



# 6<sup>th</sup> INTERNATIONAL EMERGENCY & CARDIAC CARE SYMPOSIUM



# BİLDİRİ KİTABI

03 - 06  
June  
2021

Crowne Plaza  
Hotel

Belgrade  
Serbia

ETHICON event & congress

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## **SEMOZYUM BAŞKANLARI**

Prof. Dr. Başar Cander  
Saša Ignjatijević ,MD

## **SEMOZYUM GENEL SEKRETERLERİ**

Prof. Dr. Hakan Oğuztürk  
Acc. Spec Prim. Tatjana Rajkovic, MD

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Assoc. Prof. Mehmet Okumuş (Turkey)

Biljana Radisavljevic, MD (Serbia)

Bojan Stojanović, MD (Montenegro)

Bojana Uzelac, MD (Serbia)

Doc. Živana Slović, MD, PhD (Serbia)

Doç. Dr. Ayhan Aköz (Turkey)

Doç. Dr. Şükrü Gürbüz (Turkey)

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Dragan Mitić, MD (Serbia)

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Dušica Janković, MD (Serbia)

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Jelena Milanović, MD (Serbia)

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Milan Elenkov, MD (Serbia)

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Prof. Dr. Yunsur Çevik (Turkey)

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Sándor Balogh,MD (Hungary)

Teona VARSHALOMIDZE, MD (Georgia)

Vusale YAŞAR, MD(Azerbaijan)

## BİLİMSEL PROGRAM

### 03 JUNE 2021 – MAIN

Time	Subject and Speakers
14.00 - 16.00	Check-in to Hotel
	<b>Serbian – Turkey Emergency and Family Medicine Panel</b>  <b>Prof. Dr. Başar Cander</b> Chairman, President of Emergency Physician Association of Turkey
16.00 - 18.00	<b>Sasa Ignjatijević, MD</b> Chairman, President of Serbian Society of Emergency Physicians  <b>Bojana Uzelac, MD</b> President of The Emergency Medicine Section of The Serbian Medical Society
19.00 - 22.00	Dinner

### 04 JUNE 2021 MAIN HALL

	<b>Opening Speeches</b>
09.00-10.00	<b>Prof. Dr. Başar Cander</b> Chairman, President of Emergency Medicine Physician Association of Turkey
	<b>Sasa Ignjatijević, MD</b> Chairman, President of Serbian Society of Emergency Physicians
	<b>Bojana Uzelac, MD</b> President of The Emergency Medicine Section of The Serbian Medical Society
10.00-10.30	Coffee Break

		<p><b>Cardiac Failure Management in ER</b>  <b>Prof. Dr. Behçet Al</b>  Gaziantep University, Faculty of Medicine, Emergency Medicine Department</p> <p><b>Management of Atrial Fibrillation in ER</b>  <b>Assoc. Prof. Dr. Mehmet Okumuş</b>  Ankara Train &amp; Research Hospital, Emergency Medicine Department</p> <p><b>Hypertension Management</b>  <b>Jelena Milanović, MD</b>  Emergency Medical Service, Kragujevac</p> <p><b>Chest Pain Management in Prehospital Settings</b>  <b>Saša Ignjatijević, MD</b>  Emergency Medical Service, Niš</p> <p><b>Early Hospital Management of Patients with Chest Pain Suspected of Acute Myocardial Infarction</b>  <b>Marina Djikić, MD</b>  Emergency Centre, Clinical Center of Serbia, Belgrade</p> <p><b>New Guidelines and Treatment of Atrial Fibrillation</b>  <b>Jelena Tijanić, MD</b>  Emergency Medical Service, Kragujevac</p>
10.30-12.30	<b>Saša Ignjatijević, MD</b>  <b>Prof. Dr. Hakan Oğuztürk</b>  <b>Assoc. Prof. Dr. Şükrü Gürbüz</b>	Lunch
12.30-13.30		
13.30-14.10	<b>Dragan Mitić, MD</b>  <b>Assoc. Prof. Dr. Mehmet Okumuş</b>	<p><b>Pneumonia: Current Approach</b>  <b>Prof. Dr. Ayhan Aköz</b>  Aydın Adnan Menderes University, Faculty of Medicine, Emergency Medicine Department</p> <p><b>X-Ray in Pulmonary Infections</b>  <b>Dragan Mitić, MD</b>  Department of Radiology, General Hospital Pirot, Serbia</p>

14.10-14.50	<b>Bojan Stojanović, MD</b>  <b>Prof. Dr. Zeynep Çakır</b>	<b>Pulmonary Thromboembolism</b> <b>Assoc. Prof. Dr. Yavuz Katırcı</b> Ankara Keçiören Train & Research Hospital, Emergency Medicine Department  <b>Bojan Stojanović, MD</b> Special Hospital CODRA Podgorica, Montenegro
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14.50-15.10	<b>Prof. Dr. Hakan Öğütürk</b>	<b>Differential Diagnosis of Hemophysis in Emergency Department</b> <b>Ivana Milicević-Nesić, MD</b> Emergency Centre Clinical Center of Serbia, Belgrade
15.10-15.30	Coffee Break	
15.30-16.10	<b>Prim. Vladimir Gajic, MD, Phd</b>  <b>Assoc. Prof. Dr. Şükrü Gürbüz</b>	<b>Cardiac Emergency in Turkey</b> <b>Prof. Dr. Zeynep Çakır</b> Erzurum Atatürk University, Faculty of Medicine, Emergency Medicine Department  <b>Cardiac Emergency in Serbia - Serbian STEMI Network</b> <b>Prim. Vladimir Gajic MD, Phd</b> Emergency Medical Service, Kragujevac
16.10-17.00	<b>Prof. Dr. Hakan Öğütürk</b>	<b>Rational Use of Medication</b> <b>Prof. Dr. Başar Cander</b> Chairman, President of Emergency Physician Association of Turkey
19.00-22.00	Dinner	

## 04 JUNE 2021 SECOND

Time	Moderator	Subject and Speakers
12.30-13.30		Lunch

13.30-15.00	Prof. Dr. Hakan Oğuztürk Assoc. Prof. Dr. Şükrü Gürbüz	Oral Presentations
15.00-15.30	Coffee Break	
15.30-17.00	Prof. Dr. Ayhan Aköz Prof. Dr. Behçet Al	Oral Presentations
19.00-22.00	Dinner	

## 05 JUNE 2021 MAIN HALL

Time	Moderator	Subject and Speakers
09.00-10.00	Prof. Dr. Vesna Brzački, MD, Phd Prof. Dr. Ayhan Aköz	<b>Approach to Patients with Liver Failure in ER</b> <b>Prof. Dr. Mehmet Gül</b> Konya Necmettin Erbakan University, Faculty of Medicine, Emergency Medicine Department
		<b>Approach to Patients with GI Bleeding</b> <b>Prof. Vesna Brzački, MD, Phd</b> Clinical Centre Niš, Department of Gastroenterology
10.00-11.00	Dušica Gujaničić, MD  Prof. Dr. Behçet Al	<b>Approach to Patients with Abdominal Pain</b> <b>Assoc. Prof Dr. Şükrü Gürbüz</b> Malatya University, Faculty of Medicine, Emergency Medicine Department
11.00-11.30	Early Hospital Approach to Patient with Abdominal Pain  Dušica Gujaničić, MD Emergency Center, Clinical Center of Serbia, Belgrade	
	Coffee Break	

11.30-12.30	<p><b>Milan Elenkov, MD</b></p> <p><b>Assoc. Prof. Dr. Mehmet Okumus</b></p>	<p><b>Acute Pulmonary Oedema in ICU</b> <b>Milan Elenkov, MD</b> Department of Anesthesiology, General Hospital Pirot</p> <p><b>CHF and AC Edena</b> <b>Spec. Dr. Miray Tümer</b> Ankara City Hospital</p>
12.30-13.30		Lunch

13.30-14.30	<p><b>Bojana Uzelac, MD</b></p> <p><b>Assoc. Prof. Dr. Mustafa Ahmet Afacan</b></p>	<p><b>Summary of The New Guidelines for Management Patientswith SVT</b>  <b>Biljana Radisavljević, MD</b>  Emergency Medical Service, Niš</p> <p><b>Differential Diagnosis of Wide Complex Tachycardia</b>  <b>Bojana Uzelac, MD</b>  President of The Emergency Medicine Section of The Serbian Medical Society</p>
14.30-16.10	<p><b>Prim Vladimir Mitov MD, Msc, Phd, FACC</b></p> <p><b>Assoc. Prof. Dr. YavuzKatırcı</b></p>	<p><b>Acute ST High MI?</b>  <b>Assoc. Prof. Dr. Mustafa Ahmet Afacan</b>  Haydarpaşa Numune Train &amp; Research Hospital</p> <p><b>Non Ischemic ST Elevation</b>  <b>Slobodan Dzelebdzic, MD</b>  Emergency Center, Clinical Center of Serbia, Belgrade</p> <p><b>Everything About ICD</b>  <b>Prim. Vladimir Mitov MD, Msc, Phd, FACC</b>  Department of Cardiovascular Diseases, General Hospital Zaječar</p> <p><b>Aortic Dissection</b>  <b>Aleksandar Jolić MD, FACC</b>  Department of Cardiovascular Diseases, General Hospital Zaječar</p> <p><b>Heart in Trauma</b>  <b>Dušica Janković, MD</b>  Emergency Medical Service, Nis</p>

16.10-16.40	Coffee Break
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		<b>Workshop: Cardiac Emergency &amp; Internal Medicine in Serbia</b>
<b>16.40-17.20</b>	<b>Doc. Prim. Dragan Milojević, MD, Phd</b>  <b>Doc. Zivana Slović, MD, Phd</b>	<b>Atypical Presentation of Pulmonary Thromboembolism and Medicolegal Significance</b>  <b>Doc. Prim. Dragan Milojević, MD, Phd</b> EMS, Kragujevac  <b>Doc. Dr. Zivana Slović, MD, Phd</b> Medical Faculty, Kragujevac
<b>19.00-22.00</b>		Dinner

## **06 JUNE 2021 MAIN HALL**

<b>Time</b>	<b>Moderator</b>	<b>Subject and Speakers</b>
<b>09.00-11.30</b>	<b>Prim. Mıljan Jovic, MD</b>  <b>Spec. Dr. Erkut Coşkun</b>	<b>Legal Problems with Solutions in Emergency Medicine</b> <b>Prim. Dr. Mıljan Jovic, MD</b> General Hospital Zajecar, Emergency Medicine Department  <b>Prof. Dr. Başar Cander</b> Chairman, President of Emergency Medicine Physician Association of Turkey
<b>11.30-12.00</b>	<b>Symposium Closing Speeches</b>	

## **POSTER BİLDİRİLERİ**

### **POSTER 1**

#### **A Patient with Spondylolisthesis with Low Back Pain Admitted to the Emergency Clinic: A Case Report**

Murat Baloğlu<sup>1</sup> Abdurrahman Çetin<sup>2</sup> Hüseyin Özevren<sup>3</sup>

<sup>1</sup>Department of Physical Therapy and Rehabilitation, Diyarbakir Gazi Yasargil Education and Research Hospital, Diyarbakir, Turkey

<sup>2</sup>Department of Neurosurgery, Diyarbakir Gazi Yasargil Education and Research Hospital, Diyarbakir, Turkey

<sup>3</sup>Department of Neurosurgery, School of Medicine, Dicle University, Diyarbakir, Turkey

#### **Introduction and aim**

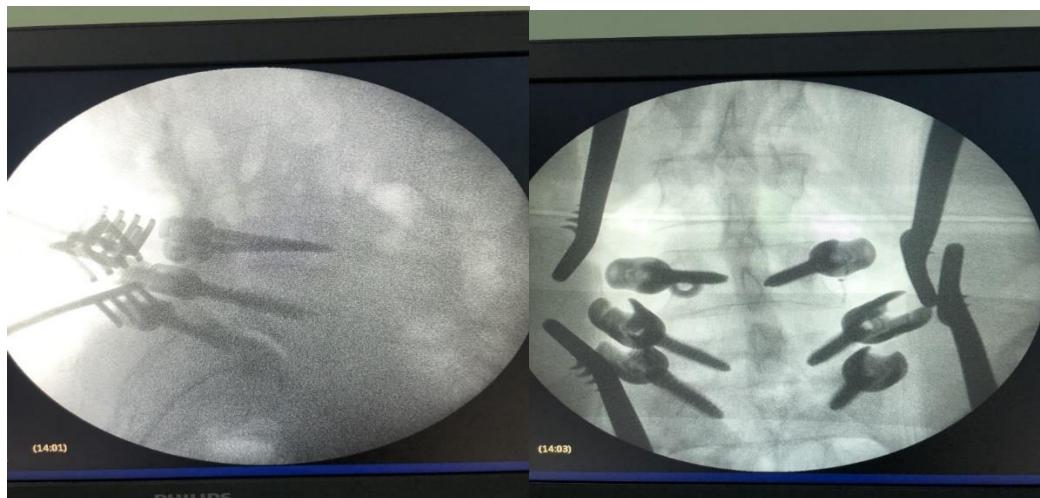
Many patients apply to the emergency clinics due to low back and leg pain. We aimed to present a case presenting with the diagnosis of Spondylolysis.

#### **Material and method**

The 56-year-old patient has back and leg pain that increases with sitting, standing up, and walking.

#### **Results**

The patient received medical treatment in the physical therapy and algology outpatient clinic due to his current complaints, but his complaints did not decrease. The operation was decided after spondylolisthesis grade 3 was detected in the dynamic MRI.



Post-op figure 1 and 2

#### **Discussion and Conclusion**

Impairment of the integrity of the bone bridges, which we define as Spondylolysis, lead to spondylolisthesis in the future, may develop as a result of many different reasons. They can be congenital (dysplastic spondylolisthesis), or as a result of recurrent trauma (isthmic spondylolisthesis). The most important reason for isthmic spondylolisthesis, which is mostly seen at young ages, is sports that force the spine to move beyond normal limits. Another important development path is the degeneration of the intervertebral joints and fluid pads, which we see in older age groups, and their loss of support and resistance against spinal movements. As a result, they cannot prevent the vertebra from slipping forward. The diagnosis can be made easily by direct x-ray and computed tomography. While applying Grade 1 and 2 medical treatment and external corset, surgical treatment should be preferred for Grade 3 and 4 slips. In surgical treatment, the pressure on the nerves is removed, and stabilization is provided by placing screws. Bone tissue is added to this area, the vertebrae are fused together and the possibility of slipping is eliminated. We placed the patient on the table in the prone position and placed a bone graft on the L4, 5, S1 vertebrae to provide posterior stabilization and fusion. On the 2nd day, we mobilized the patient with a corset, his VAS pain scale decreased from 8 to 2.

#### Keywords

low back pain, spondylolysis, spondylolisthesis,

## POSTER 2

### Evaluation of Operated Patients with 5-6 Cervical Dislocations A Case Report

Abdurrahman Çetin<sup>1</sup> Hüseyin Özevren<sup>2</sup> Murat Baloğlu<sup>3</sup> 1Department of Neurosurgery, Diyarbakir Gazi Yasargil Education and Research Hospital, Diyarbakir, Turkey

2Department of Neurosurgery, School of Medicine, Dicle University, Diyarbakir, Turkey

3Department of Physical Therapy and Rehabilitation, Diyarbakir Gazi Yasargil Education and Research Hospital, Diyarbakir, Turkey

#### Introduction and purpose

To present a case in which cervical vertebra dislocation developed as a result of falling from the vehicle.

#### Material and method

42-year-old male patient-related documents and reports were saved to the computer. The patient was placed on the table in the supine position. A subcutaneous incision was made in the cervical region at the level of the cricoid. The platysma was craniocaudally dissected. The sternocleidomastoid muscle was medially passed through its fascia. The incision was deepened from the anterior. The area was enlarged with the finger. The anterior corpus was reached, the muscles were bipolarized. Retractor was placed in the distance. An anterior longitudinal ligament was excised. A cage with a knife was placed between the C5-6 vertebrae and an anterior plate screw was placed. The layers were properly closed, 4 extremities were moved, and transferred to the service with a neck collar.

## Results

In the cervical MR of the patient, cervical axis disruption was observed at the C5-6 level, listesis and ligament damage were observed. Cervical vertebra malalignment and axis distortion were observed. There was no spinal cord injury or neurological deficit.



## Discussion and Conclusion

Cervical traumas are life-threatening injuries that occur especially as a result of direct or indirect blunt traumas, permanently reduce the quality of life. These injuries can be relatively mild injuries such as supporting tissue and connective tissue injuries, as well as very serious injuries, including neurological injuries due to cervical vertebra fractures. If ligament damage or malalignment or listesis is detected with high-resolution MR in cervical traumas, surgical intervention should be considered to prevent the development of cervical kyphosis and the development of neuro deficits.

## Keywords

Anterior stabilization, cervical trauma, dislocation

## **POSTER 3**

The prophylactic of clomiphene citrate on the tibia bone in ovariectomized mice.

Murat Baloglu1, EnginDeveci2

1Department of Physical Therapy and Rehabilitation, Diyarbakir Gazi Yasargil Education and Research Hospital, Diyarbakir, Turkey

2Department of Histology and Embryology, School of Medicine, Dicle University, Diyarbakir, Turkey

### Aim

Clomiphene citrate is a non-steroid molecule with both estrogenic and anti-estrogenic properties. The aim of this study is to investigate the protective effect of clomiphene citrate on tibial bone resorption in ovariectomized mice using biochemical and immunohistochemical methods.

### Material and Method

A total of 32 Wistar rats were randomly and equally divided into 4 groups as follows.

1-Sham group

2- Clomifen citrate

3-Bilateral Ovariectomy

4-Bilateral Ovariectomy + Clomiphene citrate

Following ovariectomy, IV. Animals in the group were given 10 mg / kg of Clomiphene citrate daily for 2 months. After 2 months, the animals were intramuscularly sacrificed using ketamine hydrochloride (50 mg / kg) ketamine hydroxide and xylazine hydrochloride (10 mg / kg) for anesthesia.

Blood samples were taken from each animal and estrogen, calcium and alkaline phosphate values were examined. There were significant differences in biochemical and immunohistochemical expression values between the sham group (I) and the ovariectomy (III) group as well as the ovariectomy groups ± clomiphene citrate

### Results

Biochemical data were compared between the four groups. There were significant differences ( $p<0.001$ ) between the sham group and clomiphene citrate treated groups and between the groups  $\pm$  ovariectomy with regards to immunohistochemical osteonectin and osteopontin expression (Table 1,2).

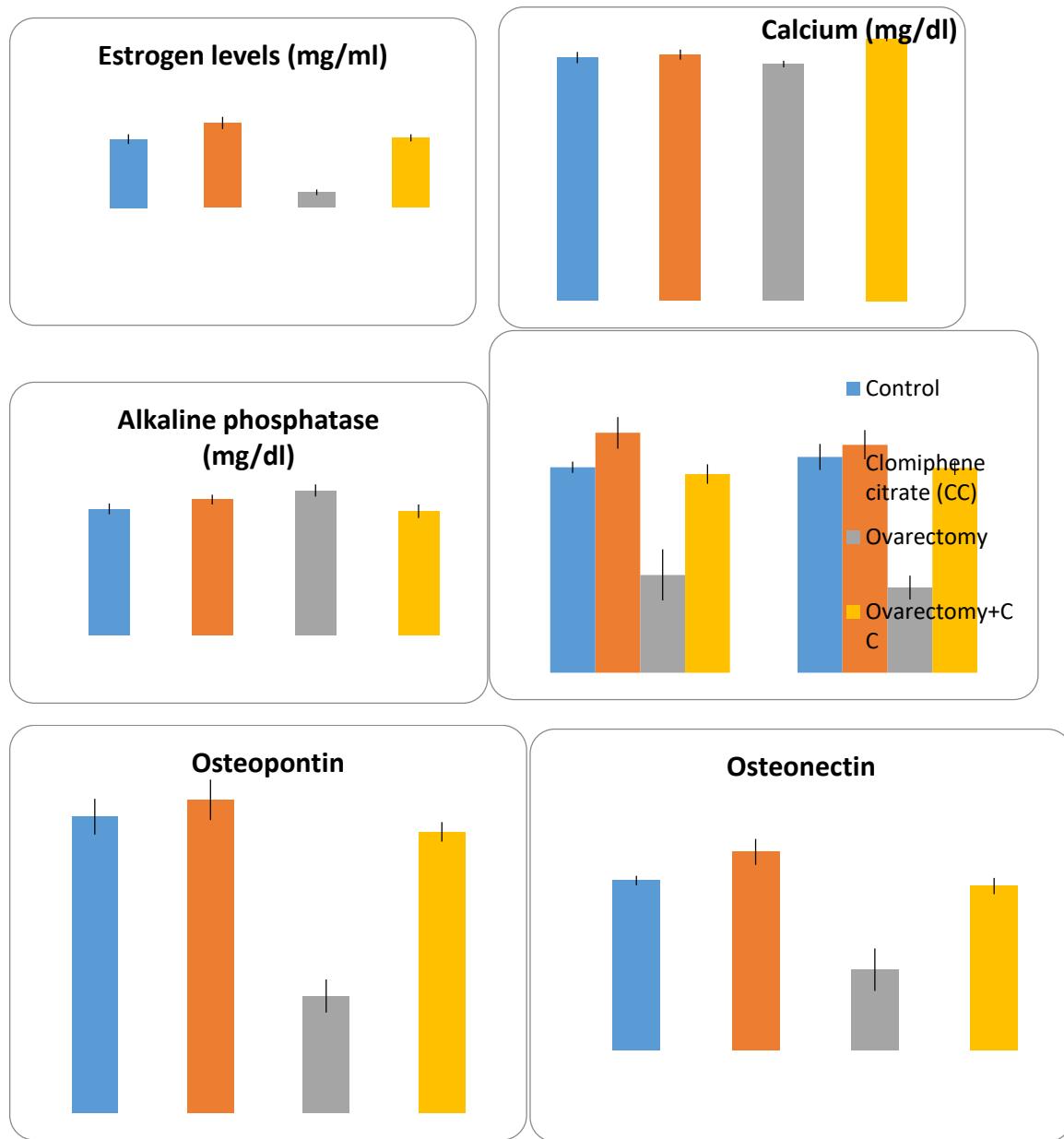


Table -2. Biochemical and immunohistochemical expression data graphs of 4 groups.

The ovariectomy + clomiphene citrate group showed regeneration of bone trabecular areas and a decrease in the number of osteoclast cells. It was observed that osteoblasts formed new bone formation with bone matrix around the bone trabecula in the group treated with clomiphene citrate after ovariectomy. Osteopontine and osteopontin expression increased in osteoblastic cells and osteocyte cells in the clomiphene citrate group and had a positive effect on new bone development.

## Discussion

The enhancing effect of clomiphene citrate, which has both estrogenic / anti-estrogenic activity on bone resorption, on osteoblastic activity induced the development of new osteocytes and ultimately stimulated bone and bone matrix formation regeneration(1). A study by Duvall and et al. (2007) reported that osteopontin expression was clearly observed in the periodontal ligament and alveolar bone in ovariectomized rats and as a result of this estrogen deficiency may lead to the destruction of periodontal ligaments (2). Similar to this study, osteoblast cells around bone trabeculae, matrix between cells and osteopontin expression in osteocytes were observed to be positive in our examinations.

Besides, we showed that fibroblasts and inflammatory cells were positive for OPN. It has been suggested that the prominence of OPN expression in the mRNA of osteocytes in bone tissue (caused by estrogen deficiency after ovariectomy) may be considered a sign of bone metabolism. Wronski et al. (3) investigated the long-term effects of ovariectomy on proximal tibial metaphyseal trabecular bone histomorphometry in ovariectomized rats. Therewithal, Uyar et al (4) reported that clomiphene citrate, a selective estrogen receptor modulator, prevented daily bone loss in an animal osteoporosis model

## Conclusions

As a result, bone loss is an important consequence of estrogen deficiency in bone resorption resulting from ovariectomy, which is also known to induce osteocyte development, bone regeneration, and bone matrix formation. In our current study, we hypothesized that clomiphene citrate increased osteoblastic activity against bone loss. Due to the effect of ovariectomy, the increase in osteoclast cell activity with the decrease in bone matrix led to bone loss suggesting that the antiestrogenic effect of clomiphene citrate has similar effects like estrogen and prevents bone loss by inducing bone matrix development besides increasing osteonectin and ostopontin activity which are the precursor proteins in bone cells and also by reducing inflammatory process.

## Keywords

Clomiphene citrate, Osteoporosis, ovariectomy

## References

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## **SÖZEL BİLDİRİLER**

### **SÖZEL 1**

#### **Persistent Complete Atrioventricular Block in a Patient with Covid-19 Pneumonia: A Case Report**

Ashihan Mete Yıldırım<sup>1</sup>, Emine Hidayet<sup>1</sup>, Şükrü Gürbüz<sup>2</sup>

<sup>1</sup>Malatya Training and Research Hospital, Department of Internal Medicine, Malatya

<sup>2</sup>Inonu University Medicine Faculty, Department of Emergency Medicine, Malatya

#### **Introduction**

While the Covid 19 pandemic continues all over the world, new data are presented to the literature every day that the disease progresses with a wide variety of complications (1). Cardiovascular system complications are of particular importance in terms of both their high frequency and high mortality (2). There are some case reports in the literature of complete Atrioventricular Heart Block due to Covid-19 infection. (3-5)

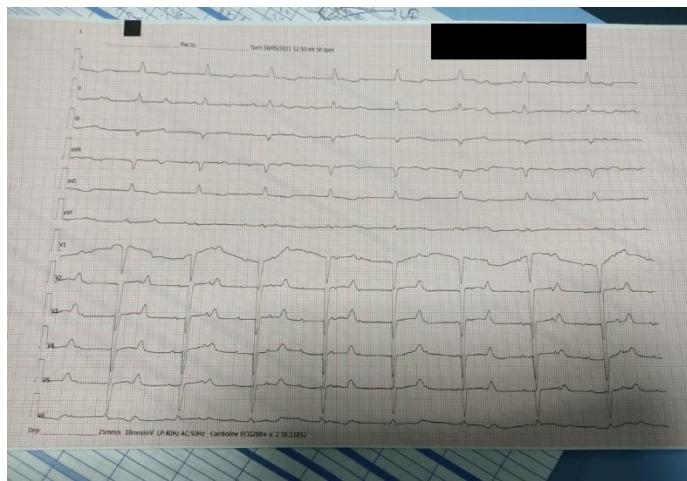
#### **Case Report**

In this case report, we reported atrioventricular complete block (AVB) in a 79-year-old female patient who was being followed up with Covid-19 pneumonia. The patient using Favipravir was admitted to the emergency room with syncope on the 6th day of her treatment. AVB was detected in the patient whose previous ECGs were normal and who did not have any electrolyte disorder.

Patient was followed up in the intensive care unit. Favipravir treatment was stopped and symptomatic treatment was started to the patient for the complete heart block. Patients condition got better for covid-19 and she was discharged.

In her follow ups for 8 weeks it was seen that her complete heart block became permanent.

She went under permanent pacemaker procedure for her complete atrioventricular block



## Discussion

Several factors including inflammatory response, myocardial involvement, hypoxia due to pneumonia and drug used are accused for this clinical picture, the pathophysiology of AVB development in Covid-19 infection has not been well understood yet (4).

There are several case reports in the literature that shows permanent complete heart block in covid-19 patients (5,6). A case series involving 138 hospitalized patients with COVID-19-infected pneumonia in Wuhan, China, reported 7.2% of patients developing acute cardiac injury (defined by elevated high-sensitivity cardiac troponin I levels or new ECG or echocardiographic abnormalities), and around 16.7% patients were noted to have developed arrhythmias (7).

There are several possible causes that can be the reason of this condition. One of them is that the virus can cause a defect in signal transmission due to its effect on angiotensin-converting enzyme-2. A few other mechanisms that have been thought to potentially induce cardiac damage are hypoxemia and systemic inflammatory response caused by COVID-19 (8).

Our patient had hypertension and that condition may have been a facilitating factor in the development of the block. However, very little is known about cardiac involvement as a complication of COVID-19 infection. Whether the development of arrhythmia is secondary to direct viral involvement or due to an exaggerated inflammatory response is unknown at this time.

Further studies are needed to clarify the pathogenesis of this condition.

Conclusion:

Although the spontaneous recovery of the AVB is expected with conservative treatment, the need for a permanent pacemaker may arise in such cases.

Considering the pandemic that the world is struck, it is important to evaluate Covid-19 infection by performing PCR control in patients who admitted to the Emergency Department with arrhythmia and conduction defects.

#### References:

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## SÖZEL 2

### **ACUTE EBV HEPATITIS SYNCHRONOUS WITH AMOXICILLIN-CLAVULANATE INDUCED LIVER INJURY – A CASE REPORT AND LITERATURE REVIEW**

Aslıhan Mete Yıldırım<sup>1</sup>, Serdar Karakaya<sup>2</sup>, İbrahim Karadağ<sup>2</sup>, Oktay Bulur<sup>3</sup>, Şükrü Gürbüz<sup>4</sup>

<sup>1</sup> Malatya Training and Research Hospital , Malatya , Department of Internal Medicine

<sup>2</sup> Dr. Abdurrahman Yurtaslan Oncology Training and Research Hostpital, Ankara, Department of Oncology

<sup>3</sup> Erciyes University Medical Faculty, Kayseri, Department of Gastroenterology

<sup>4</sup> Inonu University Medicine Faculty, Malatya , Department of Emergency Medicine

## Introduction

Epstein-Barr virus (EBV) is a member of the herpes virus family. It is associated infectious, auto-immune, neurological, hematological and malign diseases. EBV primarily causes infectious mononucleosis characterized by the triad of fever, oropharyngitis, and symmetric lymphadenitis (1,2). Acute hepatitis is a rare consequence of EBV infection. It is usually seen with transient jaundice and increased levels of aminotransferase, but may rarely cause fulminant hepatitis (3).

