use should be remembered in differential diagnosis in young patients presenting to emergency service with loss of consciousness and fever.

P851

Toxicology

LIPID EMULSION THERAPY: AN EMERGING TREATMENT MODALITY IN CALCIUM CHANNEL BLOCKER INTOXICATION

F Karbek Akarca, S Kriyan, E Tavas, O Unek

Emergency Department, Ege University Faculty of Medicine, Izmir, Turkey

Corresponding author: Melle Tavas Ayse Ece (ecetavas@gmail.com)

Key-words: Calcium channel blocker ; Toxicity ; Lipid emulsion therapy

Introduction:

Calcium channel blockers (CCB) are widely used agents in the treatment of hypertension and arrhythmias. CCB overdose might be intentional or accidental, since elderly patients sometimes forget that they took their pill and take it again. Even mild overdose causes might develop serious outcomes. If not treated on time, severe morbidity and mortality ensues. In this case report, we aim to draw attention to intravenous lipid emulsion therapy as a useful treatment modality, which is effective even in the late phase.

Case:

25-years old female presented to the emergency department three hours after committing suicide by ingesting 10 amlodipine pills. Upon arrival her vitals were as follows: Blood Pressure: 84/47mmHg Pulse: 65/min Respiratory Rate: 16/dk Oxygen saturation: 99%. She had no active complaints. There were no abnormal physical examination findings. Her initial electrocardiogram (ECG) rhythm was Mobitz Type I block and

arterial blood gas (ABG) showed normoglycemia and normokalemia. The patient was started on iv fluids and %10 intravenous calcium gluconate as first line treatment. On follow up the ECG rhythm turned to third degree atrioventricular (AV) block, hypotension and bradycardia deepened. The patient was started on glucagone 0.1mg/kg iv bolus following 0.1 mg/kg/h infusion. Hypotension and bradycardia resolved and ECG rhythm became first degree AV block. A few hours later she developed Mobitz Type II block and hypotension recurred. Glucagone dose was increased but no response was seen. Upon sixteenth hour of her arrival, 20% intravenous lipid emulsion infusion therapy 2mL/kg bolus followed by 0.25mL/kg/min infusion for 60 minutes was administered. After this treatment, the patients's vitals stabilized and ECG was back to normal sinus rhythm. No adverse events were noted and the patient was fully recovered, and was discharged after completing follow-up period.

Discussion:

CCB toxicity is one of the most lethal drug overdoses, therefore an emergency medicine physician should be adept at treating such cases. Clinical features of CCB intoxication are bradycardia, hypotension, cardiac conduction abnormalities, altered mental status, metabolic acidosis, hyperglycemia, shock, electrolyte abnormalities and cardiac arrest. In our case, hypotension, conduction abnormalities, bradycardia and metabolic acidosis were present. Diagnosis of CCB intoxication can be made through patients history or by clinical suspicion regarding the patients physical examination and laboratory results. The patient with CCB poisoning should be monitored and started on oxygen as two large bore intravenous lines are established and ECG obtained. Supportive treatment aiming to secure the airway and ensure hemodynamic stability is the first step. Blood samples for complete blood count, biochemical parameters and blood gas should be drawn. If the patient presents within 60 minutes of ingestion, gastric lavage and activated charcoal therapy should be initiated. We could not use these treatment modalities because our patient arrived to the emergency department three hours after ingestion. First antidote of choice is intravenous calcium given as 10 mL of %10 calcium chloride (or 20-30 mL of calcium gluconate) solution in 100cc normal saline. If intravenous calcium is helpful, the patient should be started on a continuous infusion. Our case was unresponsive to calcium therapy so we passed on to glucagone. After the initial bolus dose, clinical improvement occurred so we continued with the infusion dose of 0.1 mg/kg/h. However, the clinical improvement did not endure more than a few hours. In cases refractory to glucagone treatment, catecholamines or amrinone should be used. At this point, we took the road less traveled by, and started the patient on lipid emulsion therapy on the sixteenth hour of her arrival. This therapy binds the toxins, inactivating them. The patient's clinical status quickly improved with lipid emulsion therapy. This case points to the fact that lipid emulsion therapy can be effective even in the late phase of toxicity.

Conclusion:

CCB intoxication is a lethal drug overdose. Intravenous lipid therapy, which has emerged as a new treatment modality for CCB intoxication seems to be a useful option. Further clinical trials on the subject should be carried out.

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P852

Toxicology

EFFECTIVENESS OF METADOXINE IN THE MANAGEMENT OF ACUTE ALCOHOL INTOXICATION

E. Tesfaye

Emergency Department, Reinier de Graaf hospital, Delft, Netherlands

Corresponding author: Melle Tesfaye Emebet (etesfay@yahoo.com)

Key-words: Metadoxine ; Alcohol Intoxication ; Ethanol Elimination

Introduction

Acute alcohol intoxication is the most frequent of alcohol-related disorders present in patients referred to Emergency Departments (ED). The treatment is mainly directed toward correcting the possible acid-basic or electrolytic disorders as well as hypoglycemia and hypovitaminosis, and ensuring adequate respiratory functions. The limiting step that conditions the time required for full recovery of the patient is the elimination of ethanol from the blood. An increase in the elimination rate of ethanol will conceivably accelerate the recovery of patients from intoxication.

Since more than 25 years it has been known from clinical observations in patients and different studies on patients and animals that Metadoxine is capable of accelerating the removal of ethanol from the blood. However, thorough knowledge about the effectiveness of Metadoxine in the management of acute alcohol intoxication might not be at the disposal of every ED.

Objective

A literature research was performed with the aim to assess the effectiveness of Metadoxine in the management of acute alcohol intoxication by reviewing studies related to this subject.

Methods

Databases of Cochrane, EMBASE and Medline were searched. Used search terms were "Metadoxine", "Alcohol Intoxication", "Ethanol Elimination", "Ethanol Half-Life", "Treatment" and "Alcoholism".

Results

Only 3 Randomized Controlled Trials (RCTs) related to this subject have been found 1,4,5. 2 of these RCTs have been published in 2002 4,5. The remaining RCT was only published as poster on a congress in 2010 1. Furthermore, the most recent review article on this subject was published in 2008 2. Another review article was published in 2003 3.

Both RCTs from 2002 concluded that Metadoxine treated patients exhibited a significantly greater decrease in blood alcohol concentration compared with those receiving standard treatment (6.70 +/- 1.84 versus 5.41 +/- 1.99 hr, p<0.013 5) and that Metadoxine significantly improved behavioral toxic symptomatology (76.9% versus 42.3% improvement of at least one clinical category, p=0.011 4).

The RCT from 2010 did not show a significant reduction in the alcohol blood level (*), but only showed a significant improvement of motor and cognitive function.

All RCTs did not show any adverse effects of Metadoxine treatment.

(*) This RCT only mentions the administration of 70 ml of alcohol to the patients treated with Metadoxine, but not the resulting blood alcohol levels from this administration.

Conclusion

Metadoxine is an effective pharmacological treatment for patients affected by acute alcohol intoxication. It must be noted that the

available studies are relatively moderate in level of evidence meaning there is room for additional studies with a larger sample size to create a higher level of evidence.

P853

Toxicology

RECENT EPIDEMIOLOGIC FEATURES OF CARBON MONOXIDE POISONING IN KOREA: A SINGLE CENTER RETROSPECTIVE COHORT STUDY

J Jeon, WY Kim, BJ Oh, DW Seo, CH Sohn

Emergency Department, Asan Medical Center, Seoul, Korea, (South) Republic of

Corresponding author: Mr Sohn Chang Hwan (schwan97@gmail.com)

Key-words: carbon monoxide poisoning ; suicide attempt ; epidemiology

Objective:

The aim of this study was to describe the epidemiologic characteristics of adult patients with carbon monoxide poisoning presented to the emergency department in recent years.

Methods:

This was a retrospective cohort study on adult (over 15 years old) consecutive patients with carbon monoxide (CO) poisoning presented to the emergency department of a tertiary care university-affiliated hospital from January 1, 2008 to December 31, 2011. Diagnosis of CO the diagnosis was based on identifying a source of carbon monoxide emissions and measuring carboxyhemoglobin (COHb) levels; more than 3% for non-smokers and more than 5% for smokers. Demographic data, intent, source of poisoning, poisoned place, annual frequency were reviewed and described as frequency.

RESULTS:

A total of 91 patients were included in this study. There were 56 (61.5%) unintentional and 35 (38.5%) intentional poisonings. For unintentional CO poisonings, the principal sources of exposure to CO were fire (39.3%), charcoal (17.9%), briquette charcoal (7.1%), wood burning boiler (7.1%), gas boiler (5.4%), automobile heater (3.6%), briquette boiler (3.6%), firewood (3.6%), and other items (12.5%). For intentional CO poisonings, the sources were ignition charcoal (60.0%), briquette (31.4%), charcoal (5.7%), and butane gas (2.9%). In both men and women who selected CO poisoning as a method of suicide attempt, the most common source was ignition charcoal and the second common source was briquette. For unintentional CO poisonings, the poisoned places were home (58.9%), workplace (10.7%), public accommodation (8.9%), tent (8.9%), automobile (3.6%), and parking place (1.8%). For intentional CO poisonings, the poisoned places were home (77.1%), public accommodation (11.4%), and automobile (11.4%). The proportion of intentional CO poisonings among total poisonings has been significantly increasing in recent years; 0.0% in 2008, 3.3% in 2009, 5.5% in 2010, and 29.7% in 2011 ($p = 0.009$). Except for poisoning caused by fire, the proportion of intentional CO poisonings was 0.0% in 2008, 37.5% in 2009, 50.0% in 2010, and 55.1% in 2011.

CONCLUSIONS:

Our study showed that in recent years in Korea, intentional CO poisonings from burning ignition charcoal or briquette have been increasing and most of these poisonings has occurred in home. Prevention efforts should take these factors into consideration.

SYNCOPE, CARBONMONOXIDE POISONING AND NARGHILE

F. SARI DOĞAN, E. ERKUŞ ŞİRKEÇİ, V. ÖZAYDIN, A. DEMİR, B. VARIŞLI

Emergency Department, Medeniyet University, Göztepe Training and Research Hospital, Istanbul, Turkey

Corresponding author: Mr Sari Dogan Fatma (fatmasdogan@gmail.com)

Key-words: Carbon monoxide poisoning ; Narghile ; Syncope

ABSTRACT:

Introduction:

Carbon monoxide (CO) is a colorless, odorless gas produced by incomplete combustion of carbonaceous material. Carbon monoxide poisoning has been reported as a result of exposure to various sources of smoke, such as fires, stoves, portable heaters, and automobile exhaust and tobacco smoke. Narghile (water pipe, hookah, shisha, hubble bubble) is a traditional method of tobacco use. In recent years, its use has increased worldwide, especially among young people. We presented a case of symptomatic, moderately carbon monoxide (CO) poisoning in a young man after smoking a narghile.

Case Report:

Our patient was a 26-year-old man and he had no past medical history. He presented to our ED following a syncope. He had been smoking narghile at home 30 minute prior to presentation. He had a headache. His vital signs revealed a temperature of 37°C, blood pressure of 110/70, pulse rate of 94/min and pulse oximetry reading of 97% on room air. Physical examination revealed that he was alert and orientated to time, place and person. He had a headache. There were no focal neurological signs or cranial nerve deficits. The baseline electrocardiogram was normal. Computed tomography (CT) of the brain planned to exclude neurological syncope. CT scan of the brain revealed no intracranial hemorrhages or skull fractures. However, a carboxyhemoglobin (COHb) level was taken in view of the shisha smoking. The COHb level was 25.9%. He was admitted to the observation monitoring area and put on 100% oxygen via a non-rebreather mask. A bedside arterial blood gas on high flow oxygen revealed with pH of 7.36, pCO₂ of 41.4 mmHg and PO₂ of 77.4 mmHg. He was placed on 100% oxygen for the next 1–2 h while he was in the ED. Hyperbaric oxygen therapy is recommended in patients with neurologic dysfunction, cardiac dysfunction or a history of unconsciousness. Our patient presented with syncope and he was transferred to hyperbaric center. His COHb level dropped and his headache was resolved after the hyperbaric oxygen therapy. The patient was discharged with a follow-up date for psychometric testing and neurological review at the outpatient clinic.

Conclusion:

Narghile smoking popularity has been increasing especially among young people recently. Finally, if the young patients presenting with syncope, nonspecific neurologic symptoms or unconsciousness should be asked specifically about this exposure. This case highlights the importance of considering carbon monoxide exposure in patients presenting with syncope to the emergency department (ED).

Key words: Carbon monoxide poisoning, narghile, syncope.

P854

Toxicology

P855

Transportation

THE PROSPECTIVE ANALYSES OF INTER HOSPITAL PATIENT TRANSFERS TO AN ACADEMIC EMERGENCY DEPARTMENT IN TURKEY

M Ergin (1), MR Ozer (1), Y Durduran (2), A Nur (1), E Erdemir (1), AS Girisgin (1), S Kocak (1), M Gul (1), B Cander (1)

1. Emergency Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey
2. Public Health Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

Corresponding author: Mr Ergin Mehmet (drmehtemergein@gmail.com)

Key-words: Patient transferring ; Inter hospital transferring ; Patient safety

INTRODUCTION: During last decade, Ministry of Health of Turkey has made many changes in the law related with emergency care. Many important changes were also about inter-hospital patient transfers. **GOAL:** To analyze management strategies of inter-hospital patient transports in Turkey. **MATERIAL – METHOD:** The study was conducted at Necmettin Erbakan University Meram Medicine Faculty Emergency Department between 1 February and 15 April 2012. All patients who firstly evaluated at other health care centers and then directed to our ED were included in our study. **RESULTS:** There were 941 patients included. 60.1% (n=566) were men. The patients were transferred mostly from other hospitals located within the province (90.2%, n=849). The distribution of types of hospitals which transferred patients was like that 78.5% (n=739) government hospital (GH); 10.7% (n=101) private hospitals (PH); 5.8% (n=55) education and research hospitals (ERH); and 3.4% (n=32) other medicine faculty hospitals (MFH). 42.3 (n=398) of cases were not under control of Command and Control Center of Emergency Medicine System. The reasons of transferring were determined as necessity of advanced evaluation and treatment (95.7%, n=901), privation of specialist for the case (67.1%, n=631), requirement of critical care (35%, n=329), request of patient or patients' relatives (3.9%, n=37), transferring patients to other departments which works by appointment (2.3%, n=22), lack of appropriate hospital bed in the department dealing with the case (0.3%, n=3). **CONCLUSION:** Inter-hospital patient transfer is still a problem of health care system of Turkey. The changes in law related with emergency care resulted in some improvement of coordination of inter hospital patient transfers under control of EMS centers. However, it was shown that it wasn't enough.

transferred to emergency department of Ankara Ataturk Training and Research Hospital by 112 ambulance service.

MATERIALS AND METHODS: In this retrospective study, we enrolled all off the adult patients transferred to Emergency Department of Ankara Ataturk Training and Research Hospital by 112 ambulance service between 01/01/2012 and 01/31/2012. The data about demographic characteristics, diagnoses and clinical outcomes were obtained from records of 112 ambulance service.

RESULTS: A sum of 385 patient were transferred by 112 emergency ambulance service to our emergency department between 01-01-2012 / 31-01-2012 whereas a sum of 9658 patients admitted to our emergency department in the same period. 55.3% of patients were male, 44.7% were women and mean age of all patients was 54.16 ± 20.1. Patients were classified in to three groups according to their triage examination, 80.1% were in yellow area, less than 4.5% were in red area, 5.7% were in the green area. Patients were brought most frequently between 12: 00-18: 00 o'clock (32.9%), and least frequently between 00:00 to 06:00 o'clock (16.1%). The causes of admission were trauma 28.5% (n=110), cardiac or pulmonary symptoms (chest pain, syncope, shortness of breath) 27.5% (n=106), forensic events 16.6% (n=64) (traffic accident, work accident, assault, suicide, carbon monoxide intoxication etc.), neurological symptoms 13.2% (n=51), gastrointestinal symptoms 9.35% (n=36), respectively. For diagnostic purposes, in 180 patients (46.7%) consultations with other departments were done, 54 of these patients (14.02%) were consulted with multiple departments. The most consulted departments were cardiology (12.2%), neurology (11.9%), chest diseases (9.35%) and orthopedics (8.05%) respectively. Following emergency department evaluation and treatment 87.2% of the patients were discharged, 11.9% were hospitalized, and 3 patients (0.77%) died. A sum of 593 patients hospitalized in the clinics or intensive care unit by emergency department and 7.75% of all hospitalized patients were transported by 112 in the one-month period. The hospitalization rate of outpatient admissions were 5.66%. Of the 46 patients who were hospitalized 30 were hospitalized in clinics (7.79%) and 16 were hospitalized in the intensive care unit (4.15%).

DISCUSSION-CONCLUSION: 112 Emergency Ambulance Service plays an active role in the transfer of critical patients and elderly patients constitute the majority of the patients transported by ambulance. The hospitalization rate of the patients transported by 112 is higher than those of who admitted themselves. 112 ambulance services play the most important role in transportation to hospitals.

P857

Transportation

EMERGENCY RETRIEVAL UNIT ON A SHOESTRING

PK Cheah, LY Low, DF Ongkili, W Madsah, MY Arifin, N Chew
Emergency and Trauma Department, Queen Elizabeth Hospital, Kota Kinabalu, Sabah, Malaysia

Corresponding author: Mr Cheah Phee Kheng (pkheng1@yahoo.com)

Key-words: Retrieval ; Critically Ill ; Air and Land

Introduction

Sabah in North Borneo is blessed with impressive geographical features such as mountainous regions and tropical rainforests. Land distance between district and tertiary hospitals are far with treacherous road conditions. This represents a challenge in the transfer of critically ill patients who are mobilised between district and tertiary hospitals on a daily basis in the state. The very process of patient transfer becomes hazardous and if executed poorly, can potentially cause deterioration of care, resulting in more harm than

P856

Transportation

EVALUATION OF PATIENTS WHO WERE TRANSPORTED TO THE EMERGENCY DEPARTMENT BY 112

G Kurtoglu Celik (1), O Karakayali (2), T Atmaca Temrel (1), YE Arik (1), F Icme (1), A Sener (1)

1. Emergency department, Ataturk Training and Research Hospital, Ankara, Turkey
2. Emergency department, Teaching and Research Hospital in Kocaeli Derince, Kocaeli, Turkey

Corresponding author: Melle Kurtoglu Celik Gulhan (kurtoglugulhan@yahoo.com)

Key-words: 112 Emergency Ambulance Service ; triage examination ; hospitalization rate

INTRODUCTION: The aim of this study was to evaluate the clinical and demographic characteristics of the patients who was

good to the patient. These factors call for a highly skilled and trained group of personnel who specialise in retrieval, resuscitation, stabilization, preparation and transfer of such patients. Establishing a specialised team for air and land transfer of critically ill patients requires highly trained medical staff and strong financial resources. Can a solution be offered without burning a hole in the state medical budget?

Methodology

An Emergency Retrieval Unit (ERU) was formed and comprised of 15 members, which include an Emergency Physician, Senior Medical Officers and Assistant Medical Officers from the Emergency and Trauma Department of Queen Elizabeth Hospital, the largest tertiary hospital in Sabah. Team members were given training in the clinical aspects of transporting the critically ill as well as helicopter and ambulance safety. At the launch, the ERU provides air and land ambulance transfer of critically ill patients between the 23 hospitals in the state.

Results

Based on our preliminary data, we received 42 referrals, 38 of which were successful transfers. Reasons for unsuccessful outcomes include death prior to transfer, deteriorating condition in which further intervention is futile and logistical deficiency. More than two-thirds of the transfers were patient retrieval and medical evacuation cases, while the rest were inter-facility transfers. Almost half of our patients (47.4%) were transferred by air.

Conclusion

Despite lack of data prior to the start of this service for comparison, it can be clearly seen that the establishment of this specialised team of medical personnel greatly improves the outcome of patients during transfer. It removes the immense pressure faced by the primary clinicians caring for the patient in the district hospital each time a transfer is needed. Public confidence in the health care system also improves when they know that this part of the health service is well taken care of. Nevertheless, there is still room for improvement especially in terms of staffing, training, equipment and also organisation of the unit. We hope to develop and expand this service that is still in its infancy, as we take baby steps to improve and excel with an aim to provide excellent, efficient and safe transportation for critically ill patients tailored to our resource availability and local settings.

P858

Transportation

AIR TRANSPORT: OXYGEN CONSUMPTION DURING VENTILATION.

C BOURRILHON (1), E FORSANS (2), L FRANCK (2), F LECLERC (1), JP TOURTIER (2)

1. Research Department, Institut de Recherche Biomédicale des Armées, Brétigny-sur-Orge, France
2. Anesthesiology, Hôpital d'Instruction de Armées Val-de-Grâce, PARIS, France

Corresponding author: Melle Forsans Emma (emma0206@hotmail.fr)

Key-words: Ventilators ; Aeromedical evacuation ; Oxygen Consumption

INTRODUCTION : Air medical evacuations of patients requiring ventilator support are becoming more frequent. The use of transport ventilators needs pressurized oxygen cylinder. However, inside the aircraft, there are strict space and weight limitations : so, a limited number of oxygen cylinder is available during the flight. We carried out a bench study to evaluate the oxygen consumption of three transport ventilators: LTV 1200 (Care Fusion, USA), Medumat Transport (Weinmann, Germany), Elisée 350 (Resmed, Australia), at three different altitudes.

MATERIALS AND METHODS : We employed a lung model to mimic a normal human lung. The three ventilators were disposed in a decompression chamber. This chamber helped us to create a hypo barometric environment (5000 feet, 8000 feet and 12000 feet). The set tidal volume was 700 ml. The inspired oxygen content was 100 %. The respiratory rate was 20 breaths per minute. The oxygen volume consumed per minute was measured with a Fleisch pneumotachograph with an oxygen sensor, which was connected between the ventilator and the oxygen cylinder.

RESULTS : The consumed oxygen volume per minute appeared different between the three ventilators. This observation was made at each altitude. Equally, we found out that the oxygen flow was not the same from an altitude to another, for the same ventilator. On the ground, the LTV1200 consumed 18.5 l/min of gas while the Medumat Transport used 17.6 l/min and the Elisée 350 27.3 l/min. While the barometric pressure was decreasing, the oxygen consumption appeared quite stable for the first ventilator : 19.3 l/min at 5000 feet, 19.0 l/min at 8000 feet and 18.6 l/min at 12000 feet. About the Medumat Transport, the more the barometric pressure decreased the less this ventilator used oxygen : 14.8 l/min at 5000 feet, 13.1 l/min at 8000 feet and 11.2 l/min at 12000 feet. The Elisée 350 seemed to follow the same rule but, strangely, it increased suddenly its gas consumption at 12000 feet : 24.0 l/min at 5000 feet, 22.2 l/min at 8000 feet and 30.6 l/min at 12000. The oxygen consumption was the higher for the Elisée 350 at each altitude, while it was the lower for the Medumat Transport.

CONCLUSION : Thus, despite the same parameters set, the three transport ventilators did not need the same oxygen flow to work. Equally, the barometric changes seemed to influence the gas consumption. Focusing on these criteria, the Elisée 350 does not appear as the best ventilator during an aeromedical evacuation. The oxygen consumption of a ventilator is a very important logistic constraint. Due to the volume and weight of the oxygen cylinders, a limited number of them are allowed aboard the aircraft for an air medical evacuation.

P859

Traumatology

NECESSITY OF AN INTEGRATED ROAD TRAFFIC INJURIES SURVEILLANCE SYSTEM: A COMMUNITY-BASED STUDY

H Hatamabadi (1,2), H Soori (2), M Haddadi (2,3), R Vafaee (2), E Aini (2)

1. Emergency department, Emam Hosein hospital, Tehran, Iran
2. Ministry of health, Tehran, Iran
3. Safety promotion and injury prevention research center, Shahid Beheshti University of medical sciences

Corresponding author: Mr Hatamabadi Hamidreza (hhatamabadi@yahoo.com)

Key-words: ; ;

A prerequisite to improving the situation of traffic accidents and injury prevention is to set up a road traffic accident and victim information system (RTAVIS), which does not exist in Iran. The objective of this study was to compare the 3 major sources of information, including police, emergency medical services (EMS), and hospitals, to show the necessity of an integrated road traffic injury surveillance system. This prospective cohort study was performed by pursuing all road traffic accident (RTA) cases during one year (May 2008 to May 2009) within 30 days of their occurrence by a draft questionnaire and data pooling from participating sources. After pooling the data from all organizations, it was revealed that during one year, 245 road traffic accidents occurred in Tehran-Abali route (with a 45-km radius) in which 434 people were either injured or deceased. Out of these crash injuries,

police and EMS were unaware of 67 and 51 cases, respectively. In other words, police, pre-hospital emergency services and hospitals reported 56.2, 82.9, and 76.4 percent of the entire number of injuries or deaths, respectively. None of the organizations investigated, that is, police, EMS, and health care facilities, have complete records on injuries and deaths caused by traffic accidents. We recommend the formulation and implementation of an integrated and multidisciplinary data collection system of national traffic accidents with the collaboration of police, Ministry of Health and Medical Education (EMS and hospitals), forensic medicine, and the Iranian Red Crescent.

P860

Traumatology

THE ROLE OF BLOOD S100B AND LACTATE LEVELS IN CHILD AND ADULT MINOR HEAD TRAUMAS AND CORRELATION WITH BRAIN COMPUTERISED TOMOGRAPHY

AA Sezer (1), E Akıncı (2), M Ozturk (1), F Coşkun (1)

1. Emergency department, Ankara Training and Research Hospital, Ankara, Turkey
2. Emergency department, Konya Training and Research Hospital, Konya, Turkey

Corresponding author: Melle Akinci Emine (emineakinci@yahoo.com)

Key-words: minor head traumas ; S100b ; lactate

Introduction

In this study we aimed to set levels of blood S100b and lactate and correlation brain computerised tomography (CT) in child and adult minor head traumas.

Material methods

This clinical trial is a prospective study that has 100 child and adult head trauma patients who applied to Ankara Training and Research Hospital emergency service.

Results

The persons' who are taken in the research GCS is 15, %61 of the coming people is man and %39 is woman. %12 of the patients are 18 years old and under, and the patients of %88 is bigger than 18 years. In this study cut off range is used in blood S100b levels 0,0-0,15 ug/ml and lactate 0,9-1,7 mmol/L. 42 percent of patient S100b level is higher and 56 percent of patient lactate level is higher than cut off range. At a result no significant differences founded in age groups. Also S100B and lactate levels with brain CT was being related; there hasn't determined any meaningful statistical relation.

Discussion

There was shown that S100B increased in the blood and cerebrospinal fluid (CSF) during traumatic brain injury (TBI). The results of the studies which made relevant to serum S100B increasing after the pediatric head traumas are incompatible. At some studies there was shown that S100B is a reliable prognostic index. At the other hand there is opposite results are present. At the head traumas the increasing of lactate level at the brain tissue and CSF was found relevant with severity of damage. 42 percent of patients' s100b level and 56 percent of patients' lactate level are high but these results were not statistically significant. S100B and lactate levels with brain CT was being related; there hasn't determined any meaningful statistical relation.

In conclusion

At the minor head traumas, the determination of elevated serum S100B and lactate levels can't take the place of clinical examination and the using of cranial CT according to our results. Although the patients of our study group have minor head trauma, we have opinion that S100B and lactate aren't reliable markers for guessing progression.

P861

Traumatology

PANSCAN: TO SCAN OR NOT TO SCAN, THAT IS THE QUESTION!

A Wazzan

Emergency Department, King Abdulaziz Medical City, National Guard Health Affairs, Jeddah, Saudi Arabia

Corresponding author: Mr Wazzan Ahmad (dramwaz@hotmail.com)

Key-words: Trauma ; Panscan ; CTscan

Trauma patients undergo different types and amounts of energy that affect their bodies. With the blunt injuries being so prevalent in our region the detection of the magnitude of the injury is a cornerstone in the management of the traumatized patients.

Panscan i.e. whole body CT scan, is a concept that is adopted by many trauma centers as part of their management protocols. This practice has improved the trauma outcomes and injury detection. Time saved, hospital admissions, and money spent are other parameters that support the increasing use of this technology.

On the contrary to the above mentioned, concerns started to rise regarding the liberal use of panscan. Excessive radiation exposure, especially to the young trauma population, brings up the question of probable risk of increasing malignancies. Ignorance of appropriate clinical assessment and relying solely on a radiological study is another concern that we are facing not infrequently.

As with everything in medicine, the risks and benefits should always be balanced in a way that helps traumatized patients to reach the optimum medical or surgical care possible. Long term observational studies are to be initiated to observe for the proposed risks of radiation on the young trauma victims.

P862

Traumatology

RUPTURING OF RENAL ANGIOMYOLIPOMA DUE TO PHYSICAL EXAMINATION

S Zengin, B Al, C Yildirim, MM Oktay, DA Yilmaz

Emergency Department, Gaziantep University, Gaziantep, Turkey

Corresponding author: Mr Zengin Suat (zengins76@gmail.com)

Key-words: Renal angiomyolipoma, ; trauma, ; physical examination

Renal angiomyolipoma (AML) is relatively a rare benign tumor including vascular smooth muscle, and fatty elements; and the majority of renal AML run an asymptomatic, benign course. Potentially life-threatening complication of renal AML is tumor rupturing that can be seen after a low-velocity trauma. Flank pain and hematuria may be considered not important in Emergency Department (ED) if underlying cause is not kept in mind. However, sometimes, flank pain and hematuria may be the symptoms of renal AML that may cause retroperitoneal hemorrhage and hypovolemic shock. In present study, we aimed to discuss a patient that developed ruptured AML during physical examination.

P863

Traumatology

MISSED EXTREMITY FRACTURES IN THE EMERGENCY DEPARTMENT

E. Er (1), P.H. Kara (1), O. Oyar (2), E.E. Unluer (1)

1. Emergency Department, Izmir Katip Çelebi University, Atatürk Research and Training Hospital, Izmir, Turkey
2. Radiology Department, Izmir Katip Çelebi University, Atatürk Research and Training Hospital, Izmir, Turkey

Corresponding author: Melle Kara Pinar Hanife (hpinkara@hotmail.com)

Key-words: missed fractures ; radiography ; Emergency department

Objective: The purpose of the study was to analyse the accuracy of emergency physicians' (EP) interpretation of extremity traumas to determine the most difficult area for interpretation compared with official radiology reports for direct X-ray .

Methods: The radiologist reports and the EP reports of the direct X-rays from isolated extremity trauma patients were retrospectively compared from 01.05.2011 to 31.05.2011. A total of 181 fractures in 608 cases were confirmed.

Results: The locations of the misinterpreted fractures were ankle and foot (51.4%), wrist and hand (32.4%), elbow and forearm (5.4%), shoulder and upper arm (5.4%), hip and thigh (2.7%), and knee and leg (2.7%). The diagnostic accuracy of the EPs and radiologists were not significantly different ($\kappa = 0.856$, $p=0.001$).

Conclusion: Knowledge about the types of fractures that are most commonly missed facilitates a specifically directed educational benefit.

P864

Traumatology

EVALUATION OF THE CASES WHO UNDERWENT THORACOTOMY AFTER PENETRATING CHEST TRAUMA

z karakaya (1), ss sagay (2), s demir (3), O. karakaya (4)

1. Emergency department, adana state hospital, adana, Turkey
2. thoracic surgery, adana state hospital, adana, Turkey
3. cardiology department, adana state hospital, adana, Turkey
4. radiology department, adana state hospital, adana, Turkey

Corresponding author: Mme Karakaya Zeynep (zeynepkarakaya76@hotmail.com)

Key-words: Penetrating trauma ; thoracotomy ; cardiac injury

Objectives: Penetrating chest traumas are one of the most serious injuries with clinical results and target patient profile. In this study, we evaluated our clinical experience that we obtained from thoracotomy applied patients along with the related literature.

Materials and Methods: Records of 36 patients who were applied thoracotomy and were admitted for penetrating thorax trauma from 2009-2011 were retrospectively reviewed. Only the conservatively treated patients with penetrating chest trauma were excluded.

Results: 32 of the cases were men and 4 of them were women. Twenty-eight patients had sharp penetrating trauma and eight patients had gunshot wounds. Pulmonary parenchymal laceration was the most common intrathoracic pathology which was detected at 28 patients. 7 patients had extrathoracic organ injury. The most common cause of extrathoracic organ injury was liver laceration, observed in 4 patients, Cardiac injury was detected in 5 patients and mortality occurred in two patients among cardiac injury

patients. Morbidity occurred in seven patients and the most common cause was improved atelectasis.

Conclusion: Since penetrating chest trauma causes a disruption of the cardiorespiratory system in a very short time, early diagnosis and treatment is life saving. The accompanying extrathoracic injuries that are due to increased mortality and morbidity rates can be minimized through a multidisciplinary approach.

P865

Traumatology

A CASE OF COMMOTIO CORDIS CAUSED BY HORSE KICK

z karakaya (1), ss sagay (2), s demir (3), O. karakaya (4)

1. Emergency department, adana state hospital, adana, Turkey
2. thoracic surgery, adana state hospital, adana, Turkey
3. cardiology department, adana state hospital, adana, Turkey
4. radiology department, adana state hospital, adana, Turkey

Corresponding author: Mme Karakaya Zeynep (zeynepkarakaya76@hotmail.com)

Key-words: commotio cordis ; horse kick ; sudden death

Abstract: Sudden death in adults after non-penetrating chest blows are rare cases which are successfully resuscitated. Commotio cordis is the most described report during sporting activities in the youth. There have been very few reports of commotio cordis caused by other traumas. They endure a low survival rate. We reported a rare case of commotio cordis caused by a horse kick injury in a middle-aged male, who was successfully resuscitated and discharged without any neurological sequelae. This case can be classified as commotio cordis as the ventricular fibrillation (VF) had developed immediately after chest injury.

Case: The patient was a 46 year-old male who suffered a severe horse kick impact to the chest while examining the horse. He had no history of cardiac disease or other system diseases. The patient was transported to our hospital in a private car. He arrived at the emergency room within 10 minutes of the accident. There was no basic life support until he arrived. Evidence of ventricular fibrillation led the doctor to carry out immediate defibrillation with a biphasic defibrillator and started cardiopulmonary resuscitation. We performed endotracheal intubation. Return of the spontaneous circulation was restored within 10 minutes of CPR, and establishment of normal sinus rhythm was confirmed. The patient was immediately examined for internal organ injuries that might cause death.

General physical examination determined an 8 cm in length abrasion in the chest wall resulting from blunt trauma, and computerized tomography of the chest showed pulmonary contusion on the left lung. There wasn't any pneumothorax, hemothorax or cardiac tamponade in the imaging of the mediastinum. The patient was transported to our hospital's Intensive Care Unit. On arrival, he was hemodynamically stable and image studies were clear. The vital signs were stable (blood pressure: 125/77 mmHg, heart rate: 88 bpm, respiratory rate: 24 bpm, body temperature: 36.0 c). Glasgow Coma Scale score was 3 (E1 V1 M1). Serum CK-MB and Troponin I levels were normal. No evidence of any other critical injury was detected. The patient remained in the ICU for two days. During the clinical course, the patient remained hemodynamically stable and there was no recurrence of arrhythmia. On day 2, he had woken up and extubation had been performed by the ICU doctors. He was able to communicate and asked for discharge. Three days after being accepted to the intensive care unit, he was discharged on his request.

Conclusion: It has been reported that the previous Commotio Cordis cases involving adults may be considered again based

clinical evaluation rather than the age of the patient or the severity of the trauma.

P866 Traumatology

PANCREAS FRACTURE AFTER A GOKART ACCIDENT

c elif çelikel (1), b bige sayın (2), ck cemil kavalcı (1), e engin deniz arslan (1), f fevzi yılmaz (1), ms muhittin serkan yılmaz (1)

1. emergency department, ankara numune eğitim ve araştırma hastanesi, ankara, Turkey
2. radiological department, ankara numune eğitim ve araştırma hastanesi, ankara, Turkey

Corresponding author: Mme Çelikel Elif (drelifkaya@gmail.com)

Key-words: pancreas fracture ; trauma ; go-kart

Isolated pancreatic trauma is extremely rare because of its anatomic localization. Also; diagnosis of pancreatic injury may be difficult due to lack of sensitivity of initial clinical findings, laboratory and imaging investigations in emergency department. Morbidity and mortality is much higher in delayed presentation or if left unrecognized. In this paper we report a 20-years-old female with isolated pancreas fracture after a blunt abdominal trauma due to go-kart accident. Repeated evaluation of patient by taking into account the mechanism of trauma and suspicion of pancreatic injury is essential for early diagnosis.

P867 Traumatology

DELAYED MANAGEMENT OF SPLENIC INJURY

O Ghazanfar, E Holmes, A Qureishi

Emergency Department, Wexham Park Hospital, Slough, United Kingdom

Corresponding author: Mr Ghazanfar Omar (omarg1976@aol.com)

Key-words: Trauma ; Splenic Injury ; Fast Scan

The spleen is the most common organ damaged after blunt abdominal trauma. There are several different ways of managing this particular type of injury and depends largely on the patient clinical presentation and hemo-dynamic status.

This poster will highlight the different ways of managing this type of injury and accepted practice.

A 55 year old gentleman presented to the Emergency Department one week after a road traffic accident whereby the impact was on the left side of the torso. The presenting complaints included abdominal pain, dizzy spells and abdominal bruising.

The patient was initially hemodynamically stable and a comprehensive clinical examination revealed tenderness in the left upper quadrant of the abdomen and bruising in the peri-umbilical region and on both flanks. A fast scan showed free fluid in the abdomen and a subsequent CT scan confirmed a grade 4 splenic rupture. The patient was admitted under the surgical team and discharged 4 days later having managed him conservatively.

We aim to present different modalities of treatment options available to manage blunt abdominal trauma and more specifically splenic injury

P868 Traumatology

RECTUS SHEATH RUPTURE AND HEMATOMA DUE TO TAKE THE SHUTTLE

E Akıncı (1), NB Akıllı (1), MO Gonen (1), R Köylü (1), E Atayık (2), B Cander (1)

1. Emergency department, Konya Training and Research Hospital, Konya, Turkey
2. Department of Allergy and Immunology, Cumhuriyet University School of Medicine, Sivas, Turkey

Corresponding author: Melle Akıncı Emine (emineakinci@yahoo.com)

Key-words: Rectus sheath rupture ; Rectus sheath hematoma ; to take the shuttle

Introduction

Rectus sheath hematoma (RSH) is a relatively uncommon condition and often a clinically misdiagnosed cause of acute abdominal pain. It is caused by hemorrhage into the rectus sheath, which is caused by damage to the superior or inferior epigastric arteries or their branches, or by direct damage to the rectus muscle.[1,2] It is usually localized in the lower abdominal wall.[3] Many causes of RSH have been described, including trauma, anticoagulation medications, medication injection, hematological and coagulation disorders, increased abdominal pressure from straining, pregnancy, and hypertension.[1,2,4,5] The most frequent predisposing factor is anticoagulation therapy. Women are more prone to RSH than men. Although most cases are self-limiting, RSH can lead to significant morbidity and its overall mortality rate is reported as 4%.[5] The most commonly presented feature is a painful lower abdominal mass that never crosses the midline. [3] If RSH is suspected, the diagnosis is made on the basis of history, physical examination, ultrasonography (US) and computerized tomography (CT) findings. With early diagnosis and conservative management, surgical intervention can be avoided even with large hematoma. Surgery would be necessary in cases in which hemodynamic stability is not achieved. Early diagnosis is mandatory in order to prevent unnecessary surgical interventions.[6]. We present a case that RSH and rupture after take the shuttle.

Case report

15 years old male patient was admitted to the emergency department with abdominal pain. In medical history, abdominal pain was started 2 days before. He didn't have nausea, vomiting, diarrhea or constipation. His medical history was no history of chronic disease. Physical examination general status open, cooperated and oriented, vital signs stable. In abdominal examination, abdominal tenderness and defense of voluntary was seemed but neither rebound nor hepatosplenomegaly. Laboratory results are: WBC: 7080 K/uL Hb: 14.2 gr/dl AST: 217 U/L ALT: 117U/L ALP: 284 U/L GGT: 16 U/L BUN: 27mg/dl Cre: 0,65mg/dl LDH: 1294 U/L CK: 4480 U/L CKmb: 128 U/L. In abdominal ultrasonography, abdominal organs natural but bilateral rectus muscles are dropsy, rupture and hematoma of the rectus sheath was seemed. When the medical history was refined He has taken the shuttle 30 times a day last one week. The patient was admitted to the service. IV hydration was started. He has consulted to the general surgery, don't think any surgical intervention. During the control CK, CKMB values returned to normal levels. His pain was stopped. Four days after the ultrasound showed a significant reduction in edema in rectus muscles. Patients were discharged by polyclinic control.

Discussion

RSH is a rare but well-documented clinical entity with an elusive diagnosis. Clinical presentation, past medical history and previous medications in these patients should be carefully questioned in order to obtain valuable information for the correct diagnosis. RSH

demonstrates a female to male ratio of 2-3:1, with the highest incidence in the fifth decade (7). It accounts for up to 2% of cases of unexplained abdominal pain and may occur more often in the right lower quadrant. Other than blunt abdominal trauma, RSH typically occurs in patients who receive anticoagulant or fibrinolytic treatment and in severe hypocoagulability states such as hemophilia and von Willebrand disease.[8,9] Our patient had no risk factors mentioned above. As the lesion is self-limited, most RSH can be treated conservatively with analgesia, the treatment of predisposing conditions and cessation of the anticoagulation. When necessary, the coagulation profile should be corrected with the administration of vitamin K, fresh frozen plasma and protamine sulfate in patients being treated with heparin or factor VIII replacement in patients with hemophilia A. Active bleeding can be managed either surgically by evacuating the hematoma and ligating the bleeding vessels, or radiologically with catheter embolization. We treated our patient conservatively with analgesia and there isn't any complications.

Conclusion

RSH is rarely occur after minor trauma in youngs. RSH is rarely fatal, but clinicians should be aware of this possibility especially in frail elderly patients.

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P869

Traumatology

A RARE ENTITY IN EMERGENCY DEPARTMENT: TRAUMATIC FRACTURE OF HYOID BONE AND THYROID CARTILAGE DEPLETION

P Durukan (1), O Salt (1), S Ozkan (1), B Durukan (2), K Tarhan (2)

1. Erciyes University Faculty of Medicine, Department of Emergency Medicine, Kayseri, Turkey
2. Erciyes University Faculty of Dentistry, Department of Periodontology, Kayseri, Turkey

Corresponding author: Mr Durukan Polat (polatdurukan@gmail.com)

Key-words: hyoid bone ; thyroid cartilage ; trauma

Abstract

Hyoid bone fractures secondary to blunt trauma other than strangulation are rare accounting for only 0.002% of all fractures. It is generally associated with suicidal hanging. The importance of hyoid fracture, however, rests not with the rarity of it, but with the lethal potential of missed diagnosis. After fracture, the occult compressive forces of hematoma formation and soft tissue swelling may compromise airway patency. To ensure a positive outcome, a strong degree of suspicion based on mechanism of injury is mandated.

Here we presented an incidentally detected case of hyoid bone fracture and thyroid cartilage depletion in the emergency department.

Case

A 53-year-old male passenger on the front seat; seat belt-non-restrained was brought to the emergency department (ED) by an ambulance because of a motor vehicle accident. His Glasgow Coma Scale score (GCS) was 14 at the admission. After initial assessment, a cervical collar was placed. The patient was alert and awake with his baseline normal mental status. During the initial evaluation, the patient's airway was intact with minimal swelling on the throat and no difficulty in breathing. After that a non-contrasted computerized tomography (CT) scan demonstrated the fractured body and left greater corn of the hyoid and depletion of the left part of the thyroid cartilage. The patient was observed in otolaryngology department and was treated conservatively by rest, analgesia and restriction of head movements. The patient was evaluated with direct laryngoscopy, which revealed as normal except thyroid cartilage depletion. He was discharged after 3 days of observation without any complication or sequelae.

Because diagnosis of this kind of fracture is difficult and easily missed, greater attention should be paid to the patients who admitted to the Emergency Department with motor vehicle accident.

P870

Traumatology

VERTEBRAL ARTERY DISSECTION A RARE CAUSE OF NECK PAIN AFTER TRAUMA

MC van Schepen

Emergency department, Isala Klinieken, Zwolle, Netherlands

Corresponding author: Mme Van Schepen Marian Christine (jaarsmafinance@live.nl)

Key-words: vertebral artery dissection ; neck pain ; trauma

Introduction

Vertebral artery dissection is a rare, but important cause of neck pain after trauma in the adult population. Headache and/or ipsilateral neck pain are the prominent symptoms. The most frequent complication is artery-to-artery embolism and the consequence is vertebro-basilar stroke (incidence 24-100%) with potentially severe disability or even death. It is important to recognize vertebral artery dissection because it is often a treatable entity with most patients having good functional recovery. We report a case of vertebral artery dissection in a middle-aged man complicated by cerebellar infarction.

Case report

A 66-year-old man presented to the emergency department (ED) complaining of neck pain after a high-velocity car accident. After investigation he was thought to have musculoskeletal sprain. However, the same evening, he returned to the ED with a collapse, vomiting and tingling in his left arm. After obtaining a computed axial tomography scan (CT) of the head and neck, which showed no

abnormalities, he was admitted for observation. The next day he showed a deteriorating clinical picture with left-sided hemiparesis. CT-scan of the brain and arteriography of the extracranial arteries revealed cerebellar infarction due to a traumatic vertebral artery dissection. He was admitted to the stroke care unit and managed with anti-coagulant therapy. He was subsequently transferred to a rehabilitation unit but he developed severe left-sided spasticity.

Discussion

Vertebral artery dissection can be spontaneous or can follow blunt cervical trauma. Head trauma with persistent neck pain should raise suspicion of an underlying vertebral artery dissection. Diagnosis may be confirmed non-invasively by ultrasound. The sensitivity of ultrasound in detecting vertebral artery dissection is about 92%. Ultrasound can be easily obtained in the emergency department. With early confirmation of vertebral artery dissection and the start of anti-coagulant therapy potentially severe stroke can be prevented.

P871

Traumatology

A CASE OF TENSION PNEUMOPERICARDIUM FOLLOWING BLUNT CHEST TRAUMA IN A PATIENT WITH SEVERE MULTIPLE TRAUMA

V Gavrilă (1), G Filip (1), RD Gavrilă (2), LA Tandara (1)

1. Emergency Department, Emergency County Hospital, Timisoara, Romania
2. Department of Family Health Care Providers, Romanian National Society of Family Medicine, Timisoara, Romania

Corresponding author: Mr Gavrilă Vasile (gavrilă_vasile@yahoo.com)

Key-words: tension pneumopericardium ; thoracic trauma ; pericardial drainage

Introduction

Tension pneumopericardium is uncommon after blunt thoracic trauma and generally occurs following a penetrating injury. The diagnosis is made by computed tomography scan of the thorax and abdomen that allows the additional detection of concomitant injuries. Pneumopericardium following blunt chest trauma is due to tracheobronchial, pulmonary or esophageal injury.

Case report

We present the case of a 53 years old man, politraumatized, with multiple injuries after a high speed motor vehicle crash, brought by paramedics with signs of shock (low blood pressure, tachycardia, tachypnea, and turgescence jugular veins), who developed tension pneumopericardium shortly after the endotracheal intubation and positive pressure ventilation. His Glasgow Coma Scale (GCS) on arrival was 3/15 (E1, V1, M1), BP=100/60mmHg, HR=130/min, SpO₂=88%, RR=30/min, with multiple trauma marks on the head and chest. Rapid sequence intubation was performed. Shortly after intubation, the patient developed cardiac arrest (pulseless electrical activity), that responded to resuscitation maneuvers: chest compressions, administration of adrenaline. Abdominal sonography didn't revealed any trace of free fluid in the Douglas or Morrison's pouch, but upper abdominal examination was difficult. A CT "body" scan was performed: CT head - comminuted parietal fracture, multiple brain lesions, multiple fractures of the facial massif, massive cerebral edema: aspect of "gray brain matter". CT thorax - tension pneumopericardium, lungs with emphysematous bullae. Laboratory: moderate increases in liver enzymes, respiratory acidosis. The subxiphoid pericardial window and pericardial drainage, successfully treated this patient. After a pericardial drain was placed, the patient remained hemodynamically stable.

Discussion

Survivors of tension pneumopericardium secondary to blunt thoracic trauma are rare.

This case demonstrates the rapid and dramatic deterioration to cardiac arrest of a patient with tension pneumopericardium and severe multiple trauma. Tension pneumopericardium causing a life-threatening cardiac tamponade requires an immediate pericardial aspiration and subsequent pericardial drainage. In this case, the poor prognosis was due to severe head injuries and not to the tamponade secondary to tension pneumopericardium that was resolved successfully.

P872

Traumatology

CLINICAL CHARACTERISTICS OF OCCUPATIONAL FALL INJURIES

SH KIM

Emergency medicine, Ulsan University Hospital University of Ulsan College of Medicine, Ulsan, Korea, (South) Republic of

Corresponding author: Mr Kim Sun Hyu (stachy1@paran.com)

Key-words: Accidental falls ; occupations ; Injury

Objectives: The aim of this study was to investigate the clinical characteristics of fall injuries related to occupation and compare with another causes of occupational injuries.

Methods: Data were used from Emergency Department(ED)-based Occupational Injury Surveillance System of Korea Occupational Safety and Health Agency (KOSHA), to investigate the occupational injuries from July to October 2010 at the 10 emergency department in Korea. All the occupation related injured subjects that were 2147, divided into two group, injured group due to fall (fall group) of 213 patients (9.9%) and non-fall (non-fall group) of 1934. Data including baseline characteristic, factors and clinical characteristics associated with injury and outcome were compared between two groups.

Results: Mean age was 46 years old in the fall group and 42 in the non-fall group ($p<0.001$), male sex were 90% in the fall group and 86% in the non-fall group ($p=0.158$). Rate of presentation to ED via other facility were 46% in the fall group and 17% in the non-fall group ($p<0.001$). Frequent area of injury occurred were the area related to secondary industry of 65%, especially related to construction of 32 % in the fall group, however injury occurred in construction area were only 8% in the non-fall group. Rate of injury occurred during the regular working hours from 9 a.m. to 6 p.m. were 70% in fall group and 57% in non-fall group ($p<0.001$). Initial blood pressures were not different between two groups, however Glasgow Coma Scale were 14.6 in the fall group and 14.9 in the non-fall group ($p=0.019$). Injury severity was more severe in the fall group than the non-fall group resulting from that Injury Severity Score were 22.0 in fall group, 7.7 in non-fall group ($p<0.001$). Predicted days away from work were 35 days in the fall group and 13 in the non-fall group ($p<0.001$). Death rate after ED arrival were 4.2% in the fall group, 0.6% in the non-fall group ($p<0.001$), and rate of operation were 26% in the fall group, 11% in the non-fall group ($p<0.001$).

Conclusion: Fall injuries related to occupation were more severe comparing to other causes of trauma and resulting to more longer loss for work. It is necessary to recognize the severity of fall injuries in high risk industrial area such as construction and aim to prevent with all efforts.

P873

Traumatology

PELVIC BONE FRACTURES ASSOCIATED WITH INTRA-ABDOMINAL SOLID ORGAN INJURY

SH KIM

Emergency medicine, Ulsan University Hospital University of Ulsan College of Medicine, Ulsan, Korea, (South) Republic of

Corresponding author: Mr Kim Sun Hyu (stachy1@paran.com)

Key-words: Pelvic bones ; Abdominal injuries ; Fracture

INTRODUCTION.

Early detection for the intra-abdominal solid organ injury is critical in patients with pelvic bone fractures.

OBJECTIVES. This study analyzed the characteristics of pelvic bone fractures associated with intra-abdominal solid organ injury.

METHODS.

Medical records were retrospectively reviewed from January 2000 to December 2010 for patients with pelvic bone fractures. Pelvic bone fracture were divided into stable and unstable type; unstable pelvic bone fracture defined as lateral compression types II and III, antero-posterior compression types II and III, vertical shear and combined type by young classification. Subjects were divided into two groups, with (injured group) and without (non-injured group) intra-abdominal solid organ injury. Data included demographics, mechanism of injury, initial hemodynamic status, laboratory results, revised trauma score (RTS), injury severity score (ISS), amount of transfusion, admission to the intensive care unit (ICU), and mortality.

RESULTS.

Of all 363 study subjects, injured group were 60 patients (16.5%). Most common injured intra-abdominal solid organs were liver and spleen. Mean age of injured group was younger than non-injured group (37 vs 45 years old, $p=0.005$). Male patients was 56% in non-injured group and 70% in injured group ($p=0.048$). Mechanism of injury and stability of pelvic bone fracture were not different between two groups, however fall from height was higher in injured group (7.4 vs 4.1 m, $p=0.002$). Initial blood pressure at emergency department (ED) and RTS in injured group was lower than non-injured group. Shock at ED was more presented in injured group. For bivariate logistic regression test with significant factors from univariate analysis, early factors associated with intra-abdominal solid organ injuries for pelvic bone fracture was fall from height. Clinical outcomes including ISS, the amount of transfusion, the rate of invasive treatment, ICU stays and mortality was more severe in injured group.

CONCLUSIONS.

Higher fall from height was early factors associated with intra-abdominal solid organ injuries for pelvic bone fractures. There is a need to decide on a early diagnostic and therapeutic plan regarding the possibility of intra-abdominal solid organ injury for patients with pelvic bone fractures.

P874

Traumatology

THE CLINICAL ANALYSIS OF PATIENTS WITH FASCIOTOMIES IN THE 2011 VAN EARTHQUAKE

G. Görmeli (1), CA Görmeli (2), R. Dursun (3)

1. Orthopedics and Traumatology, Van Training and Research Hospital, Van, Turkey
2. Radiology, Van Training and Research Hospital, Van, Turkey
3. Emergency Department, Van Training and Research Hospital, Van, Turkey

Corresponding author: Mr Görmeli Gökay (ggormeli@yahoo.com)

Key-words: Earthquake; ; compartment syndrome ; ; fasciotomy

Objectives: The aim of this study is to report clinical profile and prognosis of patients with fasciotomy admitted to Van Training and Research Hospital after the 2011 Van earthquake.

Patients and methods: Eleven male and 10 female patients aged 18 to 60 (mean, 38.3) years had urgent fasciotomy. We conducted a retrospective review of medical records to document the clinical profile, treatment and prognosis.

Results: Twenty-one patients had fasciotomies and amputation was required on seven of them. Fasciotomy incisions were closed with skin grafting in nine cases, and with primary closure in three cases. Eight patients had full range of motion, four patients had not gained full range of motion and needed rehabilitation, two patients had sensory loss.

Conclusion: Compartment syndrome is one of the serious problem after the Van earthquake. The infection ratio was low, the amputation ratio was high.

P875

Traumatology

THE IMPACT OF A NATURAL DISASTER ON THE INCIDENCE OF PENETRATING TRAUMA IN AN URBAN POPULATION

JL Avegno (1), S D'Andrea (2), A McFarlin (1), L Moreno-Walton (3), A Plyer (4)

1. Emergency Medicine, Louisiana State University Health Sciences Center, New Orleans, United States
2. Emergency Medicine, Louisiana State University Health Sciences Center & Harvard University, New Orleans & Boston, United States
3. Emergency Medicine & Research Genetics, Louisiana State University Health Sciences Center, New Orleans, United States
4. Demography, City of New Orleans, New Orleans, United States

Corresponding author: Mme Moreno-walton Lisa (DoctorMoreno@gmail.com)

Key-words: Penetrating trauma ; Natural disasters ; Interpersonal violence

BACKGROUND: Sociological theories hold that interpersonal violence increases following a disaster due both to stress caused by lack of resources and to break down of societal organization which normally serves to control the behaviors of marginally functioning personality types. Although many studies have been done on the impact of Hurricane Katrina (K), none have looked at the impact on interpersonal violence.

HYPOTHESIS: Interpersonal violence, as represented by PT, will be increased following K.

METHODS: This is a retrospective chart review of all entries to the Trauma Registry from 1/01-8/05 (pre-K data= 3824 entries) and 4/06-12/10 (post-K data= 3076 entries). Entries representing self inflicted wounds were excluded. All individuals living in the Level One trauma catchment area were included in the population demographics. Being treated at the Level One Trauma Center was used as the surrogate marker for being a victim of PT. Data was analyzed by the calculation of totals and percentages. Odds ratios and confidence intervals were calculated for discrete variables.

RESULTS: There is no significant change in the mean rate of PT in the 5 years post-K compared to the 5 years pre-K. PT rate rose significantly in the 2004-5 pre-K period (63.74-70.23) and dropped significantly in the year post-K (70.23-60.15). K had no statistically significant impact on the likelihood of being stabbed vs. being shot. Pre-K crude died of wounds in the ED rate = 7.48%; 4.71% post-K. Patients were less likely to be resuscitated from PT pre-K (OR 0.612; CI 0.498-0.759). Pre-K post-resuscitation mortality (survived to admission, death before discharge) = 12.42%; 9.59 post-K.

Victims of PT pre-K who survived resuscitation were more likely to die, even when adjusted for ISS. There was no difference in the risk of being male. K had a negative impact on the risk of Black race on the likelihood of being a victim of PT (OR 0.489; CI 0.430-0.556). There was no impact on age as a risk factor. Alcohol was more likely to be associated with PT post-K than pre-K (OR 1.71; 95%CI= 1.16-1.37). Drug use was more likely to be associated with PT post-K (OR 1.28; 95% CI= 1.164-1.411). There was no statistically significant difference in ISS levels. K made New Orleans (NO) residence less of a risk factor for being a victim (OR 0.499; CI 0.449-0.554), and post-K the impact of being within the city limits as a risk factor was also diminished (0.773, 0.701-0.851). For patients who survived ED resuscitation, there were no differences in the distribution of dispositions from the ED to the floor, OR, ICU, step-down unit or home. Although all-cause mortality for victims of PT was significantly higher pre-K, the disposition of survivors to home, acute care facility, medical facility, non-medical facility or by AMA was not affected by the storm.

CONCLUSIONS: Rates of PT actually decreased following K. Mechanism of PT, gender, age, ISS, disposition from the ED and type of hospital discharge were unaffected. Victims of PT had improved overall survival post-K. Post-K victims were more likely to be intoxicated (alcohol or drugs) than were pre-K victims. This suggests a higher level of post-K substance use, but also a higher level of disinhibition effect and a lower level of intent than pre-K. Being Black, living in NO and being in NO were less of a risk post-K than they were pre-K.

P876

Traumatology

THE IMPACT OF HURRICANE KATRINA ON VIOLENCE AGAINST WOMEN IN ORLEANS PARISH, LOUISIANA

JL Avegno (1), IA Espinal (2), L Myers (3), L Moreno-Walton (4)

1. Emergency Medicine, Louisiana State University Health Sciences Center, New Orleans, United States
2. Undergraduate, Oberlin College, Oberlin, United States
3. Biostatistics, Tulane University School of Public Health & Tropical Medicine, New Orleans, United States
4. Emergency Medicine & Research Genetics, Louisiana State University Health Sciences Center, New Orleans, United States

Corresponding author: Mme Moreno-walton Lisa (DoctorMoreno@gmail.com)

Key-words: interpersonal violence ; women ; natural disasters

Objectives: Intimate partner violence (IPV) is an ongoing public concern. Post-traumatic stress disorder (PTSD) is documented to be a contributing factor in IPV perpetration. Major stressors include large scale natural disasters. In 2005, Hurricane Katrina devastated the New Orleans. The percentage of homicides resulting from IPV rose from 9.56% before the storm to 14.22% in the year following. The purpose of this study is to compare sexual assault rates, severity, and characteristics pre- and post-hurricane; and to examine what effect the disaster itself had on this type of violence as seen in the Emergency Department.

Methods: This study is a retrospective chart review of data collected routinely as part of the Sexual Assault Nurse Examiner (SANE) program and maintained on excel spread sheets. Data was examined for the five year periods pre- and post-Katrina. Number of assailants, verbal or physical threats, evidence of external trauma, trauma to the genitals or face (identified in the literature as markers of increased rage) and pain scale were used as

surrogate markers for severity of attack. Pearson's chi square test was used to analyze categorical data; Wilcoxon rank test for non-parametric data.

Results: In the two years immediately post-Katrina there was a statistically significant per-capita increase in the incidence of violence against women. Although the percentage of assaults by multiple perpetrators did not increase, an increase in other markers of severity was noted.

Conclusion: There is an association between natural disaster and increased violence against women in this study. Implications for disaster workers include increased awareness and efforts at prevention. Women should be empowered to self-protection and vigilance. Increased knowledge and support is required to stimulate immediate recovery of the affected female population.

P877

Traumatology

TRAUMATIC TENSION PNEUMOTHORAX DUE TO BICYCLE ACCIDENT: A CASE REPORT

MT Gokdemir (1), H Kaya (1), O Sogut (1), MO Erdoğan (2), F Güngörmez (3)

1. Emergency Department, Harran University, School of Medicine, Sanliurfa, Turkey
2. Department of Emergency Medicine, Haydarpaşa State Hospital, Dr, Istanbul, Turkey
3. Emergency Department, Dr, Sanliurfa, Turkey

Corresponding author: Mr Gokdemir Mehmet Tahir (tahirgokdemir@mynet.com)

Key-words: Tension pneumothorax ; Needle decompression ; Emergency Department

Background

A tension pneumothorax is the accumulation of air causing a pressure rise in the pleural space, generated by a unidirectional valve mechanism. The diagnosis is said to be clinical since it results in a life-threatening condition. Emergent needle decompression should be carried out before confirmation by chest x-ray when the patient is haemodynamic unstable. We present A children's case with left tension pneumothorax due to a bicycle accident, severely deteriorated with loss of consciousness and clinically diagnosed in Emergency Department.

Case presentation

On 2 october 2010 A 15-year-old male children transferred to the emergency department presented loss of consciousness and deteriorated vital signs. According to the 112 transfer team records, he injured due to bicycle accident. He complained of aggravating dyspnea after accident and during ambulance transfer, cyanosis was detected and supplemental oxygen was delivered by mask. Upon arrival to the emergency department, the patient presented with a cyanosis, stupor or semi-comatose mental state, and severe tachyarrhythmia. Heart auscultation demonstrated tachycardia (140 bpm) and the jugular venous pressure was raised. Physical examination of the lungs revealed tachypnoea, decreased breath sounds on the left side and unequal chest rise. A large bore needle (16 G) immediately inserted into the second intercostal space of the mid-clavicular line to decompress intrathoracic pressure and after than percutaneously checked SaO2 increased dramatically to higher than 95%. After niddle decompression, patient's breeting was relieved relatively and portable chest X-ray was performed. On the chest x-ray a left tension pneumothorax, subtotally collapsed left lung and right shift of the mediastinum were seen on the left side. Subsequently an apical chest tube was inserted on the left side. The chest tube were kept on suction (-10 cm H2O) to accelerate the rate of healing. For an emergency laboratory study blood samples also was drawn. The arterial blood gas results upon arrival and after insertion of the chest tube were a pH of 7.2, PCO2 of 54.8 mmHg, PO2 of 81. mmHg, and SaO2 79.5%,

and a pH of 7.38, PCO₂ of 41.5 mmHg, PO₂ of 168 mmHg, and a SaO₂ of 98.7%, respectively. The patient was transferred to the ICU for close monitoring of the patient's mental state and other parameters related to tension pneumothorax. Within several hours after admission into the ICU, the patient's mental state and vital signs were restored to within normal limits. Two hours after admission into the ICU breathing was maintained with an adequate SaO₂ level. Patient was evaluated by a neurosurgeon, who confirmed that there were no significant sequela associated with the possibility of hypoxic brain damage.

Conclusion

In this case the presentation of the tension pneumothorax was clinically diagnosed. When a traumatic tension pneumothorax is clinically suspected a needle decompression should be performed. In the absence of haemodynamic compromise, it is prudent to wait for the results of an emergent chest x-ray prior to intervention.

P878

Traumatology

THE ROLE OF BEDSIDE ULTRASONOGRAPHY IN EMERGENCY DEPARTMENT FOR SCAPHOID FRACTURES

A. Yildirim, N. Vandenberg, E. Unluer, A. Karagoz

Emergency Department, Izmir Ataturk Research and Training Hospital, Izmir, Turkey

Corresponding author: Mme Van Den Berk Nergiz (nvandenberg@yahoo.com)

Key-words: scafoïd ; emergency ; ultrasound

Abstract

Objective: Our objective was to study the accuracy of emergency medicine (EM) physician performed bedside ultrasonography (BUS) in patients with clinical suspicion of scaphoid fracture and normal radiographs.

Methods: After six-hour training program, from January to December 2011, an EM physician used BUS to prospectively evaluate patients presenting to the emergency department (ED) with clinical suspicion of scaphoid fracture and normal radiographs underwent US examination of scaphoid prior to wrist MRI scan, within 24 hours following wrist trauma. Outcome was determined by official radiology reports of the MR Imaging. BUS and MR imaging results were compared with Chi-square testing.

Results: Of the 63 enrolled patients, 12 Patients were BUS-positive. Of these, MR imaging results agreed with the BUS findings in 12 patients who has cortical damages of scafoïd with hematoma. In 35 cases have only hematoma without cortical damages with the USG and these were corroborated by MR imaging. A scafoïd fracture was demonstrated by MRI in 2 patients in this group. The sensitivity, specificity, Positive predictive value, negative predictive value, and negative likelihood ratio for BUS were %85.7, %100, %100, %100 and 0.14 respectively. The diagnostic accuracy of BUS were not statistically different from MR imaging (kappa=0.938 p=0.001)

Conclusion: BUS for diagnosis of scafoïd fracture is another application of BUS in the ED. EM physicians can diagnose scafoïd fracture using BUS with high degree of accuracy.

P879

Traumatology

POSTTRAUMATIC PERSISTENT SHOULDER PAIN: SUPERIOR LABRUM ANTERIOR POSTERIOR (SLAP) LESIONS

U Gulacti (1), MO Erdogan (2), Z Birkan (3), M İçer (4)

1. Emergency Department, Ministry of Harput General Hospital, Elazig, Turkey

2. Emergency Department, Haydarpasa Numune Training and Research Hospital, Istanbul, Turkey
3. Radiology, Ministry of Harput General Hospital, Elazig, Turkey
4. Emergency Department, Medical Faculty Hospital of Dicle University, Diyarbakir, Turkey

Corresponding author: Mr Gülaçti Umut (umutgulacti@gmail.com)

Key-words: fall ; shoulder ; pain

Introduction: Due to the anatomical and biomechanical characteristics of the shoulder, traumatic soft tissue lesions are more common than osseous lesions. Superior labrum anterior-posterior (SLAP) lesions have been described as a cause of shoulder pain in 1990. SLAP is injury or separation of the glenoid labrum superior where the long head of biceps adheres. SLAP lesions are usually not seen on plain direct radiographs. Shoulder magnetic resonance imaging (MRI) and magnetic resonance arthrography are useful for diagnosis. Most valid method for patients' not diagnosed radiologically is arthroscopic examination. Our aim is emphasizing the need to consider the diagnosis of SLAP lesions in post-traumatic shoulder pain, for emergency department patients.

Case report: Fifty-seven-year-old male patient was admitted to emergency department due to a low fall on his shoulder. In physical examination, active and passive shoulder motion was normal except painful extension. Anterior-posterior shoulder X-ray was normal. Patient required orthopedics consultation due to persistent shoulder pain in emergency observation unit and patient was admitted to orthopedic clinic. Type 2 SLAP lesion was detected in fat suppressed Axial T2 weighted MRI sequences. Patient was referred to a third level hospital due to lack of arthroscopy in our hospital.

Conclusion: Shoulder traumas are usually soft tissue injuries with no findings in X-rays. SLAP lesion is an uncommon cause of traumatic shoulder pain. For this reason, we recommend orthopedic consultation in post-traumatic persistent shoulder pain.

P880

Traumatology

VARIATION IN ACTIVATION OF TRAUMA TEAMS IN DUTCH EMERGENCY DEPARTMENTS

CJ Doggen (1), RE Egberink (2), MJ IJzerman (1), HJ Otten (1), AB van Vugt (3)

1. Health Technology & Services Research, MIRA Institute for Biomedical Technology and Technical Medicine, University of Twente, Enschede, Netherlands
2. Centre for Emergency Care (Acute Zorg Euregio), Medisch Spectrum Twente, Enschede, Netherlands
3. Emergency Department, Medisch Spectrum Twente, Enschede, Netherlands

Corresponding author: Mr Egberink Rolf (r.egberink@acuteczorgeregio.nl)

Key-words: trauma teams ; in-hospital trauma triage ; trauma team activation

Introduction: Trauma teams can be activated by emergency department (ED) staff to assess and treat a seriously injured patient optimally. Some EDs have one trauma team available whereas other EDs have two or more different trauma teams. The decision to activate a specific trauma team is mostly based on information provided by the emergency medical service (EMS) and is called in-hospital trauma triage. A system with a tiered response may contribute to the efficiency of the in-hospital trauma triage process by better resource allocation, improved cost containment and patient outcomes.

Objective: The aim of this study is to investigate and compare current practice of in-hospital trauma triage and activation of trauma teams in Dutch EDs.

Methods: A cross-sectional survey was conducted between May 30, and July 26, 2011 among managers of all 102 EDs in the

Netherlands, using a semi-structured online questionnaire. The questionnaire contained items about type of in-hospital trauma triage system, composition of trauma teams at the ED and the criteria used to activate these teams.

Results: Seventy-seven (76%) questionnaires were included in the analyses. Most EDs use a one-team trauma triage system (64%). The overall number of trauma team members varies from 3 to 16 professionals. 96% Of the EDs receive a pre-notification from EMS, mostly by telephone (92%). 40% Of the pre-notifications is communicated directly, 31% via an Emergency Medical Dispatcher (EMD), 20% by both EMS and EMD and 9% in another way. The ED nurse usually receives the pre-notification (96%), whereas the decision to activate a team is made by different professionals at the ED. Information mostly available in pre-notification is: blood pressure (84%), pulse rate, age and gender (all 81%). The following criteria are mostly used for trauma team activation: Glasgow Coma Score (85%), Airway, Breathing, Circulation (84%) and Revised Trauma Score (83%). Only 56% of the EDs were satisfied with the current situation on in-hospital trauma triage and found their system useful.

Discussion: We identified a large variation in trauma team activation across Dutch EDs regarding: 1. the in-hospital trauma triage system (number of teams) and composition and size of trauma teams; 2. how and by whom information about the incoming patient is communicated between EMS and the ED and by whom the decision for trauma team activation is made; 3. the criteria to activate the different trauma teams. Future research needs to address the criteria that could be used to efficiently and safely activate a specific trauma team and in what way decision makers in Dutch EDs can be supported in the in-hospital trauma triage process.

P881 Traumatology

ANALYSIS OF OCCUPATIONAL ACCIDENTS ADMITTED TO EMERGENCY MEDICINE DEPARTMENT

N Kozacı

acil tip, adana NEAH, adana, Turkey

Corresponding author: Mme Kozaci Nalan (drkozac@yahoo.com)

Key-words: Emergency ; occupational accidents ; judicial case

Objective: In this study, we aimed to analyse the demographic features of accidents at work admitted to an education and research hospital, life-threatening content of the forensic reports, simple medical intervention situations and outcomes in the emergency department.

Material and Methods: In this study, patients admitted to emergency department and diagnosed accident at work during January 1, 2009 and December 31, 2010 were evaluated retrospectively. All of accidents at work were included in this study. Categorical measurements obtained from data were summarized as the number and percentage numerical measurements were summarized as the mean and standard deviation. And the data were statistically analyzed with using SPSS 16.0 statistical program. Results: Of the 406 patients, 96.55% were male and 3.45% were female. The mean age of the patients were 32.80. Accidents at work admitted mostly in December 2010, the most frequent injury were limb injury with 62 %. Of the 73.65 % the patients were discharged after evaluation from the emergency department. Looking at the contents of the life-threatening reports 14.53% of the patients had life-threatening and 28.57 % were not resolve with simple medical intervention.

Conclusion: Work-related accidents are seen mostly in younger men. Most frequent patients discharge from emergency department after evaluation. Clinicians often decide abolishing with simple medical intervention according to staying in hospital, and while injuring of more than one system, the life-threatening rates develop.

P882 Traumatology

DEMOGRAPHIC ANALYSIS OF PEDIATRIC PATIENTS ADMITTED TO DEPARTMENTS WITH HEAD TRAUMA

N Kozacı

acil tip, adana NEAH, adana, Turkey

Corresponding author: Mme Kozaci Nalan (drkozac@yahoo.com)

Key-words: trauma ; head ; pediatrics

Objective: The purpose of this study was to determine the demographic characteristics and mortality of the pediatric head trauma patients who presented to the emergency department.

Material and Methods: This retrospective observational study was performed in the tertiary care emergency department. All pediatric head trauma patients admitted to the emergency department between 1.12.2009-31.12.2010 were included in the study. Patients' demographic data, head computed tomography (CT) results and mortality rates were evaluated.

Results: Four thousand, two hundred fifty seven patients were included in the study. One thousand, five hundred sixty three were girls and 2694 were

boys. The mean age was 6.3 ± 5.16 , and the most frequent age range of trauma was 0-2 years (infancy). The major etiologic factor was falling down. Of the 4208 patients, (98.8%) were exposed to mild head trauma according to the Glasgow coma scale (GCS) score. The most frequent CT finding in 114 (3.2%) of patients was skull base fracture.

Conclusion: Most of the pediatric head traumas were minor head injuries. Furthermore, most of them were falls from heights. The 0-2 aged patients especially were exposed to head trauma, unlike the literature. Motor vehicle accidents were the leading cause of trauma between 10-14 years pediatric patients in whom the clinical status becomes more critical. The most common cause of death was motor vehicle accidents in the study and the most lethal CT finding was subarachnoid hemorrhage.

P883 Traumatology

TRAUMATIC CERVICAL DISC HERNIA

S Karaman (1), E. Kadioğlu (2), C Şen Tanrıkulu (1), E Acar (1)

1. Emergency Department, Erzurum District Training and Research Hospital, Erzurum, Turkey

2. Emergency Department, Kütahya Evliya Çelebi Training and Research Hospital, Kütahya, Turkey

Corresponding author: Mr Karaman Serhat (drserhatkaraman@hotmail.com)

Key-words: trauma ; herniations ; neurologic deficit

The trauma is to be caused increasingly human mortality and morbidity. Mostly young and healthy people suffer from trauma and if it is correctly diagnosed and treated, they can live healthy life.

A 49-year-old male patient, had traffic accident, was admitted to the emergency department. He was conscious and cooperative. Arterial blood pressure was 130/70 mmHg, and heart rate was 92/min, and body temperature was 36.4°C. Patient was included under control, and IV saline hydration was given. On examination at that time, he had intense cervical pain, paresthesias on his shoulders and neurologic deficits in his right arm. A fracture in the left clavicle was existed in directly X-ray. Other direct and cervical x-ray were evaluated normal. The cervical vertebrae were observed normal in the cervical tomography. MRI was taken because neck pain and neurologic deficits continued in right arm. C3-4, C5-6, and C6-7 disk traumatic herniations were observed at MRI. The patient was admitted for urgent surgery by brain surgery department. Neurologic deficit was recovered in the early stage after operation.

According to this case, all suspected cervical trauma patients should be immobility for cervical and other vertebrae, too. Neurological deficits should be determined immediately. We determined that MRI is required for a complete exclusion of acute cervical injury in this case, too.

P884

Traumatology

ESOPHAGEAL FOREIGN BODY

S Karaman (1), E Acar (1), Z. Turktarhan (2), A Bayramoğlu (3)

1. Emergency Department, Erzurum District Training and Research Hospital, Erzurum, Turkey
2. Thoracic Surgery, Erzurum District Training And Research Hospital, Erzurum, Turkey
3. Emergency Department, Atatürk University Medical Faculty,, Erzurum, Turkey

Corresponding author: Mr Karaman Serhat (drserhatkaraman@hotmail.com)

Key-words: early diagnosis ; foreign bodies ; radiological methods

Esophageal foreign bodies an emergency situation which can be seen in all age groups, especially in childhood, sometimes leading to significant morbidity and mortality. As the duration of symptoms of foreign bodies increase, symptoms become more complicated and difficult to diagnosis. Foreign bodies which waited for long time mainly

due to mediastinitis, esophagus tracheal fistula, can cause vascular fistulas. As at childhood usually metallic money and toy parts are absorbed; at advanced ages the substances such as meat, bone and dental prostheses are absorbed.

A 10-year-old male patient, with sudden onset of severe retrosternal, brought to the emergency room with chest pain. Patient was conscious, agitated was seen. Ta: 100/70 Heart rate: 97, fingertip pulse oxygen rate was 98%. The lung was evaluated normal by auscultation. Chest radiography was normal. At the ECG normal sinus rhythm, there was no pathological finding. At the Thorax CT scan of soft tissue density a foreign body revealed close to the density in the central part of the esophagus. The patient could absorb liquid foods. Foreign body was planned to remove with esophagoscopy the patient had a sudden relaxation after a few mouthful of food was given. On the soft chest tomography there was no foreign body in esophagus tomography.

Early diagnosis and treatment of foreign bodies have vital importance because of serious complications. Radiological methods have an important place in diagnosis. After diagnosis it should be treated as early as possible. For a successful removal of foreign bodies in today's conditions, Esophagus tomography is the most effective and reliable method. As in our case the foreign bodies can progress into the stomach spontaneously as we increase peristalsis.

P885

Traumatology

RETROSPECTIVE ANALYSIS OF PEDIATRIC TRAUMA CASES ADMITTED TO EMERGENCY MEDICINE DEPARTMENT

N Kozacı

acı tip, adana NEAH, adana, Turkey

Corresponding author: Mme Kozacı Nalan (drkozac@yahoo.com)

Key-words: pediatric ; trauma ; emergency service

Introduction and Aim: The purpose of this study is to determine the prognosis of the demographic characteristics, etiology, morbidity and mortality rates of the pediatric trauma patients admitted to the emergency department of a training and research hospital.

Materials and methods: Pediatric patients who have been brought to the emergency department of a training and research hospital between 01.01.2010- 31.12.2010 because of trauma have been included to this study. The demographic data of the patients, distribution by seasons and months, the etiologic factors that cause to trauma, how the patients have been admitted to the emergency department, the conclusion figures of the patients in the emergency department, and the data of the units where patients have been hospitalized, the treatments, average hospitality time, the conclusion figures of the clinics where they have been hospitalized has been analyzed statistically.

Findings: Of the 18936 patient 12096 were boys and 6840 were girls have been included to this study. The mean was as $8,11 \pm 5,19$ in boys and $6,89 \pm 5,04$ in girls. The most common age for trauma was 7-14 (% 36,15) it has been stated that the pediatric trauma cases have been mostly admitted in spring and summer months. Extremity injuries (% 42,40) and falls (% 40,67) were stated as the most etiologic causes. 815 of the patients have been hospitalized. 353 cases (% 43,31) received surgical intervention while 462 (% 56,69) cases received only medical treatment. The pediatric trauma patients were exitus by the following reasons: 10 (% 47,62) of them due to traffic accidents, 5 (% 23,81) of them due to falls , 5 (% 23,81) of them due to burns and 1 (% 4,76) due to drowning. It has been stated that 13 (% 61,90) cases were male and 8 (% 38,10) patients were girls of a total 21 cases resulting in death.

Results: Most of the pediatric traumas become due to falls or simple extremity injuries. Traumas are mostly seen between the 7-14 age range during the primary school. The most common etiologic factor in hospital admissions are falls. The most common etiologic cause of death in pediatric trauma are traffic accidents.

P886

Traumatology

RETROSPECTIVE ANALYSIS OF ADULT TRAUMA CASES ADMITTED TO EMERGENCY MEDICINE DEPARTMENT

N Kozacı

acı tip, adana NEAH, adana, Turkey

Corresponding author: Mme Kozacı Nalan (drkozac@yahoo.com)

Key-words: adult trauma ; emergency services ; epidemiology

Objective: In this study, we aimed to analyse the demographic features, etiology, the morbidity and mortality rates and prognosis

of the adult patients admitted to the emergency department of a training and research hospital and diagnosed trauma.

Materials and Methods: Patients, admitted to the emergency department of Adana Training and Research Hospital over 18 ages and diagnosed general body trauma during March 1, 2011 and August 31, 2011 were included in the study. The speciality, including demographic data, etiologic reason of trauma, how to apply, duration of hospitalization, hospitalization unit and completion format, mortality rates were recorded. And the data were statistically analyzed with using SPSS 16 statistical program.

Results: In study period, 110.495 patients admitted to the emergency department. Of the 110.495 patients, % 12,29 were general body trauma. % 62,16 of these patients were male. Mean age of the patients were 35,82. The most reason of trauma was soft tissue injuries. % 92,09 of patients applied directly and % 6,1 applied by 112 services to the emergency department. The most admission route was extremity trauma. Multiple trauma rate was % 18,17. GCS was between 13 and 15 in % 99,71, 9-12 in % 0,08 and 3-8 in % 0,21 of the patients. Brain tomography was applicated mostly for screening and % 77 of these had no pathological sign. % 93,8 of the patients were discharged after evaluation from the emergency department. Most of patients were admitted to the ortopedic clinic and mean duration of hospitalization was 5,51 days. % 0,9 of patients diagnosed GBT died. The most reason of death at emergency deperntment was needlestick and sharp injuries and at clinics of hospital, the most reason of death was traffic accident.

Conclusion: Most of general body trauma is simple trauma. Patients can be discharged easily and in a short time period from emergency deperntmant by taking complete history and examining carefully. Thus, unnecessary labaratuvar techniques are excluded and loss of time reduces. So time to deal with heavily bad injured patients increases. Transporting trauma patients carefully to the relevant hospitals with eligible ambulances can be possible by working coordinated in trauma centers and establishing an organized trauma system only.

P887

Traumatology

THE ROLE OF TRAUMA TEAM NURSES AT THE ANKARA UNIVERSITY IBNI SINA HOSPITAL EMERGENCY

H KARABULUT, S EKINCI, A DEMIRKAN, O POLAT

Emergency Department, Ankara University Faculty of Medicine, ANKARA, Turkey

Corresponding author: Mme Karabulut Hulya (hulyakarabulut_1@hotmail.com)

Key-words: Trauma team ; Nurse ; Emergency department

Introduction: Traumatic injuries are complex events since in general they effect more than one system of the body and an experienced team is required for successful treatment. The responsibility of nurses are very important in this team. The quality of resuscitation and treatment carried out during the hours right after the trauma are very important. To this end, a trauma team has been determined at our emergency clinic and job definitions have been defined for the nurses in the team.

Objective: To determine the nursing approach and roles for the nurses in the emergency clinic trauma team.

Materials and Method: It is deemed suitable to have at least 2 nurses in the trauma team determined according to the trauma profile. It is also suggested in literature that there should be two nurses working simultaneously for trauma cases. The job definitions of these two nurses have been defined as Nurse – 1 and Nurse – 2.

Results and Conclusion: A total of 4995 trauma patients have been accepted to the trauma clinic during 2011. The job definitions of the trauma nurses in the trauma team determined according to the trauma profile of our clinic have been written down as items. Accordingly;

Tasks of Nurse – 1:

- ☐ Taking the patient to the bed with trauma board
- ☐ Placing the patient identity card after the patient identification verification
- ☐ Evaluation of the risks of falling for the patient and taking the necessary precautions; lifting of the gurney balustrades
- ☐ Monitoring the vital findings of the patient
- ☐ Cardiac monitorization
- ☐ Ensuring that the material required for airway clearance are ready
- ☐ Ensuring that emergency medicines and materials are kept ready
- ☐ Giving medications
- ☐ Pain followup
- ☐ Keeping records in full
- ☐ Ensuring privacy

Tasks of Nurse – 2

- ☐ Opening of vascular access and drawing the required amount of blood
- ☐ Fluid resuscitation, heating up of blood products and supplying to the patient
- ☐ Taking out the clothes of the patient, handing over the precious items to the judicial authorities with delivery record after informing the team leader
- ☐ Providing the required materiafor the patient
- ☐ Taking the blood samples to the laboratory (Full blood count, blood type and crossmatch, Coagulation profile, Metabolic panel, Ethanol, toxicology examination, pregnancy test, lactate and base deficit)
- ☐ Providing the blood and fluid products
- ☐ Sending the relatives of the patient to the clinic social service specialist in order to prevent crowding in front of the room

Comments and suggestions: It is thought that nurses will be able to use their time more effectively and carry out their duties more efficiently if the tasks of the trauma nurses in the trauma team are written down. Another study is planned for the efficiency of clinical guidance.

P888

Traumatology

ANALYSIS OF GERIATRIC TRAUMA

C SEN TANRIKULU (1), Y TANRIKULU (2), S KARAMAN (1)

1. Emergency Department, Erzurum Area Education and Research Hospital, Erzurum, Turkey

2. General Surgery Department, Erzurum Area Education and Research Hospital, Erzurum, Turkey

Corresponding author: Mme Sen Tanrikulu Ceren (cerensen81@hotmail.com)

Key-words: Emergency room ; Geriatric ; Trauma

Aim: Geriatric people more exposed to trauma due to changes physiopathological caused by aging. The aim of this study was to evaluate the demographic characteristics of geriatric patients admitted to the emergency clinic and their diagnosis and treatment processes.

Material Method: In our study, was to evaluate 1450 geriatric trauma cases, who referred to Erzurum Area Education and Research Hospital Deparmetn of Emergency Medicine, between May 2011- April 2012. The patients were to evaluated from the demographic characteristics, monts of exposure to trauma, body

region to the affected trauma and the number of regions covered by trauma, incidence of local-multiple trauma and hospitalized clinics.

Findings: Of the evaluated 1450 cases, 790 (51.3%) were male and 750 (48.7%) were female. The mean of age was 73.9. 1368 cases were local trauma patients and 72 cases were multiple trauma patients. The falls were the most common cause of trauma (82.3%) ($p < 0.05$). The extremities were the most affected body region. The soft tissue injury was the most observed trauma in cases of local trauma, while the coexistence of the extremity and head and neck trauma was the most observed trauma in cases of multiple trauma.

Conclusion: Geriatric trauma cases should be better examined, judicial records should be kept fully and patients should be treated in a multidisciplinary approach, increased geriatric population in our country due to development of living standards.

P889

Traumatology

BILATERAL SHOULDER PATHOLOGY SECONDARY TO ELECTRICAL INJURY

M Zumrut (1), M Ayan (2), M Baltacıoglu (1), E Marçal (3)

1. Department of Orthopedics, Konya Numune Hospital, Tokat, Turkey
2. Department of Emergency Medicine, Gazi Osman Pasa University, Faculty of Medicine, Tokat, Turkey
3. Department of Emergency Medicine, Konya Numune Hospital, Tokat, Turkey

Corresponding author: Mr Ayan Murat (ayan421975@windowslive.com)

Key-words: shoulder ; electrical injury ; fracture

Introduction:

Shoulder injury and more in particular bilateral involvement caused by electric shock is extremely rare and is sometime diagnosed late. It can occur as a dislocation or fracture-dislocation. Early diagnosis and treatment prevent to increase the risks of permanent injuries. Treatment includes surgical and non-surgical techniques with physiotherapy. In this report a case of right shoulder fracture-dislocation and left shoulder fracture developed after an electrical injury is presented.

Case:

A 50 year-old male patient referred immediately to our emergency department with complaints of pain and motion inability of shoulders after an electric shock (220 V alternating household current). The physical examination and x-ray findings revealed fracture of greater tuberosity and dislocation on right shoulder and also fracture of greater tuberosity on left shoulder. Dislocated shoulder was promptly reduced under iv sedation. Velpeau dressings were applied for four weeks, then gentle physical therapy was applied to improve range of motion capacity. Recovery was uneventful for both shoulders four months after the injury.

Conclusion:

Shoulder injury caused by electric shock is extremely rare. It must always be kept in mind that fractures and dislocations of shoulder might occur in electrical injury. Early diagnosis and treatment mean better outcome.

P890

Traumatology

TRAUMATIC HIP DISLOCATION IN A 3 YEAR-OLD GIRL

M Zumrut (1), M Ayan (2), M Baltacıoglu (1)

1. Department of Orthopedics, Konya Numune Hospital, Konya, Turkey
2. Department of Emergency Medicine, Gaziosmanpaşa University, Faculty of Medicine, Tokat, Turkey

Corresponding author: Mr Ayan Murat (ayan421975@windowslive.com)

Key-words: traumatic dislocation ; children ; hip

Introduction:

Traumatic hip dislocation in the pediatric population is an uncommon injury and constitutes an orthopaedic emergency. It can be a consequence of minor trauma in young children whereas greater force is required in adolescents or adults. Most children have an excellent outcome after this injury. The urgent reduction should be performed to achieve normal hip. Avascular necrosis is a well-known and catastrophic complication of traumatic dislocation of the hip in children. The aim of this report is to create an awareness about this rare occurrence

Case:

We report the case of a 3 year-old girl who dislocated her right hip after her brother fell on her. The patient was evaluated with an x-ray confirmed a posterior dislocation of her right hip. The hip was promptly reduced with gentle manipulation and immobilized with hip spica cast for 3 weeks. After removing the cast, load bearing restriction was applied for 3 weeks. Review at 6 months revealed normal examination and no evidence of avascular necrosis on x-ray.

Conclusion:

Traumatic hip dislocation in childhood is a relatively rare injury and can occur as a result of trivial force. Urgent reduction within six hours of injury reduces the risk of avascular necrosis.