Drug induced liver injury(DILI) is getting a growing problem for gastroenterologists in this century. It can be classified as non-idiosyncratic or idiosyncratic.

In addition, it is further classified according to injury pattern in the liver: Histological injury pattern and liver functions abnormalities. Predisposing factors for DILI are drug dose, drug lipophilicity, age, sex, presence of underlying liver disease, and genetic(HLA) predisposition (4,5).

Amoxicillin/clavulanate is one of the most common idiosyncratic cause of DILI. It can cause hepatocellular ,cholestatic or mixed type liver function abnormality .Patients may complain about varying degrees of jaundice (6).

In the literature search made with the terms of acute hepatitis, Epstein Barr virus, drug-induced liver injury and amoxicillin-clavulanate, to the best of our knowledge, we present the first case of Acute EBV Hepatitis synchronous with Amoxicillin-Clavulanate-induced Liver Injury.

## Case Report

A 36-year-old man was admitted to the emergency department with a 5 days history of fatigue, fever ,dark urine and sore throat. In his past medical history, 20 days before his admission he received Amoxicillin-Clavulanate (2x1000 mg) for five days.

The physical examination revealed, fever, icterus, the membranous plaques on his tonsils. Lymphocytes, liver function tests, INR and PT levels were increased, hepatitis markers and PCR tests for Covid-19 were negative. Anti-SM antibody and EBV-VCA IgM/IgG were positive.

Abdominal ultrasound revealed hepatomegaly and increased parenchymal echogenicity.

Liver biopsy was revealed dense portal inflammation and atypical lymphocyte infiltration, bile duct damage, cholestasis in zone 3 and positive staining with EBER in situ hybridization.

The patient was diagnosed with synchronous, acute hepatitis due to EBV and Amoxicillin-Clavulanate. After supportive therapy at end of 10 days, patient discharged with normal levels of liver function tests

## Discussion

We are presenting the first case of Acute EBV Hepatitis synchronous with Amoxicillin-Clavulanate-induced Liver Injury. Amoxicillin/clavulanate is the one of the most accused drug leading hepatitis. Proposed mechanism of hepatic toxicity is an immune reaction to the clavulanate part of the drug (7).

Men are affected more than women. Our patient was male and Amoxicillin / clavulanate was prescribed for throat infection. Liver injury due to Amoxicillin/clavulanate is almost cholestatic type but occasionally may be hepatocellular or mixed type. The pattern of liver injury is assessed by the ratio (R) of the serum ALT to alkaline phosphatase an  $R < 2$  indicates cholestatic-type injury, an  $R > 5$  hepatocellular, and  $R = 2-5$  as mixed cholestatic-hepatocellular injury (6). In our patient R score was approximately 3 that indicate injury was mixed type in our patient. Hepatic type injury may be seen occasionally.

Patients often complain from jaundice that usually recover completely. Rarely liver injury may progress to liver insufficiency and liver transplantation may be needed (6,8). In our case jaundice was fully recovered. Histopathological findings in Amoxicillin/clavulanate induced liver injury are commonly zone 3 cholestasis and bile duct injury (9).

In addition of histological findings, laboratory findings also supported the synchronous EBV infection.

Infectious mononucleosis has prodromal symptoms as fever, headache and malaise. Following these prodromal symptoms classic clinical findings including fever, pharyngitis, adenopathy, and fatigue occurs (10).

Although hepatitis mechanism not known clearly, EBV can result acute hepatitis with elevated liver enzymes and varying degrees of jaundice with or without infectious mononucleosis (11,12).

EBV tests results were compatible with acute EBV infection. Liver histology of the EBV infection is characterized by atypical sinusoidal lymphocytic infiltration and portal expansion by these lymphocytes. In the setting of EBV infection cholestatic hepatitis is very rare (13).

In our patient's liver biopsy was revealed dense portal inflammation, increased number of atypical lymphocytes in sinusoids.

Treatment of Amoxicillin/clavulanate induced liver injury is to discontinue of the drug. Treatment in infectious mononucleosis is mainly supportive and symptomatic. Management consists of adequate fluid replacement, non-steroidal drugs for fever or sore throat and resting. The use of corticosteroids in the treatment of EBV-induced IM has been controversial. (2,12)

## Conclusion

Epstein–Barr virus is associated with a wide variety of clinical manifestations and can present hepatitis with or without features of infectious mononucleosis.

Drug induced liver injury may accompany to other causes that related hepatitis. We propose that clinicians keep in mind the synchronous viral and drug-induced liver injury in the differential diagnosis of acute hepatitis.

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### SÖZEL 3

#### **Myocarditis After Covid-19 Infection: A Case Report**

Aslıhan Mete Yıldırım<sup>1</sup>, Şükrü Gürbüz<sup>2</sup>

<sup>1</sup>Malatya Training and Research Hospital, Department of Internal Medicine, Malatya

<sup>2</sup>Inonu University Medicine Faculty, Department of Emergency Medicine, Malatya

## Introduction

Covid-19 infection has caused numerous mortality and morbidity worldwide since March 2020, when it was declared as a pandemic (1). Although it progresses with pneumonia in the foreground, patients present with many different clinical presentations (2).

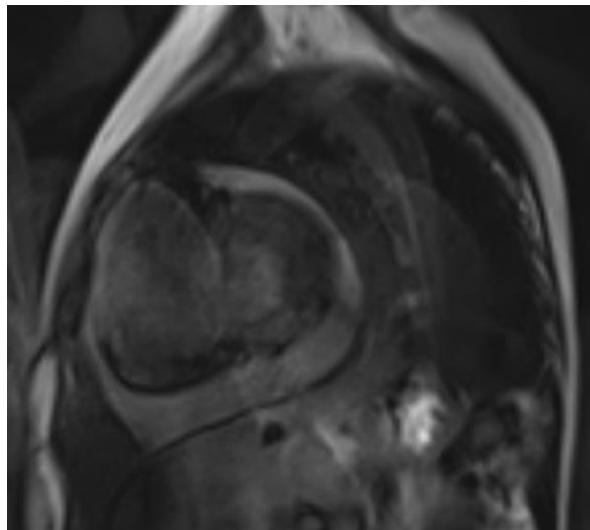
Among these, myocarditis cases have been encountered with an increasing frequency recently and many case reports have been reported. In this case report, we reported a case of myocarditis that developed after covid-19 infection (3,4).

## Case Report

A 43-year-old male patient was admitted to the emergency department with the development of dyspnea and exertional dyspnea 3 months after treatment for covid infection. Patients Creatine Kinase , Creatine Kinase-MB and Troponin levels were high, and there was an appearance compatible with pleural effusion in the lung basals. There was a sinus tachycardia and no ST elevation on patient's ECG.

Ecoecardiography was performed to the patient who has no history of heart failure and his EF was detected as 30%, however there was no evidence of vegetation or valve insufficiency that will reduce infective endocarditis.

Cardiac MRI was performed to the patient with the pre-diagnosis of the development of myocarditis due to Covid-19. The patient was diagnosed with myocarditis because of involvement in late gadolinium contrast-enhanced phases in right and left ventricles Wall in cardiac MRI. At the same time there was a severe pericardial effusion. Ejection fraction was calculated as 30% in the functional cine MRI.



## Discussion

Although the pathophysiology in the development of myocarditis after covid is still not fully brightened , myocyte damage caused by the virus and the excessive response of the immune system are blamed (5-7).

In studies conducted by Huang et al. and Chen et al. it was shown that cytokine levels are higher in patients who need intensive care (8,9).

However, it is still unclear whether this is the main cause of myocarditis.

Another potential cause of myocarditis is direct viral involvement. SARS-CoV-2 uses the angiotensin-converting enzyme to enter to the cell (10,11). Therefore, myocardial inclusion and inflammation are plausible in the pathogenesis of myocarditis.

So far, there are limited reports showing pathological evidence that COVID-19 directly invades the heart. Sala et al. showed viral particles with the morphology and size of coronaviruses in interstitial macrophages, however, there was no SARS-CoV-2 genomic material in the myocardium (12). In another study, Xu et al. reported pathological postmortem biopsies from a patient who succumbed to COVID-19. There were only a few interstitial mononuclear inflammatory infiltrates, but no other substantial damage in the heart tissue (13).

## Conclusion

We think that patients with Covid-19 infection may develop a picture of myocarditis even if they have recovered, and it should be considered that they can apply to the emergency department with the heart failure clinic.

In this case report , we wanted to emphasize that it may be important to consider that patients with COVID 19 may develop myocarditis even if they fully recovered and that patients can admit to the emergency department with signs of heart failure.

Further studies are needed to elucidate the pathogenesis of this condition.

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## SÖZEL 4

### TRANSORBITAL INTRACRANIAL INJURY WITH a METAL BAR

Dr. Burak Emre Gilik, Dr. İzzettin Ertas, Prof. Dr. Hakan Oğuztürk

Abstract:

Transorbital intracranial injury is relatively rare and may cause serious brain damage and is associated with a high mortality rate(1,2). This type of injury, accounting for 4.5% of all orbital pathology, represents 0.04% of all head trauma (3,4). The injuries account for 24% of penetrating head injuries in adults and approximately 45% in children (5). Penetrating orbital injury may lead to severe brain injury when the foreign object enters the cranium leading to both orbital and cerebral complications.(2) We report an uncommon case of transorbital intracranial injury where child sustained injury due to accidental penetration of metal bar .

**Keywords:** Orbital trauma, Penetrating brain injury; transorbital route, Metal bar,

Case report::

A 2-year-old boy was admitted to the emergency department outpatient due to foreign body trauma to the right eye, which occurred approximately 1 hour ago. The metal bar was 15 cm long. (fig 1.)Approximately 6 cm of the object entered the eye and was removed by his brother immediately after the incident.

At first admission, the patient was conscious, oriented and cooperative beside four limbs were mobile. There was no nausea, vomiting and tendency to sleep. There was no history of loss of consciousness or seizures.The right periorbital region of the patient was ecchymotic and edematous.(fig 2) There was an oblique laceration of approximately 2 cm in the right eyelid and lateral to the conjunctiva. Light reflex + / + indirect light reflex + / +.

His general and systemic examination was normal. Blood investigations were normal.

A noncontrast Cranial CT demonstrated the appearance of the bone fragment measuring approximately 5x2 mm in the brain parenchyma in the frontal region on the right supraorbital area adjacent to the orbital ceiling. There was hemorrhage, measuring approximately 8.5 mm thick, extending towards the periventricular area, adjacent to the bone fragment. (Fig 3)

After receiving tetanus prophylaxis and IV antibioticotherapy, the patient was consulted for neurosurgery, eye and pediatric clinics. The patient was hospitalized in ICU because of brain hemorrhage.

Discussion :

The incidence of brain damage from orbital injury is related to orbital bone anatomy as well as size, shape, and trajectory of the penetrating object. The orbit is pyramidal in shape with a quadrangular base situated at the orbital margin, converging triangular sides formed by the orbital walls, and an apex terminating at

the superior and inferior orbital fissures(SOF, IOF) and optic canal (OC). Suspended within this pyramid, the globe is resistant to trauma due to its tough sclera and relative mobility within the surrounding bed of intraorbital fat .Given this mobility, penetrating orbital injuries may not be accompanied by damage to the globe itself and can easily be overlooked. (7,8)

#### Conclusion :

Penetrating eye injuries are not always limited to orbital trauma, but can cause brain injury. evaluate the foreign body and the part where it enters the eye; cranial imaging is essential because this situation carries the risk of intracranial hemorrhage and meningitis and poses a high mortality rate.

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FIG 1



FIG 2

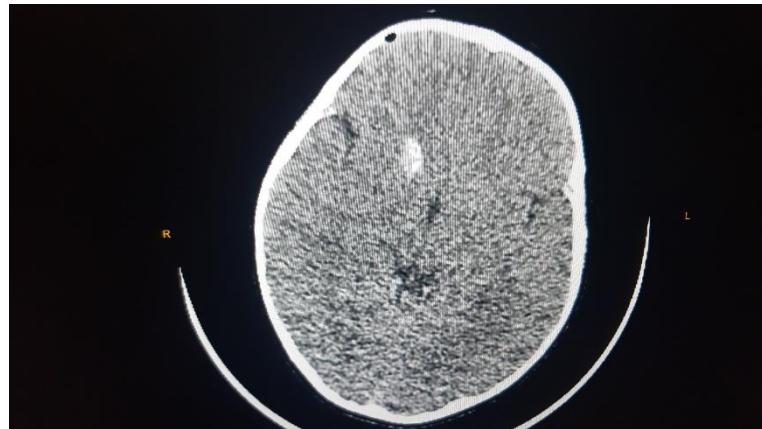


FİG 3

## SÖZEL 5

### FARKLI ZAMANLarda KARACİĞER VE DALAK KİST HİDATİK RÜPTÜRÜNE BAĞLI GELİŞEN AKUT BATIN TABLOSU: ÇOK NADİR GÖRÜLEN BİR OLGU

Mümin Demir, Çağrı Akalın

Ordu Üniversitesi Tıp Fakültesi, Genel Cerrahi ABD, Ordu

#### GİRİŞ

Kist hidatik (KH), başta karaciğer ve dalak olmak üzere çok sayıda organı tutabilen zoonotik bir enfeksiyondur. KH rüptürü, bu hastalığın yüksek morbidite ve mortaliteye yol açan bir komplikasyonudur. Bu olgu sunumunda aynı hastada farklı zaman dilimlerinde karaciğer ve dalak KH rüptürüne bağlı gelişen akut batın tablosu sunulacaktır.

#### OLGU SUNUMU

50 yaşında erkek hasta karın ağrısı ve ateş şikayeti ile acil serviste değerlendirildi. Karın ağrısının aynı gün içerisinde ani olarak başladığı ifade edildi. Vital bulgularında; nabız:112/dk, tansiyon: 92/61 mm hg, vücut sıcaklığı: 38,6 °C idi. Özgeçmişinde 10 sene önce karaciğer kist hidatik rüptüründen dolayı operasyon öyküsü mevcuttu. Fizik muayenesinde; tüm abdomende defans ve rebaund mevcuttu. Laboratuvar parametrelerinde; tam kan sayımı: 17200/mm<sup>3</sup>, CRP: 8.2 mg/dL idi. Bilgisayarlı tomografide (BT) dalakta 10,5 cm'lik KH izlenmiş olup kistin membranları ve kapsülü arasında ayrılma olduğu saptandı. Ayrıca ince bağırsak segmentlerinde dilatasyon, duvarında kalınlaşma ve mezenterik kirli yağ dansiteleri izlenmiş olup bulgular dalak KH rüptürüne sekonder olabileceği yönünde yorumlandı (Figür-1). Hastaya laparotomi kararı verildi. Hastaya germinatif membran eksizyonu+kapitonaj işlemi uygulandı. Herhangi bir komplikasyon gelişmeyen hasta post-operatif 3.gününde taburcu edildi. Takibinin 1.ayında karın ağrısı şikayeti ile tekrar polikliniğe başvuran hastanın fizik muayenesinde sol üst kadranda defans saptandı. BT'de dalak alt ve orta kesiminde 101x96,6 mm boyutlu ince cidar oluşturacak şekilde KH kapsülünün tekrar reorganize olduğu saptandı. Nüks KH tanısı konulan hastaya splenektomi yapıldı. Hasta postoperatif 4.gününde taburcu edildi.

## TARTIŞMA VE SONUÇ

KH, cerrahiye rağmen rekürrens olasılığı yüksek olan bir hastalıktır. KH rüptürü ya da cerrahi sırasında KH içerisindeki kız larvaların batın içine yayılması rekürrens'in ana sebeplerinden biridir. Hastamızda, karaciğer KH rüptüründen kaynaklanan bu bulaşın dalakta KH'ya neden olabileceğini düşünmektediriz. Cerrahi tedavi sonrasında hastaların sıkı takip edilmesi nüksün erken tanısında önemli bir rol oynamaktadır. Hastamız nüks dalak KH rüptürü nedeniyle tekrar opere edilmiştir. Olgumuzda, hem karaciğer hem de dalak KH rüptürü tablosu gelişmiş olup bu durum oldukça nadir görülmektedir. KH'nin rüptürasyon ile akut batın tablosuna yol açabileceği ayrıca KH nedeniyle opere edilen hastalarda rekurren KH'nin de tekrar rüptürasyon ile akut batın tablosuna tekrar yol açabileceği akılda tutulmalıdır.

Anahtar Kelimeler: Kist hidatik, rüptürasyon, akut batın



Figür 1. Dalak kist hidatik rüptürü görüntüüsü

## SÖZEL 6

### **Cardiopulmonary Arrest in a Methoclopramide-induced type I Kounis syndrome**

Ekrem Taha Sert<sup>1</sup>, Korhan İvelik<sup>2</sup>

<sup>1</sup>Aksaray University Training and Research Hospital, Department of Emergency Medicine, Aksaray, Turkey

<sup>2</sup>Tarsus State Hospital, Department of Emergency Medicine, Mersin, Turkey

**Introduction:** Allergic angina syndrome, also known as 'Kounis syndrome', includes allergic symptoms as well as findings of myocardial ischemia. Associated with subclinical, clinical, acute or chronic allergic reaction and a clinical spectrum ranging from chest pain to acute myocardial infarction (especially associated with the inferior wall).

**Case report:** A 64-year-old male patient was referred to the county public hospital for complaints of nausea. Approximately 15 minutes after intramuscular injection of 10mg methoclopramide in the emergency department, whole body has developed generalized rash, redness, dizziness, fatigue, shortness of breath, retrosternal chest pain. Physical examination was normal. ECG at the external center observed sinus tachycardia. Compared with the ECG taken before admission to our hospital, her ECG recording showed ST segment elevation in inferior derivations (Figure 1). While preparing the patient transfer to the coronary intensive care, hemodynamic instability got worse and in emergency department the patient was in cardiopulmonary arrest with pulseless electrical activity. Cardiopulmonary resuscitation was initiated and the patient was intubated. After 5min of CPR and IV administration of 1mg epinephrine spontaneous circulation was established. Normal sinus rhythm was seen after cardiopulmonary resuscitation. Her

hemogram and basic chemistry panel were normal; cardiac markers including troponinI and creatinin kinaseMB revealed no pathologic elevations. Echo examination was normal. Normal coronary anatomy was detected. Extubation was performed after 12 hours. The mental status of the patient returned to normal within the 5 hours.

**Discussion:** Kounis syndrome is the concurrent occurrence of acute coronary syndromes with hypersensitivity reactions. In our case, as in Type 1 kounis syndrome, we believe that the occurrence of transient ST segment elevation by means of some mediators, including allergic mediators. There were ischemic ECG changes but there was no increase in cardiac biomarker readings. It may be considered that cardiac ischemia has occurred due to general hypoxigenaemia since angiography was found to be normal. Chest pain, allergic condition, with ECG ischemic changes but with normal cardiac markers, normal coronary angiogram are in favor of type I variant of the Kounis syndrome. Therefore, We set the diagnosis of Kounis syndrome type I variant.

**Conclusion:** The main treatment of Kounis syndrome is the management of ACS and the suppression of the allergic reaction. The use of antihistamine, steroid and possibly epinephrine drugs should be considered in kounis syndrome. In addition to standard ACS treatment, the vasospasm should be treated with vasodilators.

**Keywords:** kounis syndrome, methoclopramide, emergency department

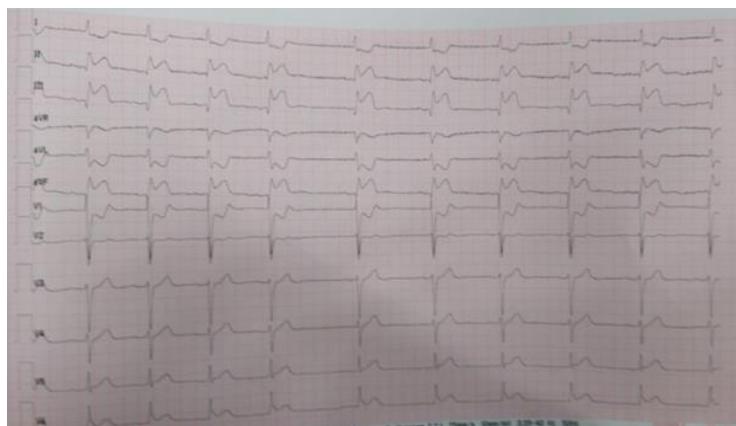


Figure 1: ST segment elevation in leads II,III and Avf

## SÖZEL 7

### LATE URETER RUPTURE

Ahmet Burak Erdem MD, Elif Çelikel MD, Hakan Oğuztürk MD Prof, Miray Tümer MD

A 57-year-old male patient passed the tractor. On the date of application, gcs: 15 saturation 90%, pulse: 87, blood pressure: 120/80 were measured. In thoraco-abdominal tomography of the patient with pain in the thorax, left shoulder and back region, grade II laceration was observed in the lower spleen at a depth of 1.5 cm. The free fluid of 17 mm thickness was observed in the perisplenic area. Grade 3 injury with a medial 18x16 mm size hypodense in the left kidney mid polar section was observed. More marked reticular density increase in the inferior, minimal fluid and thickening in the Zuckerkandl facies were observed in the left perirenal adipose tissue. In the left scapula body, multiple fractures were observed in the infrascapular fossa. Partially displaced fractures were observed in the left 4th costal

posteriorolateral and displaced in the 8th costal posterolateral fracture. T4,5,6,7,8,9,10,11. Displaced fractures were observed in vertebral spinal processes. The fracture was detected in L1 vertebra right transverse process. Due to the rib fractures, the patient undergoing thoracic surgery is followed for 4 days and discharged with a polyclinic check.

When the patient went to the general surgery outpatient clinic for control purposes, the control was taken in the abdomen tomography “Urinary opaque extravasation secondary to injury at this level is observed in the left ureter proximal end, which is evident in late phase shots. The extravase opaque extends downwardly along the psoas muscle on the left retroperitoneally. In the distal of the injury, no opaque was observed in the lumen of the left ureter. Opaque extravasation was observed in the perisplenic area (intraperitoneal). Widespread free fluid, which became evident in the intraperitoneal, especially pelvic region, was observed. In late phase examinations, the density of intraperitoneal fluid was increased. The fluid may be due to urinary leakage In the left adrenal gland, a hypodense round lesion of approximately 2 x 1 cm was observed. It may belong to the adrenal hematoma. The laceration-like appearance observed in previous tomographs of the left kidney was detected. With these findings, the patient is admitted to the urology service with the diagnosis of late ureter rupture. The patient undergoing left radical nephrectomy is discharged due to lack of follow-up.

It is the kidney most frequently injured in the organs of the urinary system in abdominal trauma. It is difficult to diagnose in ureter injuries. First of all, it is necessary to be suspicious. As ureters are more anatomically protected, they have 1% traumatic injuries. As a mechanism of injury, it can be seen as a result of excessive extension due to trauma. Computed tomography is the gold standard for diagnosis in urinary system damage. IV contrast imaging and late-phase imaging should be taken in patients with suspected urinary tract injury. If the diagnosis is made late, complications may develop, and nephrectomy may be required.

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## SÖZEL 8

### CRAZY PAVING

Elif Çelikel MD, Hakan Oğuztürk MD Prof , Ahmet Burak Erdem MD, Miray Tümer MD

A 19-year-old female patient presented to the emergency room with a cough and pleuritic qualitative chest pain and joint pain that had been ongoing for two days. Antiviral treatment started for the patient who went to the outer centre before. They applied to our emergency room to continue their complaints. 110/70 saturation, pulse: 115, fever: 36.6 saturation was 98% at room air; there was no known chronic disease and smoking. After the physical examination, a chest X-ray took to the patient. On the x-ray, an image similar to the cotton-expelled appearance was detected, which was more pronounced in the lower left lobe. The patient biochemistry blood sample result was normal. Procalcitonin 0,47 microgram/L, WBC:26,38 ve CRP :114 g/L was detected.

In the pulmonary tomography, "Although there are interlobular septal thickening in both lung parenchyma, areas with widespread ground glass density were observed. The appearance is compatible with the crazy-paving pattern. In differential diagnosis, there are infectious pathologies, alveolar haemorrhage, interstitial types of pneumonia, and alveolar proteinosis. It reported.

The crazy paving lung is a condition that appears with the onset of sudden-onset dyspnea and cough seen between the ages of 20-50, and infiltration tomography shows interlobular septal thickening, diffuse infiltration, ground-glass appearance. Crazy paving is polygonal, curbstone view where interlobular and intralobular interstitial thickening observed. In differential diagnosis, there are infectious pathologies, pulmonary oedema, ARDS, neoplasms. Risk factors include smoking, drug-associated pneumonitis, dust exposure. But often a specific underlying cause cannot be found. There is no risk factor in our patient. This pattern can also see in pulmonary alveolar proteinosis. PAP is a rare lung disease of unknown cause. It is estimated that surfactant deficiency in pathophysiology or balance mechanism defect in macrosillary and mucociliary cleaning activities. Bronchoalveolar lavage is recommended for the diagnosis of PAP. All lung lavage is also recommended as a treatment for PAP patients. 10-50% of these patients are in spontaneous remission.

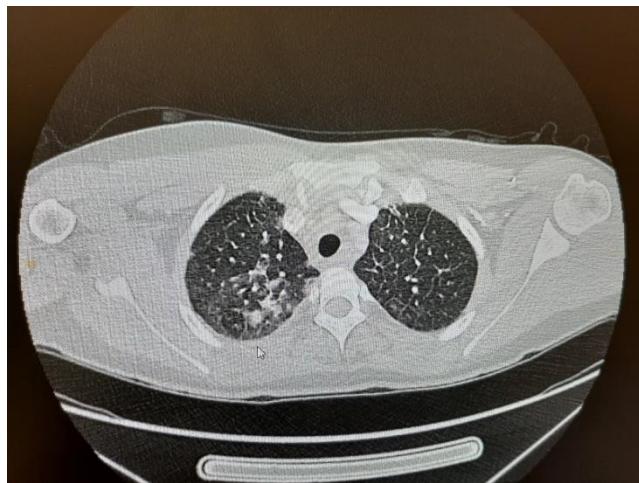
Our patient was hospitalized in the chest diseases service. BAL was not considered in the patient whose clinical follow-up was stable. The patient whose pathology regressed with the treatments given was discharged with full recovery.

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## SÖZEL 9

### RECTUS FEMORIS AVULSION FRACTURE (CASE REPORT)

Dr.Engin Dinç<sup>1</sup>,Dr.Mehmet Güll<sup>2</sup>

1-Konya Education and Research Hospital

Sports Medicine Clinic

2-Necmettin Erbakan University Medicine Faculty Emergency Department

#### Abstract:

Pelvis fractures are dangerous injuries to human life. Therefore, the approach to pelvic injuries is important. However, there are some differences between adult pelvis injuries and pediatric age group pelvic injuries. We wanted to draw attention to the approach to pediatric pelvis injuries in the paper.

#### General Information :

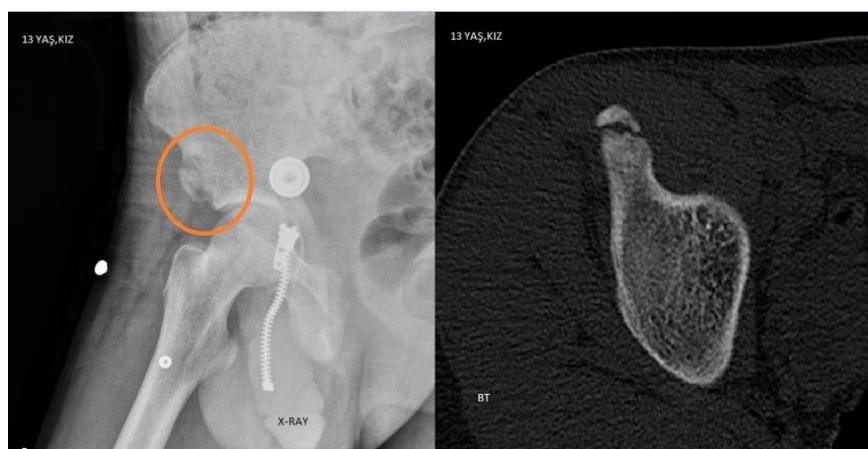
Pediatric pelvic injuries are rare but are generally associated with high energy trauma<sup>1</sup>. The most common cause of pediatric pelvis fractures non-vehicle traffic accidents. Pediatric pelvis injuries constitute %2-7 of traumatic injuries in pediatric trauma center. Hospitalization times are long due to accompanying injuries and life-threatening risks in pediatric pelvis injuries<sup>2,6</sup>. While the incidence of childhood pelvis

fractures is 0.8-1.6 %, mortality rates of injury range from 5 to 6,3 . It is impossible to create a single approach algorithm in this group of patients, as there are many factors affecting treatment and follow-up such as age, additional disease and trauma type. The approach should be specific to the patient. While vascular injuries and life risk are higher in unstable fractures, bed rest and conservative treatments can be planned for stable fracture. Children's pelvic ring bone have increased plasticity, thicker and stronger periosteum and reduced remodeling with age, the sacroiliac joint and symphysis have increased flexibility. Due to these properties, higher energy is required than the adult bone for pelvic region fractures to occur. However it should not be forgotten that fractures such as avulsion fractures or stable ring fractures are also possible after low-energy injuries.