P891

Traumatology

DOG TOOTH

S Karaman (1), C Şen Tanrıkulu (1), A Bayramoğlu (2), O Delice (1)

1. Emergency Department, Erzurum District Training and Research Hospital, Erzurum, Turkey
2. Emergency Department, Atatürk University Medical Faculty, Erzurum, Turkey

Corresponding author: Mr Karaman Serhat (drserhatkaraman@hotmail.com)

Key-words: animal bites ; foreign body ; x-ray

Animal bites can cause some bruises and injuries such as penetrating, lacerations, contusion, and rupture. As a result; infection, disfigurement, zoonotic disease, and even serious complications to lead a fatal may develop. Injuries associated with dog bites are mainly occurred in the extremities. Tendon, articular, bone, vascular tissue, hand, face, foot and genital area injuries have high risk infection.

52-year-old male patient applied to emergency department with pain and swelling the right arm because of the dog bites a day before. There were teeth marks, swelling, redness, and tenderness in his right hand-wrist dorsal. Wound care, rabies and tetanus vaccine was performed. Opacity, being compatible with the dog teeth on the ulnar bone was observed in the patient's right forearm and wrist X-ray. The dog tooth on the right ulnar bone was removed with surgery.

Dead - necrotic tissues and foreign bodies, caused by animal bites, must be removed from the wound. Dogs can lead to bone fractures

during biting due to powerful jaws. Plain radiographs are required to show the presence of fractures and tissue foreign bodies in articular and hand injuries.

P892

Traumatology

CASE REPORT: WHEN OBESITY SAVES LIFE.

FT SÖNMEZ (1), F BÜYÜKÇAM (2), Cİ SÖNMEZ (3), MC MERMERKAYA (4), M. TANDOĞAN (5)

1. Department of Emergency Medicine, Yenimahalle State Hospital, Ankara, Turkey
2. Department of Emergency Medicine, Dışkapı Y.B.Training and Education Hospital, Ankara, Turkey
3. Family Medicine, Kalaba Primery Care Senter, Ankara, Turkey
4. Family Medicine, Atatürk Training and Education Hospital, Ankara, Turkey
5. Department of Emergency Medicine, Esenyurt State Hospital, Istanbul, Turkey

Corresponding author: Mme Turan Sönmez Feruza (ferouzabakounova@yahoo.com)

Key-words: abdominal stab wounds ; conservative treatment ; penetrating trauma

Introduction

Penetrating abdominal injuries are associated with high risk of life-threatening organ injury. Most patients require acute surgery. The management of penetrating abdominal injury has undergone a few paradigm shifts in the past century. Up until the early 1900s, penetrating abdominal injury was managed conservatively. During World War I, however, it was discovered that patients who underwent mandatory operative exploration with subsequent intervention had a better chance of survival, and this soon became the standard of care[1]. In 1960, Shaftan, having noticed a high rate of negative laparotomies, published a report on the non-operative management of abdominal injury; he had managed 125 of 180 consecutive patients with abdominal injury without surgery, with a mortality rate of less than 1 per cent[2]. Similar reports were subsequently presented and interest in the selective non-operative management of penetrating abdominal wounds began to increase[3, 4]. The ability to manage patients without having to perform an operation means not only fewer potential postoperative complications, but also decreased costs and resource use[5, 6].

Selective non-operative management for stab wounds is now commonly practiced.

We reported a case of penetrated abdominal injury treated conservatively .

Case Report

A 30 year male was admitted to emergency department with a hobnail stabbed on his stomach.

He has fallen down on a bunch of industry nails on his workplace and found out one of them stuck in his stomach.

On abdominal examination the stomach was soft, no tenderness was found. US showed an artifact on the anterior abdominal wall and no free fluid inside. As the patient had abdominal obesity the nail had happen to slightly penetrate and not damage any solid organ.

The foreign body, about 5 cm length, was removed and the patient was followed up for 24 hours. As no extra pathology developed he was discharged.

Discussion

Selective non-operative management of penetrating abdominal injuries is recommended in facilities with the resources and experience to select and monitor patients carefully, along with the capability to provide immediate surgical intervention to those who need it[4].

P893

Traumatology

ARE OCCUPATIONAL ACCIDENTS A DESTINY? ARE EMERGENCY SERVICES FUNCTIONAL?

N Kurt (1), H Gönüllü (1), R Dursun (2), S Karadas (1), S Güner (3)

1. emergency department, Yüzüncü Yıl University, van, Turkey
2. emergency department, Van Region Training and Research Hospital, van, Turkey
3. ortopedi department, Yüzüncü Yıl University, van, Turkey

Corresponding author: Mr Dursun Recep (drrecep@yuzuncuyil.edu.tr)

Key-words: Occupational Accidents ; emergency department ; injury

Introduction

We encounter occupational accidents as an important problem in Turkey like throughout the world . According to the statistics, 64316 occupational accidents occurred in Turkey in 20091. As being a center for immediate care of occupational accidents, the functioning of emergency services are of great significance.

Case report

A male patient injured by an iron stick from his foot while working at the construction site was assessed in the emergency department. During his examination, an entry cavity from 1/3 in the sole of the right foot and an exit cavity from the right ankle of the right foot were available. In his taken graphics, there was a fracture line in his 4th and 5th metatarsus basis of the right foot and a foreign substance was also present. The patient was vaccinated against tetanus shot and his wound was dressed. He was taken into the operation room after providing his analgesia. The exit end of the foreign substance was cut and removed from the its entrance point. The tissues were sutured by carrying out injury debridement. The fractures in the metatarsus basis were dealt with in closed reduction and short leg was encased in plaster.

Conclusion

When compared with developed nations, it shows that we are not in a good position in terms of the the number of the accidents happened and mortality rate1. Protective measures and compliance with the rules on the part of health personnel are essential in preventing occupational accidents, on the other hand, rapid functioning at emergency rooms will also lessen the morbidity and mortality rate.

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P894

Traumatology

THE EFFECTS OF THE BLOOD ALCOHOL LEVELS ON THE INJURY SEVERITY AND COST IN THE TRAUMAS CAUSED BY MOTOR VEHICLE ACCIDENTS

N. Akay (1), G. Kurtoglu Celik (2), O. Karakayalı (3), M. Memis (4), F. Tanrıverdi (5), S. Vural (6)

1. Emergency department, Sivas Numune Hospital, Sivas, Turkey
2. Emergency department, Atatürk Training and Research Hospital, Ankara, Turkey
3. Emergency department, Teaching and Research Hospital in Kocaeli Derince, Kocaeli, Turkey.
4. Emergency department, Teaching and Research Hospital in Urfa, Urfa, Turkey
5. Emergency department, Necip Fazıl Karamanmaraş City Hospital, Kahramanmaraş, Turkey
6. Emergency department, Bartın State Hospital, Bartın, Turkey

Corresponding author: Melle Kurtoglu Celik Gulhan (kurtoglugulhan@yahoo.com)

Key-words: Alcohol ; Motor Vehicle Accident ; Cost

Introduction and Aim: Traffic accidents are one of the basic problems of the world and Turkey, which require to be examined and solved. The aims of this study are to detect the effects of the alcohol on the injury severity and death in the traumas which are caused by motor vehicle accidents, and to state the significance of the problem for society.

Material and Methods: Four hundred forty-five (445) patients who admitted to Atatürk Training and Research Hospital Emergency Department between January 2010 and December 2011 because of the traumas after motor vehicle accidents are enrolled in the study, and their ages, sexualities, blood alcohol levels and vehicle types are recorded retrospectively. Abbreviated Injury Score (AIS) and Injury Severity Score (ISS) were detected for each patient according to trauma regions and severity. The patients were divided into two groups according to the blood alcohol levels ($< 0,5$ promil and $\geq 0,5$ promil).

Results: The blood alcohol levels were $< 0,5$ promil in 341 patients (76,6%) and $\geq 0,5$ promil in 104 patients (23,4%) of 445 patients who enrolled in the study. There was no statistically significant difference between the groups in terms of ages ($p: 0,754$), but statistically difference was detected in terms of Injury Severity Score (ISS), observation time in the emergency department and cost ($p < 0,001$).

Conclusion: Drunk-driving is one of the most important reasons of the traffic accidents. In some studies it has been shown that drink-driving was responsible for 47% of fatality, 20% of injury and 10% of financial damage in the traffic accidents. In conclusion drunk driving increases the accident ratio as well as it affects the injury severity.

P895

Traumatology

EPIDEMIOLOGY AND PROGNOSTIC FACTORS OF SKULL FRACTURES DUE TO HEAD TRAUMA

O Guneysel, M Simsek, G Simsek

Emergency Medicine Clinic, Dr. Lütfi Kırdar Kartal Education and Research Hospital, Istanbul, Turkey

Corresponding author: Melle Simsek Gozde (gsimsek79@gmail.com)

Key-words: head trauma ; skull fracture ; epidemiology

Objective. In the present study, it was aimed to identify epidemiological data of the cases with skull fracture due to head trauma and factors those affect prognosis.

Methods. Electronic records and charts of 152 patients, who presented to Emergency Department of Dr. Lütfi Kırdar Kartal Education and Research Hospital with trauma and were diagnosed as skull fracture between May 1st and September 1st 2011, were retrospectively evaluated.

Results. There were 112 children (73.7%), aged between 0 and 16 years, and 40 adults (26.3%). Sixty-seven percent of the children were boys; whereas 80% of the adults were men. The leading causes of trauma etiologies were consisted of fall from height, simple fall and out-vehicle traffic accidents in children, while fall from height, out-vehicle traffic accident and violence were primary causes in adults. There was traumatic brain injury (TBI) in 17% of children and in 70% of adults. Among the most common concurrent injuries, facial bone fractures were found in 25% and 23.2% of adults and children, respectively. Thoracic (7.5%) and abdominal injury (2.5%) were diagnosed in adults, but not in

children. Skeletal injuries were seen in 12.5% of the adults, while in 1.8% of the children. Among all patients, 10.5% required intensive care unit admission for a mean duration of 8.63 ± 9.47 (range: 1-30) days. Linear fracture was the most common skull fracture both in children and adults, which was found as 69.6% and 52.5%, respectively. Frontal bone fracture (46.4%) was the most common fracture among children; followed by temporal (15.2%) and occipital (14.3%) bone fractures. In adults, frontal bone fracture (27.5%) was the most common skull fracture; followed by temporal (25%) and parietal (15%) bone fractures. Trauma severity was distributed as mild head trauma in 92.9% of the children, whereas moderate head trauma in 4.5% and severe head trauma in 1.8% of the children. In addition, it was found that there was mild head trauma in 52.5% of adults, while moderate and severe head trauma in 17.5% and 30%, respectively. Glasgow Outcome Scale was found as 5 in 99.1% and 4 in 0.9% of children. In adults, GOS score was found as 5 in 62.5%, 4 in 7.5%, 3 in 2.5% and 1 in 27.5% of adults. **Discussion and Conclusion.** A statistically significant prognostic relationship was found between GOS score and concurrent injuries, scalp swelling, TBI, Glasgow Coma Scale (GCS) score or Child's Glasgow Coma Scale (CGCS) score at presentation, age or neurologic deficit. There was no significant prognostic relationship between GOS and sex, fracture type, nausea or vomiting.

P896

Traumatology

EVALUATION OF ADULT PATIENTS WITH MINOR HEAD INJURY

E Coban, O Guneysel, G Simsek

Emergency Medicine Clinic, Dr. Lütfi Kırdar Kartal Education and Research Hospital, Istanbul, Turkey

Corresponding author: Melle Simsek Gozde (gsimsek79@gmail.com)

Key-words: head injury ; head computed tomography ; emergency

Objective. The aim of this study is to analyze epidemiology of adults cases with minor head trauma and to identify the high risk groups for head CT.

Methods. Four hundred and fifty patients who presented to Emergency Department of Dr. Lütfi Kırdar Kartal Education and Research Hospital with minor head trauma between 15 January, 2012 and 15 March, 2012 were prospectively and observationally evaluated. Age, gender, Glasgow Coma Scale at presentation, trauma mechanism, complaint at presentation, status of additional measures (alcohol, anticoagulant use, drug intoxication, bleeding diathesis, history of shunt), head CT scan (performed or not), physical examination and outcome (discharge, observation, admission, operation) were evaluated. Patients under age of 16 and those with a trauma mechanism including penetrating injury or firearm injury were excluded.

Results. Of the cases, 126 (28%) were women and 324 (72%) were men. Mean age was 40.99 ± 17.87 years, ranging from 16 to 89 years. Young patients (16-40 years old) were accounted from 57.2% of the cases. Leading trauma mechanism was motor vehicle accident; followed by falls and violence. Motor vehicle accidents comprised 40.3% of all trauma causes, while in-vehicle accidents alone comprised 26.0%. Out-vehicle accidents and violence were the most frequent causes for trauma in patients with skull fracture, while fall from height was the most common cause in patients with traumatic brain injury (TBI). Of the cases, Glasgow Coma Scale (GCS) was found as 15 in 94.7% and 14 in 5.3%. TBI was detected in higher rates among patients with a GCS of 14; whereas skull fracture among patients with a GCS of 14. Head CT scan was performed in 73.6% ($n=331$) of the cases. Among CT scans, 13%

was interpreted as abnormal. Most frequent abnormal CT findings included linear fracture (34.9%), subdural hematoma (25.6%) and subarachnoid hemorrhage (16.3%). Linear fractures were most commonly accompanied by pneumocephalus and subdural hematoma. Of all cases, 0.7% underwent operation.

Discussion and Conclusion. GCS of 14, vomiting more than 3 times and scalp laceration comprised high risk for prediction of abnormal head CT. There was no statistically significant relationship between abnormal CT scan and age, gender, cause of trauma, complaints at presentation other than vomiting more than 3 times, physical examination findings other than scalp laceration, alcohol or anticoagulant use.

P897

Traumatology

MANAGEMENT AND OUTCOME OF TRAUMA PATIENTS (HEAD INJURIES EXCLUDED) OVER 75 YEARS OLD AT THE EMERGENCY DEPARTMENT: IMPACT OF ORAL ANTICOAGULANT TREATMENT

C.Patarin (1), P.Bilbault (2), J.Kopferschmitt (3), Y.Gottwalles (1), C.Kam (2), M.Mihalcea (2)

1. Emergency Department, Hôpital Civil de Colmar, Colmar, France
2. Emergency Department, Hôpital de Haute-pierre, Strasbourg, France
3. Emergency Department, Nouvel Hôpital Civil, Strasbourg, France

Corresponding author: Melle Patarin Christelle (patarin_christelle@yahoo.fr)

Key-words: Emergency ; anticoagulant ; elderly

Introduction

Nine percent of the French population is over 75 years old, 1.4% of these are treated with oral anticoagulants.

Falls are the third cause of death in home accident among the elderly. Vitamin K antagonists are the first cause of iatrogenic accident.

The purpose of this study was to analyze patients over 75 years old treated with oral anticoagulants admitted at the Emergency Room (ER) for trauma (head trauma excluded). We studied mortality, morbidity, management, and the outcome of these patients by comparing them to a control group.

The secondary objective was to observe the compliance of the reversal of vitamin K antagonist in this cohort in accordance with the guidelines of the "Haute Autorité de Santé" or "HAS", (High Authority for Health in French), updated in 2008.

Patients and methods

We conducted a retrospective controlled cohort study from January to June 2010, in our adult ED.

The study included patients born in 1935 and earlier, coded « trauma » on the emergency register, and excluding those with « head injury » (based on the International Statistical Classification of Diseases and Related Health Problems, ICD-10). Two groups were defined: patients with vitamin K antagonists named "VKA" group, and patients without anticoagulant treatment named "control without VKA" group. From the latter we used a random table of patients to obtain two cohorts of the same size.

Results

During the 6 months of the study, 17617 patients were admitted in the ER. Among these patients, 874 met the eligibility criteria. We included 609 patients without anticoagulant treatment and 265 with vitamin K antagonists. After using the random table, we obtained two panels of 265 patients in each group. Demographical data (age and sex) and in-hospital mortality were comparable in both groups. The indication for treatment with oral anticoagulant was atrial fibrillation in 52.45% and thromboembolic disease in 42% of the cases.

Patients in the "VKA" group returned significantly more frequently in the ER than the "control without VKA" group (17.7% returned more than once time versus 1.5%, $p < 0.001$, Fisher's test) but they had significantly fewer fractures (45% versus 74 %, $p < 0.001$, Fisher's test). The frequency of bruises/hematomas was significantly higher in the "VKA" group than the "control without VKA" (31% versus 15%, $p < 0.001$, Fisher's test).

Concerning the need for hospitalization, patients in the "VKA" group were 2.6 times more likely to return home after a stay in ER than the "control without VKA" group (44.2% versus 24.2%, $p < 0.001$, Fisher's test). The hospitalization of those in the "VKA" group was significantly lower than those in the "control without VKA" group. In particular hospitalization was much lower in the trauma unit (28% versus 51%, $p < 0.001$, Fisher's test) and less surgery was performed (28% versus 51.3%) than in the "control without VKA" group. However, patients with oral anticoagulant treatment stayed significantly longer in the ICU unit, ($p = 0.019$, Fisher's test) without having a significantly higher mortality ($p = 0.28$, Fisher's test). The need for transfusion was not significantly different in the two groups but the average number of blood units given was greater in "VKA" patients than in "control without VKA" patients (3.22 versus 2.63, $p = 0.050$, Fisher's test).

9.8% of the "VKA" patients presented severity criteria described by the HAS with need to reverse oral anticoagulant therapy. Only 11.54% of them had a correctly managed reversal of anticoagulant in accordance with the HAS guidelines. The hemoglobin rate for the oral anticoagulant overdosed patients was significantly lower than patients with correct INR (11.6 g / dL versus 12.4 g / dL, $p = 0.024$; Fisher test).

Conclusion

In our study, among patients over 75 years old admitted to our ED for falls, there were fewer hospitalizations concerning patients with oral anticoagulants than without. This was probably related to the lesser number of fractures observed in the "VKA" group compared to the "control without VKA" group. Nevertheless transfers to the ICU were significantly higher in the « VKA » group than in the control group. So, we have shown in our ED that HAS guidelines have not been applied for the reversal of oral anticoagulant therapy.

P898

Traumatology

EVALUATION OF DEMOGRAPHIC AND CLINICAL FEATURES OF PATIENTS WITH HEAD INJURIES WHO HAD PATHOLOGICAL FINDINGS AT COMPUTED TOMOGRAPHY IN EMERGENCY DEPARTMENT

C Şahin (3), Y Yavuz (1), HU Akdemir (1), L Duran (1), C Katı (1), C Çokluk (2)

1. Emergency Department, Ondokuz Mayıs University Medical Faculty Hospital, Samsun, Turkey
2. Neurosurgery Department, Ondokuz Mayıs University Medical Faculty Hospital, Samsun, Turkey
3. Emergency Service, Samsun Training and Research Hospital, Samsun, Turkey

Corresponding author: Mr Akdemir Hızır Ufuk (hufukakdemir@hotmail.com)

Key-words: Head injury ; Computed tomography ; Prognostic factors

Objective: The clinical approach to patients head injury is one of the most persistent and comprehensive problems of modern emergency services at today. These injuries are pathologies that are fatal, debilitating and require long term treatment and care. Early diagnosis and treatment significantly reduces morbidity and mortality. In this study, we aimed to evaluate retrospectively some

demographic and clinical characteristics who had pathological findings at computed tomography in emergency department.

Materials and Methods: In this study, we analyzed retrospectively hospital records and patient file findings of total 260 patients ≥ 18 years with head injury that were determined pathological finding at computed tomography (CT) and evaluated for trauma between January 2007-December 2009 in our emergency medicine clinic. Patients' age, gender, date of application, Glasgow Coma Scale (GCS), Injury Severity Score (ISS), Revised Trauma Score (RTS), vital signs, hypoxia or the presence of hypotension, injury characteristics, injury mechanism, CT findings, concomitant system injuries, treatment methods and results recorded into the patient informant form which was previously created. Data was installed to Statistical Package for Social Science (SPSS) 15.0. For Statistical analysis Chi-square test, One-Way ANOVA, Tukey test and Cox Proportional Hazard model was used. Statistical analysis and $p < 0.05$ was considered significant.

Results: Pathological findings were found in CT of % 4.3 of all trauma patients admitted to emergency department during 3 years the study performed. 83.1 % of patients were male and mean age was 43.6 ± 18.1 . The most common cause of trauma were motor vehicle related injuries (55.8 %). Multiple contusions (40.8 %) and cranium fracture (37.3 %) were frequently determined at patients' CT. It was determined that surgical treatment was performed in 29.6 % of patients. There was no significantly difference between deceased and survivors patient groups when performed treatment methods were compared ($p > 0.05$). Frequency of cervical spine injury was 8.1 % in head trauma patients had pathological findings at brain CT. Abdominal injuries (37.3 %) were determined the most common system injuries concomitant to head trauma. Average ISS score was 35.7 and average RTS score was 5.1 in patients with poor neurological outcome. In our study, mortality rate was 27.7 %. Diffuse brain edema, multiple contusions, subarachnoid hemorrhage and epidural hematoma detected in CT was found associated with mortality. The most common cause of death were serious brain injury (61.1 %) and multisystem injuries with head trauma (23.6 %), respectively. There was a significant difference when deceased and survivors patients groups were compared for ISS and RTS scores ($p < 0.05$). We determined that the presence of hypoxia or hypotension episode in first 24 hours significantly didn't effect the neurological outcomes of patients ($p > 0.05$). Age, GCS, ISS and RTS scores were determined as the most important indicators. The most common deaths are determined in the first 24 hours after injury (36.1 %) and between 3-7 days (33.3 %) respectively.

Conclusion: Head injuries are major public health problem which is frequently as a result of motor vehicle related injuries especially effected male patients group between 18-45 years aged. It is observed that multiple contusions are the most common pathologic finding and diffuse brain edema and brain parenchym injuries are the most important pathologies associated with mortality. The most important prognostic factors in patients with head injury are ISS, RTS, GCS and average age.

Key-words: Tomography ; Blunt ; Chest trauma

Objectives: In blunt thoracic injuries, thoracic computed tomography (CT) is reported to be superior to chest radiography in detecting pathologies. The purpose of this study is to investigate whether pathologies detected only in thoracic tomography after blunt thoracic trauma affect patients' treatment and follow-up.

Materials and Methods: In the study, the data of 232 patients referred to Ondokuz Mayıs University, Medical Faculty Emergency Clinics with blunt thoracic trauma and underwent , chest radiography and thoracic computed tomography between January 2007 and August 2009 were retrospectively analyzed. Patients were divided into three groups according to the pathologies detected in radiological examinations as group 1 patients having pathology in both chest radiography and thoracic CT, group 2 patients having pathology only in thoracic CT and group 3 patients having no pathology detected. Groups were compared with respect to types of treatment, mortality and morbidity. SPSS 15.0 program was used for statistical analysis and p value of < 0.05 was considered significant.

Findings: Of the 232 patients participating in the study, 181 (78%) were male and the mean age of the patients was 47 ± 16 years. Extravehicular accident 108 (46.6%) was the leading cause of trauma. Of the patients participating in the study, 153 (65.9%) had thorax trauma accompanied with at least one additional injury. Head trauma (25%) was found to be the most frequent accompanying injury. 72 patients (31%) received tube thoracostomy, 3(1.3%) received thoracotomy and the remaining (67.8%) received medical treatment. All the patients were hospitalized and followed. The mean hospital stay was 8.6 days. Of these patients, 60 (25.8) were in the intensive care unit and 50 (21.5) received mechanical ventilator support. Of the 232 patients, 136 (58.6%) were in group 1, 69 (29.8%) were in group 2 and 27 (11.6%) were in group 3. When treatments given to groups were compared; tube thoracostomy rate in group 1 was 45.5% where as it was 14.4% in group 2. There was statistically significant difference between group 1 and group 2 as well as group 3 ($p < 0.05$). However, no significant difference was observed between group 2 and group 3 ($p > 0.05$). No statistically significant difference between three groups was observed with respect to thoracotomy treatment ($p > 0.05$). Inter-group patients survival analysis revealed 19 (51.4%), 14 (37.8) and 4 (10.8) mortalities in group 1, group 2 and group 3 respectively. While there was no statistically significant difference between group 1 and group 2 with respect to mortality rates ($p < 0.05$), statistically significant difference was observed between group 3 and group 2 as well as group 1 ($p > 0.05$).

Conclusion: In blunt thoracic trauma, thoracic CT is superior to chest radiography in displaying thoracic pathologies. While pathologies detected by chest radiography were administered interventional treatment, detection of pathologies by thorax CT does not cause significant changes in treatments such as tube thoracostomy and thoracotomy.

P899

Traumatology

EVALUATION OF THE EFFECT OF THORACIC TOMOGRAPHY IN BLUNT CHEST TRAUMA

B Şişman (1), Y Yavuz (2), HU Akdemir (2), L Duran (2), C Katı (2)

1. Emergency Service, Sinop Atatürk State Hospital, Sinop, Turkey
2. Emergency Department, Ondokuz Mayıs University Medical Faculty Hospital, Samsun, Turkey

Corresponding author: Mr Akdemir Hızır Ufuk (hufukakdemir@hotmail.com)

P900

Traumatology

DETERMINATION OF THE DEMOGRAPHIC AND CLINICAL CHARACTERISTICS OF THE PATIENTS WITH HAND INJURY THAT ADMITTED TO ULUDAG UNIVERSITY EMERGENCY DEPARTMENT

S. Kulaç (1), T. Küfeciler (2), E. Kocabaş (3), S. Akköse Aydın (4), M. Bulut (5)

1. Emergency department, The Taksim Training and Research Hospital, İstanbul, Turkey
2. Emergency department, Kırklareli State Hospital, Kırklareli, Turkey
3. Emergency department, Aksaray State Hospital, Aksaray, Turkey

4. Emergency department, Uludağ University Health Research and Application Center, Bursa, Turkey
5. Emergency department, Şevket Yılmaz Training and Research Hospital, Bursa, Turkey

Corresponding author: Mr Kulaç Semih (semikul@yahoo.com)

Key-words: Hand trauma ; Emergency service ; Injury

Purpose: Hand trauma has been detected on the majority of patients who applied to emergency departments due to injuries. The purpose of this study is to establish the profile of patients, to develop preventive measures, and to form a preliminary model for emergency service structuring by determining demographic and clinical characteristics of patients with hand injury who applied to Uludağ University Medicine Faculty Emergency Department.

Materials and Method: Total 526 patients, who applied to Uludağ University Medicine Faculty Emergency Department (U.Ü.T.F.-AS) between 01.04.2009- 30.06.2010, with isolated hand trauma were included in the study. Patients with additional organ injury, with major trauma and the patients who were not willing to participate in the study were excluded. The data of patients included in the study were recorded into the form prepared previously.

Findings: 526 patients had a mean age of 34,94±15,54 years. 82.5% of the patients (n=434) were male and 17,5% were female. In 19,6% of the patients (n=103) applied to the emergency service the injury occurred between 10-12 am. Most frequent injuries were observed in 10.6% of the patients who were employed in furniture industry. Also, 19, 8% (n=104) of the patients were admitted to emergency department on Friday. The most common cause of applications due to hand trauma was work-related accidents with 247 cases (47%) and half of those cases had second finger injury. 29.5% of the patients, who were covered in the study, were admitted due to superficial injury. 69.8% of all cases were consulted with hand surgery and 34.2% were primary sutured.

Results: Employed and young patients constitute the majority of admitted patients with hand trauma. Most of the injuries occur because of carelessness and lack of education, therefore; by taking simple necessary measures and expanding vocational training programs, these injuries could be avoided. The data obtained in this study is expected to shed light on more comprehensive studies to be performed in the future.

P901 Traumatology

SINGLE-OCCUPANT PRIMITIVE CABLE CAR ACCIDENT

BO BILIR (1), EG ERSUNAN (1), KA KALKAN (1), BS BALIK (2)

1. Emergency department, Recep Tayyip Erdogan University, Medical Faculty, Rize, Turkey
2. Department of orthopedics and traumatology, Recep Tayyip Erdogan University, Medical Faculty, Rize, Turkey

Corresponding author: Mr Ersunan Gökhan (gokhanersunan@gmail.com)

Key-words: CABLE CAR ; trauma ; emergency

Accidents resulting from single-occupant cable cars, a primitive means of transport frequently used in the Eastern Black Sea region of Turkey, are often encountered in the area's emergency departments. In this retrospective study of 54 patients referred to our university hospital due to cable car accidents, was analysed. 68.5% of these patients were male, with an average age of 45. The most common occurred injury associated with accidents was the trapping of the upper extremity between the steel cables (59.3%). Finger amputations were observed in 29.6% of these cases. Two cases died as the result of falling down from a cable car.

This study was intended to describe a significant public health problem in the Eastern Black Sea region of Turkey.

P902 Traumatology

DO THE CHARACTERISTICS OF SERIOUSLY INJURED OLDER ADULTS DIFFER FROM THEIR YOUNGER COUNTERPARTS IN THE ED?

A. Akoz (1), M. Isik (2), H. Sahin (1), M. Emet (1)

1. Emergency Medicine, Ataturk University Medical Faculty, Erzurum, Turkey
2. Family Medicine, Ataturk University Medical Faculty, Erzurum, Turkey

Corresponding author: Mr Akoz Ayhan (akozayhan@gmail.com)

Key-words: Geriatric trauma ; aged ; emergency department

Aim: To analyze the injury characteristics of younger and older adult trauma victims.

Methods: This is a prospective, cross-sectional, observational, and single-center study including both younger adult and geriatric trauma patients. The relationships between the age groups and the number of consultations in the ED were compared with ANCOVA after adjusting for ISS.

Results: The data consisted of 779 patients, 131 (16.8%) of whom were elderly. The ICU admission rate was 7.2%. For the adults and the elderly, 25.6% and 28.2% of the patients' ISS were > 15, respectively. Our results showed a significantly higher incidence of intracranial hemorrhage, fracture and/or dislocation of the femur, and fracture of the thoracic vertebra in the elderly patients as compared to the adults. The adult trauma patients suffered significantly from acute abdomen, bowel injury, and pelvic fracture when compared to the elderly. After adjusting for ISS and total consultations, the length of stay in the ED was significantly shorter in the elderly compared to the adults (115 min vs. 132 min; F = 24.2; p < 0.0001). After controlling for ISS, the total number of consultations among the elderly was significantly lower than that of the adults (2.07 ± 1.42 vs. 2.53 ± 1.44; p < 0.0001).

Conclusion: The findings of this study suggest that the characteristics of seriously injured older adults admitted to our ED differ from their younger counterparts.

P903 Traumatology

COULD UNNECESSARY LAPAROTOMIES BE REDUCABLE IN ABDOMINAL TRAUMA PATIENTS?

A. Kisaoglu (2), B. Ozogul (2), S.S. Atamanalp (2), A. Akoz (1), A. Bayramoglu (1), G. Ozturk (2), M.I. Yildiran (2)

1. Emergency Medicine, Ataturk University Medical Faculty, Erzurum, Turkey
2. General Surgery, Ataturk University Medical Faculty, Erzurum, Turkey

Corresponding author: Mr Akoz Ayhan (akozayhan@gmail.com)

Key-words: Abdominal trauma ; unnecessary laparotomies ; physical examination

Introduction

Trauma is the one of the leading causes of death before 40 ages. Unnecessary laparotomies due to multisystem injury in abdominal trauma cases may cause additional morbidity and mortality.

Materials and Method

In our study, 395 patients' results were investigated retrospectively who had laparotomy due to abdominal trauma between the dates of January 2000-December 2010 in General Surgery Clinics of

Ataturk University Medical Faculty Hospital. Unnecessary laparotomy was accepted as the sum of nontherapeutic (patients who have abdominal injury but don't need treatment) and negative laparotomies.

Results

Three hundred and twenty (81%) of patients were male, 75 (19%) of patients were female and average age of patients was 27.7 (16-81). 170 (43%) of patients had blunt abdominal trauma and 225 (57%) of them had penetrant abdominal trauma. Additional investigations weren't made for laparotomy decision of 88 patients who had firearm injury predominantly in abdomen. Laparotomy decision inpenetrating stab wounds were made by local wound exploration in 62 of patients, by diagnostic peritoneal lavage (DPL) in 36 of patients, by organ evisceration in 21 of patients, by peritoneal irrigation signs in 14 of patients and by existing shock or resistant hypotension in 4 of the patients. Laparotomy was done in blunt abdominal trauma patients by abdomen ultrasonography or if needed abdominal computed tomography and/or DPL after the physical examination, according to hemodynamic stability and state of consciousness. Twenty seven (6,8%) of the patients had negative laparotomy and 37 (9,3%) of the patients had nontherapeutic laparotomy according the operations results. Unnecessary laparotomy ratio was 16,1 % (n=64). Negative laparotomy ratio was 3% (n=12), nontherapeutic laparotomy ratio was 6% (n=24) in penetrating stab wounds. In blunt traumas they were 3,8 % (n=15) and 3,3% (n=13) respectively. In our study, unnecessary laparotomy wasn't detected in firearm injuries. Postoperative complication ratio in unnecessary laparotomy cases was 7,8% (n=5) and there was no mortality.

Conclusion

We considered that unnecessary laparotomies could be minimized by close follow-up, careful physical examination in frequent intervals and if necessary repeating of imaging methods in cases which haven't enough signs for laparotomy indication.

P904

Traumatology

ELEVEN YEARS-RETROSPECTIVE ANALYSIS OF LAPARATOMY APPLIED BLUNT ABDOMINAL TRAUMA CASES

A. Kisaoglu (2), B. Ozogul (2), S.S. Atamanalp (2), A. Akoz (1), A. Bayramoglu (1), M.I. Yildiran (2), G. Ozturk (2)

1. Emergency Medicine, Ataturk University Medical Faculty, Erzurum, Turkey
2. General Surgery, Ataturk University Medical Faculty, Erzurum, Turkey

Corresponding author: Mr Akoz Ayhan (akozayhan@gmail.com)

Key-words: Blunt ; abdominal trauma ; physical examination

Introduction and Purpose

Trauma is the one of the leading causes of death in young population in developed countries. This study's aim is detecting factors which affects the prognosis of laparotomy applied blunt abdominal trauma cases.

Materials and Method

In our study, 170 patients' results were investigated retrospectively who had laparotomy due to blunt abdominal trauma between the dates of January 2000-December 2010 in Ataturk University Medical Faculty Hospital.

Results

One hundred and thirty four (78,8%) of patients were male, 36 (21,2%) of patients were female and average age was 27,3 (17-76). Trauma cause detected as traffic accident in 118 (69,4%) of patients. There were multiple organ injuries in 131 of patients and

most seen accompanying trauma to abdominal trauma was chest trauma. Most common injured organ was spleen (47,4%). Abdominal ultrasonography was applied to 154 (90,5%) of patients, abdominal computed tomography was applied to 81 (47,6%) of patients. Diagnostic peritoneal lavage (DPL) was applied to 60 patients (35,3%) and 36 of them (60%) was evaluated as positive. All of the 11 patients who was diagnosed by direct graphy had free air under the diaphragm. Postoperative complication ratio was 17,6% (n=30), mortality ratio was 8,2% (n=14). Most commonly seen postoperative complication was pneumonia-atelectasis. Intraabdominal abscess and evisceration were in the second and third place in postoperative complications. 11(78,6%) of dead patients had multisystem injuries, 3 (21,4%) of them had more than one abdominal organ damage. Most common death reasons were respectively head trauma, hypovolemic shock, sepsis and respiratory insufficiency. Sepsis and respiratory insufficiency were consisting the most important reasons of late deaths. Being above the age of 55, existing more than 12 hours between trauma and operation, blood transfusion more than 5 units and postoperative complication existence were accepted as independent prognostic factors.

Conclusion

Preventable death ratio was high in blunt abdominal trauma cases. Fighting with sepsis, and shock, performing surgical procedure as soon as possible had an important place in reducing mortality and morbidity rates in postoperative period.

P905

Traumatology

OUR APPROACH TO TRAUMATIC RECTUM INJURIES

B. Ozogul (2), A. Kisaoglu (2), S.S. Atamanalp (2), A. Akoz (1), A. Bayramoglu (1), M.I. Yildiran (2), G. Ozturk (2)

1. Emergency Medicine, Ataturk University Medical Faculty, Erzurum, Turkey
2. General Surgery, Ataturk University Medical Faculty, Erzurum, Turkey

Corresponding author: Mr Akoz Ayhan (akozayhan@gmail.com)

Key-words: Rectum injuries ; treatment ; morbidity

Purpose

Rectum is positioned between sigmoid colon and anal canal in pelvis and it is approximately 12-15 cm. Rectum injuries are divided into two as intraperitoneal or extraperitoneal. It is a clinic entity which has serious mortality and morbidity results and its treatment is still controversial. In this study we aimed to detect appropriate treatment options with the results of diagnosis, treatment and follow-up for traumatic rectum injuries which treated in our clinic.

Materials and Method

We included patients to this study which operated due to traumatic rectum injury between the dates of January 2004-December 2010 in General Surgery Clinic of Ataturk University Medical Faculty.

Results

Twelve patients were included to this study. All of the patients were male and average age was 33,4 (17-65). 7 (58,3%) of the patients had penetrant trauma and 5 (41,7%) of patients had blunt trauma. 7 (58,3%) of the patients had extraperitoneal injury and 5 (41,7%) of patients had intraperitoneal injury. There was additional organ damage in 6 of the patients. Most common seen additional organ damage was small intestine injury. Besides that anal sphincter, colon, bladder, pelvis and bone fractures were other accompanying organ damages. All of the patients with extraperitoneal injury were diagnosed by physical examination. Abdominal free air was observed in 3 patients with direct graphy

and in 1 patient with computed tomography. We applied primary repair in 5 (41,7%) of the patients, primary repair with sigmoid loop colostomy in 4 (33,3%) of the patients and primary repair with Hartman colostomy in 2 (16,7%) of the patients. Rectum primary repair with small intestine resection and ileostomy was done to 1 (8,3%) of the patients who had small intestine perforation. Anastomose leakage occurred in 1 (8,3%) of the patient who had primary repair and this patient operated again and used Hartman colostomy. Wound infection occurred 2 (16,7%) of the patients. We had no mortality.

Conclusion

Treatment is still controversial in traumatic rectum injuries. Appropriate treatment option is an approach which has low morbidity and mortality rates.

P906

Traumatology

OUR EXPERIENCES WITH BLUNT TRAUMA CASES

B. Ozogul (2), A. Kisaoglu (2), G. Ozturk (2), A. Akoz (1), A. Bayramoglu (1), B. Aydinli (2), S.S. Atamanalp (2)

1. Emergency Medicine, Ataturk University Medical Faculty, Erzurum, Turkey
2. General Surgery, Ataturk University Medical Faculty, Erzurum, Turkey

Corresponding author: Mr Akoz Ayhan (akozayhan@gmail.com)

Key-words: Blunt Trauma ; abdominal ; mortality

Purpose:

Colon injuries have an important place in abdominal trauma cases due to high ratios of mortality and morbidity rates. Treatment of colon injuries is being a problem because of mortalities occurred by postoperative complications. Contrary to penetrant injuries, blunt traumas can be missed or there may be delay indiggnose. In our study we investigated colon injuries after the blunt abdominal traumas, treatment options, effects on morbidity and mortality retrospectively.

Materials and Method

In our study, colon injuries were included which operated after the blunt abdominal traumas between the dates of January 2006-December 2010 in General Surgery Clinics of Ataturk University Medical Faculty Hospital.

Results

Thirty-four patients included to this research. 5,8% of them were female (n=2) , 94,2% of them were male (n=32) and average age was 40,7 (17-68). Colon perforation was in one area in 31 of patients. There were two or more colon perforations in 3 patients. Most accompanying intraabdominal injury was small intestine injury. There were left colon and sigmoid colon injuries in 24 patients, transverse colon injuries in 8 patients and right colon injury in 2 patients. One staged surgical option was applied as treatment choice to 14 (41,1%) of the patients, two staged surgical option was applied to 20 (58,9%) of the patients. Having middle-heavy fecal contamination ($p<0,01$), having more than 3 colon injuring scores ($p<0,05$) were detected as significant indetermining treatment choices. Having middle-heavy fecal contamination, having more than 3 colon injuring scores and applying 2 staged surgical operation (opening the stroma) were detected as significant incurring postoperative complication ($p<0,05$). Having middle-heavy fecal contamination, having more than 3 colon injuring scores, applying 2 staged surgical operation (opening the stroma) and shock state of patient before operation were detected as significant inpostoperative complication mortalities ($p<0,05$).

Conclusion

That was concluded that, patients with middle-heavy fecal contamination and patients who had more than 3 colon injuring scores were appropriate for two staged treatment options.

P907

Traumatology

OUR EXPERIENCES WITH PENETRANT COLON TRAUMA CASES

B. Ozogul (2), A. Kisaoglu (2), S.S. Atamanalp (2), A. Akoz (1), A. Bayramoglu (1), G. Ozturk (2), B. Aydinli (2)

1. Emergency Medicine, Ataturk University Medical Faculty, Erzurum, Turkey
2. General Surgery, Ataturk University Medical Faculty, Erzurum, Turkey

Corresponding author: Mr Akoz Ayhan (akozayhan@gmail.com)

Key-words: Penetrant trauma ; abdominal ; treatment

Introduction

Colon injuries have an important place in abdominal trauma cases due to high ratios of mortality and morbidity. In this study, we analyzed applied treatment procedures to patients who operated due to penetrant colon traumas. We aimed to investigate their effects on mortality and morbidity rates.

Materials and Method

In our study, colon injuries were investigated retrospectively which operated after the penetrant abdominal traumas between the dates of January 2006-December 2010 in General Surgery Clinics of Ataturk University Medical Faculty Hospital.

Results

One hundred forty-six patients were included to this research. 13,7 % of these patients were female (n=20), 86,3% of the patients were male (n=126) and average age was 29,47 (16-62). Colon injury was caused by firearm wounding in 96 (65,7%) of the patients, by penetrant stab wounds in 50 (34,3%) of the patients. 28,8% of the patients (n=42) had right colon injury and 71,2 % of them (n=104) had left colon injury. 30 patients (20,6%) had Grade 1 injury, 40 patients (27,4%) had Grade 2 injury, 46 patients (31,5%) had Grade 3 injury, 16 patients (10,9%) had Grade 4 injury and 14 patients (9,6%) had Grade 5 injury. Our postoperative complication ratio was 43,8% (64 patients). Most common seen complication was wound infection. Stoma opening to the patient, having middle-heavy fecal contamination, having high grade injury were found as significantly effective factors in morbidity rate ($p<0,05$). Mortality rate was 6,9% (10 patients). 6 of these patients became exitus by sepsis due to colon, 4 of them became exitus by pulmonary emboli due to extra colon reasons. Stoma opening to the patient, having middle-heavy fecal contamination, having high grade injury were found as significantly effective factors in mortality rate ($p<0,05$).

Conclusion

Having middle-heavy fecal contamination, having more than 3 colon injury score, stoma opening to the patient were found as significantly effective factors in mortality and morbidity.

P908

Traumatology

ABC IT'S EASY AS 123 - TERTIARY SURVEY, MISSED INJURIES, TRAUMA PATIENTS

S. Mans, M. Oostenenck, O. Sir

Emergency department, Radboud University Nijmegen Medical Centre, Nijmegen, Netherlands

Corresponding author: Melle Mans Stacey (s.mans@seh.umcn.nl)

Key-words: Tertiary survey ; Missed injuries, Diagnostic errors, Missed diagnosis ; Trauma patients

Question

P(multi)trauma patients

I tertiary survey (TS)

C primary and secondary survey after trauma

O(clinically relevant) missed injuries (MI)

Background

The initial management of trauma patients is focused on identifying life threatening injuries. ATLS guidelines have introduced primary survey to prioritize the most threatening injuries. Secondary survey addresses all other important injuries and immediate interventions necessary.

The tertiary survey was introduced in 1990; a physical examination and review of all diagnostics after at least 24 hours post trauma to detect all (missed) injuries. However, the tertiary survey is a cost- and recourse intensive survey; is it really necessary for all clinically admitted (multi) trauma patients and is it really effective in finding all (relevant) missed injuries?

Search strategy and outcome

Terms: ((diagnostic errors) OR (missed injuries) OR (missed diagnosis)), AND (trauma) AND (tertiary survey)

Selection criteria: human, adult, language: English, Dutch, full version of article available Limits: -

MeSH term use didn't give any useful search results.

Excluded articles:

- Two editorial/abstract

- One full article in Spanish

- Three publications: in one publication TS was an abbreviation of Trauma Scan (not Tertiary Survey). In the other two publications there was no specification of the missed injuries found in Tertiary Survey.

- Two reviews: (1) Thomson et al (2007) is a descriptive review describing twenty publications of which only three concern tertiary survey and missed injuries. Two of these are already included in the Pubmed search. The third article is included in the table as a related article (Vles et al 2003). (2) Stanesco et al. (2006) is a descriptive review with a non-independent reference standard. This review is mainly referring to publications not concerning tertiary survey. All publications about tertiary survey in this review are already included in the Pubmed search.