#### Case Report :

A 13 year old volleyball player, a girl, fell to the ground after the jump. Later the child who could not stand up, was brought to our emergency room with the help of her parents and coach. In the first examination, the child who could not be mobilized described pain in the right pelvic region and hip. Haemodynamics were stable and she had no additional complaints. In the secondary examination, plain radiographs were taken. Although no pathology was seen on plain pelvic radiography, additional imaging was requested due to ongoing pain during the physical examination in the right hip and pelvic region. As a result of the images, it was determined that the spina iliaca anterior inferior had an avulsion fracture due to the pulling of the rectus femoris muscle. (Picture 1). After 24 hours hemodynamic follow-up, the patient was offered bed rest and conservative follow-up. The patient's fracture healed without sequelae on the 40th day. No sequelae was observed in the 6th month follow-up. This case shows how important the first examination at the emergency room is compared to the first views taken. In our emergency practice, we can see that an important fracture can be skipped if the first radiographs obtained without examining the examination findings well enough are considered sufficient.

This case is important in terms of summarizing a typical scheme of approach to a child with pelvic injury, even if it is an avulsion fracture of the pelvis, the simplest form of a fracture of the pelvic region



Picture 1: Pelvis AP X-Ray and Computed Tomography Image

## Results:

Pelvis fractures seen in childhood are seen in a wide range from simple avulsion fractures to unstable fractures. Since these fractures usually occur after high-energy traumas, these patients should be evaluated in detail immediately after their hemodynamic stabilization and appropriate examinations should be made for additional injuries. These patients are less likely to experience hemorrhagic complications because their immature bone structures and anatomical features in development age are different from adults. Conservative methods are at the forefront of treatment options in patient approach. Although the remodeling feature of the bone structure is good, patients with triradiate cartilage damage should be closely and closely monitored.

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## SÖZEL 10

### ACUTE DACRIOSYCID CASE REPORT WITH AN EYE CHANNEL-EYE DISEASE

Asist. Prof. Çağdaş YILDIRIM <sup>1-2</sup> MD Asist. Prof. Fatih TANRIVERDİ <sup>1-2</sup>MD, Canberk İNAN MD<sup>1-2</sup>, Prof. Servan GÖKHAN MD<sup>1-2</sup>, Asist Prof. Gül PAMUKÇU GÜNAYDIN<sup>1-2</sup> ,MD<sub>2</sub>, Assoc. Prof. Mehmet ERGİN <sup>1-2</sup> MD, Assoc. Prof. Afşin Emre KAYIPMAZ<sup>1-2</sup> MD, Prof Hakan OĞUZTÜRK <sup>2</sup>MD.

1.Ankara Yıldırım Beyazıt University, School of Medicine, Department of Emergency Medicine, Ankara

2.Ankara City Hospital, Department of Emergency Medicine, Ankara

**Introduction:** Our tears, which are responsible for moisturizing the eye, move from the small canals located inside our eyes to the nose. The tear that keeps the cornea moist is also responsible for cleaning our eyes. Our tear water protects our eyes, with the utmost sensitivity to disregard even the tiny dust that escapes our eyelids. The sticky water secreted from oil glands supports the eye to perform its duty. Due to the blockage of the lower part of the tear sac, this channel is also blocked and we face tear duct diseases. Eye

canal diseases, which are very likely to occur in 1 year old babies, are also seen in adult individuals. Eye discomfort, which starts with excessive watering, continues the process with frequent burrs in the eye. Inflammation of the eye when you press the root of the nose, that is, the discharge of the liquid from the canals is one of the most common symptoms of the infection. It shows us the formation of tear duct obstruction in the nose root swelling.

Event: An 86-year-old male patient who came to the emergency with the complaint of swelling and discharge that had been ongoing for 5 days was observed in the outer center before and was given oral antibiotics and was called for eye polyclinic control. On physical examination, infective appearance and subconjunctival hemorrhage were observed in and around the left orbit. At the arrival of the patient, the body temperature was observed as 38.2 C, the pulse was 80 and the blood pressure was 130/80 mmhg. In the examinations of the patient, wbc: 16.33 /  $\mu$ l neu%: 86.1 crp: 0.097 g / l (ref range 0-0.005) procalcitonin: 0.28  $\mu$ g / l In blood cultures, gram + coke was observed at 19 and 36 hours, and staphylococcus hominis was produced as a microorganism. On the paranasal sinus CT of the patient, an increase in skin thickness in the orbitonasal region on the left was noticed, and clinical evaluation was recommended for inflammation. The patient was consulted with infectious diseases and eye clinics. The patient was hospitalized for antibiotic therapy and his treatment was continued here, and then he was discharged with healing.



Conclusion : In this case, it should be noted that eye lavage and probe have no place in the treatment of a patient with acute dacryocystitis and local and systemic antibiotics should be used in the treatment.

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## SÖZEL 11

### ADİE'S SYNDROME İN THE PATİENT WITH ANİSOCORİA:

Asist. Prof. Fatih TANRIVERDİ<sup>1-2</sup>MD, Dr. Caner HOYLADI MD<sup>2</sup>, Asist Prof. Çağdaş YILDIRIM<sup>-2</sup> MD<sub>1</sub>, Assoc. Prof. Gülnar KURTOĞLU ÇELİK<sup>1-2</sup> MD, Abdullah Emre YURTTUTAN MD<sup>1-2</sup>

1.Ankara Yıldırım Beyazıt University, School of Medicine, Department of Emergency Medicine, Ankara

2.Ankara City Hospital, Department of Emergency Medicine, Ankara

**Entry:** Anisocoria is a condition in which both pupils (pupil) are not equal and require rapid assessment of the underlying neurological pathology. The causes that lead to pathological anisocoria are conditions that generally concern sympathetic or parasympathetic innervation, tumor, uncal herniation and aneurysms. Afferent disorders of the light reflex or visual pathways do not lead to a change in the size of the pupil. Unilateral causes of mydriasis include parasympathetic denervation (nerve palsy III), traumatic mydriasis pharmacological mydriasis, Adie's tonic pupil, Pourfour de Petit syndrome, and acute glaucoma crisis.

**Case:** A 62-year-old male patient has a diagnosis of known type 2 diabetes mellitus and benign prostatic hypertrophy. He says he pays attention to his diet and uses his medication regularly. Anisocoria was noticed by his relatives and he applied to our hospital. The patient has no complaints about vision loss. It does not describe headaches. In his examination; No facial asymmetry, right-mydiatic eye, direct and indirect light reflexes - / -, no limitation of eye movement, no natural nystagmus and other neurological examinations are natural. No abnormal findings were detected in the blood tests. No pathology was detected in CT, diffusion MR, MR angiography and orbital MR. Neurology and eye department were consulted. Adie Tonic Pupils was diagnosed and underwent neurophthalmology polyclinic follow-up.



**Conclusion:** Adie's syndrome is a neuro-ophthalmological disorder that does not respond to light, characterized by a tonic dilated pupil. Although viral or bacterial infection is generally considered, its etiology is not fully known. It is caused by damage to the parasympathetic postganglionic fibers of the eye. Syphilis should be excluded in all patients with this disease. The incidence of second eye involvement in unilateral cases in the first ten years of the disease is about 4%. The incidence in the white group of patients is independent of the iris color. Adie's syndrome has no progressive course. It is not a life threatening situation. It is not related to any mortality rate. Loss of deep tendon reflexes is permanent and can progress over time. Accommodative paresis can heal spontaneously over time.

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### SÖZEL 12

#### **Angioedema After Botox :**

Asist. Prof. Fatih TANRIVERDİ<sup>1-2</sup>,Assoc. Prof. Afşin Emre KAYIPMAZ ,MD, Asist. Prof. Çağdaş YILDIRIM<sup>1-2</sup>,Abdullah Emre YURTTUTAN MD<sup>1-2</sup>

1.Ankara Yıldırım Beyazıt University, School of Medicine, Department of Emergency Medicine, Ankara

2.Ankara City Hospital, Department of Emergency Medicine, Ankara

**INTRODUCTION:** Today, developments in cosmetic dermatology also affect people's daily lives. Botox injection is one of them. Here, we will present the case of angioedema developed after botox injection.

**CASE:** The 42-year-old female patient applies to our emergency department with a sudden swelling around her eyes. The patient, who had not any known additional disease, had the following values: blood pressure arterial: 130/80, SpO<sub>2</sub>: 98, pulse: 82, ECG: normal sinus rhythm. There is no feature in her background and family history. In the physical examination, there was a bilateral widespread edema. Uvula had a natural appearance. Breath sounds were natural. GCS was 15 and neurological examination was natural. Complete blood, biochemistry, blood gas and CRP values were within normal limits. The patient, who was observed in the emergency department, was evaluated as angioneurotic edema. Emergency interventions were initiated. A high level of secure environment was created for the patient. She was monitored. 1st Step treatment was applied to the patient whose vitals were stable. 1 mg/kg prednisolone, 45 mg phenyramine, 50 mg ranitidine were applied. The patient, who could not have an apparent relief in her follow-ups, was consulted with dermatology. Hospitalization to the department was enabled. The patient, who started to give a clear response to the treatment on the 2nd day, was discharged with recovery after 1-week follow-up.

**RESULT:** It should be kept in mind that botulinum toxin treatments, which are used for various medical reasons especially for aesthetic treatments such as wrinkles and reduction of lines on the face, are medical treatment methods. For this reason, these treatments must be applied by specialist physicians in medical clinic settings which have adequate emergency intervention conditions. As in this case, it should be kept in mind that the risk of allergic reaction may occur although it is rare.

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Laura Parolin, Francisco Germiniani, Helio Afonso Teive, Rosana Scola

First published April 17, 2017, pril 18, 2017; 88 (16 Supplement) American Academy of Neurology.

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### SÖZEL 13

#### **DIAGNOSİNG CHILIADITIS SYNDROME FROM SUSPICIOUS CHEST X-RAY IN ASYMTOMATIC PATİENT:**

Asist. Prof. Çağdaş YILDIRIM<sup>1-2</sup>MD Asist. Prof. Fatih TANRIVERDİ<sup>1-2</sup>MD, Assoc. Prof. Afşim Emre KAYIPMAZ<sup>2</sup> MD,, Asist Prof. Gül PAMUKÇU GÜNAYDIN<sup>1-2</sup> ,MD, Asist. Prof. Alp ŞENER<sup>1-2</sup> MD , Asist. Prof. Fatih Ahmet KAHRAMAN<sup>1-2</sup> MD , Assoc. Prof.Gülhan KURTOĞLU ÇELİK<sup>1-2</sup> MD, Prof Hakan OĞUZTÜRK<sup>2</sup>MD.

1.Ankara Yıldırım Beyazıt University, School of Medicine, Department of Emergency Medicine, Ankara

2.Ankara City Hospital, Department of Emergency Medicine, Ankara

**INTRODUCTION::**Chiliaditi syndrome, which is known to occur as a rare syndrome as a result of hepatodiaphragmatic interposition of the colon or small intestine, usually progresses asymptotically and can develop in a permanent or temporary position. The incidence of Chiliaditi syndrome in the general population varies between 0.003% and 0.025%. In symptomatic cases, abdominal pain, nausea, vomiting and constipation are common clinical findings. It can mimic many clinical pictures, though rarely, with variable symptoms. Sometimes it can cause symptoms such as difficulty breathing, chest pain, tightness in the chest, and can lead to cardiac arrhythmias. Diagnostic verification is possible as a result of radiological examinations for complaints.

CASE: A 68-year-old male patient applies to the emergency room due to a cough, sputum malaise, which has been happening for 2-3 days. At the time of admission, the general condition of the gks 15 was good consciousness, vital vitality blood pressure 140/85 mmHg pulse 85 / min pulse oximeter evaluated with oO<sub>2</sub>: 92% fever 36.7 ° C FM Oropharynx hyperemic Respiratory System no rally no roncus Abdominal sensitivity no defender no rebaund Kvs S1 + S2 + No additional sound murmur heard. Neurological examination is natural. The patient has a known history of prostate ca, no additional diseases and medications. After the chest x-ray, free air was detected under the right lower zone diaphragm, and no air-fluid level was detected, standing directly in the abdomen. Whole blood, biochemistry, crp, procalcitonin and blood gas tests taken from the patient were found to be normal and it was decided to withdraw abdominal ct. The ct was reported as “..... Transverse column was observed wide and AP diameter was measured 7 cm at its widest point. The transverse colon also passed through the liver anterior and has Chilaiditi syndrome. There was no obvious air-fluid inside the abdomen.” The general condition of the patient was stable and the patient was discharged with a prescription and recommendations.

RESULT: In patients with no symptoms, when there is an area showing radiolucency (with air) under the right diaphragm in the chest radiograph, in the differential diagnosis; Chilaiditi syndrome should be considered with subdiaphragmatic abscess, retroperitoneal masses, liver abscess and posterior lesions. Tomography and / or ultrasonography are also required for differential diagnosis. The treatment is conservative.

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## SÖZEL 14

### Rare Cause of Abdominal Pain: Dermoid Cyst Torsion

Asist. Prof. Alp Şener<sup>1-2</sup>MD, , Abdullah Emre YURTTUTAN MD<sup>1-2</sup>, ,

1.Ankara Yıldırım Beyazıt University, School of Medicine, Department of Emergency Medicine, Ankara

2.Ankara City Hospital, Department of Emergency Medicine, Ankara

**INTRODUCTION:** There are dozens of applications to the emergency department every day due to abdominal pain. Considering the age group and background, it result in various diagnoses and it can sometimes go unnoticed. Here, we will mention the patient presenting with abdominal pain and diagnosed with dermoid cyst torsion.

**CASE:** The 25-year-old female patient presents with abdominal pain, nausea and vomiting complaint that started yesterday. When she arrived, she was looking weak and her values were as follows: blood pressure arterial: 125/84 mmHg, pulse: 87 beats/min, fever: 37.1, ECG: normal sinus rhythm and SpO<sub>2</sub>: 99. Additional disease is present as anxiety and she uses 50 mg of citoles. She has no feature in her family history. In the complete blood test, 11.720 mm<sup>3</sup> white blood cell was detected. Biochemistry was routine, blood gas test was normal and Beta HCG test was negative. In the physical examination, defensive and rebound were detected in the right lower quadrant. In the USG performed, a lobule contoured lesion was detected. In CDUS, no apparent bleeding was followed. This 85x60 mm lesion, whose center included hyperechoic solid and whose periphery included multiple septations, was in the appearance of cyst in the bladder and uterus anterior in appendix, uterus normal location and sizes, Douglas normal, blind-ended and responding to the compression in normal diameter. The patient was consulted with the department of obstetrics and gynaecology. She was hospitalized with the preliminary diagnosis of dermoid cyst torsion. She was urgently operated. The patient, whose cystectomy was performed, was discharged after 24 hours.

**RESULT:** Dermoid cysts are masses formed by dermal elements in abnormal localizations due to an anomaly during the embryological development. In practice, they are mostly located in ovary. They are rarely located in mediastinum, oropharynx, paravaginal area, colon and cecum. They are usually benign. These should be kept in mind in the female patients presenting with abdominal pain.

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## SÖZEL 15

### BLADDER HERNIATION IN THE INGUINAL HERNIA AREA

Asist. Prof. Fatih TANRIVERDİ<sup>1-2</sup>MD, Canberk İNAN MD<sup>1-2</sup>, Prof. Servan GÖKHAN MD<sup>1-2</sup>, Asist Prof. Gül PAMUKÇU GÜNEYDİN<sup>1-2</sup> ,MD<sub>2</sub> Asist. Prof. Alp ŞENER<sup>1-2</sup> MD , Assoc. Prof.Mehmet ERGİN<sup>1-2</sup> MD, Assoc. Prof.Afşin Emre KAYIPMAZ<sup>1-2</sup> MD, Prof Hakan OĞUZTÜRK<sup>2</sup>MD.

1.Ankara Yıldırım Beyazıt University, School of Medicine, Department of Emergency Medicine, Ankara

2.Ankara City Hospital, Department of Emergency Medicine, Ankara

**Introduction:** Inguinal hernia, which is defined as an inguinal hernia, is the most common hernia formed in the groin region. Inguinal hernia, which is approximately 3 times higher in males than females, makes up eighty percent of all hernia species. It is a defect or a rupture that exists in the abdominal wall, intraabdominal, that is, the abdominal tissues come out abnormally, creating swelling on the skin. The hernia is formed directly out of the abdominal wall and is 40% bilateral. It appears in older ages as a result of weakening of the muscles, has a half-moon shape and is not very large, mostly when standing or with intra-abdominal movements.

**Case:** The patient was admitted to the emergency with swelling and pain in the groin for two days, and the patient was admitted to the urinary system, and her physical examination revealed a reductive hernia sac in the left inguinal region. At the arrival of the patient, his body temperature was 37.2 C, his pulse was 70, and his blood pressure was 140/80 mmhg. In the examinations of the patient, it was observed as wbc: 11.77 / µl hgb: 13.7 g / dl glucose: 87 mg / dl urea: 36 mg / dl creatinine: 0.84 mg / dl. In addition to the omental adipose tissue herniation, which was evident by valsalva from a defect of approximately 1.5 cm in diameter, it was observed that the bladder was herniated into the hernia sac. The patient was consulted with the general surgery clinic and elective surgery was recommended to the patient who was followed up by the department.

**Conclusion :** As observed in this case, the only treatment method in inguinal hernia is surgery, where the aim is to insert the hernia into the abdomen, eliminate the formation of the pouch, close the cavity causing the exit and repair the defect in the abdominal wall in order to prevent recurrence.

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## SÖZEL 16

### POST-MI HEMOPTYSIS

Asist. Prof. Fatih TANRIVERDİ<sup>1-2</sup>MD, Prof Hakan OĞUZTÜRK<sup>2</sup>MD.

1.Ankara Yıldırım Beyazıt University, School of Medicine, Department of Emergency Medicine, Ankara

2.Ankara City Hospital, Department of Emergency Medicine, Ankara

**INTRODUCTION:** In today's world, it is obvious how many patients apply to the emergency department. People apply to emergency departments for various reasons. While there are rare cases, the rare causes of commonly seen complaints can also be detected. Now, we will mention a case of ventricular septal defect (VSD) which applies due to hemoptysis and develops after coronary angiography.

**CASE:** The 63-year-old male patient applied to our emergency department with the complaint of hemoptysis continuing for a week. Blood pressure arterial of the patient without any known coronary artery disease was detected as 90/50 mmHg, SpO<sub>2</sub> as 93 and pulse as 85 beats/min. We learned from the previous reports of the patient that CAG was performed due to myocardial infarction 10 days before the application and that there was obstruction in 3 coronary vessels and a bypass operation was recommended. In the physical examination of the patient, there were widespread thin crepitant rales in the lung. PAAC was compatible with pulmonary edema. In the examinations performed, we see that the biochemistry table is within normal limits, his hemogram is 18.340 L/mm<sup>3</sup> and there is neutrophil dominance. High sensitive troponin was detected as 2309 ng/L. Contrast-enhanced pulmonary CT angiography was performed from the angle of pulmonary embolism retraction. As a result, it was detected that the patient with no pulmonary vascular pathology had minimal effusion and appearance compatible with pulmonary edema. He was consulted with cardiology. Echocardiography (ECO) was performed under emergency conditions. As a result of ECO, VSD emerging after MI and having 2.5 mm posterior location was detected. For the patient with hypotensive and pulmonary edema, cardiovascular surgery was consulted. CABG + VSD operation was planned and he was hospitalized to intensive care unit.

**RESULT:** Acute MI and complications developing after it are on the 1. rank among the causes of death in the world. One of the complications developing after MI is VSD. In the patients who need surgical treatment, it can be stabilized with the support of intra-aortic balloon pump and surgery can be performed. It should be kept in mind that this type of diagnosis can be in question in the patients presenting with chest pain and respiratory distress. In this case, medical history should be taken and acting urgently is important.

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## SÖZEL 17

### **ACUTE RENAL FAILURE İN PATİENT WHO RECEIVED MORPHİNE FOR SUİCİDE:**

Asist. Prof. Fatih TANRIVERDİ<sup>1-2</sup>MD, Dr. Gülsah SABIR MD<sup>1</sup>, Prof. Şervan GÖKHAN MD<sup>1-2</sup>, Asist Prof. Gül PAMUKÇU GÜNEYDİN<sup>1-2</sup> ,MD<sub>2</sub> Asist. Prof. Alp ŞENER<sup>1-2</sup> MD , Asist. Prof. Fatih Ahmet KAHRAMAN<sup>1-2</sup> MD , Assoc. Prof. Afşin Emre KAYIPMAZ<sup>1-2</sup> MD, Prof Hakan OĞUZTÜRK<sup>2</sup>MD.

1.Ankara Yıldırım Beyazıt University, School of Medicine, Department of Emergency Medicine, Ankara

2.Ankara City Hospital, Department of Emergency Medicine, Ankara

**INTRODUCTION:** Morphine is a powerful opioid analgesic widely used for the treatment of acute pain and long-term treatment of severe pain. Morphine is a member of the morphine-framed alkaloids found in the poppy plant. The drug is water soluble, but its solubility in lipids is poor. The metabolism of morphine can occur not only in the liver, but also in the brain and kidneys. Glucuronides are mainly eliminated through bile and urine. Side effects; addiction, respiratory depression, nausea, vomiting, constipation, increased intracranial pressure, cholestasis, urinary retention. In this case, we aimed to present our patient who developed rhabdomyolysis and acute renal failure due to high dose of morphine intake.

**CASE:** A 32-year-old female patient was brought to the emergency room after she received 60 morphine tb for 2.5 hours prior to her suicide. There is a history of tricuspid insufficiency known. The drugs she uses dideral tb but not regularly. On arrival, the general condition was moderate to bad, conscious, cooperative, pupillary miotic, breathing sounds were natural with bilateral listening, no abdominal rebound, no pretibial edema, mucous membranes were slightly dry. vital signs were blood pressure: 80/50 Saturation: 99 (with O<sub>2</sub>) pulse: 101 fever: 36.7. urine 68, creatinine 2.42, ast 1354, alt 754, wbc 31.000, troponin I 4433, CK 6693, myoglobin 10000, ph 7.17, hco<sub>3</sub> 18, lactate 2.39 were obtained from the patient. Speed 106 compatible with ECG sinus tachycardia, no ischemic change. Paac radiography was natural, echo EF was performed %60,1 MY. The patient was given active charcoal application and naloxone.

Acetylcysteine treatment was started. Hydration and serum was followed up with serum physiological. The patient with urea 120 and creatinine 3.6 was hemodialized considering the rhabdomyolysis and acute renal failure. After completion, hospitalization was made to the internal medicine department. After 15 days of service, the patient was discharged with recommendations.

**CONCLUSION:** Patients receiving high doses of morphine should be closely followed hemodynamically and it should be taken into consideration that hypotension, rhabdomyolysis and acute renal failure may be present. In another case report, acute renal failure due to rhabdomyolysis has been reported after high-dose morphine administration.

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## SÖZEL 18

### Morgagni Hernia Presenting with Dyspnea

Assoc. Prof. Gülhan KURTOĞLU ÇELİK<sup>1-2</sup> MD Asist. Prof. Fatih TANRIVERDİ<sup>1-2</sup> MD, , Asist Prof. Çağdaş YILDIRIM<sup>-2</sup> MD , Asist. Prof. Alp ŞENER<sup>1-2</sup> MD , , Abdullah Emre YURTTUTAN MD<sup>1-2</sup> Assoc. Prof. Mehmet ERGİN<sup>1-2</sup> MD , Asist. Prof. Gül PAMUKÇU GÜNEYDIN<sup>1-2</sup> MD. Prof. Ayhan ÖZHASENEKLER<sup>1-2</sup> MD, ,

1.Ankara Yıldırım Beyazıt University, School of Medicine, Department of Emergency Medicine, Ankara

2.Ankara City Hospital, Department of Emergency Medicine, Ankara

**INTRODUCTION:** Thousands of patients apply to emergency department due to dyspnea and chest pain. Considering the intensity of applications, patients receive various diagnoses from very simple asthma attacks to STEMI. Today, we will mention a case presenting with typical chest pain and where morgagni hernia was detected.

**CASE:** The 65-year-old male patient applies with chest pain, nausea, vomiting and dyspnea that started yesterday. The patient, who does not have any additional complaints, has the following values: blood pressure arterial: 150/80, SpO<sub>2</sub>: 98, pulse: 78 beats/min, ECG: normal sinus rhythm. In his history, there is hypertension and coronary angio undergone one month ago. There is also stent application in the left anterior descending artery. Drugs used: acetylsalicylic acid, clopidogrel, proton pump inhibitor and aceii. There is no feature in his family history. No pathology was detected in complete blood, biochemistry,

blood gas and cardiac panel tests. According to his physical examination, the abdomen is comfortable, there is a minimal distention, there is no defect, rebound or sensitivity; rectal examination is compatible with normal stool contamination. PAAC: Haustra appearance belonging to the transverse colon was detected in front of the right lung (image 1). According to his abdomen CT, his gastric cardia is herniated to intrathoracic area from diaphragmatic hiatus. Transverse colon and omental adipose tissue are herniated from the diaphragmatic defect to the intrathoracic area in the anterior. It is compatible with the Morgagni hernia. The patient's nasogastric catheter was inserted, oral was stopped and hydration was started with physiological saline solution. He was consulted with general surgery. He was admitted to the emergency surgical service. In his follow-ups, elective surgery decision was taken.



IMAGE 1

**RESULT:** Morgagni hernia is a rarely seen diaphragmatic hernia type and is caused by a congenital defect in the retrosternal area. It is mostly observed on the right side of the diaphragm and is more common in females. This rare pathology should be kept in mind especially in the patients presenting with acute abdominal complaints accompanied by respiratory complaints. Morgagni hernia cases detected incidentally should be consulted with surgery before getting complicated and necessary follow-ups or surgery should be performed.

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## SÖZEL 19

### NOT ONLY IN PREGNANCY: CASE REPORT

Kosa MT<sup>a</sup>, Tulu AB<sup>a</sup>, Karapinarli B<sup>a</sup>, Hakan OĞUZTÜRK<sup>a</sup>

<sup>a</sup>Department of Emergency Medicine, Ankara City Hospital, Ankara, TURKEY

**INTRODUCTION:** Cerebral venous thrombosis (CVT) is rare and diagnosis process is more challenging than other stroke types. [1] Risk factors for CVT are prothrombotic state, malignancy, infections, oral contraceptives, pregnancy, puerperium and head trauma. [2]

**CASE:** 29 years old woman presented to emergency department (ED) with headache which lasts since 47 days. As she tells headache worsens day by day and doesn't get better with analgesics. Patient also had blurred vision from time to time. In neurologic examination Glasgow Coma Score (GCS) was found 15 points, there wasn't any motor or sensory loss, cerebellar tests were successful. Her vitals in presentation was normal. In her medical history she had emergency cesarean delivery 47 days ago because of preeclampsia and she had systemic hypertension. Laboratory results are Cre: 0.69 mg/dL , Urea : 24 mg/dL, Na: 141 mEq/dL, Glucose: 110 mg/dL. We had planned brain computed tomography (CT) and diffusion magnetic resonance imaging (MRI) and these imagings were normal. After that we planned a MRI venography for the patient and we found right sinus venous thrombosis in her MRI venography (Image 1). After consulted with neurology clinic the patient hospitalized.

**CONCLUSION:** CVT, is seen more frequently in young patients in contrast to other stroke types. In pregnant women who presented with headache our preliminary diagnosis is usually CVT but often we don't think about CVT in women who are in puerperium. Emergency physicians should keep in mind CVT when a woman presented with headache in puerperium period.



Image 1

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## SÖZEL 20

### PAGET- SCHROETTER SYNDROME WITH PAIN IN THE RIGHT ARM:

Asist. Prof. Fatih TANRIVERDİ <sup>1-2</sup>MD, Caner HOYLADI MD<sup>1</sup>, Prof Hakan OĞUZTÜRK <sup>2</sup>MD.

1.Ankara Yıldırım Beyazıt University, School of Medicine, Department of Emergency Medicine, Ankara

2.Ankara City Hospital, Department of Emergency Medicine, Ankara

ENTRY: Venous thrombosis of the upper extremities is extremely rare and accounts for about 4% of the whole body deep vein thrombosis. The most common causes of upper vein deep vein thrombosis (UEDVT) are; trauma, vena cava superior syndrome, tumor, foreign body, polycythemia, thrombocytosis, cor pulmonale, congestive heart failure, thoracic outlet syndrome and coagulation factor disorders. Today, the incidence of UEDVT is increasing due to the use of central catheters for reasons such as chemotherapy, dialysis, parenteral nutrition.