Conclusion

There is no definitive evidence for the idea, that tertiary survey after trauma is effective in finding all (relevant) missed injuries. However, this CAT shows that a number of missed injuries will be diagnosed by a good tertiary survey; a mean percentage of 53.5% (21.2% -100%) of missed injuries was an extremity injury, 39.6% (0-67.3%) a head-pelvis injury and 23% (22-24.3%; Janjua, Chen) a soft tissue injury detected.

Clinical bottom line

Tertiary survey is of value, when performed in a structured manner, including a review of blood results and diagnostic imaging. A well-performed tertiary survey will reveal a percentage of missed injuries. However, it is questionable whether all injuries will be found by doing a tertiary survey. But how many of the missed injuries are clinically relevant and have consequences for decision-making? There hasn't been conducted any (double blind prospective) research to clarify, whether all trauma patients admitted to the clinic really need a tertiary survey. It is thinkable, that a tertiary survey is of less value in a subgroup of multi trauma patients (e.g. trauma patients with low ISS score, trauma patients with maximum GCS and not involved in a vehicle accident). Although there is no significant data to support this idea, the data available shows a trend towards finding more missed injuries in trauma patients with high ISS scores and altered GCS. Further, it's

important not to overuse diagnostic imaging when performing a tertiary survey. It is also advisable, for more accurate and earlier detection of missed injuries, that diagnostic imaging is reviewed by a radiologist.

Level of recommendation: B

Comments

There is an inconsistency of the definition of 'missed injury'.

None of the studies has a sufficient follow up period. Two studies had a follow-up after hospital discharge (3 months and 1 year) but only of the documentation available in the (same) hospital.

The studies also didn't correct for diagnostic imaging done in the primary and secondary survey. Improvements in diagnostic techniques may decrease the incidence of MI (especially in head to pelvis region with the upcoming of CT in the initial assessment of trauma patients).

A dedicated trauma service/team may be of influence in the total number of missed injuries; however, many articles don't mention the consistence of their trauma team.

Five studies are conducted in a level one trauma center and three in a level II.

P909

Traumatology

CHARACTERISTICS OF PATIENTS WITH FLAME BURNS

M. Uzkeser, M. Saritemur, A. Akoz, A. Bayramoglu, M. Emet

Emergency Department, Ataturk University Medical Faculty, Erzurum, Turkey

Corresponding author: Mr Saritemur Murat (muratsaritemur@gmail.com)

Key-words: Burn Injury ; Flame ; Emergency Department

Introduction: Burns are one of the leading causes of injury and a frequent cause of hospitalization. The incidence and mortality of burn injuries are both higher and it is anticipated that 1% of the worldwide population will suffer from a burn injury sometime during their life. Burn injuries are important because of their morbidity, mortality, and sequel.

Method: We analyzed 208 patients with flame burns who admitted to our emergency department (ED) between 2001 and 2011, retrospectively.

Results: The mean age was 17.7 ± 38.9 (min.18, max.100 years) and 69.2% (n=144) of the patients were male. Of the patients, 51% (n=106) were admitted to our ED from provinces of Erzurum, followed by 9.6% (n=20) from Agri, 9.1% (n=19) from Van, 6.7% (n=14) from Igdir and 5.8% (n=12) from Kars. Of the patients, 54.3% (n=113) had been living in the city centers and 23.1% (n=48) in the village. The patients mostly admitted in summer (35.6%; n=74) and at least in winter 19.7% (n=41). The admissions to the ED were between 12:00 and 24:00 mostly (67.3%; n=14). The mean percentage of burn area was 22 ± 19.7 (min.1%-max.92%). The frequency of burns according to body parts were as follows: head and neck 76.9% (n=160), right upper extremity 73.6% (n=153), the left upper extremity 70.2% (n=146), the right lower extremity 44.2% (n=92), the left lower extremity 42.3% (n=88), anterior trunk 40.4% (n=84), posterior trunk 33.2% (n=69), and genitals % 7.7 (n=16), respectively. Of the patients, 1% (n=2) had first degree burns, 76.5% (n=159) had second degree and 22.5% (n=47) had third degree burns. Mean length of stay in hospital was 20.6 ± 19.5 (min.1- max.116 days).

Conclusion: Flame burns are frequently seen in males. Patients usually have second degree burns and the most common region is head and neck.

P910

Traumatology

CHARACTERISTICS OF PATIENTS WITH CHEMICAL BURN ADMITTED TO THE EMERGENCY DEPARTMENT

M. Uzkeser, M. Saritemur, A. Bayramoglu, A. Akoz, M. Emet
Emergency Department, Ataturk University Medical Faculty, Erzurum, Turkey

Corresponding author: Mr Saritemur Murat (muratsaritemur@gmail.com)

Key-words: Burn Injury ; Chemical ; Emergency Department

Introduction: Chemical burns are generally classified as acid and alkali burns. These burns especially caused by contact with chemicals as industrial accident, or are usually seen as a result of ingestion or pouring on children.

Methods: A total of 22 patients admitted to our emergency department (ED) because of chemical burns between 2005 and 2011 were evaluated retrospectively.

Results: Median age was 37 (min.24 – max.65 years) and 90.9% (n=20) of patients were female. Of the patients, 72.7% (n=16) were firstly admitted to our ED and 27.3% (n=6) were sent from other hospitals. The chemical burns were seen mostly in the summer (59.1%, n=13), especially in July (45.5%; n=10). Patients most frequently admitted to our ED between 12:00 and 24:00 (90.9%; n=20). Of the patients, 90.9% (n=20) had second degree burns, and 9.1% (n=2) had third degree burn. The percentage of burn area according to the parts of the body were as follows respectively: 1.5% on the head and neck, 1% on the anterior trunk, 10% on the posterior trunk, 2% on the right upper extremity, 2.5% on the left upper extremity, 2.5% on the right lower extremity, and 4% on the left lower extremity. There was no genital burn. Median percentage of burns was 5% (min.1 - max.34). Median days of hospitalization were 17 (min.7 – max.46 years). The percentage of the body parts that affected were as follows: head and neck 18.2% (n=4), anterior trunk 9.1% (n=2), posterior trunk 4.5% (n=1), right upper extremity 50% (n=11), left upper extremity 36.4% (n=8), right lower extremity 45.5% (n=10), and left lower extremity 40.9% (n=9).

Conclusion: Burns due to chemicals are rare compared to other types of burns, and common especially in men. They are mostly seen on the right upper extremity and in the summer in our region.

breathing patients, there is uncertainty about patients receiving positive pressure ventilation. We compared the lung point (i.e. the area where the collapsed lung still adheres to the inside of the chest wall) using the two modalities ultrasound (US) and computed tomography (CT), to determine whether US can reliably be used to assess PTX progression in a positive pressure ventilated porcine model.

Methods

Air was introduced in incremental steps into five hemithoraces in three intubated porcine models. The lung point was identified on US imaging and referenced against the lateral limit of the intrapleural air space identified on the CT. The distance from the sternum to the lung point (S-LP) was measured on the CT scans and correlated to the insufflated air volume.

Results

The mean total difference between the 131 US and CT lung points was 6.8 mm (standard deviation \pm 7.1 mm and range 0.0-29.3 mm). A mixed-model regression analysis showed a linear relationship between the S-LP distances and the PTX volume (p <0.001).

Conclusions

In an experimental porcine model, we found a linear relation between the PTX size and the lateral position of the lung point. The accuracy of thoracic US for identifying the lung point (and thus the PTX extent) was comparable to that of CT imaging. These clinically relevant results suggest that US may be safe and accurate in monitoring PTX progression during positive pressure ventilation.

P912

Traumatology

A CASE PRESENTATION WITH TRAUMATIC PNEUMOPERICARDIUM AFTER BLUNT THORAX TRAUMA

M Ergin, T Acar, A Tuncar, AA Sevimli, S Kocak, M Tokur (2), B Cander

1. Emergency Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

2. Thoracic Surgery Department, Sutcu Imam University Medicine Faculty, Kahramanmaraş, Turkey

Corresponding author: Mr Ergin Mehmet (drmehtemtergin@gmail.com)

Key-words: Pneumopericardium ; Blunt trauma ; Thorax trauma

INTRODUCTION: Pneumopericardium is a rare and life threatening condition which results from either penetrating or blunt thorax trauma. **CASE:** 59 year-old man was admitted to our ED due to chest pain and difficulty in breathing after falling from tractor while driving it. His vital signs were that blood pressure was 120/80 mmHg, heart rate 90/min and pulse saturation 85%. Physical exam showed that there was wide spread subcutaneous amphysema, supraclavicular ecchymoses at left neck region, diminished breathe sounds at bilateral lungs. There was also crepitation at distal part of left forearm region. Chest X-ray showed bilateral multiple rib fractures. The patient was monitored, had hydration resuscitation and oxygen supplement. Right tube thoracostomy was performed. Chest and abdomen computed tomography which showed pneumomediastinum, pneumopericardium, bilateral pneumothorax, hemothorax and lung contusion, stenum fracture, widespread subcutaneous amphysema. Then, left tube thoracostomy was performed. He had a conservative treatment at critical care unit of Thoracic Surgery Department and discharged from hospital at 5th day due to his own will. **DISCUSSION:** The communication between lung, bronchi or esophagus and the pericardial sac results in pneumopericardium following chest trauma results. It is frequently together with pneumothorax. Pneumopericardium is usually self-limited but can progress into

P911

Traumatology

USING THORACIC ULTRASOUND TO ACCURATELY ASSESS PNEUMOTHORAX PROGRESSION DURING POSITIVE PRESSURE VENTILATION A COMPARISON WITH COMPUTED TOMOGRAPHY

L Knudsen (1), HM Lossius (2), NP Oveland (2), E Sloth (1), PJ Stokkeland (3), K Wemmelund (4)

1. Anesthesiology and Intensive care, Aarhus University Hospital, Aarhus, Denmark

2. Research and Development, Norwegian Air Ambulance Foundation, Stavanger, Norway

3. Radiology, Stavanger University Hospital, Stavanger, Norway

4. Institute of Clinical Medicine, Aarhus University, Aarhus, Denmark

Corresponding author: Mr Oveland Nils Petter (nils.petter.oveland@norskluftambulans.no)

Key-words: Pneumothorax ; Ultrasound ; Computed tomography

Objectives

While thoracic ultrasonography accurately determines the size and extent of occult pneumothoraces (PTXs) in spontaneously

tension pneumopericardium causing cardiac tamponad. The drainage of pneumothorax could be initial procedure in case of pneumothorax associated with pneumopericardium. If, however, the patient has hypotension, an aggressive fluid resuscitation must be followed by emergent pericardiocentesis. Definitive treatment includes pericardial decompression and pericardial window to provide drainage at the operation room as in our case. Emergency physicians should think this rare entity for differential diagnosis of thorax trauma with shock and familiar with its treatment options.

P913

Traumatology

THE PROSPECTIVE ANALYSIS OF FOREIGN OBJECTS IN EYE AT EMERGENCY DEPARTMENT

B Cander, I Kayitmazbatir, M Ergin, S Kocak, AS Girisgin, M Gul

Emergency Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

Corresponding author: Mr Ergin Mehmet (drmehtemergegin@gmail.com)

Key-words: Foreign objects ; Eye injury ; Emergency Department

BACKGROUND: Foreign bodies in eyes (FBIE) are common injuries seen in emergency department (ED). The aim of this was to describe to demographic datas and occupational safety of the cases. **METHODS:** This study includes of all age categories in Necmettin Erbakan University Meram Faculty of Medicine ED. There were 121 patients came to ED with complaint of FBIE. **RESULTS:** There were 121 patients and %92.6 of them were male. %83.5 of cases were work-related injuries. The most common FBIE were metal fragments (%71.9) and dusts (%18). %52 of patients presented within 12 hours of the injury. %48.8 of patients have had the same injuries before. %66.1 of patients didn't try to remove the foreign bodies with physical examination but %52.9 patients used eye drops. %62 of the cases, firstly came to our ED. %21.5 of the cases referred from other hospitals without any intervention to remove FBIE. %14 of the patients referred to us because of non-removed FBIE. %17.4 of patients were using eyewear. %39.7 of the cases have no educational background about using eyewear. %94.2 of the cases were consulted with ophthalmology. FBIE were determined in only left or right eye, were the %63.4 of the cases and %5 of cases were bilateral. **CONCLUSION:** The work related precautions of eye health in Turkey are inadequate. The education of worker must be provided.

P914

Traumatology

DEFINING THE PERCENTAGE OF INTRA-ABDOMINAL HEMORRHAGE IN ABDOMINAL CT USING STEREOLOGY IN PATIENTS WITH BLUNT LIVER INJURY AND DETERMINING ITS RELATIONSHIP WITH OUTCOMES

M. Uzkeser (1), H. Sahin (1), B. Ozogul (2), Y. Cayir (3), F. Alper (4), M. Emet (1)

1. Emergency Department, Ataturk University Medical Faculty, Erzurum, Turkey
2. General Surgery Department, Ataturk University Medical Faculty, Erzurum, Turkey
3. Family Medicine Department, Ataturk University Medical Faculty, Erzurum, Turkey
4. Radiology Department, Ataturk University Medical Faculty, Erzurum, Turkey

Corresponding author: Mr Saritemur Murat (muratsaritemur@gmail.com)

Key-words: Stereology ; Blunt liver trauma ; Volume measurements

Aim: To determine the percentage of intra-abdominal fluid (PIAF) on computerized tomography (CT) scan via the Cavalieri method and to define whether this is correlated with mortality, overall hospital stay, intensive care unit (ICU) admission, and intra-abdominal operation in both pediatric and adult patients with liver injury.

Methods: Fifty-one patients (24 children and 27 adults) with blunt hepatic injury admitted to our emergency department (ED) were studied cross-sectionally. The stereological method of point counting based on the Cavalieri approach was adapted to CT data so as to assess intra-abdominal hemorrhage and abdominal volume. PIAF was calculated as intra-abdominal fluid volume / whole abdominal volume x 100. For statistical analyses, the Mann-Whitney U test, Pearson correlation analysis, and Receiver-Operator-Characteristic (ROC) curve analysis were used.

Results: When children and adults were investigated demographically and clinically, the following statistical differences were observed, respectively: splenic injury (29.2%; 11.1%, P=0.012), intra-abdominal operation (20.8%; 51.9%, P=0.041), in-hospital mortality (12.5%; 40.7%, P=0.031), and total length of hospitalization (14.8±8.3; 9.3±6, P=0.013). Mean PIAFs in children and adults were 4.20±2.85% and 6.28±5.21%, respectively. Co-existing intra-abdominal injuries in children and in adults were as follows: splenic injury (29.2%; 11.1%, P=0.012), kidney (25%; 11.1%), bladder (4.2%; 14.8%), and pelvic fracture (12.5%; 11.1%). PIAF was moderately negatively associated with hemoglobin levels (r=-0.301; P=0.032), hematocrit levels (r=-0.322; P=0.021), and Glasgow Coma Score (GCS) (r=-0.276; P=0.05). Neither ROC curve analyses for PIAF nor outcomes were statistically significant in children. In adults, sensitivity and specificity of PIAF in predicting the prognoses when the cutoff levels were taken as 5.39%, 9.9%, and 12.4%, respectively, were as follows: operation (71%; 84%), mortality (36%; 93%) and ICU admission (25%; 94%).

Conclusion: In patients with blunt hepatic injury, the Cavalieri principle of stereology can easily be added to the CT slices in order to calculate PIAF. This method is repeatable in other institutions and can be used as a guide to predict outcomes. It is suitable for a universal parameter to measure intra-abdominal fluid in blunt injury. PIAF has low sensitivity but high specificity to predict ICU admission and mortality in cases of blunt hepatic injury in adults. Its specificity in predicting the need for operation is better than the anatomic liver injury grading systems in CT.

P915

Traumatology

CHARACTERISTICS OF TANDIR BURNS THAT ADMITTED TO OUR EMERGENCY DEPARTMENT

M. Uzkeser (1), B. Ozogul (2), M. Saritemur (1), A. Akoz (1), A. Bayramoglu (1)

1. Emergency Department, Ataturk University Medical Faculty, Erzurum, Turkey
2. General Surgery Department, Ataturk University Medical Faculty, Erzurum, Turkey

Corresponding author: Mr Saritemur Murat (muratsaritemur@gmail.com)

Key-words: Burn Injury ; Tandir burns ; Emergency Department

Introduction: Tandir is the name given to a special oven used for baking bread in the eastern and southeastern part of Anatolia.

Material and Methods: Tandir burns that admitted to our emergency department between 2001 and 2011 have been investigated retrospectively.

Results: Forty-three patients with tandir burns with a mean age of 45 (min.20, max.75 years) and 97.7% of whom are female were admitted to our emergency department (ED). Of the patients,

58.1% were living out of the borders of Erzurum province. The inhabitations of patients were as follows: 76.7% in the village, 7% in the county and 16.3% in the city center. Burn localizations of the patients were as follows: right upper extremity 83.7%, left upper extremity 79.1%, head-neck 67.4%, right lower extremity 60.5%, left upper extremity 60.5%, trunk (front) 53.5%, trunk (back) 53.5%, perineum 2.3%. The median burn percentage was 18% (1-62%). Percentage of 2nd and 3rd degree burns were 23.3% and 76.7%, respectively. After primary treatment in our ED, 11.6% of the patients were transferred to another facility due to inappropriate bed. Of the patients, 41.9% were discharged with whole recovery, 41.9% left the burn unit before the treatment was completed and 4.7% were dead in the burn unit. Median hospitalization day was 35 (min.0, max.136 days). Median treatment cost was 5772.29 (min.14.5, max.22774.59 Turkish lira). Conclusion: Tandir burns are not only seen in our city, but also seen in neighbor cities as well as in the whole eastern Anatolia region. These burns differ from others with female predominance, deep burns, upper extremity and head-neck localizations, the need of long hospitalization days.

P916

Traumatology

POSTTRAUMATIC DETECTION OF COMMON NON-TRAUMATIC BILATERAL SUBACUTE SUBDURAL HAEMATOMA

S. Kulaç, A. Basa, A. İnce, C. Çaltılı

Emergency department, The Taksim Training and Research Hospital, İstanbul, Turkey

Corresponding author: Mr Kulaç Semih (semikul@yahoo.com)

Key-words: Subdural haematoma ; Trauma ; Elderly patient

Subacute and chronic subdural haematoma are usually more common in elderly patients due to head trauma or without trauma. It often progresses with altered mental status and neurological changes. In this study, a male patient aged 72 years who was admitted to ED, due to his falling down, was included. On admission, the patient had a 2 cm parietal superficial cut. Nothing particular detected after full neurological examination. Since he was over 65 years old, according to Canada BT principles, cranial tomography (CT) scanning was done. Upon CT scanning, common bilateral subacute subdural haematoma was detected. Despite prior extensive bleeding history of the patient, his description of no symptom and therefore, incidental detection of the case show us that intracranial hemorrhages might easily be overlooked, especially in elderly patients.

P917

Traumatology

ROTATIONAL THROMBOELASTOGRAPHY IN MAJOR TRAUMA RESUSCITATION.

L Stevens

Trauma and Orthopaedics, University College Hospital, London, United Kingdom

Corresponding author: Mr Stevens Lewis (lewis.stevens@doctors.org.uk)

Key-words: Trauma ; Haemorrhage ; Thromboelastography

Haemorrhage remains a significant cause of mortality in patients with major trauma, accounting for up to 40-50% of deaths from trauma and despite advances in resuscitation techniques this figure

has improved little in recent years. This can in part be attributed to trauma induced coagulopathy whereby clotting factor and platelet consumption, haemodilution along with acidaemia, hypothermia and tissue hypoxia combine to produce deficiencies in the clotting cascade and so worsened and prolonged haemorrhage.

In recent years damage control resuscitation has been developed to combine early transfusion of erythrocytes (PRBC), platelets, fresh frozen plasma (FFP) and cryoprecipitate with correction of hypoxia, hypothermia and acidaemia and rapid surgical intervention to arrest bleeding. Currently transfusion of blood products is largely empirical with volume of FFP and platelets given decided by PRBC requirements. In some centres goal driven resuscitation is being pioneered whereby objective measures are used to decide the need for the various blood products. While some centres are using traditional laboratory measures such as platelet count, prothrombin time and fibrinogen levels, others are exploring the use of point-of-care methodologies such as rotational thromboelastography (TEG) and thromboelastometry (TEM).

Thromboelastography, first described in 1948, measures increasing shear elastic strength of a whole blood sample during clot formation in real time. This is achieved by measuring either the torque applied to static pin in an oscillating, incubated sample of whole blood (TEG) or by optical detection of reduced rotation of an oscillating pin within a static sample of blood (TEM). As clot is formed it adheres to the cup and pin and either promotes transmission of the cup's oscillation to the pin (TEG) or impedes oscillation of the pin (TEM). This information is then used to plot a curve from which numerous parameters of coagulability can be determined. These parameters include time to initial clot formation, rate of clot formation and time achieve a pre-defined clot strength which are used as measures of clotting factor activity in both the extrinsic and intrinsic pathway while other measures such as maximal clot strength indicate platelet concentration and function. Importantly many of these parameters can be assessed early in the process meaning that within five to ten minutes of blood being taken, results are available and able to guide resuscitation. This is in contrast to more traditional laboratory based assays which tend to not be available for upwards of twenty minutes from sampling.

The usefulness of thromboelastography has been well established in predicting the need for transfusion in both liver transplantation and cardiovascular surgery, where it has been proven to reduce transfusion requirements. In the trauma management, studies have been carried out in varied settings including major trauma centres across the US and Europe as well as in military settings in Afghanistan, where TEM has been shown to be a feasible option for assessing coagulopathy in multiply wounded patients. Indeed in numerous studies thromboelastography has been shown to be effective in detecting post-traumatic coagulopathy more accurately and in a much shorter time frame than standard laboratory based assays. Thromboelastography has also been proven effective in predicting mortality in major trauma and has been shown to be the most useful predictor, along with injury severity score, of 30-day mortality in major trauma. As well as being a useful prediction tool thromboelastography has also been demonstrated as effective in guiding need for various transfusion products: this has helped to both reduce the number of patients given transfusion, reduce the amount of product used in those receiving transfusion and may improve resuscitation as demonstrated by reduced lactate levels and in reduced mortality in those receiving goal directed resuscitation.

It is important to remember that the use of TEG and TEM in trauma management is still relatively novel and as such requires more validation. Given the promise demonstrated in trials so far it seems warranted that large scale, prospective trial should be designed to validate the use of TEG/TEM in trauma management and to

formulate standardised resuscitation plans based on TEG/TEM results.

P918

Traumatology

THREE YEARS EXPERIENCE IN EMERGENCY DEPARTMENT: RETROSPECTIVE EVALUATION OF SPINAL TRAUMA PATIENTS

HU Akdemir (1), D Aygün (2), C Katı (1), M Altuntaş (1)

1. Emergency Department, Ondokuz Mayıs University Medical Faculty Hospital, Samsun, Turkey

2. Neurology Department, Ondokuz Mayıs University Medical Faculty Hospital, Samsun, Turkey

Corresponding author: Mr Akdemir Hızır Ufuk (hufukakdemir@hotmail.com)

Key-words: Spinal trauma ; Frequency ; Emergency Department

Objective: Spinal cord injury is one of the application reasons to emergency department (ED) and the frequency of this is not rare. In literature studies that research the frequency of spinal cord injuries are rare.

The aim of this study is to show the demographical findings, localization of lesions, neurological deficits, clinical severity determined with the ASIA classification at the admission and before discharge from hospital, effectivity of the therapies (medical and surgical), complications and mortality of the spinal trauma patients who admitted to our ED.

Material and Method: In our study frequency datas of 91 cases applicated to ED of Ondokuz Mayıs University Faculty of Medicine Hospital in three years with spinal trauma were evaluated retrospectively. Cases were divided into two groups; one of the groups include complete injuries (Grade A/Group 1) and the other group include incomplete injuries (Grade B, C, D/Group 2). Groups were compared according to age, sex, mechanism of trauma, time of reach to hospital, Glasgow Coma Scale (GKS) score, complaints, accompanying trauma findings, types of neurologic deficits, values of clinically ASIA-IMSOP damage scale, radiologic imaging methods, type of treatment, improving complications and mortality ratios.

Results: Spinal cord injuries were 0,25 % of all applications. According to sex; there was not any meaningful difference between complete and incomplete injury groups. Most of the patients were male. The ratio of males to females were 1,8/1. 47 % of the patients were complete injury, 53% of the patients were incomplete injury. Most of the patients were at <45 age group. For our patients, most frequent etiologic reason was falling from high (50,5 %). Most of our patients (37 %) applicated at summer and most seen complaint at application was loose of power (89 %). Servical spinal damage was the most frequent type of injuries (50,5). Approximately half of our patients had accompanying trauma findings. Thorax (12 %), head (7,6 %) and abdominal (4,3 %) trauma were determined with spinal cord injury. 87,9 % of our patients had taken steroid for treatment. At 16,4 % of our patients, clinical changes were found between application and discharge. According to ASIA-IMSOP damage scale, 14,2 % of our patients functionally improved and 2,1 % of them functionally deteriorated. Most seen complications at our patients were bleeding (19,7 %), respiratory insufficiency (16,4 %) and urinary system infections (10,9 %). Approximately one fifth of our patients dead and the frequency of mortality was higher at the complete injury group. Falling from high was the injury mechanism at half of the exitus patients. Respiratory insufficiency was the most frequent reason of the exitus patients at our study group.

Conclusion: Our study demonstrate datas about the frequency of spinal injury among all emergency applications, clinical survive, emergency care, follow up and acute prognosis. Also these results represent the importance of emergency service approach (early diagnosis and correct treatment) to acute spinal trauma cases. Emergency service physicians must be careful about not only the primary care of these patients but also preventing the complications.

P919

Traumatology

CONTROL HEAD CT: IS IT NECESSARY?

A Denizbaşı (1), SE Eroğlu (1), OE Onur (2), S Özkaya (1), C Özpolat (1)

1. Emergency department, Marmara University Pendik Research and Training Hospital, Istanbul, Turkey

2. Emergency department, Marmara University Pendik Research and Training Hospital, Istanbul, Turkey

Corresponding author: Mr Eroglu Serkan Emre (drseroglu@gmail.com)

Key-words: Head trauma ; Cranial CT ; Neuroimaging

Introduction: The national average rate for neuroimaging in the ED is 6.7%. One of the leading complaints associated with neuroimaging is trauma. Computed tomography (CT) imaging has proven essential in early diagnosis. Control cranial CT series is not a routine protocol in guidelines of head trauma, but there is a clinical practice of serial cranial CTs in these patients by neurosurgeons. This study aimed to determine if the results of these serial CTs are meaningful for treatment of these patients.

Material and Methods: In this study all head trauma patients were evaluated, radiological work-up made according to Canadian CT Head Rule and the patients were consulted to neurosurgery. We collect the cases in whom first cranial CT was normal, but neurosurgery advise control cranial CT after a couple of hours. We interpreted the control CT results and research if there was a statistically significant management in patients.

Results: In 3 months total neurosurgery consultation were 519 and of them total 355 cranial CT imaging were wanted. Neurosurgery wanted 209 control CTs from them. After the evaluation of 209 CTs, there were no extra-patologies reported in the control CT.

Discussion: Although severe complications requiring neurosurgical intervention are rare in mild TBI(trumatic brain injury) patients, fear of the dire consequences of delayed treatment has led many to advocate for the liberal use of CT scanning in patients with TBI. But according to our study, there is no need to control cranial CT if the initial head CT is normal in trauma patients.

P920

Traumatology

MINOR TRAUMA = MAJOR PROBLEM - CASE REPORT ON RECOGNITION AND NON OPERATIVE MANAGEMENT OF SPLENIC INJURIES

D.Yeo, P.Ketty

Emergency Department, Queen Elizabeth Hospital, Birmingham, United Kingdom.

Corresponding author: Mr Ketty Pradeep (docketty@doctors.org.uk)

Key-words: angioembolization, splenic laceration ; angioembolization, splenic laceration ; angioembolization, splenic laceration

Objectives:

A 65 male presented to with a sudden onset of epigastric pains following breakfast. He gave a history of minor fall on to his left side 2 days ago but was well after the event. Clinically he was haemodynamically unstable with a HR of 50 bpm. BP 80/50mmhg. He was tender over his epigastric/ left upper quadrant. FAST scan performed in resus showed free fluid. CT abdomen showed active haemorrhage from a splenic capsular rupture. The patient was transferred for interventional radiology of the splenic artery. He went on to make a good recovery.

Discussion:

Splenic lacerations can occur even with seemingly innocuous circumstances. All emergency physicians must keep up-to-date on issues regarding splenic injury diagnosis, indications for nonoperative treatment, and potential complications arising from both operative and nonoperative splenic injury management. Interventional radiology became an integral part of the management of splenic injuries, in some institutions replacing emergency operation as the treatment of choice. Trauma admissions at Level 1 trauma centers across the country suggests splenic injury occurs in as many as 25% of the average 800-1200 admissions for blunt trauma per year.

Angioembolization, once contraindicated in compensated shock, has now been reported as a safe method of splenic salvage when immediately available in the treating facility. Splenic angioembolization is increasingly being used in both stable responders and transient responders for fluid resuscitation under constant supervision by a surgeon with an operating room on standby. Femoral artery access with embolization of the splenic artery or its branches can be

accomplished with gel foam or metal coils.

CONCLUSION:

Isolated splenic injury is more likely to have nonoperative or interventional radiologic management in a trauma center. Prognosis is usually excellent. Increased availability and ease of access to interventional radiologic equipment and personnel, may salvage splenic injuries that previously required operative intervention and splenectomy.

Disclosure of Interest: None Declared

Keywords: angioembolization, splenic laceration

P921

Traumatology

SEVERAL CERVICAL SPINE FRACTURE: AN UNUSUAL EFFECT OF SEAT BELT

M. Tas, S. Ercan, L. Karaman, S. Gokhan, C. Yaylali

Emergency Department, Diyarbakir Training and Research Hospital, Diyarbakir, Turkey

Corresponding author: Melle Karaman Lale (prenselsale@gmail.com)

Key-words: cervical spine fracture ; seat belt ; motor vehicle accident

INTRODUCTION

The indirect injury mechanisms of the cervical spine should be subdivided into " non-contact injury" of the cervical spine, without head impact, by definition hyperflexion or hyperextension. The objective of this case report is to determine the effects of seat belt on cervical spine.

CASE

A 32 years old man was brought to emergency service after 24 hours then car accident. He was a set-belted driver on this accident. On admission, he has a sever neck pain. Neurological examination revealed normal muscle tone in all extremities without motor or sensory disturbance. Deep-tendon reflexes were

symmetrical and there were no Babinski signs present. Glasgow Coma Scale was 15. There was no sign for blunt head injury. Computed tomography (CT) scan suggested the fractures on spinous process of cervical spine from C4 to C7. The patient diagnosed with 3D CT scan and cervical MRI scan. There were no disturbance in medulla spinalis, but there was an injury on inter-spinous ligament.

CONCLUSIONS

The rare cervical spine injuries in seat belt wearers are caused by restraining effects of the belt. The cervical spine fractures are mostly seen in severe injuries. This case was showed us that, the hyperflexion of the cervical spine can cause the fractures of spinous process of spine even though the crush was mild. It is also showed us the importance of the examination of cervical spine in mild, moderate or severe.

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P922

Traumatology

DIAGNOSIS AND MANAGEMENT OF THORACIC TRAUMA: ANALYSIS OF 1139 CASES

b Atli (1), m Bayram (2), A Coskun (3), I Dongel (4), F Koyuncu (5), s Ozbay (3)

1. Emergency Medicine, karabük state hospital, karabük, Turkey
2. chest diseases, bezmialem university, istanbul, Turkey
3. Emergency Medicine, sivas state hospital, sivas, Turkey
4. chest surgery, suleyman demirel university, Isparta, Turkey
5. Emergency Medicine, Mevlana University, KONYA, Turkey

Corresponding author: Mr Koyuncu F (drferidun@hotmail.com)

Key-words: Thoracic trauma ; hemothorax ; pneumothorax

Objective of the study: Age, gender, etiological reasons, distribution of pathologies, diagnosis, treatment methods and mortality rates were reviewed retrospectively in patients applying to emergency service with thoracic trauma.

Methodology: 1139 patients applying to the emergency service of our hospital with thoracic trauma between January 2007 and December 2011 were included in the study. 698(61,3%) patients were male and 441(38,7%) were female and the average age was 54,17±17,39.

Results: 1090(95,7%) of the patients had blunt trauma while 49(4,3%) had penetrating trauma. Etiological reasons were detected to be falls in 792(69,5%), car accidents in 259 (22,8%), animal accidents in 39(3,4%) and penetrating injuries in 49(4,2%) patients. It was found that 229(20%) patients had single, 35(3%) patients had multiple, 10(0,008%) patients had bilateral rib fracture and 19(0,016%) patients had sternal fracture. Pneumothorax was present in 58(5,1%) patients while hemothorax, hemopneumothorax and other system injuries were present in 36(3,1%), 38(3,3%) and 292(25,6%) patients respectively.

Conclusions: While a part of thoracic trauma patients can be treated as outpatients, mortality varies based on etiological reasons, additional systemic pathologies and capabilities of the hospital. We believe that; in emergency services, a multi-disciplinary approach thorax-traumatic patient and the application of the most appropriate treatment will significantly reduce the morbidity and mortality.

P923

Traumatology

PANCREAS AND SUPERIOR MESENTERIC VEIN INJURY IN A BLUNT TRAUMA PATIENT

HU Akdemir (1), A Polat (2), C Katı (1), L Duran (1), Y Çelenk (1), B Güngör (1)

1. Emergency Department, Ondokuz Mayıs University Medical Faculty Hospital, Samsun, Turkey
2. General Surgery Department, Ondokuz Mayıs University Medical Faculty Hospital, Samsun, Turkey

Corresponding author: Mr Akdemir Hızır Ufuk (hufukakdemir@hotmail.com)

Key-words: Blunt Trauma ; Pancreatic Injury ; Computed Tomography

Objective: Pancreas injuries are seen rarely due to the anatomical position of this organ. Morbidity and mortality in pancreas injuries are associated with factors such as the existence of an supplementary organ injury, whether the pancreatic canal is affected or not, and together with the existence of duodenal injury. We aimed to report a case in which the patient was brought into the emergency department after an in-vehicle traffic accident, tenderness was detected by abdominal examination, after having an abdominal computerized tomography (CT) scan, pancreas injury and intraabdominal free fluid were determined, so the patient was taken under an operation and diagnosed an injury of intraoperative superior mesenteric vein.

Case: A male patient aged 51 was admitted to emergency department due to in-vehicle traffic accident. When the patient applied to the emergency department, he had a complaint of abdominal pain. The patient was clinically well with normal mental status. The vital signs: blood pressure: 130/70 mmHg, heart rate: 76 beats/min, respiratory rate: 16/min. and temperature: 36,4 °C. The patient, who had common tenderness in his abdominal examination, was not detected defense and rebound. ECG findings: the speed was about 80/minute and normal sinus rhythm. In his laboratory studies, WBC: 6440/uL, Hb:12.1 g/dL, Htc: % 37 and serum amylase level : 213 U/L, lipase level was 251 U/L. In his blood gas studies, pH: 7.35, pCO₂: 33 mmHg, pO₂: 89 mmHg, HCO₃: 18 mmol/L and O₂Sat: %96. In the abdominal ultrasound scan, free fluid was detected around liver and in pelvis. Following the abdominopelvic CT scan, intraperitoneal fluid (hemorrhage) was detected common in the left subdiaphragmatic and perisplenic areas, minimally in the right perihepatic area, both paracolic areas and pelvis. Furthermore mesenteric hematoma area was detected at pancreatic uncinate process level and in the form of circling the duodenum around the superior mesenteric vein. CT research findings were significant in terms of mesenteric injury. By these findings, pancreatic and mesenteric injury related to blunt abdominal trauma was thought. After the general surgery consultation patient was taken under operation urgently. It was learned from the hospital registry that pancreatic uncinate process and superior mesenteric vein injury were detected during the operation. The patient was discharged on the sixteenth day of his admission because his vital findings were stable and he had no additional problems.

Conclusion: Commonly, pancreatic injuries are quite rare. Pancreatic injuries usually appear related to blunt trauma. It is known that in pediatric age group it is associated with the falling from the bicycle. Isolated pancreatic injuries are seen quite rarely. The morbidity and mortality in pancreatic injuries are associated with the injuries of the additional organs. The use of computerized tomography (CT) in pancreatic injuries is very important and it enables us to detect the additional organ injuries.

P924

Traumatology

BURN INJURIES DUE TO LIGHTNING

M. Saritemur (1), M. Kurt (2), H.I. Tanboga (3), S. Aslan (1), M. Emet (1)

1. Emergency Department, Ataturk University Medical Faculty, Erzurum, Turkey
2. Cardiology Department, Mustafa Kemal University Medical Faculty, Hatay, Turkey
3. Cardiology Department, Ataturk University Medical Faculty, Erzurum, Turkey

Corresponding author: Mr Saritemur Murat (muratsaritemur@gmail.com)

Key-words: Burn Injury ; Lightning ; Emergency Department

Introduction: Lightning is a flow of the energy rising into the sky from the ground and may reach as high as 100 million volts. Length of exposure is milliseconds. The effects of the lightning on the body are different when compared with high voltage electrical injury because of direct current (electric is an alternating current). Transient loss of consciousness, convulsions, amnesia, temporary paralysis of legs, respiratory failure, kidney damage, tympanic membrane damage, cardiac arrhythmias, cardiac arrest or extensive burns may be seen.

Method: The patients admitted to our emergency department (ED) with burn injury due to lightning during the last 8 years were analyzed retrospectively.

Results: A total of 17 patients were included. The median age of the patients was 38 years (min.23, max.58 years) and 76.5% (n=13) were male. According to provinces, 88.2% of the patients (n=15) were from Erzurum, 5.9% (n=1) came from Agri and 5.9% (n=1) came from Kars. Of the patients, 67.7% (n=11) were living in the village, 23.5% (n=4) in the county and 11.8% (n=2) were living in the city center. All of the patients were sent to our ED from other centers. After initial treatment and follow-up in the ED, 52.9% (n=9) of the patients were discharged, 29.4% (n=5) were admitted to the burn center, 11.8% (n=2) were referred to another hospital from our ED because our burn center was out of bed, and 5.9% (n=1) was refused admission. All cases of lightning injury were seen in four months: 17.6% (n=3) were in May, 41.6% (n=7) in June, 17.6% (n=3) in July, and 23.5% (n=4) were in August. Of the patients, 82.4% (n=14) were admitted to our ED between 12:00 and 24:00. Median length of the hospitalization was 8 days (min.3, max.39 days). The affected parts of the body were as follows: 17.6% (n=3) of the patients had burning of the head and neck, 52.9% (n=9) the anterior trunk, 23.5% (n=4) the posterior trunk, 64.7% (n=11) the right upper extremity, 23.5% (n=4) the left upper extremity, 41.2% (n=7) the right lower extremity, and 29.4% (n=5) of the patients had burning of the left lower extremity. The mean percentage of burn area was 9.4% ± 10.4 (min.1, max.30%). Of the patients, 5.9% (n=1) had 1st degree burn, 11.8% (n=2) had 2nd degree burn and 82.4% (n=14) had 3rd degree burn.

Conclusion: Lightning injuries cause particularly 3rd degree burns and burning occur most frequently in the right upper extremity and anterior trunk. High risk group is the men living in rural areas.

P925

Traumatology

ISOLATED STERNUM FRACTURE WITH NO DIRECT TRAUMA. --AN UNUSUAL CASE.

S. Coskun (1), A. Hasanbasoglu (1), M. Dakak (2), PK. Coskun (3)

1. Emergency Department, TOBB-ETU Hospital, Ankara, Turkey
2. Thoracic Surgery Department, TOBB-ETU Hospital, Ankara, Turkey
3. Cardiovascular Surgery Department, TOBB-ETU Hospital, Ankara, Turkey

Corresponding author: Mr Coskun Selcuk (scoskun_tr@yahoo.com)

Key-words: Isolated Sternum Fracture ; Sternum Fracture ; Isolated Fracture of sternum

Isolated fracture of the sternum is a rare injury except iatrogenic ones. Up to 8% of patients admitted with blunt chest trauma have sternal fractures, caused primarily by anterior blunt chest trauma. Sternal fractures usually due to motor vehicle accidents by reason of the chest strikes the steering wheel. Nearly almost sternal fractures are due to direct trauma. Stress or indirect fracture of the sternum is a rare injury. Stress fracture can occur rarely in young athletes due to repeated stress and sometimes in elderly patients with osteoporotic bones or probably other pathological conditions. Herein case of a isolated sternum fracture with no direct trauma is reported.

A 50-year-old man who sustained fracture of the sternum without any history of direct trauma when he simply expose sudden fall from two meter upon his hip.

Sternum fractures except iatrogenic ones, although rare, should be considered in patients who present with acute chest pain in any kind of trauma.

CT scans and neurological examination. There were no pathological sign in CT angiography and MRI angiography. After five days the decrease of hemorrhage on midbrain was observed on CT scans. The patient discharged on ninth day without any neurological disturbance.

CONCLUSION:

Focal traumatic brainstem injury occurs most likely due to direct impact at the back of the head stretching forces affecting the brainstem in cases of complex fall from height and car accident. It is a serious and commonly fatal brain damage. In acceleration injuries of the brainstem in seat-belted automobile drivers without blunt head injuries, the mechanism of the hemorrhage determination is suggested that complication of hyperextension injury to the head have a benign course.

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P926

Traumatology

PRIMARY TRAUMATIC BENING MIDBRAIN HAEMATOMA OF THE BRAIN; AN UNUSUAL CASE

S. Ercan, M. Tas, S. Gokhan, L. Karaman, C. Yaylali

Emergency Department, Diyarbakir Training and Research Hospital, Diyarbakir, Turkey

Corresponding author: Melle Karaman Lale (prensasale@gmail.com)

Key-words: midbrain haematoma ; brain injury ; motor vehicle accident

INTRODUCTION:

Brainstem hemorrhage is common in cases of head injury when it is associated with space occupying lesion and increases in the intracranial pressure (duret hemorrhage), in case of diffuse axonal injury and diffuse vascular injury (in periventricular tissue). Primary traumatic brain stem hemorrhage after blunt head impact is an uncommon injury and has historically been associated with high mortality.

CASE:

A 25 years old man was brought to emergency service after car accident. On admission, he was drowsy. Neurological examination revealed normal muscle tone in all extremities without motor or sensory disturbance. Deep-tendon reflexes were symmetrical and there were no Babinski signs present. Glasgow Coma Scale was 15. There was no sign for blunt head injury. Computed tomography (CT) scan 30 minutes after the accident suggested the hemorrhage in the midbrain. Six hours later, increase of midbrain hemorrhage was diagnosed by consecutive CT scans. The treatment was performed in intensive care unit. Follow up CT scans were examined after 24 hours and 72 hours. There was no difference on

P927

Traumatology

DESCRIPTION OF A CLINICAL CASE OF A PATIENT WITH SUBCLAVIAN POST TRAUMATIC PSEUDOANEURYSM AND IPSILATERAL BRACHIAL PLEXUS AVULSION.

T. Kokra (1), MP. Cadau (1), M. Paulis (4), L. Crissantu (2), C. Di Angelo (3), S. Sau (1)

1. Emergency Department, San Francesco Hospital, Nuoro, Italy
2. Orthopedics Department, San Francesco Hospital, Nuoro, Italy
3. Department of Vascular Surgery, San Francesco Hospital, Nuoro, Italy
4. Neurosurgery Department, San Francesco Hospital, Nuoro, Italy

Corresponding author: Mme Kokra Theodora (theodora.kokra@gmail.com)

Key-words: trauma ; shoulder ; pseudoaneurysm

Introduction: Subclavian artery or peripheral nervous injuries represent an uncommon complication of blunt chest, cervical or shoulder traumas, because protected by subclavius muscle, the clavicle, the first rib, and the deep cervical fascia as well as the costo-coracoid ligament. Nevertheless, various clinical cases have been described surprisingly after months or years after the traumatic event, even though the initially physical examination resulted "normal".

Aims: In this work we report a case of a late diagnosis of subclavian artery injury and brachial plexus avulsion due to a post trauma shoulder dislocation.

Methods: a 53-year-old male was admitted to our emergency department after a motorcycle accident, referring hypoesthesias and pain on his left arm, attributed initially to a posterior shoulder dislocation.

On admission, the patient had a cervical collar and was immobilized on a spinal board. After a first physical examination and stabilization of the clinical conditions, the patient has been moved to a ward stretcher; during that displacement the patient reduced spontaneously his shoulder dislocation without pain lamentation.

X-rays did not show any cervical, limb, costal or shoulder fractures. Two hours later, symptoms described earlier and erroneously attributed to a post shoulder dislocation syndrome, were still present, though the limb aspect was normal. There were no temperature or skin colour changes but nervous functions such as sensibility and hand motility as well as radial pulse were absent. A rapid colour ultrasound exam confirmed radial and brachial pulse absence and demonstrated only collateral arterial flows.