CASE: A 50-year-old male patient applied to our emergency department with complaints of pain, swelling and color change in the right arm for 3 days. He applied to another center the day before with similar complaints and was discharged by prescribing analgesics. He came to our emergency room after no regression is observed after using the prescription.

The patient has no known illness and no history of drug use. Muscle mass is high. The vitalities measured at his arrival are stable, ECG is in normal sinus rhythm. No history of trauma to the right arm recently. In the examination, there is significant swelling and color change in the right arm compared to the other arm. Distal pulses can be palpated. There are no signs of insect bites. No chest pain, shortness of breath or fever. No pathology was detected in the desired blood tests. No obvious pathology was seen on direct

radiography. In the right extremity venous colored dopp; Acute thrombus was observed along the right subclavian vein trace. There is also a widespread thrombus extending from SCV to the axillary vein and distal to the brachial vein. Acute thrombus in cephalic vein is observed in the antecubital region. The patient was consulted with CVS and hospitalized.



**RESULT:** Paget-Schrotter syndrome is a self-occurring UEDVT in young and healthy people due to serious, challenging activities. It often occurs in men with excessive muscle mass after excessive exercise. This syndrome is a venous manifestation of thoracic outlet syndrome, and it occurs in the arm that is used mostly, as a result of suppression of the subclavian vein by an advanced scalene muscle during heavy exertion. Heavy exertion initiates the coagulation cycle by causing microtrauma in vessel intima. Recurrent traumas, especially in the presence of mechanical compression, result in the development of severe thrombosis. The prevalence of right arm dominance in the community, the combination of the right subclavian vein and the internal jugular vein with a sharper angle than the left, the more turbulent flow is formed here, and more exertion thrombosis in the right arm.

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## SÖZEL 21

### AN UNUSUAL EMERGENCY CASE

M. Serkan YILMAZ MD<sup>1-2</sup>Asist. Prof. Fatih TANRIVERDİ<sup>1-2</sup>MD, Asist. Faruk BÜYÜK MD<sup>1-2</sup>, Assoc. Prof. Gülhan KURTOĞLU ÇELİK<sup>1-2</sup> MD , Asist Prof. Çağdaş YILDIRIM<sup>-2</sup> ,MD , Asist. Prof. Fatih TANRIVERDİ<sup>1-2</sup> MD , , Abdullah Emre YURTTUTAN MD<sup>1-2</sup> Assoc. Prof. Afşin Emre KAYIPMAZ<sup>1-2</sup> MD

1.Ankara Yıldırım Beyazıt University, School of Medicine, Department of Emergency Medicine, Ankara

2.Ankara City Hospital, Department of Emergency Medicine, Ankara

**INTRODUCTION:** Emergency department is the first place where people apply for all kinds of problems. Considering that there are billions of people, it is possible to encounter an unusual case every day. Here, we will talk about a patient whose penis was stuck in a bottle and urgently applied to the emergency department.

**CASE:** The 50-year-old male patient applies to the emergency department with severe pain in his penis. The patient's vitals were stable. Blood tests were performed. He had no other disease. Physical examination revealed that the penis was stuck in a hard plastic bottle under the glans and glans penis was extremely swollen, purple and sensitive. (Images 1/2/3) The patient, who said that he could not urinate, had very severe pain. USG was compatible with globe. The penis of the patient was cleaned. The region between the skin and bottle was completely excluded. The bottle was cut and removed with the help of a small-sized clean plier. ( Image 4). The catheter was inserted and urine outlet was seen. In the physical examination after the intervention, there was no apparent feature. The patient stated that he was relieved and suggestions were made to him. The control of an urology polyclinic was suggested and the patient was discharged.



IMAGE -1

**RESULT:** Emergency department is a center where people apply for all kinds of problems. When we consider billions of people and lives, we must always be prepared for any kind of urgent case.

## SÖZEL 22

### VASCULITIS SECONDARY TO PNEUMONIA : CASE REPORT

Tulu AB<sup>a</sup>, Saruhan MB<sup>a</sup>, Kosa MT<sup>a</sup>, Durdu T<sup>a</sup>, Donmez S<sup>a</sup>, Erdem AB<sup>a</sup> Hakan OĞUZTÜRK<sup>a</sup>

<sup>a</sup>*Department of emergency medicine, Ankara City Hospital, Ankara, TURKEY*

**INTRODUCTION:** Cutaneous small vessel vasculitis (CSVV) defined as single organ or isolated skin small vessel vasculitis or angiitis. [1] Without systemic vasculitis or glomerulonephritis it usually named as leucocitoclastic vasculitis (LCV). CSVV can occur secondary to many drugs (penicillins, sephalosporins, sulfonamides, phenytoin, butamirat citrate, allopurinol, etc) and infections (hepatitis B or C , infective endocarditis, pneumoniae, HIV, etc). [2,3]

**CASE:** 44 years old man presented to emergency department (ED) with yellow-green sputum, chilling for 3 days and diffuse rashes for 2 days. His vitals in presentation was normal. In physical examination patient has diffuse rash in his extremities, abdomen and his back (Images 1-2 are showing lesions at presentation, images 3-4 are showing lesions at 12th hour). In his medical history diabetes mellitus type 2, hypertension, congestive heart failure were existed. And his lesions were appeared after when he used butamirat citrate (Kreval forte)Laboratory results were WBC : 16.000/mm<sup>3</sup> , CRP : 0.176 g/L. In his postero-anterior chest x-ray there was a infiltration area at right paracardiac zone. And his thorax computed tomography (CT) findings were compatible with multilobar pneumonia. Our preliminary diagnosis were LCV secondary to butamirat citrate (Kreval forte) with multilobar pneumonia. Therefore we hospitalized the patient to pulmonology clinics.

**CONCLUSION:** LCV is a small vessel vasculitis which occurs secondary to infective processes and drug usage. And it is important to distinguish it from systemic vasculitis. When a patient presents with rash it is important to evaluate and follow up the lesions carefully. A detailed patient history should taken such these patients.



Image 1

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## SÖZEL 23

### A Rare Case: Prostate Abscess

Prof Hakan OĞUZTÜRK<sup>2</sup>MD, Asist. Prof. Fatih TANRIVERDİ<sup>1-2</sup>MD, Prof. Şervan GÖKHAN MD<sup>1-</sup><sup>2</sup>, Asist Prof. Çağdaş YILDIRIM<sup>1-2</sup> ,MD, Asist. Prof. Alp ŞENER<sup>1-2</sup> MD , Asist. Prof. Fatih Ahmet KAHRAMAN<sup>1-2</sup> MD , Assoc. Prof. Gühan KURTOĞLU ÇELİK<sup>1-2</sup> MD, Assoc. Prof. Mehmet ERGİN<sup>1-2</sup> MD,

1.Ankara Yıldırım Beyazıt University, School of Medicine, Department of Emergency Medicine, Ankara

2.Ankara City Hospital, Department of Emergency Medicine, Ankara

**INTRODUCTION:** Patients very frequently apply to the emergency department with the complaint of dysuria. Although urinary tract infection is very commonly encountered, abscess, which is a rarely seen cause, should not be forgotten. Those, who previously underwent a prostate surgery, are even at a higher risk. In this case, we will explain our case applied with the complaint of dysuria and where we detected prostate abscess.

**CASE:** The male patient aged 75 applied with the complaint of urinary burning ongoing for 5 days. The patient with known type 2 dm underwent surgery 10 years ago due to prostate cancer. In the arrival of

the patient who did not have any chemotherapy history, his vital signs were stable. Blood pressure arterial was 125/87, pulse was 76 beat/min, SpO<sub>2</sub> was 98, ECG was normal sinus rhythm and fever was 37°C. In the physical examination, the tests of the patient who did not have any specific characteristics were performed. In the test performed, his biochemistry was within normal ranges. In his hemogram, WBC was detected as 11.900/mm<sup>3</sup>. C-reactive protein was detected as 0.173 g/L ( 0 – 0.005 g/L). In the complete urinalysis test, the following results were obtained: leukocyte esterase 3+, leukocyte>200 p/HPF. Due to the fact that he was a male patient and underwent a surgery, advanced imaging was performed. In the computed tomography, a hypodense lesion in the form of abscess and with 24x18 mm dimensions was detected in the left posterolateral showing parietal contrast enhancement in the prostate peripheral zone (picture 1). The patient consulted with urology was hospitalized for treatment and further examination.



IMAGE 1

**RESULT:** After performing a robust anamnesis by considering the active complaints of the patient, imaging performed on-site takes us to the diagnosis easily. Additional problems such as a history of prostate operation and complaint of dysuria in the patient with dm increase the risk of prostate abscess. These should be considered in such cases.

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## SÖZEL 24

### POST-IM PSOAS ABSCESS

Prof. Servan GÖKHAN MD<sup>1-2</sup>, Ali KAPLAN MD<sup>1-2</sup>MD<sup>1</sup>, Asist Prof. Çağdaş YILDIRIM<sup>1-2</sup>, MD<sup>2</sup>, Asist. Prof. Alp ŞENER<sup>1-2</sup> MD<sup>1</sup>, Asist. Prof. Fatih Ahmet KAHRAMAN<sup>1-2</sup> MD<sup>1</sup>, Assoc. Prof. Gülhan KURTOĞLU ÇELİK<sup>1-2</sup> MD<sup>1</sup>, GÜLŞAH SABIR MD<sup>1-2</sup>. Abdullah Emre YURTTUTAN MD<sup>1-2</sup>

**INTRODUCTION:** Psoas abscess is a type of abscess rarely seen in the community. It can be observed with various clinics. There are 2 types of psoas abscess as primary and secondary. It is a fact that diabetes mellitus is facilitating although there is Crohn's disease in the background in secondary abscesses. Here, we will mention a case with gluteal abscess developing after injection and psoas abscess developing after the injection.

**CASE:** The 49-year-old female patient was admitted to our emergency department with the complaints of fatigue, weakness and difficulty in walking and pain continuing for a month. There is known hypertension and hypothyroidism. There is no additional disease in the patient. Her vitals are as follows: blood pressure arterial 138/90 mmHg, pulse: 133 beats/min, fever: 37.1 and SpO<sub>2</sub>: 99. According to the physical examination, her general condition is good, she is conscious, oriented and cooperated, GCS is 15, there is no typical feature in her abdominal examination. There is an abscess observed to be drained and opening to the skin spontaneously and emerging after the IM injection to the right gluteal region. There is no active discharge, no redness and no temperature increase. Active antibiotic therapy is not available. In the laboratory tests, the biochemistry was determined as natural, hg: 5.6 g/Dl, WBC: 11700/mm<sup>3</sup>, procalcitonin: 17.6 microgram/l and CRP: 0.125 g/l (0- 0.005 g/L). In the patient, who had no apparent effective complaints such as cough, phlegm, dysuria abdominal pain, diarrhea, neck stiffness and mental fog but had a pain in the left increasing with movement, CT was performed due to the probability of abscess. In the CT report, it was seen that there was a large collection that had an extension at T12-L3 vertebrae level, pushed the right kidney to anterolateral, aorta and cava to anterior, also filled the prevertebral region and had air densities in it. Empirical antibiotic therapy was started and the patient was consulted to infectious diseases and hospitalized.

**RESULT:** Considering the patient complaints, it is easier to make a diagnosis with a good anamnesis. The secondary psoas abscess developed in our patient who had gluteal abscess after IM injection and it is necessary to perform contrasted-enhanced abdominal tomography for making a diagnosis in suspicious cases.

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## SÖZEL 25

### **Renal Cyst Rupture Presenting with Pain in the Left Leg**

Asist. Prof. Fatih TANRIVERDİ<sup>1-2</sup>MD, Asist. Prof. Çağdaş YILDIRIM MD<sup>1-2</sup>, Assoc. Prof. Gülhan KURTOĞLU ÇELİK<sup>1-2</sup> MD Prof. Şervan GÖKHAN MD<sup>1-2</sup>, Asist Prof. Çağdaş YILDIRIM<sup>1-2</sup>,MD, Asist. Prof. Alp ŞENER<sup>1-2</sup> MD , Asist. Prof. Fatih Ahmet KAHRAMAN<sup>1-2</sup> MD , , Abdullah Emre YURTTUTAN MD<sup>1-2</sup>

1.Ankara Yıldırım Beyazıt University, School of Medicine, Department of Emergency Medicine, Ankara

2.Ankara City Hospital, Department of Emergency Medicine, Ankara

**INTRODUCTION:** There are many applications to the emergency department with complaints such as malaise, weakness and loss of strength. There are pathologies that can result in various diagnoses as well as rare pathologies. Now, we will present a case applying with such complaints and where renal cyst perforation was detected.

**CASE:** The 59-year-old male patient applies with weakness, malaise and increased pain in the left leg. The general condition of the patient is good and he is conscious. His GCS is 15 and vitals are as follows: blood pressure arterial 90/50 mmHg, pulse: 88 beats/min, fever: 37 and SpO<sub>2</sub>: 98. His background includes heart failure, hypertension and type 2 diabetes mellitus. He has no urological or abdominal operation. He has no abdominal trauma. He has no urological active complaint. According to his physical examination, oropharynx is natural, abdomen is comfortable, respiratory system examination is natural and there is no costovertebral angle sensitivity. His neurology examination is natural. In his tests, biochemistry was normal, WBC: 14000, HG: 10.8, CRP: 207g/l. The patient underwent contrast-enhanced abdominal tomography. In his tomography, a high content collection area with a thick wall of approximately 13x7x4 cm was observed in the perirenal area on the posterior lateral of the left kidney. In addition, thick-walled intramuscular collections with 4 cm and 3.8 cm dimensions were observed in the near adjacency in the psoas muscle in the described collection adjacency. In the diagnosis, abscess was considered firstly. In addition, a hypodense area compatible with perforated cyst with 2 cm length and 8.9 mm width extending towards the kidney surface was observed in the kidney middle section posterolateral (Image 1). 3x 4.5 g of piperacillin tazobactam started to be applied to the patient consulted with infectious diseases. Drain was placed in the abscess of the patient with interventional radiology and he was hospitalized in the urology service for follow-up.



IMAGE 1

**RESULT:** It is necessary to deepen the anamnesis and diversify the differential diagnosis in the patients applied with non-specific clinic. With on-site imaging, it will be easier to make a diagnosis for the patient. Renal and psoas pathologies should be kept in mind in isolated lower extremity distresses.

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**SÖZEL 26**

**STATUS EPILEPTICUS TRIGGERED BY FLUOROQUINOLONE USAGE IN MULTIPLE SCLEROSIS PATIENT : CASE REPORT**

Tulu AB<sup>a</sup>, Kosa MT<sup>a</sup>, Kablancı A<sup>a</sup>, Donmez S<sup>a</sup> Hakan OĞUZTÜRK<sup>a</sup> Afşin Emre Kayıpmaz<sup>a</sup> Fatih TANRIVERDİ<sup>a,b</sup>

<sup>a</sup>*Department of Emergency Medicine, Ankara City Hospital, Ankara, TURKEY*

<sup>b</sup>Ankara Yıldırım Beyazıt University, School of Medicine, Department of Emergency Medicine, Ankara, Turkey

**INTRODUCTION:** Fluoroquinolones are antibiotics that has many advantages including high oral bioavailability, high distribution volume and broad spectrum. But also fluoroquinolone usage has many serious adverse effects like neuropathy, lowering seizure threshold, tendinopathy. [1] Multiple sclerosis (MS) is most frequent inflammatory demyelinating disease of central nervous system. [2] Like many other neurologic diseases MS patients has a lower seizure threshold than normal population. [3]

**CASE:** 59 years old woman presented to emergency department with confusion, spasm in her chin and convulsion. In her presenting vital findings heart rate was 108 bpm otherwise normal vital findings, electrocardiogram (ECG) showed sinus tachycardia. In physical examination her glascow coma score(GCS) was 13 points, she was lethargic. In her medical history she had diabetes mellitus type 2 and MS. And she were using ciprofloxacin since 5 days because of her urinary tract infection. In laboratory analysis Cre: 1.47, Urea: 48, Glucose: 151 mg / dL, Na: 139 mEq / L, K: 4.7 mEq / L, Procalcitonin: 0.09 µg / L, CRP: 0.014 g / L, WBC: 21.950 / mm<sup>3</sup>, Neutrophil 18.720 / mm<sup>3</sup>, Urine analysis: Erythrocyte 363 p / HPF, Leukocyte 38 p / HPF, Leukocyte esterase 3+, blood gas lactate was 3.70. Her neurologic imaging was normal there wasn't any acute pathology. Our preliminary diagnosis was status epilepticus and we treated her with phenytoin, in her follow up in emergency department at 21th our she had another generalized tonic-clonic seizure. After that patient hospitalized to neurology intensive care unit.

**CONCLUSION:** In patients who has MS disease seizure threshold is lower than normal population. Along with this fluoroquinolones are lowering seizure threshold in many neurologic diseases and can cause serious mortal events like status epilepticus. We should be careful about prescribing fluoroquinolones. In case of neurologic diseases we should obtain a detailed patient's medical history.

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## SÖZEL 27

### RAPID VENTRICULAR RESPONSE ATRIAL FIBRILLATION WHICH CHANGES WITH POSITION: CASE REPORT

Tulu AB<sup>a</sup>, Donmez S<sup>a</sup>, Miray Tümer<sup>a</sup>, Hakan OĞUZTÜRK<sup>a</sup>

<sup>a</sup>Department of Emergency Medicine, Ankara City Hospital, Ankara, TURKEY

**INTRODUCTION:** Submandibular area infections are usually derived from lower molar teeth.[1] Atrial fibrillation is second common narrow complex tachycardia after sinus tachycardia. [2] In electrocardiogram (ECG) it characterized with absence of P waves, RR interval irregularity. Rapid

ventricular response atrial fibrillation (RVR AF) is what mean heart rate about 150 bpm with atrial fibrillation and usually it develops when there is a inducer factor.

CASE: 51 years old woman presented to the emergency department (ED) with swelling, erythema under her chin. Her vital findings in presentation was body temperature: 39OC, blood pressure: 140/70 mmHg, heart rate: 160 bpm, respiratory rate: 22/min, SpO<sub>2</sub>: %94. ECG: 160 bpm RVR AF. In her physical examination there was erythema and swelling under her chin and in her left lower molar gum there was operation scar and halitosis were exist. In her medical history diabetes mellitus type 2 was exist. In laboratory results : Glucose:304 mg/dL, WBC: 8.960/ $\mu$ L , CRP: 264, Procalcitonin: 0.18  $\mu$ g/L, Troponin negative, TSH: 0.888 mU/L, sT4: 1.33 ng/dl, urine ketone negative, blood gas pH: 7.38. In her neck computed tomography (CT) we found left submental abscess that apply pressure to oropharyngeal air column. After her body temperature was controlled her tachycardia didn't resolve. And in our observation when the patient brings her head to normally anatomical position she had tachycardia but when she deviate her head to the left her heart rate dropped due to vagal pressure. The patient hospitalized to otorhinolaryngology. After drainage of the abscess her heart rate was dropped and patient was discharged with antibiotics.

CONCLUSION: In this case we want to take attention to when patient deviate her head to left, either in cardiac screen and pulse examination pulse rate was dropped significantly. Therefore when a patient presented with RVR AF we should always consider inducing etiologies and make a systemic examination.



Image 1.1 Normal anatomic position

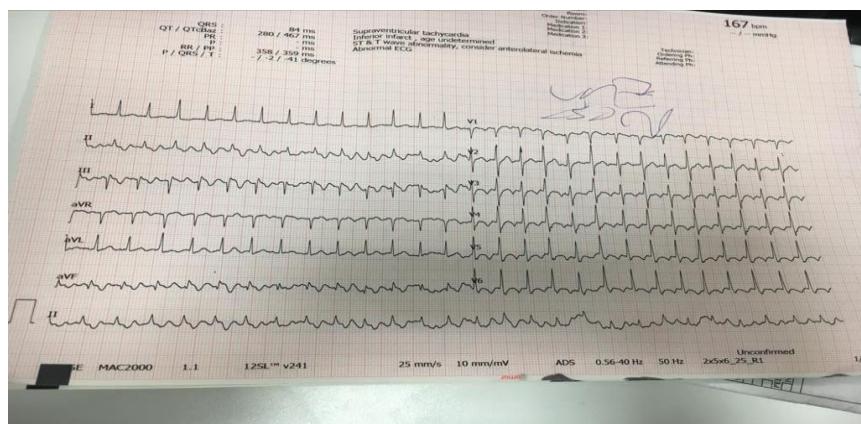


Image 1.2 ECG at normal anatomic position



Image 2.1 Head deviated to left

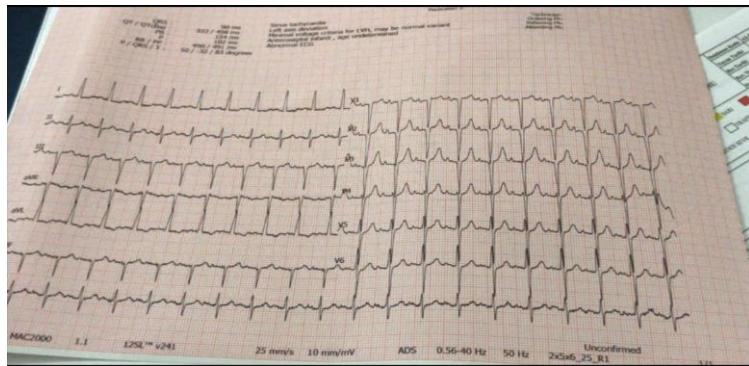


Image 2.1 ECG at deviated position

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## SÖZEL 28

### TRIPLE AT ONCE : A CASE REPORT

Tulu AB<sup>a</sup>, Gilik BE<sup>a</sup>, Kablancı A<sup>a</sup> Hakan OĞUZTÜRK<sup>a</sup>, Afşin Emre Kayıpmaz<sup>a</sup>

Fatih TANRIVERDİ<sup>a,b</sup>

<sup>a</sup> Department of Emergency Medicine, Ankara City Hospital, Ankara, TURKEY

<sup>b</sup>Ankara Yıldırım Beyazıt University, School of Medicine, Department of Emergency Medicine, Ankara, Turkey

**INTRODUCTION:** Acute appendicitis is most common surgical emergency in the world that should be keep in mind in patients who presented with abdominal pain. Lifetime risk for acute appendicitis is %8.6 in men and %6.9 in women. [1] Acute diverticulitis is one of the most frequent gastrointestinal diseases that requires hospitalization and leading indication for elective colon resection. [2] Bowel obstruction occurs when impairment normal flow of intraluminal content. In US and western Europe countries leading etiology for bowel obstruction is intraperitoneal adhesions.[3]

**CASE:** 54 years old woman presented to emergency department (ED) with abdominal pain and nausea since 3 days. Vital finding in presentation was normal. In our physical examination we found bilaterally lower quadrant pain and rebound tenderness. We learned that patient has a diverticulitis history before 2 months ago. Patient had also chronic obstructive pulmonary disease (COPD) and gynecology operation history. In laboratory studies we found WBC: 10.630 /mm<sup>3</sup>, ESR: 31 mm/h, CRP : 20.60 mg/L, Cre: 0.81 mg/dL, Üre: 41 mg/dL, K: 5.5 mEq/L, Urine analysis : Normal. In plain radiography there was one broad based air-fluid level image. In abdominal computed tomography (CT) : Retrocaecal appendix that has 10 mm diameter and its wall diffusely thick. Periappendicular area is diffusely inflamed. Findings are compatible with acute appendicitis. Ileal loops are dilated and AP diameter of largest ileal loop was 3.5 cm. There is intraluminally air-fluid levels. These findings are compatible with bowel obstruction. Also mesenteric fatty tissue around ascending colon and edges of diverticula inflamed (findings of diverticulitis). We had consulted with general surgery, operation planned for the patient and the patient was hospitalized.

**CONCLUSION:** Appendicitis, diverticulitis and bowel obstruction is frequent surgical emergencies. But when clinicians has a suspect of acute abdomen in a patient usually are focusing on one diagnosis. In suspect of acute abdomen particularly in patients who has operation history we should keep in mind of multiple surgical emergency and in such patients CT scanning threshold should be lower.

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## SÖZEL 29

### PATIENT DETECTING VENA CAVA INFERIOR TRUMBULAR WITH DVT FINDINGS:

Asist. Prof. Fatih TANRIVERDİ <sup>1-2</sup>MD, Dr. Gülşah SABIR MD<sup>1</sup>, Prof. Servan GÖKHAN MD<sup>1-2</sup>, Asist Prof. Gül PAMUKÇU GÜNAYDIN<sup>1-2</sup> ,MD, Asist. Prof. Alp ŞENER<sup>1-2</sup> MD , Asist. Prof. Fatih Ahmet KAHRAMAN<sup>1-2</sup> MD , Assoc. Prof. Afşin Emre KAYIPMAZ <sup>1-2</sup>MD, Prof Hakan OĞUZTÜRK <sup>2</sup>MD.

1.Ankara Yıldırım Beyazıt University, School of Medicine, Department of Emergency Medicine, Ankara

2.Ankara City Hospital, Department of Emergency Medicine, Ankara

**INTRODUCTION:** Inferior vena cava thrombosis (IVCT) is a rare but serious disease associated with a high mortality rate. IVCT is divided into primary and secondary thrombosis depending on the underlying pathophysiology. The diagnosis includes both clinical probability assessment and imaging assessment. The optimal therapeutic strategy remains the target of ongoing research. Although anticoagulation therapy remains essential in IVCT treatment, its inherent limitations have led to the use of minimally invasive, endovascular treatment options, including transcatheter thrombolysis, mechanical thrombectomy, or a combination of these techniques. In this case, we aimed to present the case of inferior vena cava thrombus, which causes high mortality and morbidity to the emergency room.

**CASE:** A 37-year-old male patient applied to the emergency room due to pain and swelling of the legs for 2 days. No known disease, no medication used. There was a history of air travel lasting 1 hour 2 days prior to the start of his complaint. At the time of admission, the general condition good, GCS 15, good consciousness, blood pressure 130/85 mmHg pulse 85 / min pulse oximeter spO<sub>2</sub>: 97% fever 36.7 ° C. physical examination Oropharynx natural Respiratory System no ral no roncus. No sensitivity in the abdomen, no defense, no rebaund Kvs S1 + S2 + No additional sound murmur was heard. Neurological examination was natural. Diameter difference was detected in the legs, distal pulses were palpable. Urea 126, creatinine 1.52, wbc 22.000, hb 12.3, inr 1.1 in the whole blood, biochemistry and coagulation tests taken from the patient. Lower extremity venous doppler usg performed due to the difference in diameter in the legs 'Bilateral main femoral vein-superficial femoral vein and popliteal vein were compatible with acute DVT and were followed by a non-compensatory compressor.' as reported.. 'The patient with vena cava inferior thrombus was administered heparin with a molecular weight of less than 0.1 kilograms as an anticoagulant treatment. He was consulted to the department of cardiovascular surgery and hospitalized in intensive care. After 5 days of follow-up in intensive care, the patient was discharged with recommendations.

**CONCLUSION:** In conclusion, we think that vena cava inferior thrombus is a disease with high mortality, this diagnosis should not be skipped in patients with DVT symptoms and it should not be avoided to have bt angio in these patients.

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## **SÖZEL 30**

### **QTc interval and electrocardiographic findings of COVID-19 patients**

Mehmet Oguzhan Ay<sup>1</sup>, Nalan Kozaci<sup>2</sup>, Ozlem Oymak Ay<sup>3</sup>, Halil Kaya<sup>1</sup>, Mehtap Bulut<sup>1</sup>, Melih Yuksel<sup>1</sup>, Ebru Adali<sup>1</sup>, Enad Kenan<sup>1</sup>, Ebru Cetin<sup>1</sup>

<sup>1</sup> University of Health Sciences, Bursa Yuksek Ihtisas Training and Research Hospital, Department of Emergency Medicine, Bursa, Turkey.

<sup>2</sup> University of Alanya Alaaddin Keykubat, Training and Research Hospital, Department of Emergency Medicine, Antalya, Turkey.

<sup>3</sup> University of Health Sciences, Bursa City Hospital, Department of Otolaryngology, Bursa, Turkey.

#### **Abstract**

**Aim:** This study aimed to investigate the effectiveness of the usage of QTc interval and electrocardiographic (ECG) findings to predict 28-day all-cause mortality in patients with COVID-19.

**Material and Methods:** Patients aged 18 or older that visited ED with complaints of fever, cough and shortness of breath, were tested with real-time reverse-transcriptase polymerase chain reaction, were imaged with CCT, underwent ECG, and consequently diagnosed with COVID-19 were included in this study.

**Results:** Totally 276 patients included in the study. When at least one comorbid disease, reduced oxygen saturation, ECG findings of prolonged QTc interval, ventricular tachycardia / fibrillation, left bundle branch block and ST segment elevation / depression or severe lung involvement (four or five lobes) on CCT scans were detected, patients had a higher 28-day all-cause mortality rate. Compared to surviving individuals, deceased patients had approximately 4.5-fold increased D-dimer levels, and approximately 5-fold increased C-reactive protein and troponin T levels. Of the deceased patients, 40% had sinus tachycardia.

**Conclusion:** Usage of comorbidities, ECG, laboratory tests and CCT together are useful for predicting 28-day all-cause mortality rate in patients diagnosed with COVID-19.