Results: The CT scan revealed a subclavian arterial rupture with a pseudoaneurysm formation for a 1,5 cm length; local thrombosis has been described too. Treatment by endovascular stent grafting was not possible because of temporary lack of the appropriate materials. Neither CT or MRI scans proved a cervical or dorsal spinal cord damage. The electromyography provided injury evidence of the left brachial plexus due to a plexus spinal avulsion. After admission to neurosurgery ward, patient chose to be transferred to his native country for further exams and therapies.

Conclusions: Traumatic brachial plexus injury and subclavian arterial rupture have been described after severe cervical, thorax or limb fractures with clear signs that appear early after trauma. Though, even into less severe traumas, vessel or nervous injuries should be researched carefully and repeatedly, even after hours or days and readily recognized for potential treatment.-

P928

Traumatology

TRAUMATIC UNILATERAL FACIAL PALSY: A CASE REPORT

Y ZENGİN, M İÇER, HM DURGUN, E OZCETE, O KACMAZ, M ÜSTÜNDAĞ

Emergency department, Dicle University, Diyarbakir, Turkey

Corresponding author: Mr Zengin Yilmaz (yilmazzengin79@mynet.com)

Key-words: facial palsy ; injury ; traumatic

INTRODUCTION:

Traumatic injuries to the head and cranium represent one of the most common causes of acquired facial paralysis. In instances of blunt trauma, in which no lacerations or fractures occur, the facial nerve retains its continuity and is expected to recover. In a setting of suspected nerve laceration (penetrating trauma through facial skin and soft tissues), immediate surgical exploration with nerve repair is warranted. Ideally, this would take place within 3 days of injury, during which the distal portion of the facial nerve can still be stimulated and, thus, identified during surgery. We report a 13-year-old boy who developed left facial palsy after head injury.

CASE REPORT:

A boy aged thirteen years was admitted because of mental status alteration and facial asymmetry after head injury. He collided with another child while playing, and his head was traumatized the day before. The next morning, sixteen hours later, he developed left facial paralysis, and mild left hemiparesis. He was previously healthy and had no history of neurological or haematological diseases. On initial examination in the emergency room, his general condition was moderate, he was confused and Glasgow Coma Scale score was 13. He was noted to have incomplete closure of left eye and drooling during a feeding trial. He had difficulty moving his lips

when attempting to talk or chew. His facial expression was asymmetric, but there is no emotional response. His Blood pressure was 110/70 mmHg, heart rate 98 bpm, and temperature 36.5°C. Immediate cerebral CT showed no abnormalities except for a minimal edema. Cranial and cervical magnetic resonance imaging (MR) were normal. Electrodiagnostic testing confirmed the diagnosis of left facial paralysis. The laboratory examinations including complete blood cell counts, liver function tests, chest x-rays etc. was within normal limit. The diagnosis of left facial paralysis was made based on the history, neurological examinations and then he was admitted to intensive care unit by closed head injury.

CONCLUSION:

The traumatic facial palsy, due to its variety of forms and outcomes, its difficult diagnostics and other accompanying injuries, represents a challenge especially from the therapy standpoint. Most of the cases of the traumatic facial paralysis occur in traffic accidents and they are usually visible immediately after an injury has been inflicted. In many cases of significant facial trauma, other concomitant acute conditions may delay examination and testing of the facial nerve. However, delayed surgical exploration, even months after the injury, can still be performed with reasonable success rates of functional improvement and recovery. Only early clinical detection and therapeutic interventions are important for functional recovery after facial nerve injury.

P929

Traumatology

AFFECTING FACTORS OF MORTALITY IN FALLS FROM HEIGHT

M İÇER, M ORAK, M ÜSTÜNDAĞ, C GULOĞLU

Emergency department, Dicle University, Diyarbakir, Turkey

Corresponding author: Mr Zengin Yilmaz (yilmazzengin79@mynet.com)

Key-words: Falls from a height ; mortality ; SAH

Introduction: Falls from a height constitute a significant proportion of urban trauma and are responsible for many serious adult and paediatric injuries. Falls are a leading cause of injury in the United States, second only to motor vehicle crashes.

Objective: The purpose of this clinical study was to identify and evaluate potential prognostic factors for mortality among people injured by falling from a height.

Methods: The data of 2252 patients who come for falls from height that were admitted to emergency department of University of Dicle in South East Anatolia Region between January 2005 and December 2008 was analyzed retrospectively. In the data happening month of falls from height, age, sex, reason of falls from height, place of falls from height, floor of falls from height, intubation, hypotension, tachycardia, head -neck, thorax, abdomen, pelvis extremity injury, application period, remaining time in the hospital, GCS(Glasgow Coma Scale), ISS(Injury

Severity Score), RTS(Revised Trauma Score) are analyzed. These parameters of mortality which are explained above were analyzed. Results: 1435 (63,7 %) of patients were male and 817 (36,3 %) of patients were female of the patients for falls from height who were included into this study. 2131 (94,6 %) of patients were alive and 121 (5,4 %) of patients were dead. The age average of the patients was

16,305±19,5462. The age average distribution is that the youngest is 1 month and the oldest

is 95 years. 1238 patients came to the hospital for falls from height in June, July, August, September and this had 54,9 % in whole patients. According to the falling floor 493 patients fallen to soft floor and 1759 patients fell to sharp floor. According to the place of falls from height 1056 (46,9 %) of patients fell from roof, 1665 (73,9 %) of patients fell from 1-5 meters height. According to the system injury 594 of patients cranial injury had first level. The mortality rate was 5,4 %. In this study, the average height of fatal falls is 6.612 m. Age, suicide, falling height, floor of falls from height, falls from roof, falls from balcony-window, falls from construction, falls from other places, cranial injury, thorax injury, abdomen injury, rib fracture, hemotoraks, pnomotoraks, lung contusion, hemopnomotoraks, internal abdomen free liquid, neurological deficit, cerebral edema, cranium fracture, EDH, SDH(Subdural Hemorrhage), SAH (Subarachnoid Hemorrhage), ICH(Intracerebral Hemorrhage), cerebral contusion, pnosefalus, RTS, ISS, GCS had meaningful affect on mortality ($P<0,05$ of all). SAH, hemopnomotoraks were determined and analyzed as independent variables which effects to the mortality according to the result of multivariate analyses. Conclusion: In this study, SAH and hemopnomotoraks are significant factors for mortality following falls from height.

P930

Traumatology

THE IMPACT OF MILD TRAUMA ON QUALITY OF LIFE: DIFFERENCES BETWEEN OLD AND YOUNG PATIENTS.

A Coppa (1), B Del Taglia (2), F Innocenti (3), R Pini (3), F Trausi (1)

1. Emergency Department, Careggi University Hospital, Florence, Italy
2. Emergency department, Careggi University Hospital, Florence, Italy
3. Emergency Department High Dependency Unit, Careggi University Hospital, Florence, Italy

Corresponding author: Mme Innocenti Francesca (innocentif@aou-careggi.toscana.it)

Key-words: mild trauma ; quality of life ; old and young patients

Background: Severe trauma determines an especially bad prognosis in elderly subjects, but the most part of the previous works included trauma patients admitted to Intensive Care Unit (ICU); data about prognostic value of intermediate severity trauma, both in terms of morbidity and mortality and respect to quality of life, are lacking. Aim of this study was to evaluate the prognostic impact of intermediate severity trauma according to age.

Materials and Methods: We included consecutive trauma patients admitted from July 2008 to January 2012 in the Emergency Department High Dependency Unit (HDU): this is a clinical setting with a sub-intensive level of care, without facilities for invasive mechanical ventilation. According to age, we divided the study population in Group 1 (G1, subjects aged ≥ 65 years) and group 2 (G2, subjects aged < 65 years). Presence of comorbidity (including COPD, chronic kidney disease, CAD, diabetes) and data to compute Injury Severity Score (ISS), Sequential Organ Failure Assessment (SOFA), APACHE II and Modified Early Warning Symptoms (MEWS) were collected at admission in HDU (T0) and after 24 hours in HDU (T1). Multiple injury trauma was defined as presence of ISS ≥ 15 .

After 6 months from the traumatic event, we made a phone follow-up To evaluate physical (PCS) and mental (MCS) health.

Results: We retrospectively identified 307 patients (pts), admitted for trauma, mean age 54 ± 22 yrs, 203 (66%) male subjects, with 114 subjects aged ≥ 65 years. Presence of comorbidity was more common in G1 subjects (47% vs 7%, $p<0.0001$). Multiple injury trauma was present in a comparable proportion of patients (25% in G1 and 21% in G2, $p=NS$) and the severity of trauma was similar between G1 and G2 subjects (ISS 11 ± 8 in G1 vs 10 ± 9 in G2, $p=NS$). Blood loss, evaluated through hemoglobin value, was higher in G1 both at T0 (13.9 ± 1.7 vs 12.4 ± 1.8 gr/L) and at T1 (12.3 ± 1.6 vs 10.8 ± 1.9 , all $p<0.0001$), in presence of normal value of lactate (LAC) and base excess (BE), that were also similar between the two groups (LAC at T0 1.7 ± 1.3 in G1 vs 1.7 ± 1.1 meq/L in G2, LAC at T1 1.2 ± 0.8 in G1 vs 1.0 ± 0.8 meq/L in G2, all $p=NS$; BE at T0 -0.39 ± 3.6 in G1 vs -0.73 ± 2.8 in G2, BE at T1 0.18 ± 4.1 in G1 vs 0.60 ± 3.0 in G2, all $p=NS$). Prognostic scores evidenced a significantly worst organ damage in G1 vs G2 patients (SOFA T0 2.3 ± 1.7 in G1 vs 1.51 ± 1.41 in G2, $p<0.0001$; SOFA T1 2.7 ± 1.8 in G1 vs 1.8 ± 1.2 , $p=0.009$; APACHE II T0 9 ± 4 in G1 vs 4 ± 3 in G2; APACHE II T1 10 ± 5 in G1 vs 3 ± 3 in G2, all $p<0.0001$); MEWS were similar at T0 (1.6 ± 1.3 in G1 vs 1.3 ± 1.0 in G2, $p=NS$), but significantly worst in the elderly at T1 (1.6 ± 1.3 in G1 vs 0.8 ± 0.9 in G2, $p<0.0001$). In G1 subjects the rate of in-hospital admission was higher (88% in G1 and 67% in G2, $p<0.0001$) and hospital length of stay (LOS) was longer (16 ± 18 in G1 vs 8 ± 9 days in G2, $p<0.0001$). Two of our patients died during the HDU-stay one for acute intracranial hemorrhage and the other one for Acute Respiratory Disease Syndrome; we observed 9 additional in-hospital deaths, all in G1 group. Eleven patients, 5 in G1 and 6 in G2, developed a depressive syndrome post event, 6, all in G1, became bedridden with caregiver, 7 (5 in G1) developed a severe walking impairment, 5 (3 in G1) reported severe memory impairment; 1 patient in G1 committed suicide 6 months after the event, 1 patient in G1 became tetraplegic (cumulative incidence; 18% in G1 and 5% in G2, $p=0.0003$). During the follow-up we evaluated PCS and MCS before traumatic event (BE) and after traumatic event (AE). Between before and after event, both in G1 and G2 there was a significant worsening in MCS (G1: BE 50 ± 6 vs AE 41 ± 10 , $p<0.0001$; G2: BE 51 ± 6 vs AE 47 ± 9 , $p<0.0001$) and PCS (G1: BE 42 ± 6 vs AE 38 ± 7 , $p<0.0001$; G2: BE 44 ± 5 vs AE 42 ± 6 , $p=0.002$). Comparing G1 and G2, both MCS and PCS were worst before and after the event (all $p<0.001$).

Conclusion: Elderly trauma patients admitted in HDU, despite a similar trauma severity, show worst prognostic scores and significantly longer hospital length of stay. Moreover analysis of health status demonstrated that in all patients, regardless the age, the perception of quality of life worsened significantly after traumatic event both for physical and mental aspects. Moreover, elderly people experienced a worst outcome from a medical point of view and perceived a worst a quality of life than young people.

P931

Traumatology

PENETRATING UPPER EXTREMITY TRAUMA IN THE EMERGENCY DEPARTMENT: A CASE REPORT

M. İÇER, Y. ZENGİN, H.M. DURGUN, A. ÖZHASENEKLER

Emergency department, Dicle University, Diyarbakir, Turkey

Corresponding author: Mr Zengin Yilmaz (yilmazzengin79@my.net.com)

Key-words: upper extremity trauma ; penetrating ; local anesthesia

Introduction:

Patients with skin and soft tissue wounds commonly present to the emergency department (ED) for evaluation and treatment. Evaluation of a patient with penetrating trauma upper extremity begins with a careful history and physical examination. Patients who present with a wound or localized pain following trauma should be questioned regarding the specific timing and nature of the injury, the level of wound contamination, and any materials involved in the injury (eg, wood splinters, shattered glass, shredded metal). Physical examination of the affected area should adequately assess for nerve, tendon, vessel, and joint involvement. Perform a vascular assessment focusing on color, capillary refill, and palpation of distal pulses. A neurologic examination should include testing of the surrounding and distally distributed nerves and assessing 2-point discrimination. Evaluate functional status, concentrating on potentially involved muscles, tendons, and joints. We report a case of a home-related accident involving a penetrating upper extremity trauma.

Case Report:

A 24-year-old man was admitted because of penetrating upper extremity trauma by a home-related accident. When he pruned trees, he fell down and the grate was entered into his arm. A fireman cut the grate and the patient was transferred to the emergency department (ED) by ambulance. Vital signs were within normal limits at the time of admission. A part of grate penetrated into right forearm. Neurovascular examination was normal. Right forearm radiography was assessed as normal. Tetanus prophylaxis and antibiotics were administered promptly. Wound dressings and local anesthesia was performed. Penetrating foreign body was excluded on the same plan by retraction. Neurovascular examination was reassessed and there was no pathological sign. He was discharged with daily wound dressing, antibiotic and analgesic. There was no complication during the follow up patient.

Conclusion:

When a patient who was admitted to ED penetrating extremity trauma, neurovascular examination should be evaluated carefully and Tetanus prophylaxis and antibiotics should be administered promptly. Radiologic evaluation should be performed. If the neurovascular examination is normal, the penetrating foreign body can exclude from extremity with local anesthesia in ED.

P932

Traumatology

SERIAL SPINOUS PROCESS FRACTURES DUE TO HYPERFLEXION INJURY

HM Durgun, M Orak, E Ozcete, A Ozhasenekler, M Ustundag,

Emergency Department, University of Dicle, Medical School, Diyarbakir, Turkey

Corresponding author: Mr Ozhasenekler Ayhan (drhasenek@hotmail.com)

Key-words: safety belt ; hyperflexion injury ; serial spinous process fracture

Serial Spinous Process Fractures Due to Hyperflexion Injury

Introduction: It is well known that wearing safety belt is life-saving in in-vehicle traffic accidents. Wearing safety belt prevents the passenger from flying forward by stabilizing pelvic region to the seat. However, sometimes the body of the person may be hyperflexed as the thoracic part is not stabilized as much as the pelvic region, leading to thoracolumbar trauma. This paper reports a young female patient wearing safety belt in an in-vehicle traffic accident, in whom serial spinous process fractures in thoracic vertebrae developed due to hyperflexion.

Key Words: safety belt, hyperflexion injury, serial spinous process fracture

Case: A 23-year-old female patient was brought to our clinic after an in-vehicle traffic accident. On arrival, her general condition was moderately deteriorated, she was conscious with a GCS of 15, blood pressure of 110/70 mmHg, and a pulse rate of 115 bpm. She was complaining severe back pain. On physical examination she had multiple incisions and dermal abrasions on face and extremities, as well as extensive back pain on palpation. Other systems were normal on examination. Laboratory examinations were normal. She was stabilized on a trauma board. Since she had back pain and had back pain on palpation despite the lack of trauma sign on her back, a thorax CT was taken showing serial fractures in spinous processes of T4-T9 vertebrae. She was discharged with a thoracic corset following an uneventful trauma monitoring period.

Discussion: Spinous or transverse process fractures may accompany thoracolumbar vertebral fractures due to blunt trauma presenting to trauma centers. Traffic accidents form more than half of all causes of vertebral fractures. Cervical vertebrae are affected most commonly in traffic accidents due to hyperflexion or hyperextension. However, thoracolumbar vertebrae may also be affected, albeit to a lesser extent. Radiologic examination may reveal compression fractures in vertebral bodies, as well as widening in interspinous spaces. We detected serial spinous process fractures of T4-T9 vertebrae without any compression fracture.

As a conclusion, it should be remembered that spinous process fractures may occur without vertebral body fractures in hyperflexion injuries.

P933

Traumatology

C1 VERTEBRAE FRACTURE IN A CHILD DETECTED 4 DAYS AFTER FALLING DOWN FROM HIGH GROUND

G. Cıgar (1), MB. Balioglu (2), G. Orman (3), A. Cakar (2), CH. Yildirim (4), M. Kaya (4)

1. Emergency Department, Kafkas University Faculty of Medicine, Kars, Turkey

2. Orthopedy and Traumatology Department, Kafkas University Faculty of Medicine, Kars, Turkey

3. Radiology Department, Kafkas University Faculty of Medicine, Kars, Turkey

4. Neurosurgery Department, Kafkas University Faculty of Medicine, Kars, Turkey

Corresponding author: Mme Cıgar Gülsen (gulakcay_42@hotmail.com)

Key-words: Spinal trauma ; children, ; C1 vertebrae fracture

INTRODUCTION: Fractures and dislocations in children are rare after minor traumas, because of structural difference in spinal column. Spinal trauma is detected in children rarely then adults. The most common cause of spinal trauma in children is motor vehicle accidents while the second common cause is falling down from high ground (1). Detection of spinal traumas in children is extremely difficult and SCIWORA is important to evaluate the children with spinal trauma. Proximal cervical vertebrae injuries are more frequent in younger children, while distal vertebrae injuries are more frequent in elder children (2). We would like to present a case with a story of falling down from approximately 2 meters altitude, 5 days ago, who has been carried by his family to the orthopedy outpatient clinic because of pain and posture deformity. **CASE REPORT:** 8-year-old male admitted to the orthopedy outpatient clinic with a neck and back pain and posture deformity in his neck. His family explained that he has fallen down from the roof of the cowshed which was approximately 2-2,5 meters altitude about 5 days ago. They immediately took the child to the

emergency service. After physical examination the radiographies of his neck, head and abdomen have been taken. A probable IV contrast enhanced abdominal tomography has been taken. After 8 hours of observation in the emergency service and detection of no pathology in the graphies, he was discharged. One day after his discharge his neck pain and posture deformity started. His physical examination revealed cervical torticollis to the right side, proximal thoracic kyphosis increase and motion limitation of neck movements to the right side. No neurological issues was found. Other system examinations were normal. CT was taken to his head, neck and thorax. Cranial CT was normal. A suspicious fracture line left parasagittally on C1 vertebrae posterior arcus and wedge-shape in thoracic 4-9 vertebrae corpuses are detected in CTs. MRI was taken because of his pins and needles feeling of left arm and compression fracture suspect in T4-9 vertebrae corpuses. Cervical lordosis was increased and wedge shape in T4-9 vertebrae was detected in MRI. Because there was no sign of edema wedge shape was not concluded to trauma. No soft tissue pathology was detected on MRI.

CONCLUSION: Falling from high altitude is one of the most common causes of trauma in childhood. This may cause spinal trauma in children rarely. The features of their body structures must be taken into account when evaluating childhood trauma in emergency department. Spinal injuries may be without radiological evidence in children. It must be taken into consideration that every kind of injuries may be seen in traumas even if it's a rare situation.

P934

Traumatology

AN EXTREME CASE OF PENETRATING INJURY TO THE SPINE RESULTING IN CAUDA EQUINA SYNDROME. A CASE REPORT AND LITERATURE REVIEW.

A Wei

Emergency Department, University Hospital St Radboud Nijmegen, Nijmegen, Netherlands

Corresponding author: Mr Wei Abel (AbelWei@gmail.com)

Key-words: cauda equina syndrome ; glass foreign body ; penetration

Open wounds caused by glass are common in emergency department visits. Relaying solely on wound exploration doesn't always expose glass foreign body, considering 8,7% of the glass wounds does retain glass foreign body¹. There are few reports found in PubMed on spinal cord injury caused by foreign body and only 3 with cauda equina syndrome^{2, 3, 4}. In this report we present a rare case of spine penetration by glass goes undetected until cauda equina syndrome developed.

The patient is brought to our ED with glass wound to the lower back on a Saturday night. As a practical joke his friend raised him up by the waist in the pub. His friend lost balance and they both fell on their backs. Our patient fell unfortunately on a beer glass. He reported that there is a brief moment of parenthesis in the left calf and toes while he was in the waiting room. The wound is measured to be 8cm long, transversely, at L5-S1. Exploration of the wound after local infiltrating with lidocaine shows a minimal laceration of fascia of right erector spinae muscle. No glass was found in the wound. Physical examination of the lower extremities rule out neurological deficits. The wound is sutured and the patient is booked for outpatient clinic over 3 days.

In the outpatient clinic our patient complained about headache, nausea and photophobia. The headache is pounding in nature, triggered when sitting up or standing. Neurology consult diagnosed it as a mild concussion and CT scan of the brain is not warranted. The three following check-up at the outpatient clinic he

complained about swelling of the wound. Abscess is ruled out by a clear fluid puncture. A seroma is suspected. On the fourth visit he reported to have sensory loss of the perineum and erectile dysfunction. MRI and CT scan of the lower back is warranted and multiple glass foreign bodies are found in the subcutaneous tissue and in the spinal canal. Patient underwent 3 operations to extract all the glass shrapnels and to seize the liquor leakage.

Methods of detecting foreign body in soft tissue vary from visual or tactile detection in a wound exploration to ultrasound and CT. In a in vitro experiment performed by Aras et al CT is the best imaging technique for visualization of foreign bodies, especially localized in air contained cavities⁵. Ultrasound is more effective with non-radiopaque foreign bodies in superficial structures and its advantage is limited by depth and air⁶. In contrary to general belief, glass is considered to be radiopaque and can be detected with plain X-ray up to 98%⁷. Non-radiopaque materials such as wood and plastic do not show up in plain X-ray and CT. In an extensive literature search for glass detection using plain radiography Weinberger concluded that despite adequate exploration of superficial wounds, 4% of the negative exploration retains glass on plain radiography. In our case, a plain radiography of the lower lumbar spine is warranted because the depth of the wound. The glass shrapnels could have easily detected.

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P935

Traumatology

UNDAMAGED VASCULAR STRUCTURE AFTER A POSTEROLATERAL KNEE JOINT DISLOCATION; A CASE REPORT

S Inal (1), F Taspinar (2)

1. Orthopaedics and Traumatology Department, Dumlupinar University School of Medicine, Kutahya, Turkey
2. Physiotherapy and Rehabilitation Department, Dumlupinar University Kutahya Graduate School of Health, Kutahya, Turkey

Corresponding author: Mr Taspinar Ferruh (ptferruh@mynet.com)

Key-words: vascular ; complications ; diagnosis

A knee dislocation is an unusual and extremely serious injury. The dislocation occurs when the femur and tibia lose contact between each other. Knee dislocations are usually high-energy traumatic injuries. These injuries can occur with severe falls, sports injuries or automobile accidents. When the knee dislocates, significant

damage is done to the soft-tissues that surround the joint. Except the torn ligaments of extra or intra articular region of the knee and damage of cartilage; in particular, high rates of damaged vascular and nerve structures has been reported. In fact, vascular injuries can be so severe that the leg health can be threatened to the point of requiring emergency vascular surgery. Here, we are reporting an eighty three years old male patient who had a posterolateral dislocation of the knee. He examined by the vascular surgeon at the emergency service and has not developed any vascular or nerve damage from the injury. Because of high rates of vascular injury during the knee dislocation as reported in the literature, the emergency service physicians must consult the patient to the vascular surgeon. Because vascular injury is the first emergency that must be threat.

P936

Traumatology

CHARACTERISTICS OF CHILDREN PRESENTING WITH TRAUMA TO A EMERGENCY DEPARTMENT**S OZDINC**

Emergency Department, Afyon Kocatepe University Medical Faculty, Afyonkarahisar, Turkey

Corresponding author: Melle Ozdinc Serife (drseri03@hotmail.com)**Key-words:** children ; trauma ; emergency department

Background and aim: Trauma is the leading cause of mortality in children over one year of age in industrialized countries. Among patients in pediatric trauma patients admitted to the emergency department (ED) is important. Bu travmaların bir kısmı acil serviste takip ve tedavi sonrası şifayla taburcu edilebilirken bir kısmı mortal seyredebilmektedir. Some of these traumas discharged after treatment in the emergency department follow-up and a part of the mortal. This study is aimed at the evaluation of the demographic properties of the patients pediatric trauma cases who were admitted to the to the Afyon Kocatepe University Faculty of Medicine Department of Emergency.

Material and methods: Patients admitted to our ED between January 1, 2010 – June 30, 2012 were retrospectively analysed from the admission charts and patient files. Data were analyzed with 18, SPSS.

Results: Our emergency service had been visited by 4097 trauma patients between the dates of January 2010 and June 2012, and 1227 (29%) of them were acute pediatric trauma cases. Eight hundred thirty seven patients were (64.7%) boys, four hundred fifty six patients (35.3%) were girls. Those children were younger than 19 years old (Mean age was 8,3± 4,7 years). It is found that the majority of cases admitted to ED on Saturday (%18,7), on May (14%) and at 04-12 hours pm (%58,1). The most frequent pattern of injury was related to the head/face(43%) and limb trauma (33,1%) Life threatening accident was head trauma (%1,1).

Conclusion: These kinds of investigations in ED may be useful in reducing childhood trauma for the measuring. Child trauma prevention and control is crucial. It should be an integral part of child health and survival. Thus complementary childhood injury prevention strategies were evaluated.

P937

Traumatology

EYE PAIN AFTER COUGH: ORBITAL EMPHYSEMA**YE EYİ (1), M EROĞLU (2)**

1. Emergency department, Hakkari Military Hospital, Hakkari, Turkey

2. Emergency Department, GATA Haydarpaşa Training Hospital, İstanbul, Turkey

Corresponding author: Mr Eyi Yusuf Emrah (dremrahey@yahoo.com)**Key-words:** orbital wall fracture ; orbital emphysema ; orbital trauma**Introduction:**

While injuries relating the eye and surrounding area may be blunt and penetrating, complications of injuries at middle face region would be more serious. Due to the anatomical structure of orbita bounded by sinuses, fractures formed after traumas can cause collection of sinusoidal air in orbita and then orbital emphysema. Orbital emphysema is a radiological finding that can be seen in half of orbital fractures and a sign of fracture.

Case:

35 years-old male patient has applies to our ER with complains of pain, erythema, swelling around his right eye. He expressed he had a crush by his friend's elbow during soccer play about 6 hours ago, then his pain severed after coughing. He has been evaluated normal after eye motions and eye examination. At first, his craniography has been taken, then maxillofacial region CT has also been evaluated. We have observed orbital medial wall fracture and related orbital emphysema. As eye examination of our case was normal, we have not considered decompression and surgical intervention, he has been contented for conservative follow-up.

Result:

Orbital emphysemas take place after situations where pressure increases such as cough, nose blowing, straining. Generally it is benign and self-limiting, but it can rarely cause optical nerve damage and seeing-loss. The cases with sudden seeing loss, effected eye motion, disk edema, and reduced pupil-light reaction must be carried out decompression urgently.

P938

Traumatology

TRAVMA SONRASI TESPİT EDİLEN OSTEİD OSTEOMA OLGUSU**G. Çiğışar (1), A. Çakar (2), M.B. Balioğlu (2)**

1. Acil Tıp AD, Kafkas Üniversitesi Tıp Fakültesi, Kars, Türkiye

2. Ortopedi ve Travmatoloji AD, Kafkas Üniversitesi Tıp Fakültesi, Kars, Türkiye

Corresponding author: Mme Çiğışar Gülsen (gulakcay_42@hotmail.com)**Key-words:** osteoid osteoma ; travma ; tümör

GİRİŞ VE AMAÇ: Osteoid osteoma; en fazla 10-20 yaş arasında görülen, benign osteoblastik bir kemik tümörüdür. Osteoid osteoma tüm kemik tümörleri arasında görülme sıklığı %2-3 ve benign kemik tümörleri arasında %11-12 dir(1). Tüm vücut kemiklerinde görülmekle birlikte en sık alt ekstremitelerde görülür(2,3). Osteoid osteomanın klinik olarak en belirgin özelliği nonsteroidal antiinflatuar ilaçlar (NSAID)/salisilatlarla dramatik cevap veren lokalize ağrıdır. Diğer kemik tümörlerinden en önemli farkı ise özellikle geceleri artan belirgin ağrının olmasıdır. Görüntüleme yöntemlerinden konvansiyonel radyografi, sintigrafi, BT ve MRI'den yararlanılır. cerrahi öncesinde tümörün lokalizasyon belirlemek için görüntüleme yöntemleri gereklidir(4).

OLGU/BULGULAR: 9 yaşında kız çocuğu, basit travma sonrası gittiği acil serviste değerlendiriliyor; sonrasında ağrı şikayetlerinin geçmemesi üzerine hastanemiz ortopedi polikliniğine yönlendiriliyor. Ortopedi polikliniğinde alınan ayrıntılı anamnezinde özellikle geceleri artan ve uykudan uyandıran ağrı tarifleyen hastaya, iki yönlü sol cruris konvansiyonel radyografide; tibia proksimal 1/3 medialde subkortikal sklerotik ve sklerotik alan proksimalinde litik alan tespit edilmesi üzerine osteoid osteoma ön tanısı ile salisilat başlanıyor(300 mg/gün geceleri). Salisilat tedavisi sonrası ağrılarında dramatik bir şekilde azalma olması üzerine tanınal olarak BT ve MRG istemi yapıldı. Çekilen görüntülemelerde nidus formasyonu ve nidus proksimalinde litik alan tespit edildi. Osteoid osteoma tanısı kesinleştirilen hastanın tedavisi total ekizyon şeklinde düzenlendi.

SONUÇ: Çocuk yaşta ekstremitte travma olguları sık olarak acil servise basit travma sonrası müracaat etmektedir. Bu olgularda acil servis hekimleri altta olabilecek diğer patolojiler konusunda uyanık olmalıdırlar.

Anahtar kelimeler: osteoid osteoma, travma, tümör

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P939

Traumatology

DEVELOPING ORBITAL EMPHYSEMA DUE TO TRAUMA

E Kadioglu (1), B Işık (2), S Karaman (3)

1. Department of Emergency Medicine, D.P.Ü. Evliya Çelebi Training and Research Hospital, Kütahya, Turkey
2. Department of Emergency Medicine, Aydın State Hospital, Aydın, Turkey
3. Department of Emergency Medicine, Erzurum Regional Training and Research Hospital, Erzurum, Turkey

Corresponding author: Mme Kadioglu Emine (dreminekadioglu@gmail.com)

Key-words: trauma ; orbita ; emphysema

INTRODUCTION-PURPOSE: Orbital emphysema is associated with fractures of the paranasal sinuses involving the orbita. Orbital fractures and subcutaneous are well-defined after blowing one's nose in accompanying with a few visual loss is seen. A sudden loss of vision, which happens after orbital trauma, generally becomes due to retrobulbar hemorrhage. In the paranasal sinus fractures including the orbital walls, orbital emphysema usually occurs within the first 24 hours. Benign, transient absorption, a phenomenon of spontaneous orbital emphysema occurs within two weeks. Orbital emphysema, patients with a history of trauma assessed by palpation and radiological examination. With increasing intranasal air pressure in orbital wall fracture patients, the maxillary, ethmoid and less frequently air enters the orbital area from frontal sinuses. In our studying we wanted to show you a patient who has swelling and orbital emphysema on the eyelids due to blowing one's nose after spending nearly five hours of trauma.

CASE: A thirty-one year old male patient had been hit to his head around ten o'clock in the morning but in this process, without any symptoms, the patient applied to the emergency room because of happening left eyelid swelling and pain while clearing his nose, after five hours from the incident. Good general condition with physical examination, vital signs were stable and low in the left upper eyelid edema, were detected in the medial wall crepitus. In palpation

orbital circumference is healthy and there isn't any diplopia and looking restrictions at up-down-right and left looking were detected. In Orbital computed tomography scan on the left medial orbital wall fracture, and this level of the adjacent ethmoidal sinus ethmoidal sinus shows continuity with the fine irregular soft tissue density suggestive of a small hematoma in the soft tissues and also the left preorbital collections of free air around the medial rectus muscle was found. After initiating prophylactic antibiotic and analgesic therapy the patient was discharged with polyclinic consulted recommendations from the emergency department to the eye diseases and plastic surgery departments.

CONCLUSION: Diagnosis of orbital emphysema is usually confirmed by anamnez, physical investigation and BT scan and it becomes resorbed via untreated. Facial swelling, eyelids closing and extraorbital subcutaneous emphysema clinical symptoms occur in patients who are intake in orbital space air. It can be subconjunctival hemorrhage, crepitation, tenderness and pain. Rarely, as a result of orbital emphysema, developing orbital compartment syndrome may develop central retinal artery occlusion. Air which is entering the orbital area can make occlusion and loss of vision as mass effecting on the central retinal artery. Because of our case, however, patients with orbital trauma take diagnosis in different clinic departments (plastic surgery, ENT, etc.) must consult with the department of eye disease. As a result, the benefit of treatment appears. Patients should be closely monitored due to developing risk of visual complications. Prophylactic antibiotic treatment should be given to each patient with orbital emphysema. During this period patients should be closely monitored.

P940

Traumatology

A RETROSPECTIVE EVALUATION OF TRAFFIC COLLISIONS IN A LEVEL 1 TRAUMA CENTER IN ISTANBUL

E Aydeniz (1), R Demirhan (2), O Güneysel (3), M Ünalı (3)

1. Emergency Department, Çerkezköy State Hospital, Tekirdağ, Turkey
2. Thorax Surgery Department, Kartal Training and Research Hospital, Istanbul, Turkey
3. Emergency Department, Kartal Training and Research Hospital, Istanbul, Turkey

Corresponding author: Mr Ünalı Mehmet (drmun@hotmail.com)

Key-words: Traffic Collision ; Emergency Department ; Injury

Objective: As other developing countries, traffic collisions are also an important public health problem in Turkey and thousands of people suffer from traffic collisions per year. Increasing number of traffic collisions are caused by provision of traffic load mainly with roadway, increased number of car emerging into traffic, alcohol consumption and lack of adequate education and control measures; this causes significant mortality and morbidity. In the present study, it was aimed to establish the outcomes of traffic accidents and to contribute local recommendations intending to prevent collisions; to improve survival and minimize disability after traffic collisions by assessing data of the cases presented in Emergency Department of Dr. Lütfi Kırdar Teaching Hospital by traffic collision.

Materials and Methods: In our study, traffic accidents between January, 2011 and June, 2011 were retrospectively reviewed from electronic records and patient registry. Overall, data were obtained for 1463 patients. Age, sex, presentation, arrival time, areas of injury, mechanism of the accident (in-vehicle, out-vehicle, motorcycle) and distribution according to months, vital findings, (Glasgow Coma Score, BP values), treatment and final outcome (admission, disposition, mortality rate) were considered in patients

those included in the study. Statistical analyses were performed by using SPSS Version 19.0.

Results: Of the cases, 1011 (69.1%) were men, whereas 452 (30.9%) were women. 21-30 years of age was the most frequent age interval (29.2%). Of the patients, 58.6% were injured as a result of in-vehicle collision, whereas 30.1% and 10.7% as a result of out-vehicle and motorcycle collision, respectively. In the assessment of distribution, it was seen that the highest number of collision (19.6%) occurred at June. Patients were most commonly arrived to ED by EMS (76.9%) and at hours between 16:00 and 24:00 (44.4%). Of the patients, 59.1% were injured from extremity, which was the most frequent injury area. Of the patients in our study, 87.1% were disposed from ED after treatment and 9.4% were managed by admission, while 1.8 were admitted to ICU and 0.8% died. Of all patients, 0.9% was already death before arrival. Patients were most commonly admitted to Orthopedics & Traumatology clinic.

Conclusion:

In the present day, traffic collisions are a significant social issue due to unfavorable effects on individuals and social life. Traffic collisions cause high rates of death, injury and disability in addition to substantial economic losses.

P941

Traumatology

TRAUMATIC PNEUMORRHACHIS : AN UNCOMMON BUT SIGNIFICANT FINDING IN MAJOR TRAUMA

M Hassan (1), A Majeed (1), D Yeo (2)

1. Emergency Department, University Hospital Birmingham, Birmingham, United Kingdom
2. Emergency Department, University Hospital Birmingham, Birmingham, United Kingdom

Corresponding author: Mr Yeo David (daveyeo@gmail.com)

Key-words: Pneumorrhachis ; Trauma ; Radiology

Introduction : Pneumorrhachis is an uncommon radiological finding consistent with air in the spinal canal. Taken in context with major trauma, this finding is a marker of severe trauma. We report a case of Traumatic Pneumorrhachis following chest and abdominal injury, but no skull or cervical spin injury.

Case Presentation : A mid 30s professional BMX rider was admitted to the Emergency Department following a high speed collision with the ground. He was wearing body armor and had a high impact helmet. On arrival, he complained of left sided chest and abdominal pain. Primary survey observations were stable, apart from left lower chest wall and left upper quadrant abdominal tenderness.

Secondary survey did not identify any further abnormalities or neurological deficit.

A CT head to pelvis scan on a biphasic single pass protocol demonstrated small locules of air in the spinal canal and under the vertebral arteries at the level of C2. His head scan was normal with no skull fractures. There were no cervical or thoracic vertebral fractures.

He had a fracture of left posterior 7-12th ribs and left lateral 6-7th ribs with underlying minor left lung contusion but no pneumothorax or haemothorax. There was a Grade 1 splenic lacerations with no active bleeding or intra peritoneal air or free fluid and no pelvic fracture.

The patient was admitted for conservative management and observation, and was discharged 3 days later pain free with no neurological sequele with no follow up required.

Discussion : Almost exceptionally, Traumatic Pneumorrhachis is found in combination with associated air distribution in other compartments and cavities of the body: in particular, in conjunction with pneumocephalus, pneumothorax,

pneumomediastinum, pneumopericardium or subcutaneous emphysema.

Thus, diagnosis of PR strongly suggests the possibility of the coincidental associated and hidden injuries elsewhere in the body. Penetrating spinal injuries may cause isolated subarachnoid PR without accompanying head injury. [Oertel MF et al., 2006.]

Lessons Learnt : To the best of our knowledge, this is the first case of Traumatic Pneumorrhachis to be reported without significant vertebral or mediastinal injury. In particular there was no evidence of pneumomediastinum or pneumothorax. There was a small collection subcutaneous cervical emphysema but the aetiology of this remains unclear. One possible explanation is possible barotrauma as a result of significantly increased intrathoracic pressure at the time of injury result in extrusion of air into a fascial envelope.

P942

Traumatology

ANXIETY LEVEL OF FORMULA ONE ISTANBUL GRAND PRIX FIA TURKISH MEDICAL TEAM

MA Karamercan (1), P Atilla (2), ZD Balkanci (3), G Ozel (4), AM Sevgili (3)

1. Emergency Department, Gazi University Faculty of Medicine, Ankara, Turkey
2. Histology and Embryology Department, Hacettepe University Faculty of Medicine, Ankara, Turkey
3. Physiology Department, Hacettepe University Faculty of Medicine, Ankara, Turkey
4. Microbiology Department, Yozgat Government Hospital, Ankara, Turkey

Corresponding author: Mr Karamercan Mehmet Akif (makaramercan@gazi.edu.tr)

Key-words: Formula One and Motor GP ; Motor Sports Medicine ; Trauma

INTRODUCTION

Motor sports are among the most popular types of sports worldwide, practiced in practically all countries and as a wide variety of disciplines. Grand Prix racing refers to the premier categories of road racing worldwide, including Formula One and Moto GP. Although there is a common misconception that motorsports medicine is analogous to standard emergency medical services (EMS) or sports medicine, due to the unique racing environment a traditional approach to EMS can be ineffective and may expose drivers, spectators, and medical personnel to great danger. Motorsports medicine is unique due to medical personnel must be knowledgeable regarding vehicle configurations, crash characteristics, changing safety equipments those uniquely impact patients care, providing patient care in a potentially dangerous environment, required specialized training in extrication and packaging of patients from various types of race vehicles. This purpose of this research was to determine the medical team stress level and probable factors affecting these.

METHODS

Standardized data collection forms were used throughout the study which included a letter of explanation of the study and demographic characteristics of the participants and a copy of the Spielberg State-Trait Anxiety Inventory (STAI). The participants completed the data collection forms in the morning for three consecutive day of the race while waiting in the medical center before they go to the positions within the course.

The STAI is used to determine the anxiety level and the inquiry is used to determine their personal information. The Independent Sample t-test and the One Way Variance Analyses are used for relation. All the statistics are have 95% confidence and p <0.05 accepted as statistically significant.

RESULTS

A total of 46 medical personal included in this study. 87 % (n=40) of the study group worked in intensive care unit, surgery room or emergency department and mean work time is 6.1 ±4.1 year. 94 % (n=43) had done resuscitation, 89 % (n=41) had intubated a patient, 85 % (n=39) had seen thoracic tube insertion, 61 % (n=28) had actively participated in thoracic tube insertion and 57 % (n=26) had participated in emergency thoracotomy.

Although 67 % (n=31) of the participants declared that they don't want any accident in this race, 98 % (n=45) want to be in the first intervention team in case of an accident and 74 % (n=34) at least to see the accident within the course.

While there is no correlation between profession/duty in the team (physician, nurse, driver etc) and first-second day anxiety scores of the participants, there is significant correlation between profession/duty in the team and third day anxiety scores of the participants. (p=0.007) The anxiety scores were highest in drivers of the medical vehicles whereas lowest in the physicians. There is neither correlation between sex and anxiety scores nor education level and anxiety scores. There is moderate negative correlation between work and/or previous hospital experience and anxiety scores on second and third day. (p=0.001) Anxiety scores rank highest in the ones who have not attended to resuscitative procedures before.

DISCUSSION

The results show that, the anxiety of medical team is lowest on the first day and increasing through third or last day. Although not always needed but on-site medical personnel are able to provide and/or assist an expanded scope of practice such as a surgical cricothyrotomy, rapid sequence intubation, other advanced alternative airway and amputation, which have been shown to save the lives of drivers. In this study the medical team has a good self-confidence which is obviously seen that 98 % of the participants want to be in the first intervention team in case of an accident.

There was no correlation between duty in the team and first-second day anxiety scores. However on third day which is the most stressful day of the race schedule, anxiety scores were high in drivers and low in physicians. This is also true for hospital experience and negatively correlated. Although all drivers are professional race car drivers as a rule, they are less experienced in hospital work. Because of this they are very familiar on race stress but less on the medical interventions and resuscitative procedures. As a result we should start a program that will increase the experience of medical car drivers on medical interventions and resuscitative procedures.

P943

Traumatology

BRACHIAL PLEXUS INJURY DUE TO SHOULDER DISLOCATION AT EMERGENCY DEPARTMENT: A CASE REPORT

YE EYİ (1), SK TUNCER (2), M EROĞLU (3), B KARSLIOĞLU (4), A PARLAK (5), T TÜRE (2), G AYDIN (2)

1. Emergency department, Hakkari Military Hospital, Hakkari, Turkey
2. Emergency Department, GATA, Ankara, Turkey
3. Emergency Department, GATA Haydarpaşa Training Hospital, İstanbul, Turkey
4. Orthopedics and Traumatology Department, Hakkari Military Hospital, Hakkari, Turkey
5. Family Doctor, Ağrı Military Hospital, Ağrı, Turkey

Corresponding author: Mr Eyi Yusuf Emrah (dremrahey@yahoo.com)

Key-words: SHOULDER DISLOCATION ; BRACHIAL PLEXUS INJURY ; EMERGENCY DEPARTMENT

INTRODUCTION

Glenohumeral joint, is the most active and the most common joint in the body. The mean age of the shoulder dislocated patient is 20, and 85-95% of patients are male. 85-95% of shoulder dislocations are anterior and 56% of the dominant-sided. As a complication bone fractures, ligament injuries, rotator cuff tears occur frequently, but nerve injuries rarely encountered.

CASE:

76-year-old male patient, shoulder pain started after a fall on the right side of the right arm while walking and presented to our emergency department with loss of motion. As a result of right shoulder's physical examination swelling posterior to the shoulder, ecchymosis and epaulet sign were observed. On palpation pain and tenderness in the right shoulder and anterior right humeral head were found. Neurological examination revealed paresthesia at lateral skin of right humerus, dorsal aspect of the wrist that fits to the radial nerve sensory area and inner side of the arm, ulnar side of the fingers that fits to the ulnar nerve sensory area. Also loss of extension and ulnar deviation at wrist and fingers were found. This result of neurologic examination evaluated as radial nerve and ulnar nerve motor and sensory loss. X-ray showed an anterior shoulder dislocation of the shoulder. After consultation of orthopedics, reduction was achieved by the method of Kohler by sedation-analgesia with midazolam and fentanyl. Control radiograph after reduction indicated no fracture, the patient pointed out no improvement in neurological findings and underwent velpau bandage. 3 weeks later, the EMG examination of the radial nerve showed mild axonal degeneration and ulnar nerve severe axonal degeneration. At 3. week partial and at 10. week full neurological recovery was seen.

CONCLUSION:

Brachial plexus injuries after shoulder dislocations are mixed lesions rather than isolated nerve lesions. In both cases, the most affected nerve is axillary nerve. Neurological examination and recording before reduction must make, when nerve damage is detected orthopedic consultation should be taken. These are important in the prevention of medicolegal problems.

P944

Traumatology

INTRA-ARTICULAR CALCANEAL FRACTURE: A CASE REPORT

YE EYİ (1), AO YILDIRIM (2), SK TUNCER (3), U KALDIRIM (3), B KARSLIOĞLU (4), M EROĞLU (2), S ARDIÇ (3), I ARZIMAN (3), M DURUSU (3), C KAYA (3)

1. Emergency department, Hakkari Military Hospital, Hakkari, Turkey
2. Emergency Department, GATA Haydarpaşa Training Hospital, İstanbul, Turkey
3. Emergency Department, GATA, Ankara, Turkey
4. Orthopedics and Traumatology Department, Hakkari Military Hospital, Hakkari, Turkey

Corresponding author: Mr Eyi Yusuf Emrah (dremrahey@yahoo.com)

Key-words: CALCANEUS ; FRACTURE ; INTRA-ARTICULAR

INTRODUCTION

Calcaneal fracture constitutes 2% of all fractures and the most common fractures in the tarsal bone fractures. 65% of all tarsal bone fractures are calcaneal fractures. Calcaneal fractures are high-energy fractures are also damage surrounding soft tissues. Especially at Intra-articular calcaneal fractures fracture line isn't obvious at direct radiography, and can be diagnosed by calculating angles with computed tomography.

CASE:

34-year-old male patient. He admitted to the emergency department complaining left foot pain and not weight-bearing

after falling onto foot at home. Physical examination: edema of the left lateral malleolus of ankle, and there was tenderness in the calcaneus with tenderness. Neurovascular examination was normal. At lateral ankle radiograph, calcaneal disorder observed but there was no significant pathology associated with calcaneal fracture in the monitoring. Considering the mechanism of trauma and result of physical examination to exclude a possible tarsal bone fracture limb tomography was planned. There was a fracture line that extends to talus joint line and, calcaneal height decreased, was observed at tomography. Patient was admitted to the orthopedic clinic for the operation.

CONCLUSION:

Two major angle evaluating calcaneus at lateral radiograph are Böhler angle and gissane angle. Although measurements made good, X-ray is required separately for each articular surface and intra-articular fractures of the calcaneus radiographs exposure techniques are difficult because it requires experience to diagnose. Computed tomography is the method that eliminates all these problems. Coronal and transverse images obtained with this method is focused in the geometry of the fracture, and tomography based classification shaped the treatment.

P945

Traumatology

HOW IS THE BELGIAN DEFENSE IMPLEMENTING THE 10 MINUTES TIMELINE RULE?

E DHONDT, G LAIRE

Medical Component Operational Command, BEL Defense, Brussels, Belgium

Corresponding author: Mr Dhondt Erwin (erwin.dhondt@mil.be)

Key-words: preventable combat death ; platinum 10 minutes ; battlefield casualty care

Operational medical support aims at ensuring that every battlefield casualty gets the right treatment, in a timely manner and at an appropriate facility. Timeliness of treatment is a fundamental principle of this echeloned medical support. Based on available clinical evidence and experience gained from operations during the last decade, the main NATO medical planning guideline for medical support has evolved to become the 10 Minutes -1 hour - 2 hours timeline.

Especially the initial response capability with the provision of appropriate urgent medical care at the point of injury (POI) is crucial, in particular for those casualties who are critically injured and potentially face survivable causes of death, such as extremity hemorrhage exsanguination, airway obstruction and tension pneumothorax.

To reduce this "preventable combat death" and in accordance with this 10-1-2 medical planning timeline, the provision of bleeding control, airway control and adequate breathing for the critically injured casualties must be achieved within 10 minutes of wounding.

Within these so called "platinum 10 minutes" immediate life saving measures have to be applied by non-medical professionals trained in Enhanced First Aid: stopping extremity bleeding applying tourniquets as well as pressure and hemostatic dressings, securing the airway by oro- and/or nasopharyngeal tube and treating for tension pneumothorax by closing sucking chest wounds and/or needle thoracostomy.

To provide this, sufficient combatant personnel need to be permanently trained to deliver enhanced first aid, be competent in maintaining the skills needed and finally equipped accordingly.

The Belgian Defense has adopted a tiered approach to this novel combatant non-medical battlefield casualty care requirement. At

the POI or in its immediate vicinity, after self aid or buddy aid, first aid is delivered by the combat life saver: the aidman in a conventional forces operations setting or when in support of Special Operations Forces (SOF), the SOF Advanced First Responder (aidman SO).

The certification levels of these personnel, the various life saving skills and techniques they will be trained in, the assets they are equipped with as well as the notification procedures to initiate prompt evacuation are discussed.

Additional emphasis is laid on several challenges the evolution towards this new 10-1-2 timeline holds for the BEL Defense Department as a whole and the Medical Component in particular. Creating a performant battlefield first response capacity capable of providing enhanced first aid, suddenly becomes a concern of utmost importance for ALL components (land, air and navy). On the other hand, matching the 'new' needs for extended (-sive) medical education of each deployable soldier and the combat life saver puts a significant burden on the instruction and training resources of the Medical Component. Last but not least, as a continuum of care has to be maintained throughout the whole treatment and evacuation chain, bridging the gap with medicalized rotary wing assets for forward tactical aeromedical evacuation to the right next echelon of care must be emphasized.

P946

Traumatology

ELEKTRICAL INJURY-INTRAALVEOLAR HEMORRHAGE: CASE STUDY

M Gul, T Acar, C Dikmetas, M Ergin, H Nak, B Cander

Emergency department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

Corresponding author: Mr Acar Tarik (drtarikacar@gmail.com)

Key-words: ELEKTRICAL INJURY ; INTRAALVEOLAR HEMORRHAGE ; thorax ct

ABSTRACT

Electrical injuries may come with a wide gap of damage from superficial skin burn to death. It is quite important to doubt about the injuries which come into existence on the tissues and organs over the path of current. Most of the electrical injuries are common to children, adolescent men and workers who are exposed to electric. Respiratory standstill, aspiration pneumonia, pulmonary edema and pulmonary contusion may be seen as the result of electrical injury. CASE: A 15 years old male patient who works at a hairdresser is brought to our emergency service with 112 ambulance upon exposing to household type electric while preparing shave cream with water and soap for a haircut. During the physical examination which was done just after the arrival of the patient, it was observed that general condition was good, arterial blood pressure was 120/70mmHg, pulse was 70 throb/min. and fever was 36.54°C. Electric inlet burn on the 1st and 2nd fingers of the left hand and electric outlet burn on the left areola of the chest were seen. During the examination of the patient both of the hemithoraxes were participating equally and there was no ral rhonchus. The number of respiration was 25. A blood test analysing Na, K, urea, creatinin, CPK, CK MB, troponin, Myoglobin, hemogram was done. The results of the blood test were at the normal limits. Because of the weak tachypnea of the patient, contrasty thorax bt x-ray was taken. From the contrasty thorax ct x-ray, a harmonic condition with hemorrhage was viewed on the right lung parenchyma widely and on the superior lobe at the left. For the follow-up treatment the patient was transferred to emergency bed service. Betamimetic nebul and regular oxygen together with N-ASETİLSİSTEİN were given to the patient. On the

3th day of the patient follow- up at the emergency bed service contrasty thorax ct was taken. It was determined that the hemorrhage disappeared. Upon stable symptoms , the patient was discharged. **CONCLUSION:** Through this case we identify that even there is no significant finding during the physical examination following the electric shock , there can be serious lung injuries. We presented this article in order to emphasize that a complete physical examination should be done in this type of cases and even the smallest finding may signal a serious injury.

P947

Traumatology

AN UNEXPECTED COMPLICATION OF TRAUMA: CAROTID ARTERY DISSECTION

M Ergin, FE Visneci, K Kucukceran, AA Sevimli, B Cander

Emergency Department, Necmettin Erbakan University Meram Medicine Faculty, Konya, Turkey

Corresponding author: Mr Ergin Mehmet (drmehtmetergin@gmail.com)

Key-words: Blunt trauma ; Carotid arterial dissection ; Emergency department

BACKGROUND: Although carotid arterial dissection is not common presentations to the ED, timely and appropriate diagnostic strategies will allow early initiation of effective treatment therapies. **CASE:** 35 year – male adult patient admitted to ED after falling from 1 meter-height. He complained about pain and deformity at his right elbow. His vital signs were in normal range. He had right elbow dislocation and no other abnormal physical exam findings. After procedural sedation, closed reduction of joint was performed. The procedure was successful after first attempt. While he was observed in trauma room, he had left hemiplegia and facial asymmetry. After that, brain computed tomography was reported no abnormality. The brain magnetic resonance (MR), diffusion MR and cranial MR angiography demonstrated acute ischemia, occlusion of right middle cerebral artery and dissection of internal carotid artery. The patient was admitted to critical care unit of ED. **CONCLUSION:** Emergency physicians should consider dissection of carotid artery when neurologic deficit takes place after blunt trauma.

P948

Traumatology

KÜÇÜK MESLEKİ EL YARALANMALARININ RETROSPEKTİF ANALİZİ

BC. Bilgin (1), T. Karaca (2), G. Çığışar (3), S. Özer (2), U. Türkteş (4), H. Yılmaz (2)

1. Genel Cerrahi AD, Kafkas Üniversitesi Tıp Fakültesi, Kars, Türkiye
2. Genel Cerrahi Kliniği, Ankara Meslek Hastalıkları Hastanesi, Ankara, Türkiye
3. Acil Tıp AD, Kafkas Üniversitesi Tıp Fakültesi, Kars, Türkiye
4. Ortopedi ve Travmatoloji AD, Van Yüzüncü Yıl Üniversitesi Tıp Fakültesi, Van, Türkiye

Corresponding author: Mme Çığışar Gülsen (gulackay_42@hotmail.com)

Key-words: El yaralanması ; Tecrübe ; Dominant el

GİRİŞ: Sosyal hayattaki tüm çalışanlarda olduğu gibi sanayi çalışanlarında da el vücudun fiziksel olarak en sık kullanılan organıdır. Bu nedenle vücudun en sık travmaya maruz kalan organlarından birisi eldir(1). El yaralanmalarının hayatı tehdit etme sıklığı nadirdir(2). Bu çalışmada büyük bir sanayi sitesindeki polikliniğe başvuran küçük mesleki el yaralanmalarının açık

durumları, çalışma günleri ile yaralanma ilişkisi, mesleki tecrübeleri, dominant el kullanımının yaralanma şiddeti ve tekrarlayan yaralanmalar üzerine etkisinin incelenmesi amaçlandı.

MATERYAL METOD: Çalışma 2011- 2012 yılında Ankara Ostim Sanayi Sitesi semt polikliniğine 5 aylık sürede başvuran küçük mesleki yaralanmalı hastaların retrospektif dosya kayıtlarının incelenmesi ile gerçekleştirildi. Hastaların yaş, cinsiyet, başvuru günü ve saati, dominant el kullanımı(sağ, sol), mesleğindeki çalışma yılı(tecrübe), daha önceki yaralanma hikayesi, iş sahası, yaralanan elin hangi el olduğu(sağ, sol), ek hastalığı, açlık-tokluk durumu, meslek grubu, başvurunun yaralanmanın kaçınıcı saatinde yapıldığı, yaralanmanın özelliği, yaralanmaya neden olan aletin mesleki alet olup olmadığı ve hastanın muayenesinin nasıl sonuçlandığına bakıldı. İstatistiksel çalışmalar SPSS for Windows 17 programı ile yapıldı.

BULGULAR: Çalışmaya bu dönemde polikliniğe başvuran küçük el ve el bileği yaralanması bulunan 80 hasta dahil edildi. Hastaların 79'u(%98,8) erkek, 1'i(%1,2) kadın yaş ortalaması ise 33,06±11,28 (min:16-max:64) idi. 21(%26,3) hasta ile en fazla başvuru pazartesi günü yapılırken, en az başvuru 10(%12,5) kişi ile Salı günü idi. En fazla başvurunun 26(%32,5) hasta 12-14 saatleri arasında; en az başvurunun ise 3(%3,8) hasta 16-18 saatleri arasında olduğu görüldü. Eğitim durumları incelendiğinde 23'ü(%28,8) ilköğretim, 27'si(%33,8) ortaokul, 29'u(%36,3) lise, 1(%1,3) üniversite mezunu idi. 55'inde(%68,8) daha önce mesleki yaralanma öyküsü yoktu. 57(%71,3) hastanın kaza anında aç olmadığı tespit edildi. 75(%93,8) hastada ek hastalık öyküsü tespit edilmedi. Hastaların 75'i(%91,3) dominant olarak sağ elini kullanıyordu. Hastaların yaralanan elleri 38'inde(%47,5) sağ ve 42'sinde(%52,5) sol eldi. Mesleki tecrübeleri değerlendirildiğinde mesleki tecrübeleri az olanların daha fazla oranda yaralandığı görüldü(%48,8). Dosya kayıtlarından 57(%71,3) işçinin meslek bilgilerine ulaşılmıştır. En fazla yaralanma 15'i(%18,8) oto sanayi işçisi idi. 57(%71,3) hastanın yaralanma nedenine ulaşılmış ve bu hastaların 56'sı(%70,0) mesleki aletle yaralanırken 1'i(%1,3) mesleki alet olmayan bir aletle yaralanmıştı. Hastaların 54'ü(%67,5) yaralanmadan sonraki ilk bir saat içinde başvuruda bulunurken 3'ü(%3,8) bir saatten sonraki bir sürede polikliniğe başvurmuştu. Yaralanma özellik bilgilerine ulaşılan 75(%93,8) hastanın 9'unda(%11,2) sol el başparmak kesisi, 8'inde(%10,0) sağ el birinci parmak kesisi, 6'sında(%7,5) sağ el ikinci parmakta 2cm kesi vardı. Sağ eli dominant olanlarla sol eli dominant olanlarda dominant elin yaralanma yüzdesi arasında anlamlı fark yoktu. Dominant eli sağ olanlar ve dominant eli sol olanlar arasında önceki yaralanma öyküsü açısından anlamlı farklılık yoktu.

SONUÇ: Mesleki el yaralanmaları çok sık görülmekte ve en fazla tecrübesi az olan grubu etkilemektedir. Küçük mesleki yaralanmaları değerlendirmek amacıyla sanayi bölgelerine poliklinikler kurulması hem acil servislerin iş yükünü azaltacak hem de hızlı ve çabuk müdahaleyi sağlayacaktır.

Anahtar Kelimeler: El yaralanması, tecrübe, dominant el

P949

Traumatology

EFFICACY OF PROPOLIS IN EXPERIMENTAL RAT MODEL WITH ISOLATED BILATERAL PULMONARY CONTUSION CREATED BY BLUNT THORACIC TRAUMA

T Çevik (1), O Solak (2), M Sırmalı (3), Y Yürümez (4), NN User (5), Ş Özdiç (5), G Öz (2), K Öcalan (6), R Sırmalı (7), Y Ağaçkiran (8)

1. Emergency Medicine Department, Afyonkarahisar State Hospital, Afyonkarahisar, Turkey
2. Thoracic Surgery Department, Afyon Kocatepe University, School of Medicine, Afyonkarahisar, Turkey
3. Thoracic Surgery Department, İstanbul Medeniyet University, School of Medicine, İstanbul, Turkey

4. Emergency Medicine Department, Sakarya University, School of Medicine, Sakarya, Turkey
5. Emergency Medicine Department, Afyon Kocatepe University, School of Medicine, Afyonkarahisar, Turkey
6. Thoracic Surgery Department, Afyonkarahisar State Hospital, Afyonkarahisar, Turkey
7. Biochemistry Department, Dr. Lutfi Kırdar Kartal Training and Research Hospital, Istanbul, Turkey
8. Pathology Department, Atatürk Chest Diseases and Thoracic Surgery Training and Research Hospital, Ankara, Turkey

Corresponding author: Mr Çevik Talip (drtalipcevik70@hotmail.com)

Key-words: Thoracic trauma, Pulmonary contusion ; Experimental rat model ; Propolis

Aim: In our study, we aimed to investigate anti-inflammatory mediator effects of Propolis on pulmonary contusion in experimental rat model whose isolated bilateral pulmonary contusion was created by blunt thoracic trauma.

Material and Method: In the study, 61 male Sprague Dawley rats were used. Except the sham and control groups, pulmonary contusion was created performing isolated blunt thoracic trauma in other groups. Trauma's severity was determined as 1,5 joule. Propolis was administered intraperitoneally after the application of blunt chest trauma, on the 1st, 2nd and 3rd days. Only blunt thoracic trauma was performed for the contusion group. Arterial blood gas, tissue myeloperoxidase, catalase, wet / dry lung weights values were recorded on 0th, 1st, 2nd and 3rd days. Histopathologic examination was performed on pulmonary tissue. Results: Arterial blood gas analysis revealed that pH values on the 2nd and 3rd day were significantly lower in the sham group compared to propolis group ($p < 0.05$). PaO₂ values, 3rd day was significantly higher in the propolis group compared to sham and contusion groups ($p < 0.05$). PaCO₂ values, on the 2nd and 3rd day were significantly higher in the contusion group compared to propolis group ($p < 0.05$).

Myeloperoxidase values in the sham and control groups were lower than contusion and propolis groups ($p < 0.05$). On the 1st and 3rd day was significantly higher in the contusion group compared to propolis group ($p < 0.05$). Catalase values in the sham and control groups were lower than on the 1st, 2nd and 3rd day contusion and 1st and 3rd day propolis groups ($p < 0.05$). On the 2nd day was significantly lower in the propolis group compared to sham group ($p > 0.05$). On the 1st, 2nd and 3rd day were significantly higher in the contusion group compared to 2nd and 3rd day propolis group ($p < 0.05$).

Pulmonary pathology and leukocyte infiltration scoring in the sham and control groups were observed to be lower than contusion and propolis groups ($p < 0.05$). On the 1st, 2nd and 3rd day were significantly higher in the contusion group than 3rd day propolis group ($p < 0.05$).

Conclusion: In this rat experiment model whose isolated pulmonary contusion was created by blunt trauma, propolis was observed to reduce contusion severity in the lung, the protective effects and minimize inflammatory reaction.

P950

Traumatology

A CASE OF CERVICAL VERTEBRAE FRACTURE AFTER JUMP INTO THE SEA

H Dogan, DN Ozucelik, A Avci, O Sancak, K Aciksari

Emergency department, Bakirköy Dr Sadi Konuk training and research hospital, Istanbul, Turkey

Corresponding author: Mr Dogan Halil (drhalildogan@gmail.com)

Key-words: jump into the sea ; vertebrae ; trauma

Giriş:

Dalış yaralanmaları öncelikle omurgayı etkiler, potansiyel olarak yıkıcı travma nedenidir. Servikal dalma yaralanmaları yüksek mortalite ve morbidite oranları göstermektedir. İyileşme ilk nörolojik hasarın şiddetine bağlıdır. İki metre yüksekten denize atlama sonucu kafanın zemine çarpmasına bağlı ikinci servikal vertebrada fraktür olgusunu sunarak, denize atlama sonucu oluşan cervical yaralanmaları literatürler eşliğinde tartıştık.

Olgu:

33 yaşında erkek hasta trampleden suya atlama sonrası boyun ağrısı şikayeti ile acil servisimize getirildi. Hasta yarım metre yükseklikten denize atlamış ve yaklaşık iki metre derinliğindeki suyun zemine kafası çarpmış.

Fizik muayenesinde genel durumu iyi ,kan basıncı 123/82mmhg, nabızı: 82/dakika solunum sayısı 18/dakika'dır. Palpasyonda servikal iki ve üçüncü vertebra düzeylerinde hassasiyeti mevcuttu. Diğer sistem muayeneleri doğal olan hastanın nörolojik defisiti tespit edilmemiş motor ve duyu kusuru saptanmamıştır. Çekilen servikal vertebra bilgisayarlı tomografisinde ikinci servikal vertebra korpusunda tip 3 fraktürü tespit edildi.(resim 1). Servikal magnetik rezonans görüntülemesinde ikinci servikal vertebra korpusunda tip 3 fraktürü mevcut olup kanal işgali,hematom veya travmatik disk hernisi saptanmadı.(Resim 2) Hasta acil serviste 2 gün müşade altına alındı. Sonrasında servikal kalar ile eksterne edildi.

Tarışma:

Dalış yaralanmaları öncelikle omurgayı etkiler, potansiyel olarak yıkıcı travma nedenidir. Sıklıkla beşinci ve altıncı servikal vertebralar etkilenir. Bizim olgumuzda ikinci servikal vertebrada fraktür gelişmiş diğer vertebralar doğaldır. Hangi servikal vertebranın etkileneceğini zemine çarpan kafa bölümü ile çarpma açısının,atlanan yüksekliğin, zeminin yapısının,kişinin kilosunun ve suyun derinliğinin etkili olduğunu düşünüyoruz. Bizim olgumuzda sert bir zemine kafanın parietal bölümü çarpmıştır. Servikal dalma yaralanmaları yüksek mortalite ve morbidite oranları göstermektedir. İyileşme ilk nörolojik hasarın şiddetine bağlıdır. Olgumuzda spinal kanala basının olmaması, nörolojik hasarın ve hematomun olmaması prognozlu iyi olmasına neden olmuştur.

P951

Ventilation / Invasive and Non Invasive

MOROCCAN EXPERIENCE IN THE NON INVASIVE VENTILATION : A MEDICAL INTENSIVE CARE STUDY

H EZZOUINE, A BENSLAMA, B CHARRA, S MOTAOUAKKIL

Medical intensive care unit, university teaching hospital Ibn Rushd, CASABLANCA, Morocco

Corresponding author: Mme Ezzouine Hanane (ezzouinehanane@yahoo.fr)

Key-words: Moroccan experience ; non invasive ventilation ; medical intensive care unit

Introduction

The non invasive ventilation (NIV) is probably one of the major progresses during the last years in the treatment of respiratory disease in the medical intensive care unit (ICU) .The purpose of this study is to rate the effectiveness of the NIV in the treatment of respiratory disease and demonstrate its place as a method of support and reoxygenation before intubation in ICU Medical UHC Ibn Rushd of Casablanca.

Materials and methods

This is a retrospective study spanning from March 2009 to November 2010.It includes all the patients who had non invasive ventilation in the period studied

Results

74 patients received this ventilation mode due to various etiologies ;8 patients (10,8%) with an ischemic stroke as a method of

support, preoxygenation before intubation in 7 patients (9,5%) and 59 patients (79,7%) as a mode of respiratory support :hypoxemic pneumonia in 14 patients(18,9%) ,cardiogenic acute pulmonary oedema (APE) in 12 patients (16,2%), acute decompensation of chronic obstructive pulmonary disease (COPD) in 10 patients (13,6%), hypoxemic acute respiratory failure (ARF) in 5 patients (6,8%) ,severe acute asthma in 4 patients (5,4%),weaning from invasive ventilation in 3 patients (4%) ,neuromuscular disease in 2 patients (2,7%) and one closed chest trauma.

All the patients benefited from a NIV in spontaneous ventilation following a positive expiratory pressure mode with inspiratory assistance (VS+PEP+AI) and a medical treatment according the indication. The effectiveness of the NIV in 59 patients has been judged according the evolution of the clinical and gazometric parameters. The improvement has been observed in 41 patients (69,5%) against 18 patients (30,5%) that their state worsened under this mode of ventilation. The application of the NIV for hypoxemic pneumonia has been successful in 8 patients (57%) against failure in 6 patients(43%). For the APE , the application knew a success in 9 patients (75%) against (25%) of failure in 3 patients .For COPD, 7 patients (70%) improved against the worsening of 3 patients (30%). For the hypoxemic ARF, 3 patients (60%) improved against 2 patients (40%). For asthma, 4 patients (100%) improved. In postoperative, 3 patients (75%) improved against a single patient (25%) worsened .For the prevention of postextubation ARF , 2 patients have improved against 2 which worsened (50% vs 50%). In weaning from invasive ventilation the 3 patients (100%) improved. For neuromuscular diseases , 1 patient improved against one that has worsened. One closed chest trauma is much improved. The complications of NIV were dominated by the erythems of the face (47,2%), dry mouth (14,8%), sino nasal pain (14,8%), gastric distension (12,6%) and earache (9,4%). 6 patients (10%) were intubated ,ventilated and wellimproved against 12 patients(20,5%) were intubated, ventilated and died secondary to multiple causes.

Discussion/Conclusion

It was found that the NIV has been effective in absolute value in the PAE, the acute decompensation of chronic obstructive pulmonary disease (COPD) , the asthma, in post-operative and in the weaning of the invasive ventilation. The non significance was probably due to the smallness of our sample.

The role of our study is to corroborate the effectiveness of the NIV in the treatment of the cardiogenic APE, the acute decompensation of COPD, the asthma, in post-operative and in the weaning of the invasive ventilation.

P952 Ventilation / Invasive and Non Invasive

PRESSURE CONTROL VENTILATION AND MINITRACHEOSTOMY IN TREATING TRAUMATIC CERVICAL SPINAL CORD INJURY, SPINAL INJURY, MINITRACHEOSTOMY, PERIOPERATIVE MANAGEMENT

Y Iwasaki (1), Y Maeda (2), H Nakao (3), T Nakatani (4)

1. surgery, Iwasaki Hospital, Kagawa, Japan
2. Department of Emergency and Critical Care Medicine, Kansai Medical University, Osaka, Japan
3. Emergency department, Kobe University, Kobe, Japan
4. Department of Emergency and Critical Care Medicine, Kansai Medical University, Osaka, Japan

Corresponding author: Mr Maeda Yuuji (maedayuujii@gmail.com)

Key-words: spinal injury ; minitracheostomy ; perioperative management

Traumatic cervical spinal cord injury is frequently associated with tetraplegia and alterations in respiratory and cardiovascular function that require critical care management.

Complications include respiratory failure, atelectasis, pneumonia, while complications may be managed with supportive care, endotracheal intubation will be needed.

But, when intubation is performed, patient that cannot write and communicate his complaint to medical staffs and others. That is huge stress for patients. We perform cricothyroidotomy set (Mini Track II, Portex®) as a minitracheotomy. Minitracheotomy is very useful and convenient for postoperative patients with tetraplegia because they can talk. However, there is no standard theory concerning the indications, index of the intubation and extubation of the minitracheotomy. In this study, we examined the effectiveness, duration and complications of the minitracheotomy. Patients and Methods. We performed minitracheotomy in 7 patients for postoperative treatment from January 2006 to December 2011. The procedures were anterior fixation (4), posterior fixation (2), extracorporeal fixation. Results. We performed the minitracheotomy on the operative day in 1 cases, 1 cases were on day 1 postoperatively, 1 on day 4, 1 on day 6, 1 on day 10, 2 were on day 11. The duration time of the minitracheotomy is 12 to 41 days. There was no severe complication related to this procedure. Conclusions. The minitracheotomy is very useful and convenient for the postoperative spinal injury patients. There is no specific contraindication of minitracheotomy.

P953 Ventilation / Invasive and Non Invasive

NONINVASIVE VENTILATION IN PRIMARY ANGIOPLASTY

J ALONSO, JM FERNANDEZ, E GARCIA, O GARCIA, MC GONZALEZ, A MARTINEZ, ML MOSTEIRO, S RODRIGUEZ, M RUBIO, J SANTAMARIA

EMERGENCY DEPARTMENT, COMPLEJO HOSPITALARIO PONTEVEDRA, PONTEVEDRA, Spain

Corresponding author: Mr Santamaria Jesus (jesussantamariavalladolid@hotmail.com)

Key-words: NIV ; Acute cardiogenic pulmonary edema ; Primary angioplasty

Introduction

Acute cardiogenic pulmonary edema is a frequent medical emergency with a mortality rate ranging from 10% to 20%, especially when associated with myocardial infarction. Although many patients respond to conventional therapy, some need temporary ventilatory support.

We submit the case of 71 years old male patient attended in the emergency department with symptoms of oppressive chest pain and shortness of breath

of 4 hours evolution, without other accompanying symptoms.

His medical record include hypertension, chronic alcoholism, severe peripheral vascular disease and ex-smoker, so he receives regular treatment with Clopidogrel, Irbesartan / Hydrochlorothiazide and anxiolytics.

On arrival presents SatO₂ 80% with ventimask 35%, tachypnea of 35rpm, a heart rate of 120bpm and blood pressure of 129/81mmHg, without significant changes in the electrocardiogram.

With the clinical suspicion of acute pulmonary edema, noninvasive ventilation with CPAP Boussignac simultaneously with drug therapy was started, acetyl salicylic acid p.o. and intravenous Solinitrina, morphine, and furosemide.

Diagnosis

The arterial gasometry obtained on the patient's arrival shows a respiratory acidosis with pH 7.198, PO₂ 43.1 mmHg, PCO₂ 41 mmHg, HCO₃ 15.6 mmol / l, EB -12.5 mmol / l, which, together with radiological findings of cardiogenic edema confirms the initial clinical suspicion.

In turn, the first determination of cardiac Troponin I is 13.74 ng / ml, with 2 mm elevation in the ST segment from V1 to V4 in the control ECG an hour later.

After discussing the case with the hemodynamic reference service, located in another hospital 20 Km away, the patient is transferred to his unit for primary angioplasty with the diagnosis of STEMI and acute cardiogenic pulmonary edema.

Prior to the transfer 300 mg of clopidogrel, intravenous anti IIb-IIIa and a bolus of heparin was administered.

It was necessary to maintain noninvasive ventilation initiated in the emergency room for both, emergency ambulance transfer, and to allow the patient to tolerate the supine position required for the development of interventional procedure.

Coronary angiography demonstrated multivessel coronary disease with 100% occlusion of LAD, Cx 85% and PL 75%.

The echocardiogram revealed LVEF 30-35% with severe lateral and posterior hypokinesia.

Given the findings the case was discussed with the cardiac surgeons and was accepted for surgical revascularization, which was held a week later after a proper stabilization of the patient in coronary care unit.

Conclusions

Noninvasive mechanical ventilation was applied early in the emergency department as part of initial management of acute cardiogenic pulmonary edema, later proving necessary to permit the proper execution of primary angioplasty. In both cases it was fundamental for the good handling of this case, avoiding intubation of the patient, the complications of this procedure and his admission to the ICU.

P954 Ventilation / Invasive and Non Invasive

EMERGENCY UNIT AND NON INVASIVE VENTILATION IN SEVERE ACIDOSIS: A VIRTUAL STEP DOWN UNIT.

J Alonso, JM Fouce, E Garcia, MC Gonzalez, MT Lopez, A Martinez, JR Parada, S Rodriguez, J Santamaría

Emergency, C.H. Pontrevedra, Pontevedra, Spain

Corresponding author: Mr José Ramón Parada (rparada@mundo-r.com)

Key-words: Non Invasive Mechanical Ventilation ; Step-down units ; Severe Acidosis

Introduction

Non Invasive Mechanical Ventilation (NIMV) means an alternative approach to Conventional Mechanical Ventilation (CMV) treating patients with acute respiratory failure (ARF) requiring ventilatory assistance, reducing endotracheal intubation, decreasing infection complications, mainly ventilator associated pneumonia and shortening hospital stay and mortality.

Over the last decades in the Emergency Room (ER) we have been treating and increasing number of severe but reversible acute respiratory events in patients often very elderly and with mayor comorbidities or chronic disabilities ; several studies provide evidence that denial of intensive care unit (ICU) admission is high in despite of the severity of the respiratory failure , related with high cost and scarcity of ICU beds and to protect patients from useless interventions. Although invasive ventilation is advocated by guidelines in severe acidosis, frequently NIV is deemed the ceiling of treatment

The purpose of this study was to describe the characteristics and clinical outcome of this subset of patients who were treated first in ER and subsequently in ICU or conventional wards.

Material and methods

Retrospective descriptive study from July 2007 to October 2010.

It covered 58 patients matching the following inclusion criteria: Existence of severe ARF in need of ventilatory support with pH < 7,25 and one or more of the several conditions that may led to the decision of withholding invasive ventilation and ICU admission: advanced age ,multiple comorbidities (high Charlson index) and / or Dependant for Daily Living Core Activities (DDLCA) and /or similar episodes of ARF in the past year requiring hospital admission.

Severity of illness classification was assessed by the Acute Physiology and Chronic Health Evaluation (APACHE) II. Comorbidity was measured by Charlson index. and computerized clinical records were used to establish the amount of time spent in the ER with NIV A number of monitoring variables were measured at the procedure start and 60-120 minutes afterwards: Glasgow Coma Score; Heart Rates; Respiratory Rates; pH; O₂ Saturation; Fraction of Inspired O₂; Blood Pressure.

Results

72 % of the patients (59% males and 41% females) were over 70 years and 28% over 85, of these patients only 7% were admitted to the ICU.

72% of the patients showed an APACHE> 20 and in 76% Charlson index was greater than 5; 22% had 3 or more similar episodes of ARF in the past year requiring hospital admission; 43% were Dependant for Daily Living Core Activities (DDLCA).

The causes of ARF were acute cardiogenic pulmonary edema (32,76%), COPD exacerbations (39,65%), community-acquired pneumonia in COPD (8,62%), community-acquired pneumonia (5,17%), and other causes (8,62%).

Overall mortality was 22,41% with a significant trend to increase according to: age (patients older than 85 doubling overall mortality) and the diagnosis of DDLCA and shows linear correlation with severity of illness assessed by (APACHE) II.

There was no relation between Ph at the onset of NIV, Charlson index or previous admission with mortality

The statistical median of time spent in the ER with NIV was 7 hours 15 minutes with wide statistical deviation (Interquartile range P25: 4h3m-P75: 10h39m).

Overall mortality of patients who spent less than 8 hours in ER are very high (35,29%), including patients managed in conventional ward and ICU, compared with patients managed in ER during the first 8- 12 hours (7,29%), although only 1 patient died in this period of time.

The controlled parameters improved in a relevant statistical way along the second measurement.

Conclusions

In real life medical practice there is an important percentage of patients (elderly, with major comorbidities and chronic disabilities) with severe ARF that are denied ICU admission, since conventional ventilation is not (deemed app) considered to be in their best interest and are managed in conventional medical wards.

As life expectations in chronic ill patients and general population increases, there is a great amount of patients with ARF treated in the ER with proved success for which NIV is their ceiling of treatment.

Overall mortality increases highly in unstable patients admitted in hospital areas without the means and personal expertise for the secure management of this patients, thus the urgent need of step-down units that warranty the optimal monitoring, care and survival of this patients after appropriate stabilization in the ER seems increasingly clear, avoiding prolonged stay in emergency departments.

P955

Ventilation / Invasive and Non Invasive

CEREBRAL BLOOD FLOW, HYPERCAPNIA, ETCO₂, FIO₂ AND PAO₂ CHANGES IN MECHANICALLY VENTILATED PATIENTS.

R Koylu (1), ZD Dundar (1), NB Akilli (1), E Akinci (1), B Cander (1), O Koylu (2), MO Gonen (1), H Mutlu (1)

1. Emergency Department, Konya Education and Research Hospital, Konya, Turkey
2. Biochemistry Department, Konya Education and Research Hospital, Konya, Turkey

Corresponding author: Mr Koylu Ramazan (drkoylu@yahoo.com)

Key-words: Cerebral oximetry ; mechanical ventilation ; hypercapnia

BACKGROUND AND PURPOSE: Hypercapnia can reduce cerebral perfusion pressure, and early initiation of mechanical ventilation may improve cerebral hemodynamics in critically ill patients. We aimed to evaluate whether there was a correlation between hypercapnia and cerebral blood flow and the effects of ETCO₂, FIO₂ and PaO₂ changes on it.

SUBJECTS AND METHODS: Mechanically ventilated patients were evaluated for this study. The presence of serebral edema or any intracranial pathology was a cause of elimination. All parameters were estimated just before mechanical ventilation and again before all changes in ventilator settings until the PaCO₂ was stable. On admission, serebral edema or any intracranial pathology was eliminated by computed brain tomography. Cerebral oxygenation was monitored noninvasively using oximetry with transcutaneous oxygen electrodes. Invasive mechanical ventilation care (IMVC) was started on hospital admission as standard of care when considered necessary by treating physicians. IMVC was initiated using bilevel mode with 100% fraction of inspired oxygen. The differences between these parameters were compared.

RESULTS: The mean age of 21 patients was 53±17.9 years old. 9 of them were male. 6 patients were entubated and connected to the invasive mechanical ventilator because of breathing disorders due to cardiac arrest, 9 of them were obstructive pulmonary disease, 3 of them were renal failure, 2 of them were diabetes mellitus and one of them was for pulmonary embolism. Patients who have normal PO₂, ETCO₂ and PaCO₂ values have higher cerebral oxygenation index over %65. And decreasing in sistemic arterial blood pressure was concluded with a decrease in cerebral oxygenation index.

CONCLUSIONS:

Setup of mechanical ventilators must be truly adjusted for continuing adequate cerebral perfusion in ventilated patients. Cerebral oxygenation has to be monitored closely with the vital signs. Hypoxia and hypercapnia cause increased intracranial pressure by cerebral vasodilatation. Because of this reason, we have to avoid from hypoxia and hypercapnia.

On the other hand, decreased CO₂ level because of hyperventilation can cause vasoconstriction and ischemia. Therefore, it can be resulted with undesirable reasons.

Secondary damage due to cerebral hypoxia must be prevented. The most important factors that cause secondary damage are ischemia and hypoxia. Because of all these reasons, it is so important to monitorize the vital signs and cerebral oxygenation by using noninvasive oximetry with transcutaneous oxygen electrodes in critically ill and ventilated patients.

This report provides useful clinical anecdotes but must be followed by more carefully controlled clinical trials to ascertain the indications for and benefits of this type of monitoring in emergency departments

P956

Wound Care / Burn Care

PREDICTORS OF MORTALITY AMONG BURN PATIENTS IN NATIONAL GUARD HOSPITAL IN SAUDI ARABIA

MA Aljohani (1), MA Alsalamah (2), MO Alotaibi (3), AN Alnamlah (4), SQ Alqahtani (2), GC Ciottone (5)

1. Emergency Medicine, King Abdulaziz Medical Center, National Guard Hospital. BIDMC, Harvard Medical School, Waltham, United States
2. Emergency Medicine, National Guard Hospital-Riyadh, Riyadh, Saudi Arabia
3. Emergency Medicine, Security Force Hospital, Riyadh, Saudi Arabia
4. Plastic Surgery, National Guard Hospital-Riyadh, Riyadh, Saudi Arabia
5. Harvard-Affiliated Disaster Medicine/Emergency Management Fellowship. Harvard Medical School Disaster Section / Division of Disaster Medicine. Beth Israel Deaconess Medical Center., Beth Israel Deaconess Medical Center, Boston, United States

Corresponding author: Mr Aljohani Majed (mjohani@hotmail.com)

Key-words: Age and total body surface area are the most significant predictors of Mortality among Adult Patients. ; There is clear association between type of burn and Mortality, Flame burn having the highest association. ; Age was an insignificant predictor of Pediatric Mortality in our population

Background:

Advances in burn and critical care, including aggressive resuscitation and early excision and grafting, have significantly decreased Morbidity and Mortality in these cases. Nevertheless, severe burn remains a major cause of debilitation and death. Age and Total Body Surface Area (TBSA) affected have been shown to be the most significant predictors of mortality in most of the studies.

Objectives:

To determine if by using Linear Regression module taking into account age and TBSA% we can accurately predict Mortality in our study population. And to determine the demographics of Patients with burn in our population.

Methods:

A retrospective chart Review study, Retrospective Cohort, of 619 patients who were admitted with acute burn injury to the King Abdulaziz Medical Center burn unit in Riyadh from January 2003 - May 2009. Linear regression Analysis was used.

Results:

Six hundred and nineteen patients were included in the study. The mean age was 18 +/- (19) with a range of 1-93 years. There were 61% males. The mean TBSA% was 21% +/- (23) with differing types of burn; Flame (43%), scald (44%), chemical (10%), electrical (2%) and others (1%). The overall mortality was 8.6%, with clear significance between type of burn and mortality (Value 0.000, Fishers exact test). The highest mortality was associated with flame burn (89%). By combining Age and TBSA% we came up with a linear regression module that predicts mortality in adults (R square = 0.5). The coefficient of age was 0.3 (p-value = 0.01) and the coefficient of TBSA was 0.9 (p-value=0.00).

Mortality in Adults = -19 + (0.3 x AGE) + (0.9 x TBSA%).

For pediatric patients, the model showed insignificant age coefficient (0.12; P.Value =0.6) while the TBSA was (0.45 ; P.Value=0.00) with an R-square (0.25).

Conclusion:

Although mortality in adults increases with rising TBSA% and Age, Age was an insignificant predictor of Pediatric Mortality in our population. More studies and a consensus should be established before creating clinical guidelines.

P957

Wound Care / Burn Care

TOY BALLOONS ARE NOT SO INNOCENT : A RARE CAUSE OF BURN INJURY

A Karagöz, N Vandenberg

Emergency Department, Izmir Atatürk Research and Training Hospital, Izmir, Turkey

Corresponding author: Mme Van Den Berk Nergiz (nvandenberg@yahoo.com)

Key-words: burn ; children ; balloons

Burns are common type of injuries in patients presenting to Emergency Department. Spontaneous flaming of flying toy balloon is a very rare cause for these injuries. Here, we present a case of burn injury caused by spontaneous flaming of flying toy balloons. He had grade 2 intermediate burn injury on both sides of both hands and grade 1 on his face. His injuries were healed without complications with wound dressing and medical therapy. It's essential to take measures about using acetylen to inflate flying toy balloons for preventing these injuries.

K/uL (NEU: 96.3%) and a high sedimentation rate, other parameters were in normal limits. Computerized tomography (CT) of thorax with intravenous contrast (IVC) showed nodular areas of infiltration-consolidation with air bronchograms within in both lungs and multiple lymph nodes at both axillae, the largest being of 21x15 mm on the right side. Neck CT with IVC revealed multiple lymph nodes at the anterior-posterior cervical chain and supraclavicular area bilaterally, the largest being 22x18 mm, with a tendency to coalesce, fistulizing to skin, containing areas of necrosis within, and extending to vocal cords at the level of hyoid bone. Based on these radiologic findings, initial diagnoses of miliary tuberculosis and neck abscess related to tuberculous lymphadenitis were made. The patient was transferred to the department of chest diseases. There were no proliferation in sputum and abscess cultures; however, (+++) bacilli were observed on Ziehl-Neelsen histochemical staining of sputum. Multi-drug antituberculosis treatment, wide-spectrum antibiotherapy and symptomatic supportive treatment were begun.

Discussion: Tuberculosis maintains its importance in developing countries owing to its high risk of morbidity and mortality. In recent years, skin tuberculosis has been increasingly observed in developing countries because of increased prevalence of HIV infection and immunosuppressive drug treatment. Although mortality of skin tuberculosis is not that high, it should be remembered in differential diagnosis owing to its chronic course and requirement of multi-drug regimens.

Conclusion: Skin tuberculosis is a rare form of extra-pulmonary tuberculosis. Skin tuberculosis has no increased morbidity; however, its chronic course and necessity of multi-drug regimens increase its importance. In countries like ours, where tuberculosis poses a risk for public health, the differential diagnosis of chronic skin lesions should always include skin tuberculosis.

P958

Wound Care / Burn Care

A RARE CAUSE OF NECK ABCESS: SCROFULODERMA

HM Durgun, C Guloglu, O Kaçmaz, M Orak, A Ozhasenekler, M Ustundag,

Emergency Department, University of Dicle, Medical School, Diyarbakir, Turkey

Corresponding author: Mr Ozhasenekler Ayhan (drhasenek@hotmail.com)

Key-words: neck abscess ; scrofuloderma ; emergency department

Introduction: One of the extra-pulmonary manifestations of tuberculosis is skintuberculosis. The second most common form of skin tuberculosis is scrofuloderma. Scrofuloderma typically extends to neighboring structures or results from a tuberculous lymphadenitis. In cold abscess formation, scrofuloderma causes disruption of the underlying skin. It frequently involves parotid, submandibular, and supraclavicular regions and lateral aspects of the neck. Ulcers and sinuses develop and a fluid, purulent or caseous material discharge may be observed. Sinusoidal tracts deform the skin and causes subcutaneous pocket and soft nodule formations.

Key Words: neck abscess, scrofuloderma, emergency department

Objective: The aim of this study is to draw attention to rare presentations of tuberculosis and to remind readers scrofuloderma as an etiology in patients presenting to emergency department with neck abscess.