**Keywords:** COVID-19; electrocardiography; mortality; chest computed tomography; laboratory tests

## Introduction

In December 2019, a pandemic named COVID-19 pneumonia, which is caused by a novel coronavirus (SARS-nCoV-2), emerged in the city of Hubei, Wuhan, China [1]. Among the first published cohort from the Wuhan Jinyintan Hospital, which consisted of 41 patients with COVID-19 pneumonia, six (14.6%) patients' medical conditions deteriorated rapidly, leading to death from multiple organ failure [2]. When the cohort size reached 99 cases, 11 (11.1%) patients had died [3]. In another Wuhan cohort comprised of patients hospitalized due to COVID-19

pneumonia, general mortality rate was reported as 4.3% (6/138) [4]. These studies have suggested that advanced age and underlying comorbidities are associated with disease severity and mortality rate in patients with COVID-19 pneumonia [2-4].

COVID-19 continues to spread rapidly throughout the world. Number of patients is growing each day and these patients constitute the majority of cases that visit emergency departments (ED). This exceeding volume of patients hinders routine operations at ED. Establishing markers for early and accurate diagnosis of COVID-19 and anticipating the patients at risk of mortality would reduce rates of morbidity and mortality.

This study aimed to investigate the effectiveness of the usage of QTc interval and electrocardiographic (ECG) findings to predict 28-day all-cause mortality in patients with COVID-19.

## Methods

This study was initiated following approval from the COVID-19 Scientific Research Review Commission (under the General Directorate of Health Services, the Ministry of Health) and the Hospital Ethical Committee (2011-KAEK-25 2020/07-18).

Patients aged 18 or older that visited ED between 15.03.2020 and 30.06.2020 with complaints of fever, cough and shortness of breath, underwent ECG, were tested with real-time reverse-transcriptase polymerase chain reaction (rRT-PCR), were imaged with chest computed tomography (CCT), and consequently diagnosed with COVID-19 were included in the study.

Patient information was gathered from the hospital automation system and patient files. Assessment of CCT scans of the participating patients was based on the official reports on the hospital automation system made by Radiology Specialist. Assessment of ECGs were made by two experienced Emergency Medicine Specialists. Exclusion criteria were as follows: absence of ECG, rRT-PCR or CCT results, age below 18, transfer of patient from ED or from hospitalized clinic to another facility, and lacking patient information.

A standard data form was prepared for the study. File number, age, gender, initial complaints, existing disorders (hypertension, diabetes mellitus, coronary artery disease, chronic obstructive pulmonary disease/asthma, chronic renal failure, history of cerebrovascular accident, malignancy), ECG findings (QTc interval, heart rate, heart rhythm, bundle branch block, axis deviation, negative T wave, ST elevation or depression, pathological Q wave), CCT assessment, clinical outcome (admission to hospital ward, admission to the intensive care unit, death) and 28-day all-cause mortality condition of the patients were recorded on these forms.

Resulting data were analyzed using the IBM SPSS Statistics version 21.0 software package (SPSS Inc., Chicago, IL, USA). A p value of <0.05 was regarded as representing statistical significance.

## Results

A total of 276 patients were included in the study. 150 (54.3%) of the patients were male and 126 (45.7%) were female. Mean age of the study group was 68 (60-79) years.

The most common initial complaints were shortness of breath (n=145; 52.5%), cough (n=124; 44.9%), fever (n=107; 38.8%) and tiredness (n=72; 26.1%). 193 (69.9%) of the patients had a history of comorbid diseases. The most frequent comorbidities were hypertension (n=125; 45.3%), coronary artery disease (n=83; 30.1%), diabetes mellitus (n=74; 26.8%) and chronic lung disease (n=64; 23.2%) (Table 1).

Thirty (10.9%) of the study patients lost their lives within 28 days. No statistically significant relation was observed between 28-day all-cause mortality rate, and age, gender or symptoms at the time of ED visit. There was statistically significant increase in 28-day all-cause mortality rate in the presence of at least one comorbidity ( $p<0.001$ ), hypertension ( $p<0.001$ ), coronary artery disease ( $p<0.001$ ), diabetes mellitus ( $p<0.001$ ), chronic renal failure ( $p=0.03$ ) and

malignancy ( $p=0.001$ ). Deceased patients had elevated pulse and respiration rate, and reduced oxygen saturation compared to surviving patients (Table 1).

The median of QTc interval on study patients' initial ECGs was found to be 390 (360-428) ms. Inspection of rhythm on patient ECGs revealed that while sinus rhythm was prevalent (n=152; 55.1%), sinus tachycardia (n=75; 27.2%), atrial fibrillation (n=25; 9.1%), supraventricular tachycardia (n=22; 8.0%) and ventricular tachycardia/fibrillation (n=2; 0.7%) were also present. Among deceased patients, 40% had sinus tachycardia. Thirty-seven (13.4%) of the patients exhibited negative T waves, 9 (3.3%) had elevated/depressed ST segments and 8 (2.9%) had pathological Q waves. In the presence of QTc interval prolongation ( $p<0.001$ ), ventricular tachycardia/fibrillation ( $p<0.001$ ), left bundle branch block ( $p=0.001$ ) and ST segment elevation/depression ( $p<0.001$ ), 28-day all-cause mortality rate was significantly increased (Table 1).

Involvement consistent with COVID-19 was observed on CCT scans of 173 (62.7%) patients. Distribution of pulmonary infiltrates were mostly peripheral (n=165; 59.8%) or bilateral (n=113; 40.9%). The most frequent findings on CCT scans of the patients were ground-glass opacities (n=142; 51.4%), consolidation (n=51; 18.5%), pleural fluid (n=47; 17.0%) and multifocal nodules (n=22; 8.0%).

Assessment of clinical outcomes following ED visit revealed that 192 (69.6%) of the study patients were admitted to a hospital ward, 19 (6.9%) were admitted to the intensive care unit, 63 (22.8%) were discharged and 2 (0.7%) lost their lives. Among the 211 patients that were hospitalized, 183 (66.3%) were discharged and 28 (10.1%) died while at the hospital.

## **Discussion**

Determining disease severity along with the COVID-19 diagnosis of patients visiting ED is crucial for making the decision between discharge, admission to a ward and admission to the intensive care unit. Various studies have explored initial complaints, comorbidities, clinical

findings, ECG findings, CCT imaging and laboratory results in order to distinguish high-risk COVID-19 patients. In one such study, advanced age, high number of affected lung lobes, elevated CRP levels at the time of visit, chest pain/shortness of breath and history of smoking were identified as independent risk factors for fatality [5]. Another study have found that age over 65, elevated cardiac troponin I levels, cerebrovascular disease and cardiovascular disease led to higher mortality rates. Among all the variables examined in the same study, a  $P_{a}O_2$  value of  $\geq 80$  mmHg was the only factor linked with survival [1]. Findings of another study have indicated a strong association between mortality rate and the presence of hypoxemia necessitating oxygen support within three hours of presentation [6]. In a study involving COVID-19 patients in severe condition, male gender,  $SpO_2 \leq 89\%$ , respiratory rate of  $>30/\text{min}$  and diastolic pressure of  $\leq 80$  mmHg were found to be related to significantly higher mortality rates [7]. In our study, 10.9% of the patients lost their lives within 28 days. There was no statistically significant difference between deceased and surviving patients in terms of age, gender or symptoms at the time of emergency department visit. Nonetheless, the 28-day all-cause mortality rate was significantly elevated in patients with at least one comorbid disease. Comparison of initial vital signs of the study group noted at ED revealed that patients that died within 28 days had higher pulse and respiratory rate, whereas lower oxygen saturation than those in surviving patients.

Patients may also develop cardiovascular complications associated with COVID-19. Fatal cardiovascular complications seen in such patients include acute myocardial infarction, myocarditis, dysrhythmia, heart failure, cardiomyopathy, cardiogenic shock and venous thromboembolism [8]. Due to complications, ECG findings of these patients may include ST segment abnormalities, QT prolongation, conduction abnormalities and ventricular arrhythmias. Accordingly, patients that exhibit cardiac symptoms and ECG abnormalities should be carefully examined with regards to COVID-19 related cardiac complications [9]. Patients with severe COVID-19 had a higher risk of arrhythmia complications [10]. One study has shown that patients

had higher mortality rates if their ECG findings included one or more atrial premature contractions, right bundle branch block or intraventricular block, ischemic T-wave inversion, and nonspecific repolarization. ST elevation has been found to be rare at the time of initial hospital visit [6]. Another study has reported the presence of sinus tachycardia and ventricular arrhythmia on ECG as independent risk factors for fatality [11]. Among our study group, 40% of the deceased patients had sinus tachycardia. 28-day all-cause mortality rate was significantly elevated in the presence of QTc interval prolongation, ventricular tachycardia/fibrillation, left bundle branch block and ST segment elevation/depression.

In conclusion, diagnosing and determining the severity of COVID-19 at ED can be achieved by evaluating vital signs, comorbidities, and findings of ECG, laboratory tests and CCT. At the time of ED visit, the presence of at least one comorbidity, high pulse and respiratory rate, reduced oxygen saturation, ECG findings of sinus tachycardia, QTc interval prolongation, ventricular tachycardia/fibrillation, left bundle branch block and ST segment elevation/depression, CCT findings of severe lung involvement (four or five lobes), peripheric/bilateral lobe involvement, ground-glass opacities, consolidation, pleural fluid and vascular enlargement, elevated levels of D-dimer, CRP and troponin T were associated with higher 28-day all-cause mortality rates.

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## Tables

**Table 1.** Patients' demographic data, symptoms, comorbidities, vital signs and electrocardiographic findings at admission

		28-day all-cause mortality			
		All patients	Survivor	Deceased	p value
		n (%)	n (%)	n (%)	
<b>Total</b>		<b>276 (100)</b>	<b>246 (89.1)</b>	<b>30 (10.9)</b>	
Age (years), median (IQR)		68 (60-79)	68 (60-78)	73 (64-81)	0.087*
	Male	150 (54.3)	134 (89.3)	16 (10.7)	0.906**
Gender, n%	Female	126 (45.7)	112 (88.9)	14 (11.1)	
	Dyspnea	145 (52.5)	126 (86.9)	19 (13.1)	0.210**
Symptoms	Cough	124 (44.9)	109 (87.9)	15 (12.1)	0.554**
	Fever	107 (38.8)	98 (91.6)	9 (8.4)	0.296**
Comorbidities	Weakness	72 (26.1)	63 (87.5)	9 (12.5)	0.605**
	Myalgia	52 (18.8)	46 (88.5)	6 (11.5)	0.863**
Vital signs	Chest pain	34 (12.3)	32 (94.1)	2 (5.9)	0.554***
	Diarrhea	26 (9.4)	23 (88.5)	3 (11.5)	1.000***
Presence of any comorbidity	Loss of taste odor	17 (6.2)	15 (88.2)	2 (11.8)	1.000***
	Throat ache	17 (6.2)	16 (94.1)	1 (5.9)	0.704***
Chronic lung disease	Headache	12 (4.3)	12 (100)	0	0.374***
	Loss of speech / movement	6 (2.2)	4 (66.7)	2 (33.3)	0.130***
Hypertension	Presence of any comorbidity	193 (69.9)	163 (84.5)	30 (10.9)	<0.001**
	Hypertension	125 (45.3)	99 (79.2)	26 (20.8)	<0.001**
Diabetes	Coronary artery disease	83 (30.1)	58 (69.9)	25 (30.1)	<0.001**
	Diabetes	74 (26.8)	50 (67.6)	24 (32.4)	<0.001**
Previous cerebrovascular disease	Chronic lung disease	64 (23.2)	55 (85.9)	9 (14.1)	0.349**
	Previous cerebrovascular disease	17 (6.2)	15 (88.2)	2 (11.8)	1.000***
Malignancy	Chronic renal failure	12 (4.3)	8 (66.7)	4 (33.3)	0.030***
	Malignancy	12 (4.3)	6 (50)	6 (50)	0.001***
Systolic blood pressure (mmHg), median (IQR)	Fever (°C), median (IQR)	36.5 (36.12-37)	36.5 (36.1-36.9)	36.5 (36.3-37.32)	0.095*
	Pulse (n/minute), mean (Std. deviation)	95.23 (20.49)	93.75 (20.2)	107.37 (19.11)	0.001****
Diastolic blood pressure (mmHg), median (IQR)	Systolic blood pressure (mmHg), median (IQR)	140 (121.75-160)	140 (121.75-160)	127 (107.5-150.25)	0.008*
	Diastolic blood pressure (mmHg), median (IQR)	81 (70-94.75)	81.5 (70-95.25)	80 (67.75-90.25)	0.177*
Respiratory rate (n/minute), median (IQR)	Respiratory rate (n/minute), median (IQR)	15 (14-16)	15 (14-16)	16 (14-18)	0.002*

	Oxygen saturation (%) median (IQR)	96 (94-98)	96 (94-98)	92.5 (87-97)	<b>0.019*</b>
Electrocardiogram	QTc interval (milliseconds), median (IQR)	390 (360-428)	382.5 (360-420)	428 (358-630)	<b>&lt;0.001*</b>
	Sinus rhythm	251 (90.9)	226 (90)	25 (10)	0.167***
	Right bundle branch block	14 (5.1)	13 (92.9)	1 (7.1)	1.000***
	Left bundle branch block	18 (6.5)	11 (61.1)	7 (38.9)	<b>0.001***</b>
	Atrial fibrillation	25 (9.1)	20 (80)	5 (20)	0.167***
	Supraventricular tachycardia	22 (8)	19 (86.4)	3 (13.6)	0.718***
	Ventricular fibrillation / tachycardia	2 (0.7)	0	2 (100)	<b>&lt;0.001***</b>
	T wave negativity	37 (13.4)	31 (83.4)	6 (16.2)	0.260***
	ST segment elevation / depression	9 (3.3)	3 (33.3)	6 (66.7)	<b>&lt;0.001***</b>
	Presence of pathological Q	8 (2.9)	7 (87.5)	1 (12.5)	1.000***

\*Mann-Whitney U test, \*\*Pearson's chi-squared test, \*\*\*Fischer's exact test, \*\*\*\*Independent samples Student's *t*-test

## SÖZEL 31

### Two ischemic stroke cases occurring despite high INR levels

Melih YUKSEL\*, Suna ERAYBAR ATMACA\*, Halil KAYA\*, Mehmet Oguzhan AY\*

\*University of Health Sciences, Bursa Yuksek Ihtisas Training and Research Hospital, Department of Emergency Medicine, Bursa, Turkey

#### Abstract

Warfarin is a vitamin K antagonist commonly used in the treatment and prevention of thromboembolic cases worldwide. Its therapeutic range is narrow and is followed by the international normalized ratio (INR). Ischemic conditions are observed at low INR levels whereas bleeding is seen at higher INR levels. A 45-year-old woman and a 79-year-old man using warfarin were admitted to the emergency department with a neurological deficit. Ischemic stroke was revealed via radiological imaging in both patients. However, INR levels were significantly higher in laboratory tests (11.44 and 12.37 kU / L). Ischemic stroke occurred although bleeding is normally expected at such high INR levels. Contrary to many studies published in the literature, this case report revealed interesting information in terms of its conclusions.

Keywords: Ischemic stroke, high INR levels, warfarine overdose, emergency medicine

#### Introduction

Warfarin is a vitamin K antagonist commonly used in the treatment and prophylaxis of thromboembolic diseases. It is extensively used in diseases such as prosthetic heart valve diseases, dilated cardiomyopathy, atrial fibrillation (AF), deep vein thrombosis (DVT), and pulmonary embolism (PE) (1). In particular,

anticoagulation, which is well controlled with warfarin, can prevent more than half of the strokes associated with AF and heart valve replacements (2). The therapeutic index of warfarin is narrow, followed by the international normalized ratio (INR). INR provides a standard scale for monitoring patients receiving oral anticoagulant therapy. The rate of prothrombin time (PT) of the patient is calculated as its rate to the control PT obtained using a thromboplastin reagent, an international reference developed by the World Health Organization (WHO) (3). In this case report, we will present two stroke cases occurring despite high INR levels, which is not encountered in the literature.

#### Case 1

A 43-year-old woman was admitted to the emergency department with complaints of, dizziness, nausea, and numbness in the left arm. We learned that she had been taking 5 mg of warfarin daily for her previous occlusive cerebrovascular disease. The patient was conscious. Her general state was good, Glasgow Coma Scale (GCS) was 15, and vital signs were stable. Her neurological examination showed dysarthria and 4/5 muscle strength hemiparesis in her left upper and lower extremities. The patient had no stiffness and no additional pathological reflexes. In the blood sampling, Hb was found as 9.7 g / dl, WBC was 15.070 and PLT was 272.000. His electrocardiogram (ECG) showed sinus rhythm. No electrolyte imbalance was detected in the biochemical analysis. INR was found as 11.44 kU / L (studied twice). In the cranial imaging of the patient, computerized brain tomography (BBT) showed chronic ischemic changes, while magnetic resonance imaging (MRI) showed a 10 mm diameter diffusion restriction on the left side of the brain stem (Figure 1).The patient was admitted to the intensive care unit for follow-up by consulting with the neurology clinic. In the subsequent examination of the patient, antiphospholipid antibodies (APS), anticardiolipin antibodies (ACA) and antinuclear antibodies (ANA) were found to be negative.

#### Case 2

A 79-year-old male patient was admitted to the emergency department with dysarthria and blurred consciousness. The patient had a history of hypertension, AF, and chronic kidney disease. He had

confusion, his orientation and cooperation were impaired and his GCS was 10. His vital signs were stable, blood glucose level was found as 128 mg / dl, BUN was 34.02 mg / dl, creatinine was 1.94 mg / dl, and INR was 12.37 kU / L (twice). We learned that the patient had been using 5 and 2.5 mg of warfarin every other day. Computed tomography of the brain revealed periventricular white matter density and diffuse diminution, and heterogeneous hypodense lesion area in the occipital lobe on the left side (Figure 2). Subsequent MRI revealed diffusion in both cerebellar hemispheres at the occipital lobe of the left central subcortical area. In the hyperintense ADC map of the images, signal limitation areas which were compatible with hypointense acute ischemia in the millimeter size in the thalamus on the left and in the periventricular white matter on the right were observed (Figure 1). The patient was admitted to the intensive care unit in consultation with the neurology clinic.

## Discussion

Warfarin inhibits the synthesis of vitamin K-dependent coagulation factors, including factor II, VII, IX and X and anticoagulant proteins C and S (4). The therapeutic range of warfarin is narrow. In particular, it is difficult to use as it is influenced by many factors such as dose adjustment, genetic factors, drug interactions, and diet. The targeted INR value is usually 2 to 3 in patients with AF, DVT / PE, and occlusive cerebrovascular disease. The targeted INR value in patients with prosthetic heart valve disease is 2.5-3.5(5). The most common side effect is bleeding (6, 7). Especially in cases whose INR values exceed 4.5, the risk of major bleeding increases (2). Intracranial hemorrhage (ICH) is considered as the most dangerous bleeding complication of anticoagulant therapy. In warfarin-dependent ICHs, the mortality rate is high and a large proportion of these patients die within 30 days (8). In most of the bleeding, INR values are high. Many side effects have been reported in the literature due to warfarin use. Most of the rare side effects have been reported in case reports. In those reports, acute kidney injury, skin lesions, hepatotoxicity, and penile gangrene despite the normal INR level have been reported(9-12). In another study, nonhaemorrhagic arthritis findings independent from INR values have been reported in 61 patients using vitamin K antagonist (13). The risk of thromboembolism increases dramatically in lower INR values, especially below 1.9-2.0 (14). Bleeding is observed in higher INR values. In our cases, INR values were

significantly higher than the therapeutic range (11.44 and 12.37). Normally, bleeding was expected to be with those INR levels. However, ischemic stroke developed in those two patients. In the first case, a history of previous ischemic stroke and a relatively young age strengthened the possibility of a genetic predisposing factor in the foreground. Although APS, ACA, and ANA were negative in this case, protein C, protein S and factor V leiden mutation could not be investigated due to technical deficiency. In the second case, the risk factor for thromboembolic events is AF and partly advanced age. However, the likelihood of developing ischemic stroke at such high INR levels is unexpected in both cases, regardless of the underlying condition.

As a result, unlike many studies published in the literature, this case report revealed interesting information. More detailed studies on this issue may be reported to support our findings.

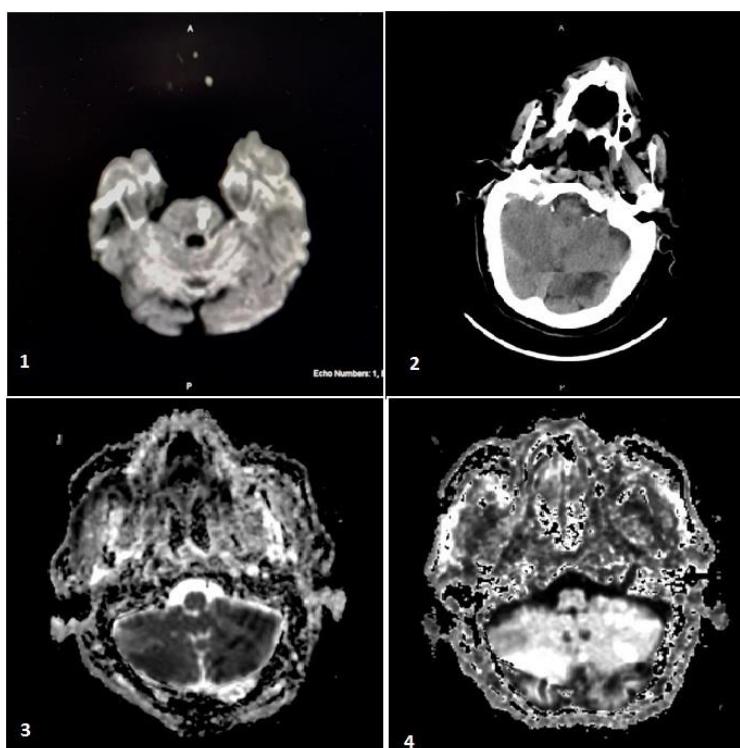
#### Informed consent

An informed consent form has been signed by the parents of the cases involved.

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**Figure 1.** Images of first (1,2) and second (3,4) ischemic stroke cases occurring despite high INR levels

## SÖZEL 32

### Analysis of intubated patients with carbon monoxide poisoning

Bekir Selim BAGLI<sup>1</sup>, Huseyin AYGUN<sup>2</sup>, Mehmet Oguzhan AY<sup>2</sup>

<sup>1</sup> University of Health Sciences, Bursa Yuksek Ihtisas Training And Research Hospital, Department of Underwater and Hyperbaric Medicine, Bursa, Turkey

<sup>2</sup> University of Health Sciences, Bursa Yuksek Ihtisas Training And Research Hospital,

Department of Emergency Medicine, Bursa, Turkey

Department of Emergency Medicine, Bursa, Turkey

Objective: Carbon monoxide (CO) is a colorless, odorless, and nonirritant gas. CO exposure is one of the most common reasons of poisoning death in Turkey. Hyperbaric oxygen (HBO) therapy is used to treat patients with CO poisoning. However, little is known about the response to HBO in intubated patients. This study aims to evaluate the results of patients who were treated with a diagnosis of CO poisoning in our unit.

Method: The following properties of 4 intubated patients, who were consulted to our clinic between January 2018 and December 2020 because of severe CO poisoning were evaluated; demographic characteristics, findings, laboratory results, applied treatment and treatment results.

Result: The mean age of patients who were administered HBO therapy with a diagnosis of CO poisoning was 73.5 (56-86), and 50% of them were male. The mean COHb was measured 35.2%. An average of 2 sessions of HBO therapy was applied to the patients. Patients with moderate to severe CO poisoning who do not have adequate response with normobaric oxygen therapy are directed to HBO therapy units. Between January 2018 and December 2020, a total of 98 patients diagnosed with CO poisoning were treated in our HBO therapy unit. About 4% of these patients were treated as intubated. The prognosis of intubated patients was quite poor, and there was 75% mortality in the short to medium term.

Conclusion: Although it is difficult to deduce from this study conducted in a limited number of patients, it was thought that the low GCS score, intubation requirement, higher CKMB, troponin and lactate could increased mortality significantly in patients with CO poisoning. It was evaluated that the reason multiple organ dysfunction in a short period of time was the global hypoxia.

Keywords: hyperbaric oxygenation, carbon monoxide poisoning, intubation

**Table 1.** Patients characteristics

Age (year)	86		56		82		70	
Gender	F		M		M		F	
GCS	4-5		6		6		6	
ECG	bradycardia		no feature		bradycardia		bradycardia	
Season	spring		winter		spring		spring	
Source	coal stove		coal stove		coal stove		coal stove	
pH	7.282	7.328	7.339	7.314	7.045	7.403	7.249	7.458
COHb (%)	40.9	1.3	35.7	1.8	24.9	1.6	39.3	1.8
Lactate (mg/dL)	7.5	1.4	3.6	0.9	16	0.7	7.9	0.7
CKMB( ng/mL)	2.4		3.15		54.3	150	9.92	15.9
Troponin T (pg/mL)	5467.8		21.04		1198	2245	430.4	304.9
HBO (n)	1		1		3		3	
Outcome	ex(24 hours)		recovery		ex(4 months)		ex(96 hours)	

M: male; F: female; GCS: Glasgow Coma Scale; ECG: Electrocardiography; HBO: Hyperbaric oxygen; ex: exitus

## SÖZEL 33

### A HYPOPOTASSEMIC PERIODIC PARALYSIS CASE RESULTING FROM CORTICOSTEROIDS USE

Tuba Ekmekyapar<sup>1</sup>, Muhammed Ekmekyapar<sup>3</sup>, Sükrü Gürbüz<sup>3</sup>

<sup>1</sup>Neurology Department, Malatya Education and Research Hospital, Malatya, Turkey

<sup>2</sup>Emergency Medicine Department, Malatya Education and Research Hospital, Malatya, Turkey

<sup>3</sup>Emergency Medicine Department, Faculty of Medicine, Inonu University, Malatya, Turkey

#### Introduction

Periodic paralysis is a low-prevalence disease developing with recurrent muscle weakness attacks. It has three different forms such as hypokalemia, hyperkalemia and normokalemia (1, 2). Hypopotassemia Periodic Paralysis (HPP) is the most prevalent form of periodic paralyses and is characterized by episodic weakness in the muscles. It can also occur sporadically. The potassium level in the serum is low during the attacks, and potassium is transmitted from the blood to muscle cells. In the

period between the attacks, on the other hand, both serum potassium level and neurological examination of the patient are completely normal (3). Besides, corticosteroids affect sodium-potassium adenosine triphosphatase ( $\text{Na}^+-\text{K}^+$  ATPase) and cause changes in the ion distribution in skeletal muscle cells. As a result of direct or indirect effect of corticosteroids on  $\text{Na}^+-\text{K}^+$  pump, hypopotassemia develops. Their direct effects develop in the long run, while the indirect effects occur in the short run. The paralysis attacks in HPP can be explained by the development of indirect effects of corticosteroids in the short run (4).

#### Case

A 55-year-old male patient presented to the emergency service with the complaint of loss of strength in both upper and lower extremities. The patient had a history of renal transplantation as a result of post-glomerulonephritis renal failure. The patient had been using a corticosteroid (prednisolone) for a long time. The vital parameters of the patient were a temperature of  $36.6^\circ\text{C}$ , 72/min. pulse, TA: 130/70 and respiratory rate of 18/min. The electrocardiography of the patient showed normal sinus rhythm and he had negative troponin value. The patient was consulted to us by the emergency service. In the neurological examination of the patient, cranial nerve examination was normal, 0/5 muscle power was present in the proximal muscle groups, and distal muscle power was evaluated as +4/5. Deep tendon reflexes were globally hypoactive, and no pathological reflexes were observed. The complaints of the patient had first started 5-6 hours before at around 03:00 at night with extensive muscle pains and difficulty in walking. Within a few hours, loss of strength had become more severe, and a complete loss of power had occurred in his arms and legs. Computerized brain tomography and diffusion magnetic resonance images of the patient who had come to the emergency service with tetraparesis were evaluated as normal. The potassium level in the patient's arterial blood gas was 2.2 mmol/L. The patient's hemogram parameters were evaluated as normal. In the biochemical parameters, creatine kinase value was normal, but the potassium value turned out to be 3.2 mmol/L. The patient was evaluated with electromyography for acute polyneuropathy, which gave normal results. As a result of clinical, laboratory and electrophysiological examinations, the patient was pre-diagnosed with hypopotassemia periodic paralysis. The patient was recommended a nephrology consultation. Along with nephrology consultation recommendation, potassium replacement treatment was administered in the emergency service. In the third hour following the treatment, muscle power in all extremities of the patient improved to almost full capacity, and the patient was discharged with suggestions.

#### Discussion

Hypopotassemia periodic paralysis (HPP) is an ion channel, autosomal dominant inheritance disorder, the symptoms of which are treated with potassium replacement (4, 5). During the attack periods, paralysis related to low potassium level develops. However, between the attacks, both potassium level and neurological examination are normal (4, 6). These attacks can be triggered by such factors as trauma, surgical interventions, cold, infections, excessive alcohol intake, corticosteroids, catecholamines, menstruation and emotional stress (4, 7). In the case in question, the patient had a history of corticosteroid use following renal transplantation.