Case report: A 79-year-old lady presented to our emergency department with a purulent wound on the right side of her neck. Her lesions had been present for 2 months with no response to various oral and topical antibiotics. She had no history of previous tuberculosis. She did not have any systemic complaints like cough, weight loss, and fever. On physical examination, she had a poor general appearance, was conscious, and had purple-colored 12-cm-long cicatrices with an erythematous circumference extending anteroposteriorly on the right side of the neck, as well as an ulcerated lesion of 1x6 cm with irregular and protruded borders and a center with a purulent discharge. Other systems were normal on examination. She had a blood pressure of 90/50 mmHg, pulse rate of 114 bpm, respiratory rate of 14/min, and body temperature of 37.2°C. Laboratory tests revealed a white blood cell (WBC): 19.3

P959

Wound Care / Burn Care

ANALYSIS OF BURN CASES OBSERVED AFTER 2011 VAN EARTHQUAKE

R Dursun (1), S Karadas (2), G Görmeli (3), Y Isık (4), C Cakır (5), CA Görmeli (6)

1. emergency department, Van Region Training and Research Hospital, van, Turkey
2. emergency department, Yüzüncü Yıl University, van, Turkey
3. orthopedy department, Van Region Training and Research Hospital, Van, Turkey
4. Anesthesiology department, Yüzüncü Yıl University, van, Turkey
5. Burn department, Van Region Training and Research Hospital, van, Turkey
6. Radiology department, Van Region Training and Research Hospital, van, Turkey

Corresponding author: Mr Dursun Recep (drrecep@dursun@hotmail.com)

Key-words: Earthquake ; burn ; tent

INTRODUCTION

Earthquake is one of the natural disasters which cause the greatest deaths and injuries in the world and in turkey. The Van earthquake was a destructive magnitude (7.2 Mw) earthquake that struck eastern Turkey near the city of Van on Sunday, 23 October 2011 at 13.41 local time. It occurred at a shallow depth of 19 kilometres. There were 604 casualties at this earthquake. 17 days after the earthquake (on 9 November, 2011), another earthquake on different fault line occurred on 21.23 local time due to trigger of first earthquake. It was centred as Edremit which is in the southwest of Van and 10 km far from here; the magnitude was 5.6 (Mw) and occurred at a depth of 5 km. since people had immigrated to other cities and others had settled into tents, there were only 40 casualties. While 222 people were rescued alive from the wreckage from both earthquakes; nearly 6000 people were

injured. 72242 houses were determined to be destructed and heavily damaged.

One of the most important morbidity and mortality reasons observed after earthquake is fire. Determination of the reasons of these fires and risk groups may help increase morbidity and mortality which occur due to earthquake. Therefore, in the current study burn cases observed after Van earthquake was compared with the burn cases of the same months and same city in previous year; changes which occur in the number, way, degree of burn and on the surface of burning body were analyzed.

MATERIALS AND METHODS

Patients who registered at Van Region Education and Research Hospital within 3-months-period after earthquake was determined as group 1; patients who registered within same time interval in the previous year were determined group 2.

RESULTS

There were 121 patients in Group 1. 16 of the cases were sent to other center after earthquake due to renovation of local burn unit, 42 of them had outpatient treatment 63 cases received inpatient treatment at burn-unit. There 89 cases in Group II. 4 of the cases were sent to other centers due to patient occupancy at burn unit, 28 of them had outpatient treatment 57 cases received inpatient treatment at burn-unit. It was determined that 35,95% of the burn cases in Group 1 has increased. Scald burns were much more than flame and electric burns in both groups and rate of scald burn was statistically significant in both groups compared to other kind of burns ($p=0,001$). Flame burns were observed 4.8 times more in Group 1 compared to Group II ($p=0,002$). 48% (39,6%) of the burn cases observed in Group 1 had occurred due to 28 tent fire.

Both superficial and deep burn were broader in Group 1 compared to Group 2 (respectively $p=0,004$ and $p=0,001$).

Exitus was observed at 25,4% of the cases ($n:16$) in Group 1; 7% ($n:4$) of the cases in group II. There was no statistically significant relation between mortality and age, gender, burn degree, interventions between groups. While 75% ($n: 12$) casualties at group I occurred as a result of flame burns of tent fires, 75% ($n:3$) casualties at group II occurred due to electric shock.

DISCUSSION

It was observed that burn cases in this study have increase compared to the previous year and much of the cases are flame burns (44,4%). The reason for flame burns being observed much following Van earthquake is that generally tents were used for temporary shelter. Moreover, due to the earthquake having occurred in winter and that the temperature falls down to -20°C in this city, stoves and electrical devices are used in the tents. Heating these inflammable tents which such kind of heating techniques poses potential risk for fires. In this study, burn cases observed both before and after earthquake influenced young people more.

As a result; in the study presented here, it was found that the number of cases registered for burns, the number of flame burns, percentage of total body burn and mortality rate is higher after the earthquake compared with the time previous earthquake. In order to decrease the effect of disasters, it is compulsory to conduct plans before the disaster. Precautions should be taken, training shall be given; temporary settlement places such as tent cities should be built by the experts for the hindrances to occur in settlements following the disaster.

P960

Wound Care / Burn Care

PREDICTORS OF MORTALITY IN CHILDHOOD BURNS: AN EIGHT-YEAR REVIEW

MN Akcay (1), S Aslan (2), ZG Cakir (2), G Ersunan (3), H Kandis (4), G Ozturk (1), A Saritas (5)

1. General Surgery, Ataturk University Medical Faculty, Erzurum, Turkey
2. Emergency department, Ataturk University Medical Faculty, Erzurum, Turkey
3. Emergency department, Rize University Medical Faculty, Rize, Turkey
4. Emergency department, Duzce University Medical Faculty, Duzce, Turkey
5. Emergency department, Duzce University School of Medicine, Duzce, Turkey

Corresponding author: Mr Saritas Ayhan (a_saritas_@hotmail.com)

Key-words: Burns ; pediatric ; death

Background: This study aims to analyze the epidemiological characteristics and predictors of mortality from burn injuries in childhood patients admitted to our hospital during the eight-year period.

Methods: The medical records of acute childhood burn patients were reviewed retrospectively. All variables thought to be associated with mortality were entered in a multiple binary logistic regression model (method=stepwise). The magnitude of risk was measured by the odds ratio, and the confidence interval 95% was estimated.

Results: A total of 2,269 acute childhood burn patients were admitted during the study period. A total of 86 (3.8%) children died due to burn injuries. Deaths were seen 1.849 times more in males than in females. According to the 1–10% TBSA burned group, mortality occurred 121.116 times more in the > 41% TBSA burned group.

Conclusions: Most burn injuries can be avoided by keeping children away from hazardous and dangerous environments. Also, requiring a multidisciplinary management in these patients, quality of care services given by physicians and nurses certainly will create a positive impact on patients' outcomes.

P961

Wound Care / Burn Care

SOCIO-DEMOGRAPHIC CHARACTERISTICS OF PATIENTS WITH ELECTRICAL BURN

A. Akoz (1), B. Ozogul (2), U. Avsar (3), Z.G. Cakir (1), S. Aslan (1), M. Emet (1)

1. Emergency Medicine, Ataturk University Medical Faculty, Erzurum, Turkey
2. General Surgery, Ataturk University Medical Faculty, Erzurum, Turkey
3. Family Medicine, Ataturk University Medical Faculty, Erzurum, Turkey

Corresponding author: Mr Akoz Ayhan (akozayhan@gmail.com)

Key-words: Electrical burn injury ; emergency department ; mortality

Introduction: Electrical burns may develop due to direct effect of electric current on cell membrane and smooth muscle of blood vessels, and due to transformation into heat energy while passing through body tissues. Electrical burns account for 3 to 5 % of all cases of burns.

Methods: A total of 213 patients with electrical burns admitted to our emergency department (ED) between 2001 and 2011 were analyzed retrospectively.

Results: The mean age of patients was 32 ± 10.8 (min.18 - max.72 years) and 86.9% ($n=185$) of the patients were male. According to provinces, 63.4% ($n=135$) of patients were from Erzurum, 10.3% ($n=22$) came from Agri, and 5.2% ($n=11$) came from Van. The majority of patients (63.4%; $n=135$) were living in the city centers, followed by patients in the village (22.5%; $n=48$) and the county (14.1%; $n=30$) respectively. The most common occurrence times of

burns were 14:00 (5.6%; n=12), 10:00 and 11:00 (4.2%; n=9). Of the patients, 39.4% (n=84) had admitted to our ED between 18:00 and 24:00. Third degree burns were seen in 57.9% (n=127), second degree in 39.4% (n=84) and first degree in 0.9% (n=2). Subarachnoid hemorrhage was accompanied to one patient, and acute abdomen to another one. Of the patients, 51.2% (n=109) was sent to our ED from other centers, 59.2% (n=126) of patients were directly admitted to our burn center, 9.9% (n=21) of the patients were referred to another hospital from our ED because our burn center was out of bed, and 5.2% (n=11) of the patients refused admission. Mortality was 2.7% (n=6) in the burn center. Electrical burns were seen most frequently in August (14.1%; n=30), June (11.3%; n=24), and July (10.3%; n=22). However, it was rarely seen during winter months (16%; n=34). The average days of hospitalization were 26.4 ± 17 (min.1 - max.141 days).

Conclusion: Electrical burns are not common compared to other burns but have high percentage of third degree burns. Frequency of electrical burns increases especially in the summer in our region.

P962*Wound Care / Burn Care***CHARACTERISTICS OF PATIENTS WHO ADMITTED TO THE EMERGENCY DEPARTMENT BECAUSE OF BURNS DUE TO DENS LIQUIDS SUCH AS HOT MILK / OIL**

A. BAYRAMOĞLU (1), M.T. SENER (2), Z. ÇAKIR (1), S. ASLAN (1), M. EMET (1)

1. Emergency Department, Ataturk University Medical Faculty, Erzurum, Turkey

2. Forensic Medicine, Ataturk University Medical Faculty, Erzurum, Turkey

Corresponding author: Mr Bayramoglu Atif (atifbay@gmail.com)

Key-words: Burn injury ; Dens liquids ; Emergency department

Introduction: Burns are life-threatening conditions that cause great destructions. In the literature, almost all burns regarding liquids are found to be due to hot water. However, according to our experience, dens liquids such as hot milk/oil should be analyzed alone as the clinical course and outcomes of the patients do differ. Here, we represent characteristics of dens liquid burns.

Method: We analyzed the patients with dens liquid burns admitted to our emergency department (ED) between 2003 and 2008, retrospectively.

Results: Totally, 28 patients were included in the study. The median age was 26.5 (min.20-max.53 years) and 75% (n=21) of patients were female. Of the patients, 89.3% (n=25) were directly admitted to our ED and 10.7% (n=3) were referred to our hospital after first aid in another ED. Of the patients, 75% (n=21) were discharged after the treatment in the ED, 14.3% (n=4) were hospitalized in the burn center, 7.1% (n=2) were referred to another hospital from our ED because our burn center was out of bed, and 3.6% (n=1) refused hospitalization. This burns were seen most common in the spring (28.6%; n=8) and mostly in May and June (17.9%, n=5). In the burn center, the median duration of hospitalization was 24.5 (min.3-max.37 days). The median percentage of burn area was 3%. Frequencies of burned area according to body parts were as follows: the head and neck 39.3% (n=11), the anterior trunk 14.3% (n=4), the posterior trunk 17.9% (n=5), the right upper extremity 50% (n=14), the left upper extremity 35.7% (n=10), the right lower extremity 21.4% (n=6), and the left lower extremity 89.3% (n=25). All of burns were 2nd degree.

Conclusion: Burns due to hot milk and oil are more frequently seen in women and in the spring unlike other burns. These burns are usually 2nd degree and have higher percentages of discharge from ED.

P150 = Poster with final number 150 / F11:4 = 4th Oral presentation in the F11 Session / G22:5 = 5th Oral presentation in the G22 Session

AUTHORS' INDEX

[illegible]

BARUT H.	P582, P800	BILGIN B.C.	P948	BURANY B.	P559	CASTELLANO E.	P603
BARUT M.	P800	BILINÇ H.	P788	BURDEOS PALAU E.	P553	CASTELLS JUAN S.	P043, P531, P533, P553, P577
BAS A.	P226	BILIR BO.	P070, P598, P757, P901	BURNOD A.	P405		
BAS EA.	P335	BILIR O.	P129, P172, P217, P218	BURSALI KB.	P026	CATTANMANCHI SC.	F23:1
BAS M.	P020, F21:1	BILLIA M.	G33:4	BUSAN AM.	P782	CAUGANT F.	P348
BASA A.	P916	BINKOWSKA A.	P055	BUSCAGLIA E.	P493, P494, P496, G21:5	CAVUS FO.	P161
BASARAN E.	P470	BIRCAN M.	P151, P152, P155, P157	BUTNARU E.	P829	ÇAVUŞ UY.	P151, P152, P153, P155, P156, P157, P161, P164, P221, P231, P570, P614
BAŞOL N.	P054, P582, P798, P821	BIRKAN Z.	P879	BUTTS C.	P106		
BASTERRET XEA A.	P557	BISCHOFF S.	P713, P772, F11:2	BUYS E.	F34:2	ÇAY E.	P241, P302
BASTURK M.	P817	BIYIK I.	P619	BÜYÜKÇAM F.	P047, P167, P168, P177, P184, P209, P210, P211, P219, P220, P232, P241, P251, P252, P267, P278, P302, P319, P614, P791, P842, P892	CAYIR Y.	P914
BATT MO.	F34:5	BLANCKAERT P.	P792			CEBI D.	P228
BATTAL S.	P291	BLANCO A.	P603			CEBİCCİ H.	P335
BATTISTIOLI M.	P415	BLASCO-ESQUIVIAS I.	P666			CEHRELİ OB.	P198, P199, P208
BATUR A.	P082, P605, P612	BODUR AS.	P605, F32:4, G32:4	BUYUKKAYA R.	P237, P238, P600	CELBEK G.	P823
BAYAROGULLARI H.	P186	BODUR S.	P031, G31:7			CELEBI E.	P824
BAYATA S.	P023, P042, P376, P574	BOELSMA N.	P717			ÇELENK Y.	P923
BAYDIN A.	P176, P561, G21:7	BOER W.	P512			ÇELİK A.	P026, P803
BAYINDIR Y.	G23:5	BOERIU C.	P112, P154	C		ÇELİK C.	P474
BAYIR A.	P309	BOESS G.	F31:3	CABELLO I.	P755	ÇELİK GK.	P085
BAYKAN H.	P653	BOLAT H.	P839, P845	CACCIAVILLANI L.	P356	ÇELİK K.	P838
BAYLE E.	F34:5	BONDARUK L.	P055, P354	CADAU MP.	P927	ÇELİK M.	P363, P651, P652
BAYRAKTAR G.	P006	BONDEVİK GT.	P739	CADELO L.	P515	ÇELİK MM.	P033
BAYRAM M.	P922	BONETTO V.	P544	CAFEROV T.	P312	ÇELİK S.	P321
BAYRAM MK.	P156, P221	BONITO MC.	P806	ÇAĞLIYAN E.	P796	ÇELİK Y.	P033, P045, P197
BAYRAM R.	P809, P810	BONORA A.	P079, P680	ÇAKAR A.	P303, P933, P938	ÇELİKEİ E.	P866
BAYRAMOĞLU A.	P018, P205, P213, P214, P216, P222, P224, P254, P257, P258, P288, P316, P317, P463, P644, P673, P744, P884, P891, P903, P904, P905, P906, P907, P909, P910, P915, P962	BOONE C.	P008, P529	ÇAKIR C.	P959	CELİKER İM.	P026
		BORCEA H.	P180, P276	ÇAKIR M.	P282, P300	CELINSKI D.	P055, P354
		BORCEA HL.	P480, P589	ÇAKIR OD.	P141, P158, P190	CEMİL KAVALCI MD.	P675
		BORENSZSTEIN R.	P540	ÇAKIR Z.	P205, P213, P214, P216, P257, P258, P317, P960, P961, P962	CENGİ V.	P063
		BORRELLI F.	F32:2			CERİNS U.	P063
		BORSALI-FALFOUL N.	P069, P432, P556, P676, P681	CAKSEN H.	P609, P727, P746	ÇETİNKAYA M.	P281
BEAUNE S.	P841	BORTOLUZZI A.	P356	CALDI F.	G23:6	CETINKAYA O.	P414, F23:2
BECEL S.	P085, P174, P646, P818	BORUP M.	G33:7	CALDWELL E.	F22:1, F22:3	CEVIK E.	P045, P046, P120
BEUCUCCI A.	G23:9	BOSMAN D.	P730	CALIK G.	P366, P388, P483, P694, P698	ÇEVİK M.	P251
BEDİR A.	G21:7	BOTEA M.	P049			CEVIK SE.	P141, P158, P190
BEİJE F.	P687, P705	BOTHA L.	P781	ÇALIK M.	P209, P210, P211, P842	ÇEVİK T.	P949
BEKAR O.	P326	BOUBAKER H.	P066, F32:5, F11:5	ÇALIŞKAN F.	P169, P170, P171, P181, P332, P758	CEVIK Y.	P035, P473, F34:7, F33:5
BEKGOZ B.	F22:7	BOUDAA M.	P445			ÇEVİRİM O.	P076
BEKTAŞ F.	P797	BOUDRIGUA N.	P078	CALISKAN K.	P466, P597, P659	CEYLAN A.	P167, P168, P177, P209, P210, P211, P219, P220, P232, P241, P251, P252, P267, P278, P302, P319, P614, P761, P842
BELAİD A.	F32:5	BOUGET J.	P392, P613	CALK A O.	P654		
BELLEC C.	F34:5	BOUHAIJA B.	P078, P760, P774, F32:7	CALLAGHAN M.	P394	CEYLAN MF.	P625, P626
BELLİLİ S.	P774, F32:7	BOUIDA W.	P066, F32:5, F11:5	ÇALTILI C.	P916	CEYLAN Z.	P465
BELLOU A.	P392, P613, F31:4, F31:3	BOUIKEF R.	P066, F32:5, F11:5	CAMACHO C.	F21:6	CHANTOISEAU S.	F11:3
BELTRÁN SÁNCHEZ A.	P428	BOULIN M.	G23:4	CAMAJORI TEDESCHINI R.	P481, G34:2	CHARGUI A.	P069, P556, P681
BEN AMMAR L.	P069	BOUREAU-VOULTOURY A.	F33:4	CAMAS C.	P540		
BEN GUEDDOUR R.	P539	BOURGUIGNON P.	P405	CAMERON P.	G11:8	CHARITIDOU S.	P050, P110, P111, P136, P427, P499, P578, P807, P951
BEN HAMIDAA.	P681	BOURRHILLON C.	P858, F22:9, F33:7	CAMPILLO D.	F32:1	CHARRA B.	
BEN JRAD G.	P539, P647, P801	BOURSIER M.	P699, F33:6	CAMPILLO R.	P071		
BEN LASSOUED M.	P501, P514, P539, P647, P801	BOUTON MB.	F23:1	CAN C.	P026, P179, P261, P262, P292	CHASE DG.	F22:2
		BOWMAN SH.	P003, P439			CHATWIN H.	P306
BEN NASR S.	P647	BOZ BV.	P237, P238, P470, P830	CAN S.	P834	CHAUDHARY H.	P735
BEN SALAH M.	P501, P514, P801	BOZDEMİR MN.	P025, P362, P431, P650, P827	CANCIU A.	F24:7	CHEAH PK.	P122, P130, P135, P857, F23:6
BEN SOLTANE H.	F32:5			CANCRINI C.	P642		
BENGTSSEN E.	F23:9	BOZKURT A.	G21:7	CANDAR M.	P206, P207, P237, P238, P470, P830	CHEEMA M.	P234, P235
BENITO FERNANDEZ J.	P717	BOZKURT O.	P289, P849			CHEN CT.	P526
BENNOURI I.	P501, P514, P539, P647	BOZKURT S.	P080, P081, P131, P162, P253, P294, P386, P387, P467, P471, P653, P749, P752, P787, P839, P845	CANDER B.	P006, P021, P027, P031, P034, P036, P038, P072, P091, P124, P125, P126, P127, P128, P242, P315, P325, P339, P366, P388, P442, P451, P475, P483, P509, P519, P521, P522, P576, P580, P605, P609, P612, P694, P698, P710, P727, P728, P746, P770, P785, P795, P804	CHERIF MA.	P078, P760
BENSLAMAA.	P050, P110, P111, P136, P427, P499, P578, P807, P951					CHERMİTİ I.	P514
		BOZKUS FE.	G31:4			CHESTERS A.	P491
BERBEN S.A.A.	F31:2	BRAAM R.	P077			CHEUNG P.	P440, P441
BERBEN SA.	P691	BRACCO F.	P495			CHIEW N.	P122, P130, P857
BERECİARTUA E.	P511	BRAMLI M.	P069, P432	CANDIRLI C.	P155	CHIAMPAS G.	F21:2
BÉRES ZL.	P480	BRAUN F.	F31:4	CARBAJO S.	P334, P511, G11:7	CHIARA F.	P494, P495, P497, G21:5
BERGER MY.	G11:5, G33:8	BRAVO M.	P603	CARBONE J.	P296	CHIBOUB DH.	P556
BERTUCCI PG.	P500	BREAUX R.	P105, P106	CARDONA J.	F33:4	CHIBOUB S.	P774
BESİR FH.	P185, P585	BRESLIN T.	P365	CARENZO L.	P147, P454, F23:5	CHITPATIMA ST.	P525
BESLAGIC E.	P191	BRICHE F.	P699, F22:9	CARLEY S.	P394	CHIU MT.	P444, P688
BEUKEMA RJ.	P068	BRIGIS G.	P738	CARNEIRO R.	F24:8	CHKIR M.	P760
BEYDİLLİ H.	P025, P149, P150, P202, P281	BRONSELAER K.	P418	CARPENTIER E.	G33:6	CHO J.	P661, P662, F21:3
		BROPHY D.	P390	CARRILLO N.	P071	CHOI HK.	P371, P773
BEYDİLLİ I.	P362, P827, P846	BUAYEN N.	P416, P672	CARRIO R.	P555	CHOI HS.	P725, P726
BEYER I.	P482	BULIKOVA T.	P734	CARSTEAN.	P686	CHOI J.	P709, P715
BIANCHI S.	G23:9, G23:6	BULLER G.	P436	CASAL SANCHEZ A.	P367, P368, P722, P723, P776	CHOI MJ.	P374, P726
BIARENT D.	P717	BULUR S.	P600			CHOO JH.	P371, P773
BICER A.	P823	BULUT M.	P335, P836, P837, P838, P900			CHOUCHENE H.	P066
BIGIARINI S.	G22:7					CHOUIKH N.	P556, P676
BILBAULT P.	P835, P897, G23:4					CHUANG YS.	P410
BILDIK F.	P329, P434, F22:7						
BILGE S.	G21:7						
BILGIC S.	P311						

CHWOJKA C.	P359	DAGTEKIN E.	P067	DEVEER M.	P149, P150, P202	DURMUS O.	P335
CIATATONE A.	F22:6	DAHAN B.	F33:2	DEVRIENDT B.	P008, P529	DURSUN R.	P139, P160, P380, P414, P571, P625, P626, P654, P874, P893, P959, F23:2, G24:4
CIBINEL GA.	P004, P443, P544, F11:9	DAKAK M.	P925	DHOND T E.	P945, F24:2, F24:3		
CICCHINI C.	P314	DALLE NOGARE S.	F24:6	DHOOGHE N.	P166		
CICEKLER H.	P034	DAMAR O.	P165, P583	DI ANGELO C.	P927	DURU M.	P597, P659
ÇİFTÇİ H.	F11:1	D'ANDREA S.	P343, P875	DI MATTEO L.	F23:5, F23:4	DURUKAN B.	P087, P268, P869
ÇİFTÇİ O.	P831	DANIELE P.	P562	DIAZ MA.	P603	DURUKAN P.	P087, P093, P266, P268, P489, P575, P869, G31:1
ÇİFTÇIOĞLU H.	P803, G21:4	DANLI N.	P233, P465, P486, P487, P488	DİBEK K.	P156, P161		G31:2
ÇİĞŞAR G.	P303, P933, P938, P948	D'ANNA C.	G34:1	DIÉGUEZ S.	P518, F21:4		P132, P133, P299, P309, P310, P311, P313, P398, P567, P677, P944
ÇIKMAN M.	P207, P237, P238, P470, P830	DARAWSH E.	F34:8	DIETIENS G.	P805, G21:2	DURUSU M.	
		DAŞ M.	P035, F34:7	DIETIENS G.J.	P411, P412, P413		
ÇIKRIKCI G.	P473, F33:5	DATCU M.D.	P037, F32:8	DIEMUNSCH P.	P348		
ÇILDIR E.	P572	DATTA D.	G32:5	DIEPEVEEN SH.	P099		
CİMLİ OZTURK T.	P507	DAVILA N.	P555	DIKBAS O.	P464	DUSINSKA M.	P354
CIMPOESU D.	P037, F32:8	DAVUTOĞLU V.	P790	DIKICI S.	P237, P585, P599, P600	DUYMAZ H.	P322
CIMPOESU DC.	P422, P460, P829, F11:4	DAY TE.	P543	DIKME O.	P246, P828		
ÇINAR C.	P610	DB SEO.	P725	DIKMEŞ C.	P242, P728, P795, P822, P946, G32:6		
CİOTONE GC.	P956, F23:1	DE BEAUFORT H.	F34:2				
CİULU C.	P453	DE CARLO S.	P551	DILLEN P.	P008, P529	E	
CIUMANGHEL I.	P422	DE CLERCQ S.	G24:7	DILSIZOĞLU D.	P839, P845	EBBEHØJ NE.	F22:8
CİVELEK C.	P152, P155, P231, P570	DE DOOY J.	P717	DILTOER M.	P482, G23:1	ECMEL ONUR O.	G22:4
CIVITA M.	P004, P443, P544, F11:9	DE KRUIFF C.	P730	DINC H.	P118	EFE E.	P162
CLAESSENS B.	P008	DE LA TORRE I.	P603	DISEL N.R.	P847	EGBERINK RE.	P880
CLAPSON P.	F33:6	DE LAS NIEVES E.	F32:1	DISERÒ L.	P551	EIKENDAL A.	P730
CLAUSSNER F.	F31:4	DE LAUNOIT N.	P333	DISTELMANS W.	G11:2	EIKENDAL T.	P342
CLEMMESSEN L.	P455	DE LORIUN F.	P730	DUEBBI O.	P501, P514, P539, P647, P801	EISENBARTH H.	G31:3
COBAN E.	P896	DE NICOLA L.	P296			EISENBURGER P.	P359
CODOGNI R.	P565, P806	DE OLEO J.	P498, G23:3	DOAN C.	P107	EKER C.	P682
ÇOKLUK C.	P032, P898	DE TALANCE M.	F31:4	DOBIAS V.	P734	EKINCI S.	P353, P887
COLAK C.	P389	DE VILLA E.	G22:6, G23:6	DOBRIN D.	P057	EKİZ M.	P332
COLAK T.	P021	DE VRIES-VAN DIJEN JM.	P068, P099	DOEVENDANS P.	F34:4, F34:2, F32:9	EL HENI N.	P078
COLAKOĞLU S.	P809, P810	DE WILDE M.	G11:5	DOGAN E.	P036, P483	ELAD B.	F34:8
COLMAN S.	P529	DE WIT G.	F34:4	DOGAN H.	P320, P324, P602, P742, P950	EL-GAMMAL A.	P346, P347, P472, P558, P560
COLOMBO D.	F23:3	DEACONU I.	P057	DOĞAN M.	P378, P389	ELIF ÇELİKEL C.	P096
COLOMO MARMOL LF.	G31:8	DEANKHUNTOD J.	P671	DOGAN NO.	P473, F33:5, F34:7	ELKIRAN O.	P719
COMERT A.	P353	DEBACKER M.	P424, F24:2, F24:3	DOĞAN Z.	P200, P298, P840	ELLENSEN EN.	P663
CONDO' C.	P004	DEBLIEUX PM.	P104	DOGGEN CJ.	P685, P691, P880	ELMAGHAWRY M.	P356
CONNOLLY J.	P457	DEBUC E.	P664	DOĞRU C.	P329	ELSHOUT G.	G11:5
CONTI A.	G22:7, G23:9	DECHAMPS K.	P808	DOKUZOGLU MA.	P182, P469	ELUMAR F.	P335
COPPA A.	P930	DEDE D.	P397	DÖLEK AKDAL B.	P397	ELVAN A.	P068
CORBACIOĞLU K.	F22:7	DEDE S.	P638	DOMANSKI L.	P699, F24:5, F33:6	EMAMIAN F.	P084, P094
CORLADE-ANDREI M.	P460, P829	DEDIC M.	P191	DONGEL I.	P922	EMERSON B.	P717
CORNECI D.	P057	DEES A.	P097	DONNINI C.	G22:6, G22:7	EMET M.	P178, P214, P222, P223, P224, P254, P258, P287, P288, P293, P317, P321, P673, P741, P744, P902, P909, P910, P914, P924, P961, P962
CORTON L.	P511, P557, G11:7	DEL ARCO L.	P701	DORMANN H.	G31:3		
COŞKUN A.	P019, P200, P218, P298, P467, P922	DEL TAGLIA B.	P930	DOROFTEA B.	P112, P154		
		DELICE O.	P201, P245, P596, P644, P820, P891	DOUKHAN M.	P337		
COŞKUN F.	P022, P083, P322, P350, P477, P778, P860, F34:6, F11:1	DELLA CORTE F.	P454, P696, F23:3, F24:1, F23:4, F23:5	DRUBITS K.	P400		
				DUBOURDIEU S.	F33:6		
COŞKUN O.	P239, P240, P433, P449	DELLA ROCCA F.	P415	DUCH P.	F22:8	ENGELBRECHT A.	P781
COSKUN PK.	P925	DELLUL MM.	P173, P546	DUCHATEAU F.	P405, P731, F11:3	ENGİN A.	G32:8
COSKUN S.	P391, P508, P925	DELMONACO P.	P297	DUIJNHOUWER A.	P203	ENGLE JF.	P014, P436
COSOLAA.	P443	DELVAU N.	G31:5	DÜLGER AC.	P140, P160	ER E.	P863
COSTE S.	F24:5	DEMİR A.	P096, P134, P212, P513, P629, P799	DUMAN A.	G31:2, G31:1	ERALP MO.	P641
COURTNEY D.	F22:4			DUMITRACHE M.	P057	ERAYBAR S.	P816
COURTNEY DM.	F21:2	DEMİR A.	P854	DÜNDAR ZD.	P031, P034, P315, P339, P955, G31:7, G22:2, G21:8	ERCAN N.	P600
COZIENSEN L.	F34:2	DEMİR AB.	P604			ERCAN S.	P378, P790, P921, P926
CRAMER M.	F34:4, F34:2	DEMİR CF.	P025, P131, P431, P649	DUPONT A.	P717, G23:1	ERDAL A.	G21:7
CRESTANI M.	F11:9	DEMİR H.	P247, P265	DUR A.	G31:9	ERDELYI ZS.	P048, P615
CRETU N.	P365	DEMİR O.	P737			ERDEM A.	P060
CRISANTU L.	P927	DEMİR OF.	P221	DURAK A.	P604	ERDEM AB.	P167, P168, P177, P209, P210, P211, P219, P220, P232, P241, P251, P252, P267, P278, P302, P319, P614, P842
CRISTIANO F.	P297	DEMİR R.	P216, P288	DURAK V.A.	P826		
CRISTOREAN C.	P049	DEMİR S.	P864, P865	DURAN A.	P060, P062, P064, P187, P188, P189, P464, P521, P548, P549, P550, P590, P817	ERDEM B.	P156
CROON-DE BOER F.	P097	DEMİRAY T.	P391			ERDEM E.	P326
CUBEDDU P.	F24:6	DEMIRCAN A.	P329, P434, F22:7			ERDEM H.	P185
CUESTA M.	P771	DEMIRHAN A.	P188, P590			ERDEM MN.	P022
CUESTA PEREDO D.	P553	DEMIRHAN R.	P940	DURAN L.	P030, P032, P065, P169, P170, P171, P176, P332, P586, P758, P821, P898, P899, P923	ERDEM N.	P393, P536, P631
CULLEN L.	F34:3	DEMIRIN H.	P824			ERDEM SS.	G32:6, G32:7, G32:3
ÇULLU N.	P149, P150, P202, P281	DEMIRKAN A.	P204, P275, P301, P353, P887	DURAN O.	P273		
CUMAOĞLU MA.	P119	DEMIROVIC E.	P191	DURAND C.	P445, F32:6	ERDEMİR E.	P034, P036, P855, G32:1, F31:8
CUMMINS F.	P484, P485	DEN RUIJTER H.	F34:2	DURDURAN Y.	P451, P710, P855, F31:8, G21:6	ERDEN ES.	P651
		DENİZ ARSLAN E.	P096, P866			ERDOĞAN FF.	P575
D		DENİZBAŞI A.	P009, P088, P248, P249, P250, P747, P832, P919	DURGUN HM.	P165, P269, P270, P381, P503, P516, P583, P584, P606, P616, P643, P656, P657, P669, P844, P928, P931, P932, P958	ERDOĞAN MO.	P264, P877, P879
DA DALT L.	P717	DESCLEFS JP.	G22:4			ERDOĞAN YK.	P597
D'ADAMO MG.	P296	DESIMONE L.	G34:6	DURAN O.	P273	ERDURMUS M.	P187
D'ADDEO G.	P297	DESUELLES D.	P029, P547	DURAND C.	P445, F32:6	EREL O.	P035
DAGHER M.	P404	DETAILLE T.	P717	DURDURAN Y.	P451, P710, P855, F31:8, G21:6	EREN I.	P221
DAGLI B.	P067						
DAGLI F.	P431						
DAĞLI Z.	P256						

EREN S.	P257	FERRER BRANDLEY E.	P635	GIJS G.	P409, P417	GUL M.	P021, P024, P036, P038,
EREN SH.	P019, P200	FERRERO S.	P004	GIL I.	P771		P124, P125, P243, P325,
ERGE NE A.O.	P574	FEVZI YILMAZ F.	P096	GIL-JARDINE C.	G11:3		P366, P451, P483, P509,
ERGIN M.	P006, P031, P034, P036,	FIELDS JM.	P735, G22:9	GIMENEZ B.	P010		P521, P522, P580, P605,
	P038, P072, P124, P125,	FILIP G.	P462, P686, P783, P784,	GIMÉNEZ B.	P518, F21:4		P612, P710, P795, P822,
	P126, P127, P128, P242,		P871	GIOVAGNONI E.	P454, P696		P855, P913, P946, G23:8,
	P243, P255, P325, P366	FLACKE N.	F31:3, F31:4	GIRELLI D.	P079		G23:7, G31:7, G32-1,
	P384, P388, P393, P442	FLOCCIA M.	G11:3	GIRGIN C.	P179, P261, P262, P292		G32:3, F31:8, F32:4,
	P451, P483, P509, P519	FLOMENBAUM N.	P540				G21:6, G32:4
	P521, P522, P580, P605	FOLETTI M.	P454, P696			GULACTI U.	P179, P261, P262, P292,
	P609, P612, P631, P694	FONTAINE E.	F24:5				P363, P510, P879
	P698, P710, P727, P746	FORMAGLIO E.	P565, P806	GiRiSGiN AS.	P021, P031, P034, P036,	GULBAHAR G.	P486, P488
	P768, P795, P822, P855	FOROUZANFAR R.	P542		P038, P124, P125, P325,	GULCU O.	P293
	P912, P913, P946	FORSANS E.	P858, F22:9, F33:7		P366, P384, P388, P442,	GÜLEN M.	P796, P797
ERGÜLA.	P586	FOTI F.	F23:3		P451, P483, P521, P580,	GULER A.	P617
ERKALP K.	P349	FOUCE JM.	P954		P605, P612, P694, P698,	GULER M.	P431
ERKEK A.	P461	FRANC JM.	F23:7, F33:8, G34:3, F23:8		P710, P795, P855, P913,	GULER O.	P431
ERKURAN MK.	P121, P692	FRANCHIN M.	F24:5		G22:2, G32:1, F32:4,	GÜLER S.	P329
ERKUŞ SİRKEÇİ E.	P854	FRANCIS E.	P390		G31:9, G23:7, F31:8,	GULERYUZ A.	F22:7
ERMİS F.	P185, P823	FRANCK L.	P858, F33:7, F22:9	GIUFFRIDA A.C.	G32:6, G21:6, G32:4	GÜLLÜ MN.	P669, P844
EROĞLU M.	P323, P398, P524, P567,	FRASCONI R.J.	F22:2	GKESOURA D.	P680	GULLUPINAR B.	G32:2
	P677, P678, P741, P937,	FRYCKSTEDT J.	P352	GOGAERT S.	P373	GULOĞLU C.	P269, P381, P516, P606,
	P943, P944	FUJIMI S.	G24:5	GOKALAN.	P418		P607, P643, P657, P929,
EROĞLU S.	P088	FULE K.	P048	GOKCE C.	P466		P958
EROĞLU SE.	P009, P248, P249, P250,	FUNARI E.	P004	GOKCE E.	P800	GULSAN C.	P828
	P747, P832, P919	FYKATAS S.	P360	GOKCE H.	P812	GULTEKINGİL KESER A.	P318
ERSAN O.	P634			GÖKÇEN C.	P740	GULTEN S.	G21:7
ERSEL M.	P848, P849			GOKDEMİR ME.	G31:4, G24:3	GÜLÜNAY B.	P204, P275, P301
ERSEN T.	P546			GOKDEMİR MT.	P044, P115, P116, P182,	GUMUS H.	P599
ERSOY G.	P803, G32:2, G24:6,				P469, P750, P877	GUMUSAY U.	P026
	G21:4			GOKHAN GUNDOĞDU A.	P486, P488	GÜN C.	P375
ERSUNAN EG.	P070, P598, P757, P901	G		GÖKHAN S.	P632, P850, P921, P926	GÜN I.	P618
ERSUNAN G.	P129, P172, P217, P218,	GAAKEER MI.	P411, P685, F33:3	GOKMEN IE.	P519	GÜNALP M.	P204, P301
	P960	GAÁL I.	P400	GOKMEN N.	P803, G21:4, G24:6,	GÜNAYDIN M.	P090
ERTAN C.	P215, G23:5	GAFFARI E.	P264		G32:2	GÜNDESLİ M.	F31:4
ERTAN D.	P215	GALAZKOWSKI R.	P354	GOKSUGUR N.	P062	GÜNDÜZ A.	P090, P420
ERTAS I.	P694, P698	GALLEGO A.	P608	GOLDLUST E.J.	P543	GÜNDÜZ E.	P669, P844
ERTEKİN B.	P031, P036, G31:7,	GALVAN F.	P071	GOLDSCHLAGER R.	G11:8	GUNDUZ FA.	P277
G32:1		GÁLVEZ SAN ROMÁN JL.	P655	GOLEAA.	P057, P336, P517, P762	GÜNER S.	P414, P625, P626, P893,
ERTOK I.	P173, P814, P818	GAMBERO R.	P667	GOLSHANI K.	P459		F23:2
ERYİĞİT U.	P183, P326, P419, P420	GANDINI G.	P680	GOMEZ CORTEZ B.	P717	GÜNEŞ BİLGİLİ S.	P654
ERYILMAZ M.	P299, P309, P310, P311,	GANDIN M.	P835, G23:4	GONEN MO.	P091, P339, P475, P576,	GUNES H.	G32:2
	P313	GARCIA BERMEJO P.	P533, P553		P785, P868, P955	GUNESACAR R.	P033
		GARCÍA DE VICUÑA A.	P334, P511, G11:7	GONENC CEKIC O.	P628	GUNEY A.	P266
ESEN B.	P022	GARCIA E.	P953, P954	GONENC OC.	P117	GÜNEYSEL Ö.	P141, P158, P175, P190,
ESEN M.	P054, P582, P798, P800	GARCIA MATEOS D.	P577	GÖNÜLLÜ H.	P138, P139, P140, P160,		P193, P194, P507, P630,
ESMAILIAN M.	P459	GARCIA O.	P953		P192, P571, P587, P893,		P759, P833, P895, P896,
ESPINAL IA.	P876	GARCIA P.	P555		F23:2		P940, G22:4
ESPLUGUES MARRAHI J.	P429	GARCIA SANCHEZ MO.	P523	GONZALEZ DE LINARES E.	P771	GÜNGÖR F.	P827, P846
ESPOSITO P.	P443	GARCIA-CASTRILLO L.	P075, P515	GONZÁLEZ MARTÍNEZ F.	P531, P577	GÜNGÖR G.	P339, P770
ESTEVEZ I.	P557	GARDY O.	P236, P664	GONZALEZ MC.	P953, P954	GUNGOR H.	P025, P053
ETILER N.	F24:9	GARGALLO C.	P771	GONZALEZ MD.	P498, G23:3	GÜNGÖRER B.	P169, P181, P923
EVMAN S.	G22:4	GARNIER-CONNOIS D.	P731	GONZALEZ-GRANDA D.	P430	GÜNGÖRMEZ F.	P115, P116, P182, P469,
EYİ YE.	P132, P133, P134, P299,	GASPARETTO N.	P356	GORMAN R.	P379		P877
	P307, P308, P309, P310,	GAUDINO G.	P296	GÖRMELİ CA.	P380, P874, P959, G24:4	GÜNLAP M.	P275
	P311, P312, P313, P323,	GAVRILA RD.	P462, P783, P784, P871	GÖRMELİ G.	P380, P626, P874, P959,	GUNN R.	G11:8
	P398, P401, P524, P567,	GAVRILA V.	P462, P686, P783, P784,		G24:4	GUNNARS DOTTIR OS.	G34:7
	P677, P678, P937, P943,		P871	GORMELİ KURT N.	P843	GUPTA V.	P012, P304, P396, P520
	P944	GAYAT E.	G31:6	GORMEZ G.	P173	GÜR S.T.	P316
EZENKWELE UA.	P003, P439	GAYOL P.	F34:5	GOTSADZE G.	P092	GURBAY A.	P791
EZZOUINE H.	P050, P110, P111, P136,	GEDIK E.	G23:5	GOTTWALLES Y.	P897	GÜRBÜZ A.	P376
	P427, P499, P578, P807,	GEDIK S.	P047	GOUESBIER M.	P405	GURBUZ H.	P843
	P951	GEM M.	P632	GOZUBATIK-CELIK G.	P227	GURBUZ S.	P766
		GENÇ S.	P153, P156, P378	GRAHAM C.	G32:5	GUREL K.	P590
F		GENÇAY I.	P659	GRANGE C.	F21:8	GURGER M.	P025, P026, P053,
FAGE JF.	G33:6	GENÇER EG.	P759, P833	GRAVE MS.	P360		P649, P650, P766
FALAMAS D.	F24:7	GENZANO L.	P297	GRAY AJ.	G32:5	GURLER S.	P301
FALLAHI M.	P084, P094	GEORMANEANU C.	P782	GREDOWSKA E.	P055	GÜRLER S.	P204, P275
FARNBACHER M.	G31:3	GEURTS D.	P720	GREEN J.	G11:8	GURRINI E.	P481
FATİH YETKİN M.	P489	GHAEMMAGHAMI C.	G22:8	GREEN S.	P490, G11:8	GUTIERREZ G.	P334
FENICIA L.	P496	GHAZALI A.	F33:4	GREENSLADE J.	F34:3	GUVEN FMK.	P019
FERAL-PIERSSSENS A-L.	P841, F31:9	GHAZALI H.	P078, P760, F32:7	GREGORI S.	P415	GUVEN H.	P393, P631
FERDA ERDOĞAN F.	P489	GHAZANFAR O.	P532, P867	GREVE J.	P020	GUVEN R.	P362, P827, P846
FERNÁNDEZ A.	P334, P603	GHAZANFAR R.	P532	GRIFONI S.	F22:6	GÜZEL A.	P030
FERNANDEZ JM.	P953	GIACHELLO S.	P696	GRISSA MH.	P066, F32:5, F11:5	GUZEL R.	P640
FERRANDİZ S.	F31:1	GIAKOUP B.	P172, P217	GROENEMEIJER B.	P077, F34:2	GUZELDERE E.	P668
FERRARIS S.	F24:6	GIAKOUP GB.	P757	GUALLAR P.	P771	GUZZO A.	G22:6
FERRARIS T.	G34:6, F24:6			GUERRA N.	P680	GWAK YH.	P726
FERRE C.	P755	GIAMPRETI A.	P492, P493, P494, P495,	GUERRINI E.	G23:9, G23:6	GYPEN B.	P166
FERRE CALABUIG MD.	P114	GIESE S.	P496, P497, G21:5	GUIJARRO C.	F31:1		
FERRER BAENA A.	P655	GIGLI C.	F22:6	GUL E.	P026, P053, P650		

[illegible]