HPP, which is characterized by autosomal dominant inheritance, is mostly observed in males. Initial HPP attack is usually seen in adolescence. However, it has also been reported in various studies that it can be seen in the population between 20-40 years old (8). It is reported to be more prevalent in Asian societies, particularly in Jewish populations. Male dominance in the cases is remarkable (at a rate of 20:1), and the number of attacks is observed to increase during summer months (9). In the case presented here, the patient was a male who had attacks in August, which showed parallelism with the literature.

During a typical attack, the patient wakes up with weakness or feels a weight in his/her legs upon waking up in the morning. In an hour, weakness in the arms and legs sets in. As the weakness develops, deep tendon reflexes become hypoactive. In its severest form, the patient gets into a stage where s/he cannot move any of his/her extremities. Most of the time, respiratory and facial muscles are not affected,

yet there may rarely be severe attacks in which respiratory muscles are paralyzed and lead to death (10). In our case in a similar way, the patient's complaints started at night and the clinical condition was realized in full.

When a patient presents with weakness in all the four extremities, factors leading to quadriplegia such as cervical myelopathy or cerebrovascular disorder that inhibits vertebrobasilar system, Guillain-Barré syndrome should be considered in the differential diagnosis. It is of utmost importance to differentiate familial hypopotassemia periodic paralysis from secondary periodic paralysis. If weakness attacks occur as a result of potassium loss through urinary and gastrointestinal systems, unlike familial periodic paralysis, potassium level is also low between the attacks. Another disease that should be considered during the differential diagnosis is biotoxicities-related periodic paralysis. In patients with hypopotassemia periodic paralysis, the diagnosis is made with the help of family history, the absence of another factor that can cause paralysis, fast normalization of serum K<sup>+</sup> value, and regression of symptoms following K<sup>+</sup> intervention (11). In our case, no familial inheritance history was detected.

### Conclusion

In conclusion, in patients who feel weakness in lower extremities affecting upper extremities in hours and who also have tetraparesis, hypopotassemia periodic paralysis should also be considered among differential diagnoses. Besides, family and medication history of these patients should be investigated, and arterial blood gas is also important in terms of early diagnosis.

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## SÖZEL 34

### THREE DIFFERENT CAUSES OF PNEUMOMEDIASTINUM: CASE SERIES

Ömür Uyanık<sup>1</sup>, Hasan Gökçe<sup>2</sup>, Muhammed Ekmekyapar<sup>2</sup>, Şükrü Gürbüz<sup>3</sup>, Hakan Oğuztürk<sup>3</sup>

<sup>1</sup>Emergency Medicine Department, Elbistan State Hospital, Kahramanmaraş, Turkey

<sup>2</sup>Emergency Medicine Department, Malatya Education and Research Hospital, Malatya, Turkey

<sup>3</sup>Emergency Medicine Department, Faculty of Medicine, Inonu University, Malatya, Turkey

#### Introduction

Pneumomediastinum is the presence of air in the mediastinum for various reasons. It is a very rare clinical condition. Traumatic pneumomediastinum was first described by Laennec in 1819 and spontaneous pneumomediastinum was first described by Hamman in 1939 (1,2). Although it can be seen as iatrogenic, it is most often due to traumatic causes (3). The most common symptom is chest pain and dyspnea. Chest pain is located in the substernal region. It may also be accompanied by a feeling of stuck in the throat and difficulty in swallowing. A typical finding is a synchronized crackling on the anterior chest wall, which is called Hamman's sign, as defined by Hamman (1). This case report is presented to draw attention to pneumomediastinum in the differential diagnosis of chest pain by examining three patients diagnosed with pneumomediastinum for three different reasons.

#### Cases

##### Case-1

A 23-year-old male patient was admitted to our clinic after a motorcycle accident. He had isolated head and neck trauma. She had jaw pain and anterior chest pain. The patient's general condition was moderate and conscious. He was oriented and cooperative. Glaskow Koma Score of patient was 15. Head and neck examination revealed tenderness and swelling of the jaw and subcutaneous emphysema on the neck. Respiratory sounds were normal, no rales or rhonchi were detected. Heart sounds were rhythmic, no additional sounds and murmurs were heard. There was no tenderness on the ribs by palpation. There was no tenderness in abdominal examination. The extremities were mobile and there was no pain. In vital signs, his blood pressure was 110/60 mmHg and his pulse was 117 bpm. Saturation was 95%. Electrocardiogram was sinus tachycardia. In the patient's blood tests, hemoglobin was 15.8 g / dL and hematocrit was 46.4%. The leukocyte count was  $11 \times 10^9$  / L. The platelet count was  $287 \times 10^9$  / L. Liver function tests, electrolyte values and renal function tests were within normal limits in biochemical parameters. After the patient was stabilized, imaging studies were performed. Abdominal ultrasonography was normal, there was no solid organ laceration or free fluid in the abdomen. Brain and maxillofacial tomography showed a fracture in the mandible corpus. There was subcutaneous air around the fracture, spreading to the neck and mediastinum. The patient was hospitalized for operation and follow-up. The patient underwent maxillofacial surgery for mandibular corpus fracture. There was no abnormal change in infection markers and chest X-rays during follow-up for pneumomediastinum. The patient was discharged after follow-up.

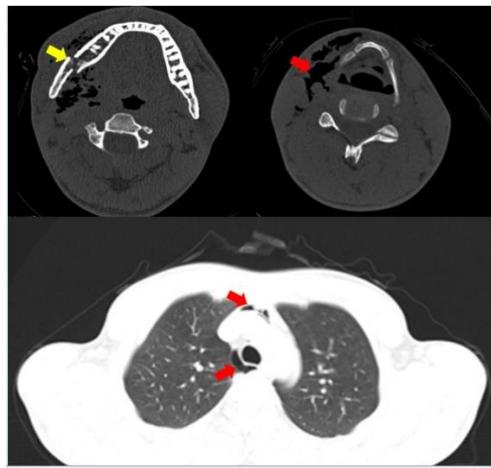


Figure-1: Fracture in the mandible corpus and subcutaneous air around the fracture and neck.  
Pneumomediastinum.

#### Case 2

A 50-year-old female patient was admitted to the emergency department with the complaint of swelling in the right eyelid and half face after endodontic treatment of the right upper molar tooth. The patient's general condition was good. In vital signs, her blood pressure was 130/60 mmHg and pulse rate was 95 beats / min. Saturation was 97%. The electrocardiogram was in normal sinus rhythm. Eye movements, visual field examination and visual acuity were normal. The patient had crepitations due to subcutaneous emphysema on the right eyelid and cheek. The oropharynx was normal and no uvula edema was observed. Respiratory sounds were normal, no rales or rhonchi were detected. Heart sounds were rhythmic, no additional sounds and murmurs were heard. Other system examinations were normal. Hemoglobin was 12.1 g / dL and hematocrit was 40.3% in the blood tests. The leukocyte count was  $7.4 \times 10^9 / L$ . The platelet count was  $264 \times 10^9 / L$ . Liver function tests, electrolyte values and renal function tests were within normal limits in biochemical parameters. CRP was 0.33 mg / dL. Cold treatment and analgesic treatment were applied to the patient. During the follow-up, the patient's neck and chest pain complaints started. Subcutaneous air was detected in the right eyelid, neck and mediastinum in the patient's tomography. She was hospitalized because of pneumomediastinum secondary to maxillofacial subcutaneous emphysema. Nasal oxygen, IV antibiotic and analgesic treatment were applied. During the follow-up, emphysema regressed and no additional intervention was required. He was discharged on the third day of hospitalization with recommendations.

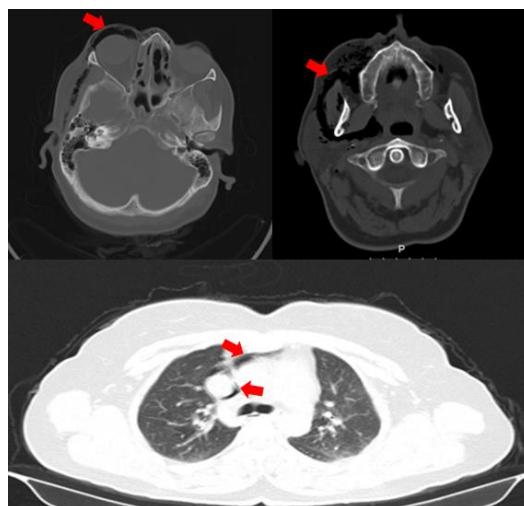


Figure-1: Subcutaneous air in the right eyelid, neck and mediastinum

### Case-3

A 22-year-old male patient was admitted to the emergency department with a chest pain that started in the morning. No spread to his chin, arm, back. He had dyspnea and his complaints increased with exercise. No sweating and nausea. There was no disease in his history and he does not use any medication. There was no history of drug use, trauma or surgery. In vital signs, his blood pressure was 110/70 mmHg, pulse was 72 bpm, saturation was 98% and fever was 36.3 ° C. The respiratory rate was 20 per minute. Electrocardiogram was normal sinus rhythm. There were no pathological findings in the laboratory values. Infection markers, electrolyte values, liver and renal function tests were within normal limits. Troponin I value was <0.023, Creatine Kinase and Creatine Kinase MB values were within normal range. Blood gas saturation was 98%, PCO<sub>2</sub> was 38 mm/Hg and PaO<sub>2</sub> was 91 mm/Hg. The patient received symptomatic treatment. There was no decrease in symptoms after treatment. So thorax tomography was taken and spontaneous pneumomediastinum was detected. The patient was hospitalized. His complaints regressed after antibiotic therapy, analgesic treatment and oxygenation and the patient was discharged on the fifth day of hospitalization.

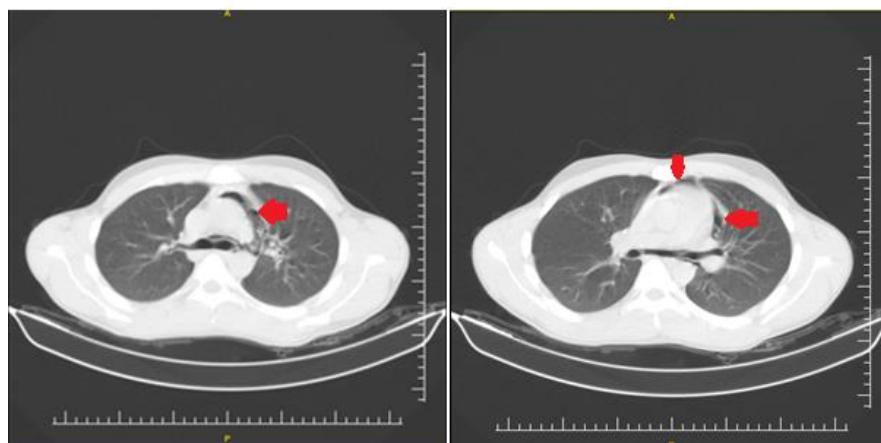


Figure-3: Subcutaneous air in the mediastinum without trauma

### Discussion

Pneumomediastinum is the presence of extraalveolar air in the mediastinum (4). Although rare, it is a clinical condition that should be kept in mind in the differential diagnosis of chest pain. The most common symptom is sudden onset chest pain located in the anterior chest wall. Pain usually increases with breathing and coughing. In addition, dyspnea, sore throat sensation, dysphonia, neck and back pain may accompany (5). A typical examination finding is a crackling sound on the anterior chest's auscultation, synchronized with the heart beat (1). Our patients also had chest pain in accordance with the literature.

Pneumomediastinum may occur due to iatrogenic and traumatic causes or spontaneously. (6) Traumatic pneumomediastinum may be seen secondary to thoracic trauma or may be due to head, neck and mouth trauma (7). Because, mediastinum is anatomically related to the submandibular region, retropharyngeal region and vascular space in the neck (8). In our first case, our patient who had head and neck trauma and fracture of the mandible was observed to have emphysema around the jaw spreading to mediastinum through this anatomical connection.

Iatrogenic pneumomediastinum may occur after oral surgery, esophagoscopy, bronchoscopy and mechanical ventilation, and rarely after abdominal surgery (6). Cervicofacial and mediastinal air after dental procedures is a rare complication. It is associated with the use of high-speed air turbine dental drill.

The roots of the molar teeth connect directly to the submandibular cavity and from there to the retropharyngeal area and mediastinum (9). In our second case, subcutaneous emphysema after endodontic treatment was first collected around the eye and then caused pneumomediastinum through this anatomical connection.

Spontaneous pneumomediastinum occurs due to drug use, valsalva maneuver, vomiting, cough, asthma attack, barotrauma, belching, forced defecation, heavy lifting and loud screaming. In these cases, alveolar pressure increases and spontaneous alveolar rupture occurs (10). In our third case, all these reasons were investigated but the etiology could not be clarified.

The free air surrounding the esophagus, bronchi and mediastinal vascular structures seen on posteroanterior and lateral direct chest X-rays is valuable for diagnosis. Computed tomography is more valuable than x-ray in diagnosis because it can show less air and should be used in case of clinical suspicion (11). We preferred computed tomography as the diagnostic method in our cases.

Although pneumomediastinum is usually self-limiting and spontaneously regressing, it requires close follow-up due to the risk of complications. Bilateral pneumothorax, tension pneumothorax or tension pneumomediastinum causing cardiac compression can be seen (5,12). In addition, the risk of mediastinitis is increased after the connection with the external environment (13). It should be kept in mind that orotracheal intubation and tracheotomy may be needed if necessary. In our cases, pneumomediastinum limited itself similar to the literature and no complication occurred in the patients.

#### Conclusion

Pneumomediastinum is often not considered in the diagnosis because it is a rare condition and it can therefore easily be missed. It should be considered especially in chest pains after head, neck or thoracic trauma and after intraoral surgery. However, it should be remembered that it can occur spontaneously.

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## SÖZEL 35

### **ISOLATED SUBTALAR JOINT DISLOCATION ( CASE REPORT)**

Dr.Muhammet Zeki Gültekin<sup>1</sup>,Dr.Mehmet Gül<sup>2</sup>

1-Konya Education and Research Hospital

Orthopaedic Surgery Clinic

2-Necmettin Erbakan University Medicine Faculty Emergency Derpartment

#### Abstract:

Subtalar joint dislocations are seen rarely as a result of high-energy traumas such as falling-down from a height place, sports injuries, and motor vehicle accidents. After physical examination of the patients, associated osteochondral fractures and adequacy of reduction should be evaluated with appropriate X-ray and computed tomography. The main treatment of subtalar dislocation is closed reduction and fixation. It requires open reduction in case of tissue compaction in the joint space which is usually seen in the lateral joint dislocations. This study presents two cases in whom subtalar dislocation was developed as a result of falling down from a height place. One of the patients who had medial dislocation was treated with closed reduction and the other patient who had lateral dislocation was treated with open reduction. During the 6-year follow-up period of the patients, arthrosis and decreased range of motion were not developed and this was attributed to that osteochondral fractures were not associated with dislocation.

**Key words:** Subtalar joint, osteochondral fractures, dislocation, arthrosis.

#### General Information:

Traumatic subtalar joint dislocation includes approximately %1-2 of all joint dislocations. This rare dislocation occurs as a result of high-energy traumas such as falls from height, sport injuries and motor vehicle accidents. (1). Damage of the talonavicular and taloalcalcaneal ligaments as a result of inversion or eversion forced are the main pathologies seen in the subtalar joint dislocation1. There is a usually pronounced deformity in the dislocated foot. They are named as medial dislocation acquired clubfoot and lateral dislocation as acquired flatfoot. (2). Due to this dislocation, talus avascular necrosis, osteochondral fractures around the joint, neurovascular injuries, posttraumatic arthrosis and chronic pain may develop in late period. (3) In this article a case with osteochondral fracture an done-with lateral and one with medial subtalar joint dislocation was presented2 .

Case:

Right foot of a 23 year-old male patient was sprained during the football match.. There was a pain, swelling and deformity in the dorsal of the foot in the evaluation made in the emergency department. There was no incision in the skin but there was extensive ecchymosis in the dorsal of the foot. Neurovascular examination was normal. In the anterior-posterior X-ray, the part of the foot outside the talus was dislocated medially. (Picture 1). Under sedation anesthesia, reduction was achieved by pressing in the opposite direction of the deformity with traction to the forefoot per Talus and the reduction was confirmed with control X-ray. Osteochondral fracture was detected by computed tomography.. Subsequently, short leg plaster and ankle were detected in neutral position for 4 weeks. Then ankle joints movement were started. The patient was advised to step on his foot slowly.. The patient started playing football again as an amateur 6 months later. The patient stated that he felt pain when he was standing for a long time, carrying a heavy load and walking on uneven ground, after a year of follow-up..The joint was stable in the control X-ray.



Picture 1: Subtalar Joint Dislocation Imaging (before reduction)



Resim 2: Reduced Subtalar Joint Imaged

Result :

Since subtalar joint dislocation are rarely seen in %1-2 of all dislocations, the case series in the literature are very few. This dislocation is mostly caused by high-energy traumas such as fall from height, sports injuries and motor vehicle accident. Classifications are similar and are made by evaluating the position of the foot relative to the talus. The most common dislocations are medial than lateral, anterior and posterior dislocations respectively. Due to this dislocation, talus avascular necrosis, osteochondral fractures around the joint, neurovascular injuries, posttraumatic arthrosis and chronic pain may develop in late period. Consequently care should be taken in the acute period in terms of complications that may accompany these dislocations... Patients should be followed-up in long term in terms of complications that may develop in late period.

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## SÖZEL 36

### Evaluation of patients with chronic subdural hematoma before and after operation by facit fatigue scale

Murat Baloglu<sup>1</sup> Abdurrahman Çetin<sup>2</sup> Hüseyin Özrevren<sup>3</sup>

<sup>1</sup>Department of Physical Therapy and Rehabilitation, Diyarbakir Gazi Yasargil Education and Research Hospital, Diyarbakir, Turkey

<sup>2</sup>Department of Neurosurgery, Diyarbakir Gazi Yasargil Education and Research Hospital, Diyarbakir, Turkey

<sup>3</sup>Department of Neurosurgery, School of Medicine, Dicle University, Diyarbakir, Turkey

#### Aim

A chronic subdural hematoma is an intracranial hemorrhage that usually occurs in older age and develops as a result of minor head trauma. The most important etiological reason is that the parasagittal bridge veins that are stretched due to cerebral atrophy, which usually occurs with advanced age, bleed as a result of trauma. Symptoms and signs usually occur due to intracranial pressure increase and the most common symptom is headache and fatigue. The FACIT- fatigue scale is an internationally recognized, old fatigue measure based on classical test theory.

## Material and Method

We followed between May 2013 and November 2019 and the data of the patients were analyzed retrospectively. Patients with chronic subdural hematoma were evaluated with the Mann-Whitney U test in terms of their gender; The pre and post-operative values of the patients were compared statistically with the Wilcoxon test. The results were analyzed statistically.

## Results

Of the 35 patients, 7 ( $61.43 \pm 19.63$ ) (29-82) were women and 28 ( $63.89 \pm 15.81$ ) (31-84) were men. No statistical significance was found between women and men in terms of age ( $p= 0.635$ ). FACIT fatigue scale was compared statistically before the operation ( $35.8 \pm 6.95$ ) (24-47) and after the operation ( $17.91 \pm 8.73$ ) (6-35) in patients with chronic subdural hematoma. It was found statistically significant ( $p<0.001$ ).

## Conclusion

Clinically, patients with chronic subdural hematoma were evaluated with the FACIT fatigue scale before and after the operation, and our study results were interpreted. It was found statistically significant. We are of the opinion that chronic subdural hematoma can be encountered frequently in advanced ages, and the evaluation and follow-up of these patients will be important with the FACIT- fatigue scale.

## Keywords

FACIT- fatigue scale, chronic subdural hematoma, operation

## SÖZEL 37

### **Emergency Surgical Evaluation of A Covid-19 Patient with Lumbar Vertebrae Fracture**

Abdurrahman Çetin<sup>1</sup> Hüseyin Özevren<sup>2</sup> Murat Baloğlu<sup>3</sup>

<sup>1</sup>Department of Neurosurgery, Diyarbakir Gazi Yasargil Education and Research Hospital, Diyarbakir, Turkey

<sup>2</sup>Department of Neurosurgery, School of Medicine, Dicle University, Diyarbakir, Turkey

<sup>3</sup>Department of Physical Therapy and Rehabilitation, Diyarbakir Gazi Yasargil Education and Research Hospital, Diyarbakir, Turkey

## Introduction

We aimed to present a patient who presented to the emergency department with multiple trauma due to falling from the height.

## Material and method

The radiographs and documents of the patient brought to our emergency department due to suicidal jumping were collected on our computer.

## Results

An 18-year-old boy was admitted to the emergency room, due to jumping from the height for suicidal purposes. The patient's vital signs were stable, level of consciousness comprised wakefulness, without motor deficit, the pupils were equal in size, and taken bilaterally. In the x-rays of the patient, a complex comminuted fracture in the tibia, as well as a burst fracture in the lumbar 5 vertebrae, was observed. The patient's covid-19 test was positive. The patient was admitted to the Covid-19 intensive care unit. Internal fixation was applied under emergency conditions due to a comminuted tibia fracture. When the general condition of the patient improved and the covid-19 test became negative, posterior stabilization was performed in elective conditions due to lumbar 5 vertebrae fracture.



## Discussion and Conclusion

Fall from heights or trauma can cause a spine fracture. These fractures can lead to extremely serious consequences because they affect the nerve structures passing through the spine and vital vessels and organs around the spine. Although some of these injuries do not require surgery, other fractures should be treated appropriately, taking into account covid-19 infection.

## Keywords

covid-19, vertebral fracture, posterior stabilization,

## SÖZEL 38

### A rare electrocardiographic finding of neurogenic shock: ST segment elevation with complete atrioventricular block

**Authors:** Mustafa ULUSOY<sup>1</sup>, Gucluhan UCAR<sup>1</sup>, Bihter SENTURK<sup>2</sup>

<sup>1</sup> Department of Emergency Medicine, Faculty of Medicine, Dokuz Eylül University, Izmir - TURKEY

<sup>2</sup> Department of Cardiology, Faculty of Medicine, Dokuz Eylül University, Izmir – TURKEY

**Abstract:**

Introduction: Various arrhythmias and complex electrocardiographic (ECG) abnormalities may be seen in patients with neurological shock (NS). Determination of causes of non-acute coronary syndrome (ACS) ST segment change is important to prevent unnecessary invasive coronary procedure. In this case report, it was aimed to emphasize the diagnostic challenge of ST elevation myocardial infarction (STEMI) in patients with NS.

Case: A 64-year-old female patient was admitted to emergency department. (ED). A patient was semi-cooperative and semi-oriented at the first examination. The blood pressure was 60/30 mmhg and pulse was 35 beats / min. Her ECG demonstrated complete atrioventricular (AV) block and ST segment elevation in inferoposterior leads. The patient was diagnosed with STEMI. External pacemaker was applied and coronary angiography was performed urgently. Her coronary arteries were determined normal. Therefore the patient was re-evaluated. Bilateral lower extremity motor deficit was detected and computer tomography of patient demonstrated C5-C6 dislocation and T6 fracture, finally, the patient was diagnosed with NS and she was operated by neurosurgery.

Conclusion: Neurogenic shock is a type of distributive shock that occurs as a result of spinal cord injury and it is commonly seen when the level of the injury is above T6. Hypotension and bradycardia may occur because of loss of sympathetic vascular tone, furthermore, arrhythmias and ECG abnormalities including ST segment changes may be seen in patients with NS. In the ED, it is important to determine the causes of ST segment change other than ACS. It should be kept in mind that ST segment elevation and complete AV block may be seen in patients with spinal cord trauma and these ECG changes may be a component of NS.

## SÖZEL 39

### **Slow ventricular response atrial fibrillation related to digoxin intoxication**

Sunay Yıldırım<sup>1</sup>, Onur Kaplan<sup>1</sup>, Ozgur Sogut<sup>1</sup>

University of Health Sciences, Haseki Training and Research Hospital, Department of Emergency Medicine, Istanbul, Turkey

Keywords: digoxin, toxicity, atrial fibrillation, hypercalcemia, renal insufficiency,

**Background:** In 1785, Sir William Withering described the use of the foxglove plant, Digitalis purpurea, for treatment of heart failure [1]. More than 200 years later, cardiac glycosides are still prescribed for patients with atrial fibrillation and heart failure or left ventricular dysfunction. Digoxin can affect cardiac tissue in a number of ways which may result in toxicity. It directly inhibits the ATPase dependent sodium-potassium pump, increasing intracellular sodium. This, in turn, reduces the activity of a sodium-calcium exchanger that normally extrudes calcium from the cell [2]. The resulting increase in intracellular calcium is responsible for the positive inotropic action of digoxin. The fluxes in calcium can also have electrophysiologic effects. Cardiac glycosides activate ryanodine receptors, which could contribute to increased calcium release from the sarcoplasmic reticulum and could play a role in the inotropic action of glycosides *in vivo* [3]. Digoxin increases vagal tone through central and peripheral effects; however, at excess levels, digoxin may augment cardiac sympathetic tone [4]. As a result of the effect on intracellular calcium concentrations and vagal tone, high levels of digoxin can have a variety of effects that facilitate the development of arrhythmias. They can enhance and depress automaticity, induce triggered membrane activity increase or decrease excitability, slow conduction, and alter refractoriness, also producing conditions conducive to the development of reentrant arrhythmias. Digoxin toxicity continues to be an important clinical problem which may be life-threatening [5].

The digoxin loading dose should be reduced by approximately one-third to one-half in the setting of severe chronic renal insufficiency, including hemodialysis [6-8]. The reduced loading dose may be supplemented after six hours if clinical response is inadequate, in absence of toxicity.

Here, we report a rare case of digoxin toxicity associated with renal insufficiency involving a 71-year-old man with symptoms of dizziness, fatigue, and atrial fibrillation with a slow ventricular response based on his electrocardiography (ECG).

**Case:** A 71-year-old male was admitted to our ED complaining of dizziness and fatigue 2 h after its onset. He has a past history of congestive heart failure, chronic kidney failure (only 1 dialysis), diabetes mellitus, hypertension, valvular disease and inguinal hernia.

His blood pressure was 74/39 mmHg, pulse rate 39 beats/min, respiratory rate 22 breaths/min, SpO<sub>2</sub> %91(on room air), and fever 36. 8 C°. The 12-lead ECG taken on admission to the ED demonstrated a slow ventricular response atrial fibrillation (Figure 1).

On physical examination, the patient was conscious, cooperative-oriented, Glasgow Coma Scale score was, his pupils were isocoric and IR +/+, eye movements were normal, and no nystagmus or ptosis was evident. Chest examination revealed bilateral rales on the lungs. His heart sounds is normal. The patient had tenderness in the abdomen but no defance and rebounds.Pretibial edema:+++/. The patient has 150 ml urine output in 1 hour.

Laboratory studies revealed a sodium concentration of 124 mEq/L, chloride of 92 mEq/L, bicarbonate of 21 mmol/L, calcium of 8.3 mEq/L, potassium of 6.7 mEq/L glucose of 157 mg/dL, creatinine of 3.09 mg/dL, EGFR of 19 Ml/min/1.73m<sup>2</sup>, blood urea nitrogen of 160 mg/dL. Laktat dehidrogenase of 271 U/L CK-MB of 10.6 ng/mL (control value:11,3 ng/mL) high sensitif-Troponine of 32,1 pg/mL(control value, 30.7 pg/mL) C-reactive protein of 31.5 mg/L. Arterial blood gas analysis revealed a pH of 7.37, PaCO<sub>2</sub> of 37,7 mm Hg, and PaO<sub>2</sub> of 68 mm Hg, clactate (arteriel) of 1,93 mmol/L. Since the digital dose could not be measured in our laboratory. Since the patient was bradycardic and hypotensive, hydration with serum saline was started and 1 mg of atropine was administered intravenously (IV). The patient's ECG changes were partially resolved after the administration of IV atropine (Figure 2).

His ECG findings were consistent with hyperkalemia, showing a wide-complex bradycardia and atrial fibrillation. Empiric treatment for hyperkalemia was initiated with intravenous calcium chloride, glucose, insulin, and sodium bicarbonate. A foley catheter was placed but yielded minimal urine output. We consulted the patient to the nephrology clinic to get an emergent dialysis. The main nephrology doctor said that the patient should be dialed under intensive care conditions because the patient is hypotensive. The patient was consulted for the pacemaker attachment to the cardiology clinic. The patient was interneed to coronary intensive care unit (ICU) for follow-up and treatment. The patient, who remained stable during the coronary ICU follow-ups, was dialed. After dialysis, the patient was discharged by reducing his digital dose and following nephrology.

Figure 1. The patient's initial ECG, showing a slow ventricular response atrial fibrillation

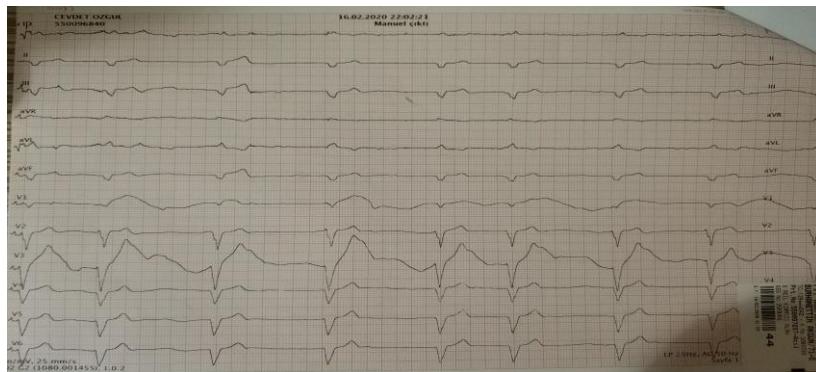
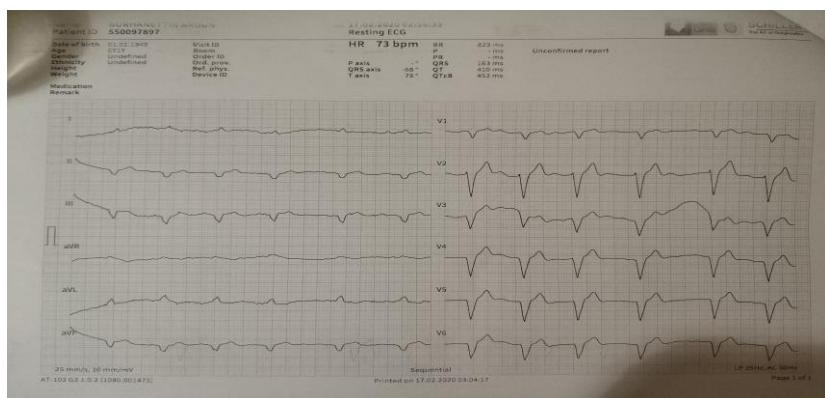


Figure 2. An ECG taken after the administration of 1 mg intravenous atropine



## Discussion

Digoxin is the only preparation of digitalis, a cardiac glycoside derived from foxglove, in use in the United States. The mechanism of action is by inhibition of Na<sup>+</sup>K<sup>+</sup>-ATPase [9]. This inhibits the transport of Na<sup>+</sup> and K<sup>+</sup> across the myocyte membrane, causing a rise in intracellular Na<sup>+</sup>, thus decreasing efflux of Ca<sup>2+</sup> from the myocyte and augmenting myocardial contractility. The elimination half-life of digoxin is 36 to 48 hours in patients with normal renal function. Steady-state levels are reached approximately a week after the initiation of maintenance therapy. Digoxin is excreted by the kidneys but is not cleared by hemodialysis. Skeletal muscles, and not adipose tissue, are the main reservoir and thus dosing should ideally be based on lean body mass. The patient's acute kidney failure probably plays a part in both the hyperkalemia and the digoxin toxicity. Patients in kidney failure take significantly longer to excrete digoxin. [10]. Therefore, the risk of digital toxicity increases in patients who develop kidney failure.

## Conclusion

Hyperkalemia is a well-known manifestation of both digoxin toxicity and kidney failure. Since the therapeutic range of Digoxin is narrow, the risk of intoxication is high. It should be kept in mind that the risk of digoxin toxicity risk is more occurred in patients with renal insufficiency and care should be taken in this issue.

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## SÖZEL 40

### **Clinical Significance of Serum C-Reactive Protein/Albumin Ratio in the Initial Assessment of Acute Ischemic and Hemorrhagic Stroke Patients**

Abdurrahman Batu Batuge<sup>1</sup>, Hüseyin Ergenc<sup>1</sup>, Ozgur Sogut<sup>1</sup>

<sup>1</sup>University of Health Sciences, Haseki Training and Research Hospital, Department of Emergency Medicine, Istanbul, Turkey

**Keywords:** Ischemic stroke, hemorrhagic stroke C-reactive protein/albüm̄in ratio, mortality, prognosis

**Objective:** The aim of this study was to investigate whether early serum C-reactive protein (CRP)/albüm̄in levels have a predictive value in differentiating the type of stroke and determining the severity of the disease in adult patients diagnosed with acute stroke in the emergency department (ED) based on clinical and radiological findings.

**Materials and Methods:** The study retrospectively included patients who were diagnosed with cerebrovascular disease and initiated on treatment in the emergency department (ED) of our hospital between January 2018 and December 2019. Patients who presented to the ED with acute stroke were divided into two groups according to the differential diagnosis as ischemic stroke patients (group 1) and hemorrhagic stroke patients (group 2) by using history, physical examination, laboratory and imaging techniques. Serum CRP/albüm̄in, neutrophil to lymphocyte ratio (NLR) red cell distribution width (RDW)/platelet ratio values measured at initial admission were compared between the groups to determine

the type of stroke. Moreover, ischemic and hemorrhagic stroke patients were divided into three subgroups based on stroke severity according to the National Institutes of Health Stroke Scale (NIHSS) with history and physical examination findings as follows: Group I, NIHSS score 0-6 points, mild-moderate; Group II, NIHSS score 7-15 points; moderate-severe; Group III; NIHSS score 16-42 points, severe-very severe. CRP/Albumin values were compared between the subgroups. In addition, the correlation between the patients' CRP/Albumin ratio at admission and NIHSS scores and were analyzed. Furthermore, patients with in-hospital mortality and those who survived and were discharged from the hospital were compared in terms of CRP/Albumin ratio on admission.

**Results:** The study included a total of 846 acute stroke patients who were admitted to the ED. Of the patients, 818 (96.7%) had ischemic stroke and 28 (3.3%) had hemorrhagic stroke. The mean age of the patients with ischemic stroke was  $67.0 \pm 14.6$  years, while the mean age of the patients with hemorrhagic stroke was  $65.8 \pm 14.2$  years. Of the ischemic stroke patients, 465 (56.8%) were male and 353 (43.2%) were female. Of the 28 hemorrhagic stroke patients, 19 (67.9%) were male and 9 (32.1%) were female. No significant difference was observed between groups 1 (ischemic stroke patients) and 2 (hemorrhagic stroke patients) in terms of mean CRP/albümén, NLR, and RDW/platelet values ( $p = 0.544$ ,  $p = 0.887$  and  $p = 0.129$ , respectively; Table 1).

Table 1. Comparisons of CRP/albümén, NLR, and RDW/platelet values in patients with ischemic stroke and hemorrhagic groups.

	Group 1 n=818	Group 2 n=28			
	Mean $\pm$ SD	Min-Maks (Median)	Mean $\pm$ SD	Min-Maks (Median)	p
CRP/albumin	$4.18 \pm 11.95$	0.004-173 (0.800)	$4.69 \pm 10.91$	0.02-48.46 (0,450)	0.544
NLR	$3.22 \pm 3.91$	0.133-46 (2.26)	$3.45 \pm 2.98$	0.947-12.03 (2,19)	0.887
RDW/platelet	$0.06 \pm 0.06$	0.024-1.05 (0.059)	$0.05 \pm 0.02$	0.026-0.131 (0.054)	0.129

Data are expressed as numbers (n), mean  $\pm$  standard deviation (SD), median, minimum (min) and maximum (max) or median.

Abbreviations: Group 1, ischemic stroke; group 2, hemorrhagic stroke; CRP/albümén, C-reactive protein/albumin; NLR, neutrophil to lymphocyte ratio; RDW/platelet, red cell distribution width RDW/platelet

There were significant differences between surviving and non-surviving patients in terms of mean NIHSS subgroups ( $p < 0.001$ ). However, no significant difference was observed between groups in terms of age and sex ( $p = 0.105$  and  $p = 0.282$ , respectively; Table 2).

Table 2. Comparisons of age, sex and NIHSS score in survivors versus non-survivors.

	Survivors n=809	Non-survivors n=37	p
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Age (year)	Mean ± SD (Min-Maks)	67.20 ± 14.30 (23-102)	61.50 ± 18.50 (18-91)	0.105
Sex n (%)	Male	466 (57.6)	18 (48.6)	0.282
	Female	343 (42.4)	19 (51.4)	
NIHSS n (%)	I	632 (78.1)	18 (48.6)	<0.001
	II	167 (20.6)	15 (40.5)	
	III	10 (1.2)	4 (10.8)	

Data are expressed as numbers (n), percentages (%), mean ± standard deviation (SD), minimum (min) and maximum (max)

Abbreviations: NIHSS, National Institutes of Health Stroke Scale

Additionally, significant differences were observed between surviving and non-surviving patients in terms of mean CRP/albumin ratio NLR values ( $p = 0.003$  and  $p < 0.001$ , respectively; Table 3). However, no significant difference was observed between groups in terms of mean RDW/platelet ratio age and sex ( $p = 0.351$ ; Table 3).

Table 3. Comparisons of NLR, and RDW/platelet values in survivors versus non-survivors.

	Survivors n=809		Non-survivors n=37		p
	Ort. ± SD	Min-Maks (Median)	Ort. ± SD	Min-Maks (Median)	
CRP/albumin	4.00 ± 11.80	0.004-173 (0.75)	8.42 ± 13.49	0.02-49.64 (3.19)	0.003
NRL	3.10 ± 3.70	0.13-46 (2.19)	5.94 ± 6.29	0.39-27.4 (3.23)	<0.001
RDW/platelet	0.06 ± 0.06	0.024-1.05 (0.059)	0.07 ± 0.06	0.025-0.374 (0.063)	0.351

Abbreviations: CRP/albümín, C-reactive protein/albümín; NLR, neutrophil to lymphocyte ratio; RDW/platelet, red cell distribution width RDW/platelet

The univariate logistic regression analysis demonstrated that age (OR 0.980, CI [0.950-0.996];  $p=0.021$ ), NIHSS score, CRP/albümín ratio (OR 1.020, CI [1,000-1.030];  $p=0.047$ ), and NLR (OR 1.090, CI [1.014-1,140] ];  $p<0.001$ ) were independent predictors of mortality in patients with acute stroke (Table 4). The multivariate logistic regression analysis demonstrated that, age (OR 0.960, CI [0.940-0.980];  $p=0.021$ ), NIHSS score (OR 3.500, CI [1.670-7.340];  $p<0.001$ ) and NLR (OR 1.090) CI [1,040-1,150];  $p<0.001$ ) were found to be independent predictors of mortality in patients with acute stroke (Table 4).

Table 4. Univariate and multivariate logistic regression analyses to determine mortality.

	Univariate			Multivariate			
	p	OR	%95 CI	p	OR	%95 CI	
Age	0.021	0.980	0.950-0.996	<0.001	0.960	0.940-0.980	
Sex	0.284	1.430	0.740-2.770	0.135	1.720	0.850-3.480	
NIHSS II	NIHSS	0.001	3.150	1.560-6.390	0.001	3.500	1.670-7.340
	NIHSS III	<0.001	14.040	4.020-49.050	<0.001	17.710	4.420-71.030

CRP/albumin	0.047	1.020	1.000-1.030	0.764	0.997	0.980-1.020
NRL	<0.001	1.090	1.040-1.140	0.001	1.090	1.040-1.150
RDW/platelet	0.322	5.140	0.200-131.290	0.945	1.190	0.010-146.980

Abbreviations: OR, odds ratio; CI, confidence interval; NIHSS, National Institutes of Health Stroke Scale; C-reactive protein (CRP)/albümín; NLR, neutrophil to lymphocyte ratio; RDW/platelet, red cell distribution width/platelet

## Discussion

The use of CRP and albumin alone has been found to be associated with the severity or prognosis of the disease in many diseases. Besides, using the ratio of these two acute phase parameters to each other is important in terms of giving more specific results. The CRP/albumin ratio has been identified as a prognostic biomarker to evaluate outcomes in patients with sepsis, cancer, and chronic inflammatory diseases (1,2). In addition, several studies have extensively investigated the association between increased CRP/albumin ratio and mortality during hospitalization in patients admitted to the ICU (3). Studies indicated that CRP and albumin measurements are also associated with poor prognosis in patients who have had hemorrhagic fluid (4-7). Studies have shown that the change in CRP/albumin ratios is associated with the 90-day prognosis of patients with ischemic stroke (8). In our study, although the CRP/Albumin ratios were statistically different between the groups, this significance was not observed in the multivariate analyzes.

Similarly, NLR, which is an inflammatory parameter, has also been shown to reflect inflammation and immunity during atherosclerosis (9). Neutrophils and lymphocytes are involved in the development of atherosclerosis. Neutrophil cells can participate in and accelerate atherosclerosis through the inflammation reaction, protein hydrolysis and oxygen stress reaction, and lymphocytopenia has been found to be associated with the development of atherosclerosis (10). Studies have shown that NLR rates can be used as a prognostic marker in stroke patients (11). In our study, the multivariate logistic regression analyses demonstrated that NLR (OR 1.090 CI [1,040-1,150]; p<0.001) remained independent predictor of mortality in patients with acute stroke.

The NIHSS score is a standardized test used in the ED emergency to evaluate the severity of ischemic or hemorrhagic stroke. It is a NIHSS eleven category (15-items) neurologic assessment that is quick to assess, reliable and consistent with infarct volume as a score. The reliability of this score, which is frequently used in the evaluation of patients presenting with stroke and in determining the prognosis of these patients, has been demonstrated by studies (12,13). There are also studies showing that the NIHSS score is effective in early and late mortality (166,167). In our study, the multivariate logistic regression analyses demonstrated that NIHSS score (OR 3.500, CI [1.670-7.340]; p<0.001) remained independent predictor of mortality in patients with acute stroke at 2-year follow-up.

## Conclusion

The results obtained in our study show that serum CRP / albumin, NLR and RDW / platelet values measured at the first admission do not have a diagnostic role in the differentiation of stroke type. In addition, a significant increase was observed in CRP/albumin, NLR and NIHSS values in patients who non-survivors compared to the survivors. Moreover, elevated CRP / albumin, NLR and NIHSS values with advanced age are found to be independent predictors of mortality in patients with acute stroke on admission.

We suggest that CRP/albumin and NLR parameters, which are simple blood tests that can be routinely measured in serum can be used to predict prognosis in stroke patients in the early period.

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## SÖZEL 41

### The utility of serum copeptin levels for determination of injury severity and prognosis in adult patients with multiple blunt trauma

Ozgur Sogut<sup>1</sup>, Tuğba Ağuş<sup>1</sup>, Mustafa Calik<sup>2</sup>

<sup>1</sup>University of Health Sciences, Haseki Training and Research Hospital, Department of Emergency Medicine, Istanbul, Turkey

<sup>2</sup>University of Health Sciences, Gaziosmanpasa Training and Research Hospital, Department of Emergency Medicine, Istanbul, Turkey

**Keywords:** Multiple blunt trauma, Revised trauma score, Injury severity score, Prognosis, Copeptin

**Background:** Biomarkers such as amyloid A, oxidative stress parameters and atrial natriuretic peptide are which are an alternative to trauma scoring and imaging methods increasingly being used for evaluating the severity of injury in patients with multiple blunt trauma (MBT) (1). Various scoring systems exist for evaluation of trauma severity and prognosis in patients with MBT. Injury Severity Score (ISS) is the most predictive and reliable scoring for clinical development and prognosis, a scaled measurement indexed to anatomical injury: By scoring the damage done by trauma on each organ (with Abbreviated Injury Score AIS), the squares of the three highest scoring values which is most severely injured body regions are added and ISS is obtained (2). Major trauma is considered when ISS > 15. Bolorunduro et.al. (3) categorised and validated the ISS as follows. <9 = Mild, 9 – 15 = Moderate, 16–24 = Severe , and ≥25 profound. Copeptin is a 39-aminoacid glycosylated neuropeptide synthesized in the hypothalamus as the C-terminal part of

the vasopressin prohormone and is secreted in equimolar amounts to arginine vasopressin (AVP) from the neurohypophysis. The exact function of circulating copeptin is unknown (4, 5). Many physiological and pathological stimuli such as pain, hypoglycemia, hypoxemia, stroke, infection and shock cause the release of copeptin. Elevated serum copeptin levels were associated with poor prognosis in several diseases including pneumonia, myocardial infarction, diabetes, heart failure, and stroke (6).

Therefore, the present study aimed to investigate the role of serum copeptine levels, which is a current marker of inflammation, in determining the severity of trauma and predicting prognosis of serum copeptin levels measured in the posttraumatic early period (first 24 hours) in adult patients with MBT.

**Method:** This prospective cross-sectional study was conducted in accordance with the 1989 Declaration of Helsinki and was approved by the Ethics Committee of Istanbul Haseki Research and Training Hospital (trial registration no. 1472). The present study was funded by the Health Sciences University Board of Scientific Research Projects (funding no. 2018/078). The study collected venous blood samples from consecutive patients with MBT who were admitted to our tertiary care university hospital emergency department (ED), within 24 h of trauma onset, between October 2018 and January 2019. Seventy-eight consecutive adult patients with MBT (16 females and 62 males, age range 17–92 years) due to various causes (vehicle accidents, vehicle–pedestrian accidents, falling from a height, or assault) as the primary injury, and 72 age- and sex-matched healthy controls with no acute traumatic injuries, were included in the study. Adults exposed to multitrauma were first hemodynamically stabilized and standard advanced trauma life support (ATLS) protocol was applied to each patient as suggested in the current 2018 ATLS-10 guidelines (7).

After vital functions had been monitored, written informed consent was obtained directly from the patient or from their authorized representative. Healthy volunteers were informed about the study protocol, and written consent was obtained from all participants prior to their participation in the study. Inclusion criteria were adult patients ( $\geq$  18 years of age) with MBT. The Revised Trauma Score (RTS), Glasgow Coma Scale (GCS), and ISS values were calculated for each patient. Patients were divided into two groups: those with ISS $<25$  (group 1; mild to severe trauma) and ISS $\geq25$  (group 1; profound trauma).

Blood samples were drawn from the antecubital vein of each subject immediately after presentation to the emergency department; samples were immediately placed on ice at 4°C without the use of medications or serum infusions and collected in vacuum gel tubes. Plasma was separated from the cells by centrifugation at 2515  $\times$  g. for 10 min using a centrifuge (Electro-mag M615E, Istanbul, Turkey) and immediately stored at -80°C until the analysis of serum copeptin levels. The serum level of copeptin were assessed in MBT patients and healthy controls. It was estimated that at least 78 participants and 72 controls would be required to detect significant differences among the patient groups with a power of 95% and an alpha error of 5%.

The data collected in the study were analyzed using SPSS 15.0 for Windows (IBM Corp., Armonk, NY, USA). Descriptive statistics are expressed in numbers and percentages for categorical variables. Numerical variables are expressed as the mean, standard deviation, and minimum and maximum values.

The numerical variables in the two independent groups were compared using Student Independent t –test (comparison of copeptin level) when the data conformed to normal distributions. When the data were not normally distributed, the Mann-Whitney U test was used to compare two independent groups (e.g., age and gender). The ratios in the groups were compared using the chi-squared test. Pearson's correlation coefficient was used to evaluate any correlation between ISS or RTS values and data that were normally distributed (serum level of copeptin). The significance level was set at  $p < 0.05$ .

**Results:** The mechanisms of injury in patients with MBT were falling from heights (n=28), motor vehicle crash (n=17), assault (n=18), motor vehicle–pedestrian crash (n=9), and motorcycle crash (n=6) (Table 1). There was no significant difference between the patients and the controls in terms of serum copetin levels age ( $3.13 \pm 6.10$  v.s  $3.90 \pm 6.82$  and  $p = 0.468$ ) . In addition, no statistically significant correlation was found between serum copeptins levels and age, RTS, ISS and GKS values in patients with MBT (Table 2). Twenty-five patients (32%) were hospitalized and 53 (68%) were discharged from the ED. Mean ISS values were significantly elevated whereas mean RTS values were significantly decreased in hospitalized patients compared to the discharged patients ( $p = 0.025$  and  $p < 0,001$ ; Table 3). In addition, the mean age of the hospitalized patients were lower than discharged patients from the ED ( $30.70 \pm 13,00$  v.s  $38.70 \pm 18,10$  and  $p=0,036$ ; Table 3).

However, there was no significant difference between the hospitalized patients and the patients discharged from the ED in terms of serum copeptin levels ( $1.72 \pm 3.05$  v.s  $1.95 \pm 3.50$  and  $p=0,783$ ; Table 3). When patients were evaluated with ISS score in terms of trauma severity; There was no statistically significant difference in age, gender and serum levels of copeptin between patients with  $\text{ISS} < 25$  and  $\text{ISS} \geq 25$  ( $p = 0.355$ ,  $p= 0.260$  and  $p = 0.595$ , respectively; Table 4).

**Table 1.** Causes of multiple blunt trauma in patients admitted to the emergency department.

		<b>n</b>	<b>%</b>
<b>Cause of multiple blunt trauma</b>			
	Fall from a height	28	36
	Motor vehicle crash	17	22
	Assault	18	23
	Motor vehicle–pedestrian crash	9	12
	Motorcycle crash	6	7

**Table 2.** Correlation between serum copeptin level and age, RTS, ISS and GCS values.

	Copeptin (ng/ml)	
	rho	p*
Age	-0.175	0.125
RTS	0.044	0.700
ISS	-0.065	0.571
GCS	0.127	0.267

\*ISS, RTS, GCS, serum copeptin values and age were calculated by Pearson correlation test.

**Table 3.** Comparison of age, gender, and serum copeptin levels between the hospitalized and discharged patient groups.

<b>Characteristic</b>	<b>Hospitalized</b> (n=25, 32%)	<b>Discharge</b> (n=53, 68%)	P*
	Mean ± SD	Mean ± SD	
Age	30.70 ± 13.00	38.70 ± 18.10	0.036
RTS	7.00 ± 1.80	7.90 ± 0.30	0.025
ISS	35.70 ± 16.30	18.10 ± 1.70	>0,001
Copeptin (ng/mL)	1.72 ± 3.05	1.95 ± 3.50	0.783

Note: Data are expressed in numbers, percentages, and mean ± standard deviation (SD).

\*The Mann-Whitney U test was used to compare the age and gender distribution between groups, and Student's t-test was used to compare serum copeptin levels between groups.

**Table 4.** Comparison of age, gender, and serum copeptin levels between the injury severity score (ISS) <25 and ISS ≥25 patient groups.

<b>Characteristic</b>	<b>ISS &lt;25</b> (n=61)		<b>ISS ≥25</b> (n=17)	P*
	Mean ± SD	Mean ± SD	Mean ± SD	
Age	38.10 ± 17.90	33.60 ± 16.90	33.60 ± 16.90	0.355
Gender	Male	47 (77%)	15 (88.2%)	0.260
	Female	14 (23%)	2 (11.8%)	
Copeptin (ng/mL)	3.53 ± 6.46	3.31 ± 6.62	3.31 ± 6.62	0.595

Note: Data are expressed in numbers, percentages, and mean ± standard deviation (SD).

\*The Mann-Whitney U test was used to compare the age and gender distribution between groups, and Student's t-test was used to compare serum copeptin levels between groups

## **Discussion**

Although there are many studies in the literature investigating serum copeptin levels in several non-traumatic diseases, there are limited clinical studies investigating the serum level of copeptine in acute traumatic situations and predicting trauma severity and prognosis, and nearly all of these studies have been performed in isolated head trauma patients (8). In a study conducted by Westermann et al. (9), the levels of endogenous vasopressin and copeptine in patients with multitrauma were compared with the healthy control group. However, no study investigated the role of copeptin levels in predicting trauma severity and prognosis in the early posttraumatic period within 24 hours. Therefore, this is the first study to investigate the serum copeptin level in MBT patients and the role of copeptin levels in predicting trauma severity and prognosis in the early post-trauma period (in the first 24 hours).

İpekçi et al. (10) included 82 cases with multiple trauma and they observed that the value of copeptin at the time of admission to the emergency room was significantly higher in multitrauma cases compared to the control group and that the level of copeptin decreased significantly after 24 hours.

In the study in which 82 multitrauma cases were evaluated by İpekçi et al., they observed that the value of copeptin at the time of admission to the emergency room was significantly higher in multitrauma cases compared to the control group and that the level of copeptin decreased significantly after 24 hours.

In our study, in accordance with the study of İpekçi et al., no statistically significant difference was found between the patient and control groups in terms of mean serum copeptin level. In addition, there was no significant correlation between serum copeptin level and trauma scores including RTS, ISS and GCS parameters

In conclusion, in the light of the findings obtained in our study, trauma scores such as high RTS and low ISS values are useful in determining the discharge from the emergency department in patients with multitrauma. However, we concluded that the serum copeptin level in these patients was not valuable in predicting trauma severity and prognosis in the early post-trauma period (in the first 24 hours).

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## SÖZEL 42

### Evaluation of ADORA risk classification in patients with amitriptyline overdose

Abdullah Algin<sup>1</sup>, Ozgur Sogut<sup>2</sup>

<sup>1</sup>University of Health Sciences, Umraniye Training and Research Hospital, Department of Emergency Medicine, Istanbul, Turkey

<sup>2</sup>University of Health Sciences, Haseki Training and Research Hospital, Department of Emergency Medicine, Istanbul, Turkey

**Keywords:** Amitriptyline, tricyclic antidepressant ADORA, emergency medicine, toxicology

## Background

Amitriptyline is a tricyclic antidepressant (TCA). Amitriptyline, imipramine, and other compounds containing 5-dimethyl derivative containing compounds were introduced in the 1960s as antidepressive agents (1). These agents exert their effects on the central nervous system by inhibiting reuptake of norepinephrine, dopamine, and serotonin from synapses. TCAs are readily absorbed in the gastrointestinal system. They are transported through binding to plasma proteins and eliminated through hepatic metabolism (2).

Amitriptyline's toxic effects occur 30 minutes after ingestion of an excessive dose and peak within 2 - 6 hours (3). While exerting a primarily anticholinergic effect at low doses, high doses produce a potent depressive effect on the central nervous system, with accompanying cardiotoxicity, seizures, and hypotensive symptoms. Potential cardiotoxic symptoms include ventricular tachyarrhythmia,

atrioventricular block, conduction delays, bradycardia, and reduced cardiac output. Widening of the QRS complex is related to increased cardiac arrhythmias and seizures (4-6).

The Antidepressant Overdose Risk Assessment (ADORA) criteria are used to evaluate clinical symptoms. The criteria consist of the following parameters: QRS interval > 0.10s, arrhythmia, altered mental status, seizures, respiratory depression, and hypotension. Patients may be classified as high or low risk according to these criteria. For patients admitted within 6 hours of ingestion, or for patients who ingested TCAs at an unknown time, the presence of any of the symptoms listed in the classification system designate them as high risk, while those with none of the listed symptoms are classified as low risk (5, 7). In this study, we investigated the relationship between certain clinical and demographic parameters and ADORA criteria in patients presenting to the emergency department (ED) with TCA poisoning.

## Methods

The study included 18 patients admitted to our ED of tertiary-care hospital between January 2016 and December 2019 due to a suicide attempt with amitriptyline overdose. The study included eighteen patients admitted to Health Sciences University Ümraniye Training and Research Hospital between January 2016 and December 2019 due to a suicide attempt through amitriptyline overdose. Patients were categorized according to the following criteria: pregnancy and lactation status, usage of multiple drugs, admission and discharge ECG findings, discharge and/or hospitalization status, complications, treatments utilized, inotrope requirement, intubation status, additional diseases, and number of suicide attempts. Also recorded was numerical data such as time of amitriptyline ingestion, dose of ingestion, systolic and diastolic blood pressure, oxygen saturation, heart rate, total time hospitalized, ADORA score, lactate levels on admission, and Glasgow coma score. Categorical data is displayed as both a number and percentage, while numerical data is given as a minimum, maximum, and median. SPSS 21.0 was used for statistical analysis. The ADORA scores were compared to the numerical data with the Mann-Whitney U test and compared to the categorical data with Fisher's exact test. Furthermore, the relationship between ingested dose and ADORA score positivity was investigated through ROC analysis and a cutoff value for ADORA positivity was calculated.

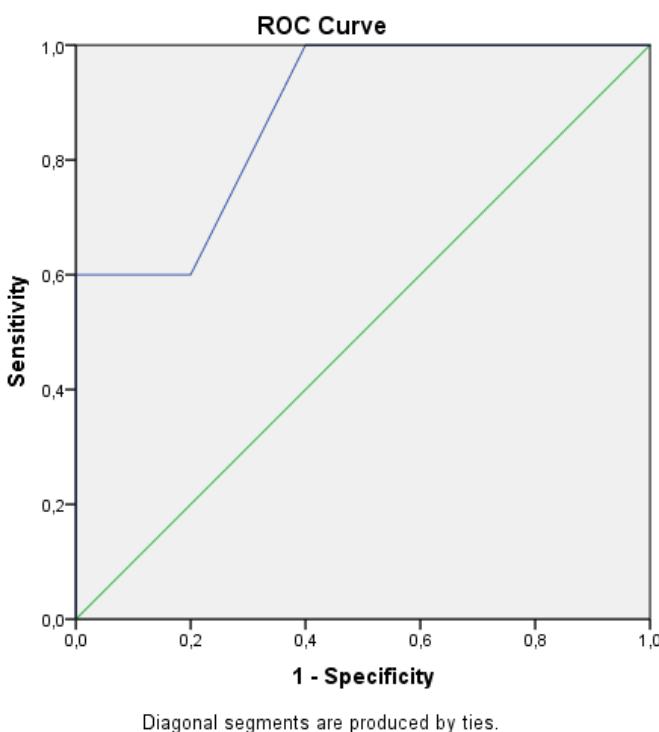
. P values under 0.05 were considered statistically significant.