KEEFE N.	P491	P795, P855, P912, P913,	L	MACONOCHE I.	P717, F24:8
KEFI H.	P801	G31:7, G32:1, F31:8,	LAAMOURI N.	MADEN E.	P256, P756
KEKEC Z.	P847	G22:2, F32:4, G21:6,	LAI CC.	MADINUR V.	G24:2
KEKERIS V.	P373	G32:4, G32:7	LAIRE G.	MADSAH W.	P857, F23:6
KELDER JC.	F32:9		LAKHANPAUL M.	MAEDA S.	P402, P403
KELES A.	P329, P434, F22:7		LAMINE K.	MAEDA Y.	P407, P952
KELLEHER J.	F31:6	KOCALAR G.		MAGHIAR A.	P049
KENDAL L.	P330	KOCAOGLU S.	LAMORTE A.	MAGHRAOUI H.	P556
KENNEDY U.	P527	KOCASABAN DU.	LAMURA F.	MAGYAR I.	P049
KEREZSI A.	P180	KOCH M.	LANDRY M.	MAHONEY BD.	F22:2
KERKHOF E.	P717, P720, G33:8	KOCOĞLU H.	LANOË V.	MAHONEY L.	P472
KESER E.	P492	KOCYIGIT AB.	LAQUITI K.	MAJED K.	P069, P432, P556, P676, P681
KESER M.	P728	KOKRA T.	LARDEUR JY.		
KESIM A.	P241	KOKRA TH.	LARESE S.	MAJEED A.	P520, P941
KESKIN F.	P619	KOKSALA A.	LARIBI S.	MAJEED M.	P011, P012, P304, P305, P306, P396, G34:8, G33:3
KESTEVEN P.	P399	KÖKSAL N.	LARRAZABAL A.		
KETTY P.	P920	KÖKSAL O.	LASOYE T.		
KHALIFA GE.	G33:2, F24:4	KÖKSALDI MOTOR V.	LAURENT C.	MALAJATI I.	P807
KHALIL F.	F34:5	KOKULU K.	LAURITA E.	MALTA MS.	P060, P187, P188
KIGUCHI T.	G24:5	KOLBECK J.	LAUWAERT I.	MANA E.	P004, P443, P544, F11:9
KIKNADZE N.	P092	KONING SW.	LAVÉN K.	MANCLÚS MONTOYA L.	P043, P429, P531
KILAVUZ Y.	P119	KOOLI S.	LAZZERETTI D.	MANS S.	P908
KILDAHL M.	F23:9	KOPFERSCHMITT J.	LE GAL G.	MANSUROĞLU C.	P001
KILIANOVA A.	F21:7	KORKMAZ H.	LE GEYT J.	MANTZ J.	P731, F11:3
KILIC AC.	P163	KORKMAZ I.	LE GUEN A.	MANZO L.	P492, P494, P495, P496, P497, G21:5
KILIC H.	P787	KÖROĞLU DB.	LEACH CI.		
KILIÇ T.Y.	P023, P377	KOSAYYER M.	LECLERC F.	MAPATUNA C.	P689, P707, P708
KILICASLAN I.	P025, P329, P434, P650, F22:7	KÖSE A.	LEE BI.	MARCHIS F.	P336
			LEE H.	MARCIL E.	P357, P889
KILINC C.	P506	KOSE SA.	LEE JH.	MAREI N.	F34:8
KIM DG.	P725, P726	KOSEOĞLU M.	LEE JY.	MARIN C.	P279, P285
KIM DK.	P371, P674, P709, P715, P716, P769	KOUTSOUMPOU S.	LEE MH.	MARINO R.	P147, G34:1
			LEE SM.	MARQUEZ MARTIN R.	P802
KIM EY.	P661, P662, F21:3	KOVARI A.	LEE SY.	MARSON BA.	P777
KIM GW.	P374	KOYLU A.	LEFORT H.	MARTIN A.	F32:1
KIM HJ.	P622	KOYLU O.	LEHTO P.	MARTIN C.	P771
KIM I.	P764		LEJEUNE C.	MARTIN P.	P340, P518
KIM JW.	P725, P726	KÖYLÜ R.	LELOVICS ZS.	MARTINEZ A.	P953, P954
KIM KS.	P361		LEMOINE S.	MARTINEZ C.	P755
KIM KY.	P374		LEONARD P.	MARTINEZ FERRIS O.	P043, P429, P531
KIM MY.	P371, P773		LEON-SALAS RABADAN C.	MARTINEZ J.	F31:6
KIM SH.	P872, P873	KOYUNCU F.	LESAFFRE B.	MARTINEZ LUGO M.	P430
KIM SW.	P098, P355	KOYUNCU M.	LESTIENNE M.	MARTINEZ M.	P592, P593, P594
KIM WY.	P622, P679, P763, P853	KOYUNOĞLU M.	LEVENT S.	MARTORANO M.	P296
KIM YH.	P478	KOZACI N.	LEWIN DR.	MASEK J.	P732
KIM YJ.	P374		LHOST J.	MASHIACH E.	G33:4
KINGMAA.	F34:4		LIBERT N.	MASMOUDI R.	F31:9
KINUGASA T.	P403	KOZAN E.	LIEU SM.	MASOERO C.	P443
KIRAN K.	G24:2	KREEFT M.	LIMON O.	MAST E.	F34:2
KIRAR F.	P164, P193, P221	KRISHNAN A.	LIN SZ.	MAST T.	F34:4
KIRASLAN O.	P362	KRISHNATHASAN K.	LINARES VALLS L.	MATANO H.	P402
KISA OGLU A.	P903, P904, P905, P906, P907	KRISJANE R.	LINDLEY LM.	MATHLOUTHI O.	P069
		KU B.	LISANTI F.	MATSUURA T.	F22:1, F22:4
KISS RG.	P559	KÜÇÜK A.	LIVOLI D.	MATTILA J.	P502, P537
KIYAN S.	P073, P289, P290, P610, P848, P849, P851	KÜÇÜK M.	LLOPIS F.	MAUDENS KE.	P792
		KUCUKASLAN I.	LLUCH SASTRIQUES A.	MAUGER J.	P491
KIYANÇIÇEK S.	P377	KUCUKCERAN K.	LOCATELLI CA.	MAYSTROVA O.	P495
KJELLAND C.	F23:7	KÜÇÜKDAĞLI O.		MAZZOLENI M.	P493, P494, P495
KLAMMER R.	P104	KÜFECİLER T.	LOCKE T.	MBAREK K.	P760
KLEIN C.	F24:5	KUKUL GUVEN FM.	LOK U.	MCFARLIN A.	P875
KLINE J.	G31:5	KULAÇ S.	LOMBARDIA.	MCKIERNAN C.	P684
KLINGER U.	G31:3	KULSTAD E.	LONATI D.	MCKNITE S.	F22:1, F22:3, F22:2, F22:4
KLUSA D.	P063, P738	KURKCUOGLU C.		MCNAMARA R.	P484, P485
KNUDSEN L.	P455, P457, P911	KURT M.	LOPERA LOPERA EL.	MCVEY E.	P107
KOBAT MA.	P026	KURT N.	LOPEZ A.	MEBAZAA A.	G31:6
KOBAYASHI M.	P408		LOPEZ L.	MEGANEM A.	P676
KOÇ O.	P006, P082	KURTOGLU CELIK G.	LOPEZ MT.	MEGHAIETH N.	P432
KOCABAŞ E.	P572, P900	KURUOZ G.	LOPEZ R.	MEHMETOGLU C.	P327
KOCAEL A.	P228, P229, P230, P283, P284, P286	KURUTAS EB.	LOSSIUS HM.	MEHMETOGLU I.	P031, G31:7
		KUŞASLAN MH.	LOW LY.	MÉLOT C.	P623
KOCAEL P.	P228, P230, P284	KUTLU NO.	LU JJ.	MELTEM AKKAS MD.	P588
KOCAK G.	P719	KUTLUCAN A.	LUMRY W.	MEMIOGLU T.	P064
			LUNDBYE-CHRISTENSEN S.	MEMIS M.	P206, P754, P894
			LUNDE SG.	MENGARDO M.	P551
			LURIE K.	MENTESE A.	G21:9
KOCAK S.	P031, P034, P036, P038, P072, P124, P125, P126, P127, P128, P325, P366, P388, P451, P509, P522, P580, P605, P609, P612, P694, P698, P710, P727,	KUTLUCAN L.	LYNGGAARD F.	MENZILCIOGLU MS.	P387
		KUVANDIK G.		MERINERO R.	F32:1
		KUWAGATA Y.		MERMERKAYA MC.	P184, P892
		KWAK YH.		MERMI E. C.	P223
		KWON WY.		MERRITT R.	P440, P441
				METE S.	P198, P199, P208

METS T.	P482	NAGY G.	P400	ONGKILI D.F.	P122, P135, P857	OZTURK G.	P317, P903, P904, P905,
METZGER A.	F22:4	NAHMIASH W.	P841	ONUR E.	G22:4		P906, P907, P960
MEULEMANS A.	P813	NAISMITH A.	F23:7	ONUR O.	P009, P248, P249	OZTURK K.	P262, P803, G24:6
MEYER G.	F34:1	NAJRAN P.	P306	ONUR OE.	P088, P247, P250, P265,	OZTURK L.	P795
MEYER N.	F34:5	NAK H.	P072, P124, P242, P710,		P747, P832, P919	OZTURK M.	P860, F34:6
MICHALAK G.	P055, P354		P946, G21:6	OOSTENBRINK R.	P720, G11:5, G33:8	OZTURK O.	P207, P238
MIHALCEA M.	P835, P897, G23:4	NAKAMORI Y.	G24:5	OOSTENENK MW.	P468, P908	OZTURK P.	P653
MILANLIÖĞLU A.	P138, P587	NAKAMOTO A.	P436	ORAK M.	P269, P381, P607, P643,	OZTURK S.	P062, P064
MILISEN K.	G24:7	NAKANISHI T.	P402		P657, P929, P932, P958	OZTURK T.	P093
MILLÁN J.	P592, P593, P594	NAKAO H.	P407, P952	ÖREN NC.	P239, P382, P383	OZUCELIK DN.	P320, P324, P602, P742,
MILLAN SORIA J.	P428, P429, P430	NAKATANI T.	P952	ORIO T D.	F33:4		P950
MINAGAWA Y.	P039	NALAN M:AKSU MD.	P588	ORKMEZ M.	P786, P789	ÖZÜPEK N.	P212
MINANTE M.	P551	NARCI DR.	P645	ORMAN G.	P933	OZYURT K.	P653
MINGUEZ J.	P555	NARCI H.	P581	ORTIGOSA O.	P771		
MINGUEZ PLATERO J.	P429	NASEER R.	P735	OSTADAL P.	F32:3	P	
MINIKSAR OH.	P831	NAUD J.	P717	OTAL Y.	F33:5	PACANOWSKI J.	P236
MINTEGI S.	P701	NAVARRO BUSTOS MC.	P523, P655, P666	OTHMANI S.	P432, P676, P681	PACHERA S.	P079
MIRAN AS.	P277	NAVARRO GUTIERREZ S.	P043, P531, P533,	OTTEN HJ.	P880	PAGANO S.	P079
MIRAY OZLEM MD.	P675		P553, P577	OTUSKA M.	P408	PAGNIN C.	P551
MOAK J.	G22:8	NAVÍO A.	P771	OVELAND NP.	P455, P456, P457, P911	PAJUSCO B.	P079
MÖCKEL M.	P563	NAVRUZ M.	P741	OVERHOLT NIELSEN L.	G33:7	PALACIOS G.	P771
MODHAFFER M.	P676, P681	NAZERIAN P.	F22:6	OYAR O.	P375, P863	PALACIOS M.	P701
MOLDOVAN D.	P714	NAZLI Y.E.	P086	ÖZ G.	P949	PALOMÁKI A.	P007, F33:1
MOLINA M.	P608	NEELS H.	P792, P805	OZ II.	P199, P208	PALOMÁKI AK.	P007
MOLL H.	P717, P720, F11:8, G11:5,	NEUGEBAUER H.	P040	OZ T.	P814	PALOMÁKI E.	F33:1
	G33:8, F24:8	NI MHAILLE G.	P484	OZAYDIN I.	P185	PAMUKCU GUNAYDIN G.	P473, F33:5
MONKS D.	P390	NICHOLSON T.	P540	ÖZAYDIN V.	P803, P854, G24:6	PANASURIYASOMBAT S.	P525
MONTALVA BARRA JC.	P428, P429,	NIESCIERENKO ML.	P450	OZBAY S.	P019, P922	PANTIS C.	P049
	P430, P635	NILSSON H.	F23:9	OZBAY YENİCE G.	P273, P737, P840	PAPA P.	G21:5
MONTALVA JC.	P592, P593, P594	NISKANEN M.	P007	OZCAN N.	P253	PAPALEXANDRIS S.	P274
MONTEJO M.	P511, G11:7	NIVEN WG.	P554	OZCELİK S.	P019	PAPANIKOLAOU S.	P373
MONTES D.	P196	NOH KH.	P374	OZCETE E.	P165, P270, P503, P583,	PARADA JR.	P954
MOORS ML.	P113	NOUIRA N.	P078, P676, P681, P774		P584, P656, P843, P928,	PARISH RL.	P718
MOR M.	P717	NOUIRA S.	P066, F32:5, F11:5	ÖZDEMİR F.	P061, P341, P604, P693,	PARK CH.	P371
MORALES C.	P667	NOVOSAD H.	P359		P816, P826, F11:7	PARK IH.	P371, P773, P773
MORENO-WALTON L.	P002, P003, P014, P100,	NUR A.	P855	ÖZDEMİR S.	P233, P247, P465	PARK SI.	P478
	P101, P102, P103, P104,	NUR USER N.	P327	OZDEN R.	P466	PARK SY.	P374, P709, P715, P716,
	P105, P106, P107, P108,	NÜRNBERGER A.	P360	ÖZDİNÇ Ş.	P005, P137, P148, P263,		P725, P726, P769
	P109, P343, P435, P436,				P327, P351, P936, P949	PARKER SD.	P751
	P437, P438, P439, P446,			OZDOĞAN E.	P837	PARLAK A.	P943
	P624, P706, P875, P876,			OZEL A.	F22:7	PARLAK I.	P273, P277, P737, P745,
	G24:1, F21:5			OZEL G.	P942		P840
MORI K.	P403			OZEL L.	P216	PASHA F.	P379, P689, P707, P708
MOROZOV S.	P358			OZEN M.	P022	PATAN T.	P247, P265
MORTELMANS L.	P166, P411, P412, P413,	OCAK U.	P093, P489, P575	OZER MR.	P125, P126, P127, P128,	PATARIN C.	P897
	P808	ÖCAL O.	P247, P265		P366, P451, P710, P795,	PATERON D.	P236, P664
		ÖÇALAN K.	P949		P855, G21:6	PATKA P.	P11:8
MOSES M.	P485	OCMEN E.	P803, G24:6	ÖZER S.	P948	PAULIKOVA M.	F21:7
MOSTEIRO ML.	P953	ODABAŞ O.	P692, P842	O		PAULIS M.	P927
MOSTERD A.	F34:4	ODETTO C.	P443, P544, F11:9	OZER UNAL E.	P765	PAUWELS S.	P690
MOTAOUAKKIL S.	P050, P110, P111, P136,	ODRIOZOLA ROMILLO N.	P075, P515	ÖZGÜR ARSLAN MD.	P675	PAXTON CE.	P711
	P427, P499, P578, P807,	OFFERMAN S.	F31:6	OZHABES M.	P158	PAZIANA K.	P735, G22:9
	P951	OGURA H.	G24:5	ÖZHASENEKLER A.	P165, P270, P381, P503,	PEKDEMİR M.	F24:9
MOTOR S.	P033, P812	OGÜZ AB.	P275, P301, P353		P583, P584, P607, P643,	PEKER O.	P386
MOUGAIDA M.	F32:7	OGÜZ B.	P204		P656, P657, P669, P844,	PENALOZA A.	G31:5, F34:1
MOYA F.	P071, P667	OGUZ S.	P639, P641		P931, P932, P958	PENICKA M.	F32:3
MOZGIS D.	P063	OGUZTURK H.	P389, P831	ÖZKAN A.	P231, P570	PENNACCHIO E.	P296, P297, F11:6
MSOLLI MA.	F11:5	OH BJ.	P622, P679, P853	OZKAN F.	P131, P159, P162, P253,	PEPELE M.S.	P215
MUAIGONDA P.	P105	OH JS.	P098, P355		P294, P386, P387, P471,	PERALES R.	P771
MUHAMMAD AI.	P555	ÖHLUND L.	P739		P749, P752	PEREIRA I.	P426
MUHTAROGLU S.	G31:2	OK I.	P067, P195	OZKAN GUNES S.	P591	PERENNES M.	P613
MULKEEN M.	P338, P528, G22:1	O'KEEFE K.	P440, P441	OZKAN HO.	P836	PERERA D.	P040
MULLAART-JANSEN N.	P697	OKTAY MM.	P740, P779, P780, P862	OZKAN M.	P466	PÉREZ A.	P771
MULLEN N.	P717	OKUBO MO.	P015, P016, P017	OZKAN MA.	P536	PÉREZ MAS JR.	P755
MULLER R.	P563	OKUMUŞ M.	P006, P080, P081, P159,	ÖZKAN S.	P087, P093, P266, P268,	PÉREZ RODRÍGUEZ E.	P802
MUÑOZ CACHO P.	G31:8		P387, P467, P653, P698,		P489, P575, P869, G31:1,	PÉREZ-ALONSO J.L.	P666
MUÑOZ MALDONADO GE.	P802		P749, P752, P839, P845		G31:2	PERTTU M.	F33:1
MURAT CELİK M.	P811, P812	OLIVER MARTINEZ C.	P428, P430	ÖZKAYA S.	P919	PERTWEE R.	P703
MURPHY-LAVOIE H.	P104, P107	OLIVIER C.	F21:1	OZKULA U.	P174	PESQUERA C.	P557
MURRAY A.	P554	OLTRA HOSTALET F.	P523	ÖZLEM M.	P212, P629, P799	PETERS A.	P364
MURRELL K.	F31:6	ÖMERCİKOĞLU S.	P248	OZLUER E.	P067, P195, P508, P591	PETERSON C.	P447
MUT T.	P281			OZMEN O.	P588	PETIT MP.	P699
MUTLU B.	P053, P650			OZOGUL B.	P222, P903, P904, P905,	PETRICA A.	P686, P784
MUTLU H.	P027, P770, P955	ONAL MA.	P072, P124, P126, P127,		P906, P907, P914, P915,	PETRINI F.	F23:4, F23:5
MUTTER LE.	P108, P109		G21:6, G32:7		P961	PETRINO R.	P147, G34:1
MYERS L.	P002, P624, P706, P876,	ÖNAL O.	P737	ÖZPOLAT C.	P088, P248, P747, P919	PETRIS AO.	P460
	G24:1	ONCALA SIBAJAS ME.	P655	OZSAGLAM E.	P580	PETROLINI VM.	P492, P493, P494, P495,
		ONDER H.	P060, P188	OZSAHIN M.	P824		P496, P497, G21:5
N		ONDER HI.	P163	ÖZSOY IE.	P761	PHULL A.	F21:2
NAFOUSI O.	P703	ONER N.	F11:7	OZTURK A.	P599	PICONE C.	F23:5, F23:4
NAGLER J.	P450	ONER Y.	P192	ÖZTÜRK D.	P056, P637, P825, G33:1	PIERIK JG.	P685

PILIP S.	P055, P354	RESIM S.	P162	ŞAHİN Y.	P171, P176, P181, P586, P758	SCHOONHOVEN L.	P691, F31:2
PINI R.	P930, G22:6, G22:7, G23:9, G23:6	REVELLO A.	P500, P562, P642	SAK A.	P335, P836, P838	SCHREIBER W.	P359
PINTO CR.	P717	REVUE E.	F21:8, F31:1	SAKUNWIRIYACHAI W.	P416	SCHUBERT H.	P713, P772, F11:2
PINZÓN RIVADENEIRA A.	P635	RHEE JE.	P374	SALAMANCA RIVERA E.	P523, P655	SCHWAB M.	P713, P772, F11:2
PIQUERES CI.	P592, P593, P594	RIBBONS TP.	G33:9	SALAMANCA-BAUTISTA P.	P666	SCUDELLER A.	P551, F31:5, F32:2
PIRCANOGLU EM.	P253, P387	RICAPITO M.	P297	SALANKE U.	P011, P304, P396	SEARLE J.	P563
PISTOLLATO E.	P356, F31:5	RICARD-HIBON A.	P731, F11:3	SALÇIN E.	P088, P249	SEBALD D.	P360
PISTORELLI C.	P079, P680	RICCI G.	P565, P806	SALIM M.	P271, P314	SEBE A.	P695
PITTALIS P.	P074	RIESCO M.	P771	SALK I.	P019	SEÇGIN SAYHAN E.	P639, P641
PIVETTA E.	P544	RIMONDO C.	G21:5	SALMERÓN O.	P196, P260, P279, P285	SEFIL F.	P812
PIZZA A.	P437, P438	RIORDAN J.	G22:8	SALMON N.	P701	SEGAL N.	F22:1, F22:3, F22:2
PLAISANCE P.	P445, F22:1, F22:2, F22:3, F32:6	RIPOLL A.	P454, P696	SALT O.	P087, P093, P266, P268, P575, P869, G31:1	SEGOUIN C.	F32:6
PLANT G.	P011	ROBERTS L.	P014	SALVADOR FJ.	P428, P592, P593, P594	SEGURA A.	F21:2
PLODR M.	P534, P732	ROBLES J.	P667	SAN I.	P174	SEIGER N.	P720, F24:8, F11:8
PLYER A.	P875	ROBSON S.	G11:8	SANCAK O.	P950	SEKER H.	P021, P727, P728, P746
POLAT A.	P923	ROCA I.C.	P037, F32:8	SANCHEZ ARTAL R.	P635	SELIMOGLU K.	P693
POLAT M.	G21:8	ROCA M.	P037, F32:8	SANCHEZ SANTOS L.	P367, P368, P722, P723, P776	SELLAMI A.	F32:7
POLAT MM.	G32:8	ROCCHI L.	G21:5			SELYANYAGAM M.	P040
POLAT O.	P204, P275, P301, P353, P887	RODRÍGUEZ A.	P771			SEN A.	P843
		RODRIGUEZ S.	P953, P954			SEN B.	P399
		ROGGEN I.	P333, P409, P690, P724	SANCHIS M.	P592, P593, P594	ŞEN J.	P267, P842
		ROGNONI C.	P492, P493, P494, P497, G21:5	SANCHIS S.	P010	ŞEN TANRIKULU C.	P018, P051, P052, P121, P142, P143, P144, P145, P146, P244, P463, P545, P883, P888, P891
POLCINI F.	F23:5, F23:4	ROIG DURÁ M.	P043, P531	SANDERS J.	P103		F34:4
POLDERVAART J.	F34:2	ROJTIINNAKORN N.	P564	SANDONÁ C.	F22:5	SENDEN P.	P001, P089
POLSINELLI A.	P013	ROLAND D.	P703	SANDSTRÖM T.	P537	ŞENEL E.	P028, P085, P646, P754, P818, P856
POMOHACI A.	P422, F11:4	ROMAN RS.	P517	SANDU E.	P422	ŞENER A.	
POPA A.	P736	ROMANIUC N.	P180, P276	SANSON T.	P440, P441		
POPA O.	P422, P460	RONCHI A.	P497	SANTAMARÍA J.	P953, P954	ŞENER MT.	P178, P962
POPA V.	F11:4	RONEN S.	G33:4	SANTIN A.	P530, P700	SENER T.	P621
POPESCU P.	P112, P154	ROOD PP.	P691, F11:8	SANTOS G.	P279, P285	SENGÜL N.	P464
PORTERO I.	F32:1	ROSADO M.	P196, P260, P279, P285	SARAC E.	P419	SEO DB.	P726
PORTILLO CANO MM.	P523	ROSCOE EJ.	G11:1	SARAGAGLIA D.	G33:6	SEO DW.	P622, P679, P853
POSTACI N.	P042	ROSSI A.	G34:1	SARAL OZTURK Z.	P546	SERA M.	P402
POTT J.	P490	ROSSO M.	G34:6	SARAYA K.	P338, G22:1	SERDAR T.	P729
POURRIAT JL.	G24:8, F33:2	ROTARU L.	P453, P736	SARCAN E.	P640	SERGEJEVS D.	P063
POWELL JT.	G33:9	ROTH D.	P359	SARI DOĞAN F.	P854	SERIANINI G.	F22:5
POYAT C.	F24:5	ROTH H.	G11:8	SARI F.M.	P321	SERKAN YILMAZ M.	P866
PRADO G.	P608	ROTHMANN C.	F31:4	SARIHAN A.	P261, G32:2	SERPELLONI G.	G21:5
PRASERTSUKJINDA N.	P372	ROTTE M.	P735	SARIKAYA R.	P153, P157, P161	SERT ET.	G21:3
PRIMROSE C.	P364	ROUANET C.	F11:3	SARITAS A.	P163, P185, P206, P207, P237, P238, P470, P585, P599, P600, P741, P809, P810, P823, P824, P830, P960	SERT P.	P815
PROIETTI MT.	P500	ROUSSEAU D.	P392, P613			SEVGILI AM.	P942
PRONE A.	F11:9	ROY PM.	G31:5, F34:1	SARITEMUR M.	P213, P214, P216, P222, P223, P224, P254, P287, P288, P293, P321, P673, P744, P909, P910, P915, P924	SEVIL H.	P213, P222, P223
PROST J.	F31:3	RUBIO M.	P953			SEVIMLI AA.	P243, P912, P947, G22:2
PUGLIESE FR.	P271, P314, P500, P562, P642	RUGGIANO G.	P481, G34:2			SEVIMLI S.	P414, F23:2
		RUIGE M.	F24:8			SEYDANOGLU A.	P357
PUGLISI S.	P565, P806	RUIZ LOPEZ JL.	P043, P533, P553			SEZDI D.	P289, P290
PUPELE R.	P063, P738	RUZ R.	P608, F32:1			SEZER AA.	P860
PYRROS D.	P373	RUPP F.	P615			SFASCIAMURO MC.	P004, P443, P544, F11:9
		RUPPRECHT S.	P713, P772, F11:2	SÁRKÁNY A.	P400	SHAH P.	P490
		RUTER A.	P404	SARLI B.	P119	SHAHZAD H.	P012, P306
		RYU HG.	P636	ŞAŞMAZ M.	P827, P846	SHAHZADI F.	P520
				SATAR S.	P695, P796, P797	SHANLEY P.	F22:4
		S	F21:8	SATILMIŞ N.	P737, P840	SHAW D.	F21:2
QUENTIN-GEORGET S.	F34:1, G31:5	SAADAR A.	P007	SATIRA R.	P271, P314	SHEMESHA A.	P559
QUERO V.	P071	SAARINEN M.	F23:5, F23:4	SATTONET P.	F31:4	SHENGUELLA L.	G11:7
QUINN E.	P390	SABATINI E.	P276, P589	SAU S.	P074, P927	SHIELDS D.	P346, P347, P472, P558, P560
QUREISHI A.	P867	SABAU M.	F23:5, F23:4	SAULNIER F.	P337		G24:5
QURESHI N.	P717	SABBATINI S.	P029, P406, P418, P547, P717, P813, G24:7	SAUNIER M.	F11:3		P408
		SABBE M.		SAUVIN G.	F31:9		P039
				SAVAŞÇI U.	P239, P240, P382, P383, P433, P448, P449, P504, P505, P618		P371, P773
		SABBE MB.	P413		P509, G31:9, G32:6, G32:7, G32:3		P542
		SABES R.	P667	SAVRAN F.			P071
		SADILIOGLU S.	P272	SAVRUN A.			P061
		SAGAY SS.	P864, P865	SAYAR H.			P277
		SAGIROGLU T.	P641	SAYAR S.			P285
		SAGLAM H.	P119	SAYERS RA.			P196, P260, P279
		SAHAN M.	P026	SAYHAN MB.	P639, P641, G31:1		P071, P603, P667
		SAHIN A.	P090	SAYIN B.	P397, P866		P500, P562, P642
		ŞAHİN C.	P030, P171, P176, P758, P898	SAYRAÇ V.	P362, P827		P602, P742
		ŞAHİN H.	P146, P205, P316, P644, P658, P902, P914	SCARAVAGGI G.	P493		P175, P193, P194, P895, P896
		SAHIN I.	P817	SCEPI M.	F33:4		P895
		ŞAHİN KAVAKLI H.	P028, P541, P546, P646, P754	SCHIFFNER R.	P712, P713, P772, F11:2		P284
		SAHIN M.	P138, P192, P192, P391, P587	SCHIRRIPIA R.	P271, P314		P747
				SCHISSLER T.	P452		P304, P305
		SAHIN S.	P746	SCHMITZ T.	P690		P908, G23:2
		SAHIN SABIHA SS.	P702	SCHOETTKER P.	P348		P494
		SAHIN TK.	G32:6, G32:7, G32:3	SCHOLTEN AC.	P691, F31:2		

SİRMALı M.	P220, P949	SUKRU ERDEN E.	P811	TOKUR M.	P081, P384, P749, P752, P768, P912	URBANO M.	P196
SİRMALı R.	P949	SULE H.	P735	TOLONEN J.	P502, P537	URGAN O.	P009, P832
ŞİŞMAN B.	P030, P899	SULU E.	P756	TOMITA H.	P408	USER NN.	P949
SİT M.	P189, P549	SUTTON L.	P777	TOP AA.	P335	USLAN Mı.	P259
SIVANASAN V.	P122	SUZAKI S.	P408	TOPACOGLU H.	P246, P272, P828	USTUN C.	P363, P510
SİVRİOĞLU AK.	P202	SUZUKI H.	P408	TOPAL F.	P001, P089	USTUN I.	P466
SIX J.	P077, F32:9, F34:3, F34:4, F34:2	SVENSON J.	P013, P423	TOPAL FE.	P001, P006, P089	USTUN N.	P033
		SY LEE.	P725	TOPAL T.	P507	USTUNDAG B.	P431
SJÖBERG F.	F23:9	SZABÓ G.	P559	TOPÇU DOĞAN H.	P474	ÜSTÜNDAĞ M.	P269, P381, P606, P643, P657, P928, P929, P932, P958
SK OH.	P725	SZABÓ I.	P048, P615	TORCATORIU A.	F34:5		
SLAGMAN A.	P563			TORREGROSA SANCHIS A.	P428, P429	ÜSTÜNÖZ B.	P383
SLICK JA.	P437, P438	T		TORRES J.M.	P771	UTKU B.	P080, P081, P749
SLIMANI H.	P835, G23:4	TABNER A.	P718	TOSATO F.	P356, P415, P551, F22:5, F31:5, F32:2	UYANIK B.	P095, P638
SLOTH E.	P455, P456, P457, P911	TAHERINIYA A.	P084, P094	TOSUN M.	P255	UYETURK U.	P060
SMARANDOIU M.	F24:7	TAIOLI G.	P079	TOURTIER JP.	P699, P858, F33:6, F33:7, F24:5, F22:9	UYGUN E.	P838
SMART C.	P364	TAJADIN SH.	P459			UYGUNGÜL E.	P095
SMET M.	P008	TALI A.	P507			UZ K.	P836, P838
SMITH J.	G34:8	TAN W.	P331	TRAUSI F.	P930	UZER H.	P093
SMITH JK.	P711	TANBOGA H.I.	P293, P924	TRAVERSA MT.	P500	UZKESER M.	P224, P254, P257, P287, P316, P317, P741, P744, P909, P910, P914, P915
SMITH L.	F31:7	TANDARA LA.	P871	TRENKLER S.	F21:7		
SMITH R.	G33:3	TANDOĞAN M.	P184, P892	TROIANO H.	F23:5, F23:4	UZUMCUGIL AO.	P633
SMITH T.	P528	TANIGAWA K.	P403	TROUDE P.	F32:6	UZUN A.	G21:9
SO BH.	P098, P355	TANIR HM.	P621	TRUHLAR A.	P732	UZUN B.	P767
SO SY.	P478	TANIRKULU CS.	P201, P595, P596, P658, P820, F34:6	TSIONAS S.	P373	UZUN I.	P742
SOBOTKA J.	G24:8, F33:2	TANRIKULU Y.	P142, P143, P144, P146, P545, P888	TSIOTRAS C.	P369, P370	UZUN K.	P256
SOĞUT E.	P798			TUAA.	G34:1	UZUN O.	P046, P197, P349, P474
SOĞUT O.	P044, P115, P116, P182, P469, P750, P877, G24:3, G31:4	TANRIVERDI F.	P028, P541, P894	TUCCAR E.	P353	UZUNAY O.	P256
		TAOTH O A.	P416, P672	TUCCI V.	P440, P441		
SOHN CH.	P622, P679, P763, P853	TARAN D.	F24:7	TUCEK D.	P732		
SOHN YD.	P535	TARHAN K.	P268, P869	TULAY CM.	P761	V	
SOLAK O.	P949	TAS M.	P513, P632, P850, P921, P926	TUNAY K.	P327	VAFAR E.	P859
SOLAKOGLU A.	P629, P791, P799			TUNC I.	P643	VALERIANO V.	P271, P314, P642
SOLDUK L.	P469	TAS U.	P798	TUNC M.	P163	VALERO E.	P010, P518, F21:4
SOLER S.	P667	TASAKI O.	G24:5	TUNCAR A.	P325, P384, P912, F31:8	VALIENTE M.	P430
SOLLID SJM.	P739	TASCI AH.	P585	TUNCER SK.	P398, P567, P677, P678, P943, P944	VALK J.	P166
SOLOMON I.	P762	TASE C.	P403			VAN ASBROECK PJ.	P041
SOLOMON J.	G11:8	TASIN V.	P659	TURAN CC.	P625	VAN BERLAER G.	P409, P417, P690, P724
SOMASUNDARAM R.	P563	TASKIN A.	P044	TURANLI G.	P729	VAN BINDSBERGEN L.	P468
SOME LB.	P696	TASKIN C.	P393	TURCU FI.	P783	VAN DE BELT T.H.	F31:2
SOMERS Y.	P417	TASKIN G.	F11:7	TURE T.	P132, P133, P943	VAN DE VIJVER K.	P569
SÓNMEZ A.	P682	TAŞKINÖZ H.	P626	TÜREDİ S.	P090, P420, G21:9	VAN DE VOORDE P.	P717
SÓNMEZ CI.	P184, P892	TAŞOLAR O.	P756	TURGUT K.	P831	VAN DE WINKEL N.	P280
SÓNMEZ E.	P151, P155, P231, P570	TASPINAR F.	P633, P634, P935	TURGUT OO.	G32:8	VAN DEN BERG K.	F31:2
SÓNMEZ FT.	P184, P892	TATAR G.	P559	TÜRKAY R.	P281	VAN DER LEI J.	G11:5
SÓNMEZ M.	P056, P212, P513, P629, P637, G33:1	TATLI O.	P090, P117, P183, P628	TURKDOGAN KA.	P200, P298, G32:8	VAN DER MATTEN BC.	P097
		TAVAKOLI N.	P395	TURKER H.	P756	VAN DER SCHOOT J .	P547
SONNI P.	P481	TAVAS E.	P289, P290, P610, P851	TÜRKMEN S.	P090, P117, P118, P420, P628, G21:9	VAN DER ZAAG H.	P077
SOORI H.	P859	TAY WK.	P135			VAN EETVELDE E.	P280
SOORMAA.	P340	TAYLOR J.	P751	TÜRKÖZ B.	P170, P758	VAN GENNEP L.	P029, P813
SOTI A.	P733	TAYSI S.	P786, P788, P789	TURKTARHAN Z.	P884	VAN IERLAND Y.	G11:5
SOUISSI S.	P078, P760, P774, F32:7	TAZÓN VARELA M.	G31:8	TÜRKTAŞ U.	P948	VAN LANCKER R.	P717
SOULIE C.	F34:1	TEDESCHI S.	P004	TURKYILMAZ A.	P183	VAN POUCKE S.	P512
SOYLU L.	P391	TEKCE E.	P309	TURKYILMAZ S.	P316	VAN SCHEPEN MC.	P704, P870
SOYSAL T.	P823	TEKCE H.	P464	TURTAY MG.	P389, P831	VAN SUIJLEN JD.	P077
SOZEN S.	P193	TEKE T.	P256	TUTAR O.	P226, P227, P228, P229, P230, P283, P284	VAN TULDER R.	P359, P360
SPANGER M.	G11:8	TEKELIOGLU UY.	P187, P189, P590			VAN TURNHOUT E.	P805
SPEIRITS E.	P364	TEKIN E.	P223, P321	TUZCU K.	P811	VAN UTTERBEECK F.	F24:2, F24:3
SQUARCIOTTA S.	G22:6	TEKINBAS C.	P183	TYLER SL.	F31:7	VAN VEEN M.	F24:8
STAES T.	P417	TEKŞAM O.	P318, P729	TZADOK B.	F34:8	VAN VUGT AB.	P685, P880
STAFFA G.	P296	TELLEZ-CASTILLO CJ.	P428, P429, P430			VANDENBERK N.	P042, P086, P375, P377, P574, P579, P767, P878, P957
STAFFORD RS.	P101	TEMELA A.	P320	U			
STALLS TS.	F23:1	TEMESVARI P.	P733	UCAR E.	P652	VANGER U.	G33:4
STEENBAKKERS A.	P203	TEODOROVICI D.	P422, F11:4	UÇÖZ D.	G31:10	VANHAECHE K.	P547
STELLA F.	P356, P551, F31:5, F32:2	TESFAYE E.	P852	UEDA K.	P408	VANNI S.	F22:6
		TEZEL O.	P323, P677	UĞRAŞ E.	P218, P598	VANNINI A.	P074
STERZ F.	P359, P360	TEZEL S.	P088	UGUR M.	P581	VAQUERO-DE SEDAS M.	P666
STEURBAUT S.	G23:1	THAN M.	F34:3	ULLRICH C.	F24:2, F24:3	VARGA CS.	P400
STEVENS L.	P917	THOMPSON M.	G33:8	ULUBAY M.	P134	VARGA-GYÖRFI K.	P400
STEWART C.	G33:5	THORFINN J.	F23:9	ULUG P.	G33:9	VARIŞLI B.	P854
STEYERBERG EW.	F32:9	THYS F.	F34:1, G31:5	UMIT H.	P641	VAZHAPPILLY SM.	P520
STOKKELAND PJ.	P911	TIELEMANS MM.	P342	UNAL AKOGLU E.	G22:4	VECCHIO S.	P492, P493, P494, P495, P496, P497, G21:5
STRAßEN U.	P020	TIETGE W.	F34:2	UNAL N.	P277		
STROOBANTS J.	P008, P529	TIO RA.	P077	UNAL S.	P206	VELA P.	P557
SUBASI C.	P198, P199, P208	TIPI T.	P223	ÜNALDI M.	P940	VELASCO M.	P755
SUCAKLI MH.	P159	TIRELI M.	P345	UNEK O.	P851	VELASCO R.	P701
SUDHIR A.	G22:8	TITTOTO P.	P271	UNLU M.	G32:2	VELDKAMP R.	F34:2
SUH D.	P769	TOBALDINI C.	P565, P806	ÜNLÜER EE.	P023, P042, P086, P375, P376, P377, P574, P767, P863, P878	VELIDEDEOGLU M.	P283
SUH DB.	P716	TOGAL T.	G23:5			VERA CRUZ R.	P523, P666
SUH GJ.	P361	TOK A.	P245	UPITE E.	P738	VERCHER MI.	P555
SUH KY.	P535						

VERDE M.	F33:8, G34:3, F23:8, F23:7	YARDAN T. YAVAŞI O.	P032, P821, G21:7 P042, P376, P377, P574, P767	YÜREKLİ İ. YURTSEVEN A. YÜRÜKER S. YÜRÜMEZ Y. YUZBAŞIOĞLU S. YÜZBAŞIOĞLU Y.	P376 P233, P465, P487, P488 P181 P259, P561, P949 P477 P350, P476, P477, P646, P778, F34:6
VERDEYEN D.	P418				
VERFAILLIE L.	P280	YAVASOGLU I.	P195		
VERGOUWE Y.	G11:5, F32:9	YAVŞAN DM.	P255, P256, P756		
VERHAMME T.	P482	YAVUZ BG.	P264		
VERMEIR A.	G11:2	YAVUZ E.	P779, G21:1		
VERNER L.	P405	YAVUZ K.	P126, P509, P728		
VERRET C.	P699	YAVUZ Y.	P030, P032, P065, P586, P898, P899	Z	
VERSCHUREN F.	F34:1, G31:5			ZAG L.	P048, P615
VETTORE G.	P415, P551, F22:5, F31:5, F32:2	YAYKASLI KO. YAYLALI C.	P207, P809, P810 P632, P698, P850, P921, P926	ZAGGIA VA. ZAINERY S. ZAKARIASSEN E. ZANDBERGEN AA. ZANNONI M. ZANO BETTI M. ZAOUCHE K. ZENGIN S.	P551 P102 P663 P097 P565, P806, F24: F22:6, G22:7, G23:9 P681 P300, P378, P640, P787, P779, P780, P786, P787, P788, P789, P790, P862, G21:1 P165, P209, P210, P211, P232, P252, P269, P270, P516, P583, P584, P606, P607, P656, P669, P842, P843, P844, P928, P931 P651, P811, P812
VEUGELERS R.	F33:3	YAZICIOGLU M.	P246		
VICAUT E.	P664	YEE R.	F31:6		
VIGGIANO G.	P297	YELDA HERNANDEZ YH.	P573		
VIKSTRÖM T.	F23:9	YENİÖCAK YS.	P070, P129, P172, P217, P218, P598, P757		
VILAR B.	P511				
VISNECI FE.	P519, P605, P612, P947, G32:4	YEO D.	P011, P304, P305, P396, P520, P920, P941, 22:3		
VIVIEN B.	P620				
VLAEYEN E.	G24:7	YEŞİL M.	P042	ZENGİN Y.	
VOGT M.	G31:3	YETİM İ.	P186		
VOI V.	P443	YETİM Ö.	P419		
VOLLER O.	P563	YETKİN MF.	P575		
VOLLERT JO.	G31:3	YH GWAK.	P725		
VOLPICELLI G.	F22:6	YIGİT M.	P046, P120	ZEREN C.	
VOLPIN R.	F32:2, F31:5	YİĞİT Y.	P172, P217	ZEREN S.	P834
VURAL S.	P028, P541, P894	YIKILMAZ A.	P266	ZERETZKE CM.	P706
		YILDIRGAN M.İ.	P903, P904, P905	ZERGUINE M.	F31:4
		YILDIRIM A.	P878	ZERMAN G.	P680
		YILDIRIM AO.	P132, P311, P323, P398, P401, P524, P567, P677, P678, P944	ZEYNAL M.	P282
				ZIRHIOĞLU G.	P617
		YILDIRIM C.	P378, P640, P740, P779, P780, P786, P787, P788, P789, P790, P862, G21:1	ZİYADA S.	P271, P314
				ZİYAN ZM.	P070
				ZOLEO M.	P415
				ZORBOZAN ONUR ÖZ.	P702
				ZORLU A.	G32:8
		YILDIRIM CH.	P933	ZORZI A.	P356
		YILDIRIM E.	P840	ZUMRUT M.	P889, P890
		YILDIRIM F.	P836, P837	ZUZUKIN V.	P446
		YILDIRIM H.	P754, P826	ZVIMAN M.	F22:1
		YILDIRIM N.	P397		
		YILDIRIM S.	P151, P153, P156, P157, P161, P278, P319, P324, P602		
		YILDIZ F.	P053		
		YILDIZ H.	P449		
		YILDIZ M.	P025, P053, P131, P431, P649, P650, P766		
		YILDIZ S.	P487		
		YILDIZ Y.	P223		
		YILDIZDAS D.	P717		
		YILIK L.	P376		
		YILMAN M.	P032, P821		
		YILMAZ A.	P586		
		YILMAZ C.	P377		
		YILMAZ DA.	P862		
		YILMAZ F.	P056, P212, P513, P629, P638, P799, P866		
		YILMAZ G.	P073		
		YILMAZ H.	P948		
		YILMAZ M.	P787, P814, G21:1		
		YILMAZ MB.	G32:8		
		YILMAZ O.	P803, G32:2, G24:6, G21:4		
		YILMAZ S.	P089, F24:9		
		YORDANOV Y.	F33:2, G24:8		
		YORULMAZ R.	P247, P265		
		YOSHIKAWA Y.	G24:5		
		YOZGAT A.	P465		
		YS JANG.	P725, P725		
		YUCELA A.	P287		
		YUCEL M.	P259, P561		
		YUCEL N.	P215, P287, G23:5		
		YUKSEL M.	P159, P253, P294, P386, P387, P471		
		YÜKSEL V.	P639		
		YULA E.	P506		
		YULUG E.	G21:9		
		YUMRUTEPE S.	P389		

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General information: MCO Congrès
natalie.ruxton@mcocongres.com