## Results

Of the patients included in the study, 2 were male (10.5%) while 16 were female (84.2%). The minimum age in years was 22, the maximum age was 52, and the median age was 32. In terms of dosage, the minimum ingested dose was 100mg, the maximum 525mg, and the median 300mg. According to the ADORA classification system, 12 cases (66.7%) were classified as low risk, while 6 cases (33.3%) were classified as high risk. No statistically significant correlation was found between ADORA score and sex, usage of multiple drugs, ECG findings, treatments utilized in the emergency department, intubation status,

age, time between ingestion of TCA and admission to hospital, systolic and diastolic blood pressure, heart rate, saturation, total time hospitalized, and lactate levels at admission (all values  $p>0.05$ ). Of the patients classified as low risk, 75% were discharged from the hospital, while 25% refused treatment and left of their own accord. Of the high risk patients, 100% were hospitalized and treated ( $p<0.0001$ ). The relationship between amitriptyline dosage ingested and ADORA classification was statistically significant ( $p=0.02$ ). Taking a cutoff value of 285 mg, sensitivity and specificity were 100% and 60%. With a cutoff value of 350mg, sensitivity and specificity were 60% and 100% respectively (Figure 1).

**Figure 1:** ROC curve produced by analysis of relationship between ADORA score and ingested amitriptyline dosage.



## Conclusion

The ADORA risk classification system positively correlates with hospitalization rates of patients. Patients having ingested  $\geq 350$ mg of amitriptyline were classified as high risk by the ADORA system with high specificity.

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## SÖZEL 43

### **Rare Syndrome That May Be Associated With Frequently Encountered Complaints and Findings in the Emergency Department: NUTCRACKER SYNDROME**

Koptur P, Oğuztürk H, ciftci K.K, Tümer M.

Emergency Department of Ankara City Hospital

**INTRODUCTION:** Abdominal and flank pain are among the top causes of emergency service applications, and you may encounter a rare syndrome as in our case. In this sense, physical examination and examination results, clinical and observation follow-up of the patient are important, you can reach different etiologies besides common causes.

**CASE:** A 33-year-old female patient who was admitted to the emergency department with a complaint of abdominal pain was evaluated in the green area. At the time of emergency admission, arterial tension was 120/70 mmhg, pulse 89 / min, saturation o2 98%. On physical examination of the patient, there was tenderness in the left lower quadrant and left lumbar region. After the examination, the patient's blood and urine tests were taken, and the patient whose oral intake was closed to monitor the pain was taken under emergency observation. 50 cc / h 0.9% nacl infusion was started. Glucose 9 8 mg / dl, urea 15 mg / dl, creatinine 0.58 mg / dl, sodium 139 meq / l, AST 16 U / L, ALT 11 U / L, Wbc 6.47, hgb 11.5, beta hcg values were within the normal range. There was hematuria, proteinuria in the urinalysis. Clinical findings did not regress with hydration and pain follow-up. Abdominal CT showed that the left renal vein was pressed between the aorta and the SMA, and the left pelvic venous structures were tortuous and increased in diameter. The current situation was evaluated as nutcracker syndrome. The patient was directed to the relevant branch for follow-up.

**CONCLUSION:** Nutcreacre syndrome is an uncommon syndrome and diagnosed late because it has similar findings with other urological or renal diseases. Abdominal pain, pain in the flank area, hematuria, proteinuria, dysparania, dysmenorrhea and fatigue may be seen. It can completely regress with physical development in childhood until the age of 2 and between the ages of 2-18. Surgical

intervention is required in cases such as severe flank pain, severe hematuria, and resistant hypertension. Patients who apply to emergency departments with recurrent complaints should be evaluated well, and their past examinations and current complaints should be associated. KEYWORDS: Nutcreacer syndrome, hematuria, flank pain, abdominal pain

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## SÖZEL 44

### **Somatization Disorder Mimicking Cauda Equina Syndrome: A case Report**

Özgür Söğüt<sup>1</sup>, Rana Selen Temür<sup>1</sup>, Ercan Kulak<sup>2</sup>

<sup>1</sup>Department of Emergency Medicine, University of Health Sciences, Haseki Training and Research Hospital, Istanbul, Turkey

<sup>2</sup>Department of Public Health, School of Medicine, Marmara University, Istanbul, Turkey

Özgür Söğüt<sup>1</sup>, Rana Selen Temür<sup>1</sup>, Ercan Kulak<sup>2</sup>

Keywords: Cauda equina syndrome, somatization disorder, urinary and gait incontinence

#### Background

Somatization is defined as a specific disorder, with physical complaints and symptoms that cannot be explained by physical findings, and many medical seeking behaviors (1). It is emphasized that the prevalence of somatization is higher in Eastern cultures and that physical symptoms accompany a significant level of other mental disorders (2). Somatization disorder usually begins before the age of 25, the first symptoms often appear during adolescence. In the etiology of the disorder, there are genetic, learning, sociocultural, psychodynamic factors and stressors and coping mechanisms (3). The most

striking point in the patients' history is that there are many unexplained complaints. Somatic complaints can be divided into gastrointestinal, neurological, autonomic and musculoskeletal groups. Possible complaints of somatization disorder include syncope, dysmenorrhea, headache, chest pain, joint pain, and dizziness. As the number of complaints increases, the probability of psychiatric disorders increases significantly (4). Here, we report a 26-year-old male patient who was admitted to the emergency department (ED) with neurological complaints mimicking Cauda Equina syndrome, and subsequently diagnosed as somatization disorder.

#### Case

A 26-year-old male patient admitted to the ED with weakness and pain in legs and urinary and gait incontinence. It was learned that the patient's complaints increased gradually in the last two weeks. The patient reported that he lifted a heavy object and after that, he had low back pain about 1.5 months. He also reported that he had many complaints such as swelling and pain in his right testicle, pain in the groin, abdominal swelling and pain. The patient underwent bilateral varicocele and right hydrocele operation in 2014. His arterial blood pressure was 110/70 mm Hg; his pulse was 76 beats per minute; his temperature was 36.7°C; his respiratory rate was 12 per minute and his fingertip oxygen saturation 98%. The patient was conscious and cooperative, the Glasgow Coma Scale score was 15. His pupils were isochoric. Cranial nerves system examination were natural. Neurological deficit was not considered, although he refrained from performing full movements secondary to pain. When asked to lift his leg, he stated that he complained of pain in the groin area and waist. There was an increase in tonus in the bilateral lower extremity. The Babinski reflex was unresponsive on the right and was flexor on the left. Deep tendon reflex was bilateral hyperactive. Sensory examination was hypoesthetic at T12 level. The patient could not sit and lie on his back, but he could stand without support. Laboratory tests performed in ED were normal. There were no pathological findings in lumbar MR, diffusion MR, contrast abdominal CT, brain CT, EMG, cervical and thoracic contrast MR. The patient was consulted with the departments of neurosurgery and neurology. Emergency surgical pathology was not considered. by neurosurgery and analgesic medication was recommended. The patient was hospitalized in the neurology service for further examination and treatment. Organic pathology was not detected in the examinations.

As a result of tests and examination findings performed by psychiatry, the patient was diagnosed with somatization disorder. Psychiatry and neurology follow-ups were recommended to the patient with 1 x 30 mg duloxetine and 2 x 5 mg baclofen.

### Discussion

Cauda equine syndrome (CES) is one of the surgical emergencies that can be accompanied by bilateral or unilateral low back pain, saddle-style perianal anesthesia or hypoesthesia, progressive paraplegia in the lower extremity, loss of sensation and urinary incontinence (5). CES is seen in 1-2% of lumbar disc herniation cases. Rarely, causes such as a tumor, penetrating trauma, and stenosis may also result in CES as a result of caudal compression (6). In this case report, the patient had a recent history of trauma. There was low back pain that started and increased after trauma, severe pain and weakness in the lower extremities, urinary and gait incontinence. On neurological examination, there was hypoesthesia at T12 level. CES was pre-diagnosis after all these symptoms and findings. However, none of the imaging methods revealed a pathology such as massive lumbar disc hernia, tumor, and stenosis that may cause cauda equina. After the evaluation in the ED, the patient was hospitalized in the neurology service. Since the patient's complaints concern many different systems, the patient was also examined by other departments such as infectious diseases, urology, orthopedics, dermatology, and psychiatry.

### Conclusion

In patients admitted to the ED with multisystemic complaints, life-threatening health conditions and diagnoses requiring urgent intervention should be excluded. If emergency pathology is not detected, anamnesis and physical examination should be deepened. The diagnosis of somatization disorder should be considered in young patients with low socioeconomic level. Neurology and psychiatry control should be recommended to the patient who is discharged from the ED.

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## SÖZEL 45

### **Geriatric patient considered as trauma may be in multitrauma**

Sema Kırmızı,Hilmi Kaya ,Bilal Yeniyurt, Başar Cander

University of Health Sciences , Kanuni Sultan Süleyman Research and Training Hospital,  
Department of Emergency Medicine

## INTRODUCTION

The geriatric patient population is one of the most common patient groups presenting to the emergency department. Especially massive consequences that may occur after low-energy trauma

require extensive investigation of trauma in these patients. Especially in patients with impaired consciousness due to chronic diseases or with impaired consciousness due to trauma, a multidisciplinary approach in trauma care and eliminating multiple trauma is an appropriate approach. If primary and secondary trauma examination is not examined in detail in every patient with geriatric multitrauma, there will be pathologies that can be overlooked. In this case, we wanted to present other massive traumas that occurred in a geriatric patient with impaired consciousness due to a simple fall.

## CASE REPORT

A 115-year-old female patient was admitted to the emergency service via 112 with the complaint of impaired consciousness after falling at home. There is no known history of additional disease.

Intubation was applied to protect the respiratory tract in the patient who had an unconscious glasgow coma scale of 3 at the arrival examination. Brachial blood pressure measured in the developing vitals was systolic 180 diastolic 100 pulse 92 fever

36.7 saturation measured with fingertip pulse oximeter was 85. In physical examination, respiratory sounds were coarse bilateral, there were rales in the lower zones, no rhoncus, heart sounds s1 + s2 + no additional sound murmur, widespread rebound and wooden abdomen were present in abdominal examination, peripheral pulses were open, there was no pretibial edema, 4 extremity palpation showed significant crepitus. There was no obvious ecchymosis, edema and redness on the body. In the post-intubation imaging, diffuse subarachnoid hemorrhage and edema in both cerebral hemispheres, nodular appearance compatible with an 18 mm thick aneurysm at the right suprasellar level, Widespread air densities in the stomach wall and adjacent to the stomach wall in the small curvature, free air densities under the diaphragm were noted. Defined air densities extend to the mediastinum. Frosted glass densities and consolidation were present in thorax imaging. The covid PCR result applied to the patient was found to be positive. The patient was admitted to the intensive care unit with the diagnosis of subarachnoid hemorrhage, gastric perforation, pneumomediastinum and covid pneumonia.



Fig.1 Diffuse subarachnoid hemorrhage

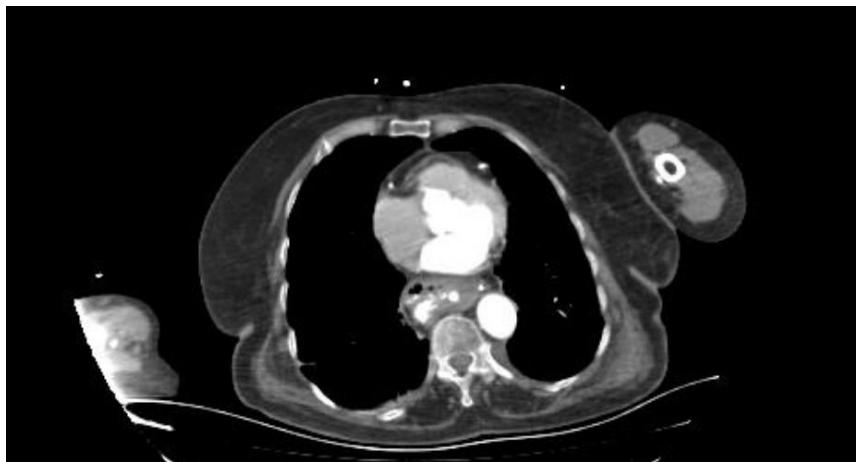


Fig.2 Pneumomediastinum

## DİSCUSSİON

Detailed trauma examination is required in geriatric population patients even in simple household falls. Even if they come with trauma in the geriatric age group, pathologies that may cause trauma should be investigated, and the mechanism of trauma should be questioned in detail. Additional diseases of the patients should also be considered and the patient should be evaluated multisystem. In this way, skipping pathologies that may be overlooked in patients will be prevented.

## SÖZEL 46

### **Delirium Caused by *Hyoscyamus reticulatus* Poisoning**

Tarık Akdemir<sup>1</sup>, Ozgur Sogut<sup>1</sup>,

<sup>1</sup>University of Health Sciences, Haseki Training and Research Hospital, Department of Emergency Medicine, Istanbul, Turkey

**Keywords:** *Hyoscyamus reticulatus*, delirium, poisoning

## Background

Plant-related intoxication is common worldwide. Although this is generally accidental, some supposed health foods may cause poisoning (1). *Hyoscyamus reticulatus* is a yellow plant termed “bat bat” by people in East and Southeast Anatolia. It is believed to reduce erectile dysfunction, abdominal pain, and palpitations; to have analgesic effects; and to treat central nervous system diseases. Changes in consciousness and mental state are commonly encountered in case of *Hyoscyamus reticulatus* ingestion. Plant ingestion is associated with arrhythmias, anticholinergic symptoms, seizures, ataxia, hypertension, and tachycardia, but very rarely delirium (2, 3). Delirium is a neuropsychiatric syndrome characterized by

disruptions in consciousness, orientation, memory, thought, perception, and behavior; caused by direct or indirect physiological or structural brain changes (1). Diseases causing delirium are often those of organs other than the brain. Rarely, alcohol, certain herbs, medicines, and primary brain diseases (e.g., encephalitis) cause delirium. Here, we present the case of a 46-year-old male admitted to the Emergency Department (ED) with a red face and confusion, reflecting anticholinergic toxicity attributable to *H. reticulatus* poisoning; he had ingested plant roots.

### Case

A 46-year-old male was brought to the ED by his relatives because he was unable to stand, aggressive, and his speech was meaningless. He had consumed an herb approximately 2–3 h prior. He had no known disease and was not on medication. His arterial blood pressure was 165/115 mm Hg; his pulse 125 beats per min; his temperature 37.0°C, and his fingertip oxygen saturation 97%. On physical examination, he was agitated with a Glasgow Coma Scale score of 13. His pupils were isochoric and mydriatic, he was flushed, and had a dry mouth. The patient was conscious and co-operative. He was confused about his location, the time, and the persons present. Physical examination was otherwise normal. The patient received 3 mg dormicum intramuscularly to control agitation associated with the delirium. Neither his agitation nor anticholinergic symptoms responded; we administered 2 mg physostigmine to treat what we considered was pure anticholinergic toxidrome accompanying the delirium. The patient improved dramatically. He now described ingesting “bat batu” from childhood because he thought it was medically beneficial. He was hospitalized for 2 days of follow-up and then discharged in good condition.

### Discussion

Plants are used as alternative medicines in both developed and developing countries, sometimes with potentially fatal outcomes. (4) *H. reticulatus*, especially the roots, is rich in the alkaloids hyoscyamine and scopolamine and has been reported to cause central anticholinergic syndrome (5, 6). Aslan et al., (3) symptomatically treated patients exhibiting QT prolongation on echocardiography after consuming *H. reticulatus*. In our case, supportive therapy was inadequate but, after intravenous physostigmine injection, all symptoms regressed. Anticholinergic toxicity is associated with both central and peripheral manifestations. The central nervous system findings reflect principally antagonization of central cortical and subcortical muscarinic receptors when the active substance crosses the blood-brain barrier. The central effects include confusion, anxiety, delirium, hallucinations, myoclonus, dysarthria, choreoathetosis, hyperactive deep tendon reflexes, convulsions, and coma. The peripheral anticholinergic effects are mydriasis, peripheral vasodilation, flushing, hyperpyrexia, tachycardia, urinary retention, decreased gastrointestinal motility, and decreased secretions (7). Our physical examination indicated isolated anticholinergic poisoning. The treatment is conservative. If the patient is highly agitated, benzodiazepines can be used for sedation. Physostigmine-like anticholinesterase inhibitors are indicated for patients

exhibiting delirium, agitation, and/or severe anticholinergic effects (8). If tachycardia, somnolence, or respiratory arrest is apparent, physostigmine should be given (4).

### Conclusion

As our patient exhibited delirium, he was first sedated and then given physostigmine. As some Turkish regions remain of low socioeconomic status, health workers should be alert to anticholinergic plant poisoning associated with delirium.

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## **KONUŞMA METİNLERİ**

### **KONUŞMA METNİ 1**

#### **Rational Drug Use**

Prof. Başar Cander

The definition of Rational Drug Use was made by the World Health Organization for the first time in 1985.

According to the clinical findings and individual characteristics of the people; It is defined as the ability to easily supply the appropriate drug, in the appropriate time and dose, at the lowest price.

Accessibility of drugs was considered as inseparable part of the long term drug policies by World Health Organization (WHO), with reference to health and equality for accessing the healthcare service are human rights. Referring in general, this issue was also evaluated as a part of the general health policy.

Wrong, unnecessary, ineffective and high cost drug use cause various problems in all over the world. The increased rate of disease incidence and mortality, increased drug side effect risk, the decreased rate of access to essential medicines due to inappropriate use of sources, the raise of social and economic treatment cost based on possible resistance against essential and emergency medicines could be counted in these problems.

For these reasons there was an attempt to produce and improve different solutions in the world. In this context, Rational Drug Use (RDU) studies were initiated.

Irrational drug use is a serious problem affecting public health in the world as well as in Turkey.  
Irrational drug use cause to decreased patient

adherence to treatment, drug interactions, resistance to some of drugs, raised incidence of adverse drug reactions and treatment cost.

Rational drug for an indication can only be chosen in accordance with efficacy, safety, compatibility and cost profiles of the drug.

#### **12 ESSENTIAL INTERVENTIONS RECOMMENDED BY "WHO" TO PROMOTE RATIONAL DRUG USE**

- Institution to coordinate drug use policies and monitor their effects
- Benefiting from Clinical Diagnosis and Treatment Guidelines to support educational supervision and decision-making processes
- Establish a list of essential drugs based on first-line treatments
- Establishing drug and treatment boards in regions and hospitals
- Providing problem-based pharmacotherapy training in the undergraduate curriculum
- Organizing continuous in-service medical training as a requirement
- Developing monitoring, auditing and feedback systems within the institutional framework
- Using independent (impartial) sources of information on drugs

-Educating the public about drugs

-Avoiding unethical financial initiatives

-Enacting appropriate and mandatory regulations

-Ensure adequate government spending to ensure the availability of medicines and staff

In Turkey:

-Rational Drug Use Unit was established on 12 October 2010 with the approval of the Minister.

-Within the Ministry of Health, studies on rational drug use have been going on for about 20 years.

-On March 19, 2012, the Rational Drug Use, Drug Supply Management and Promotion Department was established within the Turkish Medicines and Medical Devices Agency.

-There are Provincial Representatives for Rational Use of Medicines in Provincial Health Directorates in 81 provinces in order to ensure coordination in the provinces.

-In accordance with the Hospital Service Quality Standards, Rational Drug Use Teams have been formed in order to plan and carry out activities in hospitals.

-There are Provincial Representatives for Rational Use of Medicines in Provincial Health Directorates in 81 provinces in order to ensure coordination in the provinces.

-In accordance with the Hospital Service Quality Standards, Rational Drug Use Teams have been formed in order to plan and carry out activities in hospitals.

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## KONUŞMA METNİ 2

### **KORTİKOSTEROİD KULLANIMINA BAĞLI HİPOPOTASEMİK PERİYODİK PARALİZİ OLGUSU**

Doç. Dr. Şükrü Gürbüz

Giriş

Periyodik paralizi nadir görülen tekrarlayan kas gücsüzlüğü atakları ile seyreden bir hastalıktır. Hipopotasemik, hiperkalemik ve normokalemik olmak üzere 3 formu vardır (1,2). Hipopotasemik periyodik paralizi (HPP), periyodik paralizilerin en sık görülen formu olup kaslarda epizodik gücsüzlük ile karakterizedir. Sporadik olarak da ortaya çıkabilir. Atak döneminde serum potasyum düzeyi düşüktür ve potasyum kandan kas hücrelerine geçer. Ataklar arasında ise, hem serum potasyum düzeyi hem de hastanın nörolojik muayenesi tamamen normaldir (3). Ayrıca kortikosteroidler, sodyum-potasyum adenozin trifosfatazi ( $\text{Na}^+-\text{K}^+$  ATPaz) etkileyerek iskelet kası hücrelerindeki iyon dağılımında değişikliklere neden olurlar. Kortikosteroidlerin,  $\text{Na}^+-\text{K}^+$  pompasını doğrudan ya da dolaylı olarak etkilemesi sonucu hipopotasemik meydana gelir. Doğrudan etkileri uzun dönemde dolaylı etkileri kısa

dönemde gelişmektedir. HPP'de olan paralizi atakları kortikosteroidlerin dolaylı etkilerinin kısa dönemde gelişmesi ile açıklanabilir (4).

## Olgı

55 yaşında erkek hasta her iki üst ve alt ekstremitede kuvvet kaybı şikayeti ile acil servise başvurmuş. Hastanın öz geçmişinde glomerulonefrit sonrası olan renal yetmezlige bağlı renal transplantasyon öyküsü varmış. Hasta uzun süredir kortikokosteroid (prednizolon) kullanılmıştır. Hastanın vital parametreleri ateş  $36,6^{\circ}\text{C}$ , nabız 72/dk, TA:130/70 mmHg, solunum sayısı 18/dk idi. Hastanın çekilen elektrokardiyografisi normal sinüs ritmi ve troponin değeri negatif idi. Hasta acil servisten tarafımıza konsülte edildi. Hastanın yapılan nörolojik muayenesinde kraniyal sinir muayenesi doğal, proksimal kas gruplarında 0/5 kas gücü mevcut, distal kas gücü +4/5 olarak değerlendirildi. Derin tendon refleksleri global hipoaktif, patolojik refleks izlenmedi. Hastanın şikayetleri ilk olarak 5-6 saat önce gece yaklaşık 03:00 de yaygın kas ağruları ve yürümede zorlanma ile başlamış. Birkaç saat içerisinde kuvvet kaybı ilerlemiş ve kol ve bacaklarında tam kuvvetsizlik olmuştu. Tetraparezi ile acil servise gelen hastanın bilgisayarlı beyin tomografi ve difüzyon manyetik rezonans görüntülemeleri normal olarak değerlendirildi. Hastanın arteriyel kan gazında potasyum değeri 2.2 mmol/L idi. Hastanın hemogram parametreleri normal olarak değerlendirildi. Biyokimya parametrelerinde kreatin kinaz değeri normal idi ancak potasyum değeri 3.2 mmol/L olarak çıktı. Akut polinöropati için hastaya elektromyelografi yapıldı ve normal olarak değerlendirildi. Hastada klinik, laboratuar ve elektrofizyolojik incelemeler sonucunda hipopotasemik periyodik paralizi düşünüldü. Hastaya nefroloji konsültasyonu önerildi. Hastaya nefroloji önerisi ile acil serviste potasyum replasman tedavisi düzenlendi. Tedavi sonrası üçüncü saatte hastanın tüm ekstremitelerinde kas gücü tama yakın düzelleme gösterdi ve hasta önerilerle taburcu edildi.

## Tartışma

Hipopotasemik periyodik paralizi (HPP), otozomal dominant kalıtımla geçen, potasyum replasmanı ile semptomların düzeldiği iyon kanal hastalığıdır (4,5). Atak dönemlerinde potasyum düzeyinin düşüklüğüne bağlı olarak paralizi gelir. Ataklar arasında ise hem potasyum düzeyi hem de nörolojik muayene normaldir (4,6). Bu ataklar travma, cerrahi girişimler, soğuk, enfeksiyonlar, aşırı alkol alımı, kortikosteroidler, katekolaminler, menstruasyon ve emosyonel stres gibi faktörler nedeniyle tetiklenebilir (4,7). Bizim vakamızda da hastanın renal transplantasyon sonrası kortikosteroid kullanım öyküsü mevcut idi.

Otozomal dominant geçişli olan HPP daha çok erkeklerde gözlenir. HPP başlangıç atağı genellikle adölesan dönemdedir. Buna rağmen çalışmalarla 20-40 yaş arası populasyonda da görüldüğü bilinmektedir (8). Asya toplumlarda özellikle yahudi toplumunda daha sık olarak görüldüğü bildirilmektedir. Olgularda erkek hakimiyeti (20:1 oranında) göze çarpmakta olup yaz aylarında atak sayısının arttığı gözlenmiştir (9). Burada sunulan olgu da erkek olup ağustos ayında rahatsızlığının olması literatür ile paralellik göstermektedir.

Tipik bir atakta hasta sabah gücsüzlükle uyanır ya da sabah uyanınca bacaklarında ağırlık hisseder, 1 saat içinde kol ve bacaklarında gücsüzlük başlar. Gücsüzlük ilerledikçe derin tendon refleksleri hipoaktif hale gelir. En ağır şeklinde hasta hiçbir ekstremitesini hareket ettiremez hale gelir. Çoğu zaman solunum ve yüz kasları etkilenmez, ancak nadiren solunum kaslarının da tutulup ölüme yol açtığı çok ağır ataklar olabilir (10). Bizim vakamızda da benzer şekilde hastanın şikayetleri gece başlamış ve sabaha karşı klinik durum tam olarak oturumuştı.

Hasta dört ekstremitede de gücsüzlükle geldiğinde ayırcı tanıda servikal miyelopati ya da vertebrobaziler sistemi tutan serebrovasküler hastalık, Guillain-Barré sendromu gibi kuadriparezi yapan nedenler akla gelmelidir. Familyal hipopotasemik periyodik paralizi sekonder periyodik paraliziden ayırmak çok önemlidir. Gücsüzlük atakları üriner veya gastrointestinal sistemden potasyum kaybı sonucu ortaya çıkıyorsa, familyal periyodik paralizinin aksine, ataklar arasında da potasyum düşüktür. Ayırcı tanıda düşünülmlesi gereken bir diğer hastalık da tirotoksikoza bağlı periyodik paralizidir. Hipopotasemik periyodik paralizili hastalarda teşhis; aile hikayesi, paralizi yapabilecek başka bir neden olmaması, serum  $\text{K}^{+}$  değerinin çabuk normalizasyonu ve  $\text{K}^{+}$  uygulaması sonrasında semptomların gerilemesi ile konur (11). Bizim olgumuzda ailesel bir soygeçmiş hikayesine ulaşılamamıştı.

Sonuç olarak alt ekstremitelerde güçsüzlük olan ve saatler içinde üst ekstremiteleri de etkileyen ve hatta tetraparezisi olan hastalarda ayırıcı tanılar arasında hipopotasemik periyodik paralizi de düşünülmelidir. Ayrıca bu hastalarda aile öyküsü ve ilaç kullanım öyküsü de sorgulanmakla birlikte erken tanı için arteriyel kan gazı da önemlidir.

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## KONUŞMA METNİ 3

### **Konjestif Kalp Yetmezliği ve Akciğer Ödemi Tanısı**

Spec. Dr. Miray Tümer

Kalp yetmezliği (KY), acil serviste sık karşılaştığımız, hayatı tehdit edebilecek ve acil müdahale gerektiren klinik durumlardan biridir. Hastalar, kronik kalp yetmezliğinin akut dekompanzasyonu ile gelebileceği gibi yeni başlangıçlı akut tabloyla da karşımıza çıkabilir.

*Tanım :*

Normal dolum basınçlarına rağmen kalbin dokuların metabolik ihtiyaçlarını karşılayabilecek oksijen sunamamasına yol açan kalbin yapısal ve işlevsel bozukluğudur. Klinik olarak hastalardaki dispne, ayaklarda şişme ve halsizlik gibi tipik belirtilerin ve artmış jugüler ven basıncı, akciğerlerde krepitasyon ve kalp tepe atımının yer değiştirmesi gibi bulguların eşlik ettiği bir sendromdur. Kalp yetmezliğini;

Sol ventrikül ejeksiyon fraksiyonuna (LVEF) ,

Semptomatik ciddiyete

Zamanlamaya göre sınıflandırmak mümkündür.

LVEF'na göre sınıflandırma 2012 kılavuzunda : EF  $\geq$  %50 ise korunmuş EF (HFpEF) ve EF  $<$  %40 ise düşük EF (HFrEF) olarak tanımlanmıştır. 2016 yılında ise EF %40-49 (aradaki gri zon) - orta düzeyde EF li kalp yetmezliği kılavzlara girmiştir.

KY TİPİ	HFrEF	HFmrEF	HFpEF
KY TİPİ	1 Semptomlar $\pm$ Bulgular	Semptomlar $\pm$ Bulgular	Semptomlar $\pm$ Bulgular
	2 LVEF $<$ %40	LVEF % 40-49	LVEF $\geq$ %50
	3 -	1- Artmış NP -BNP $>$ 35 pg/ml $\pm$ NT-proBNP $>$ 125 pg/ml 2- En az biri: a. Altta yatan yapısal kalp hastalığı (LVH,LAE) b. <u>Diyastolik disfonksiyon</u>	1- Artmış NP -BNP $>$ 35 pg/ml $\pm$ NT-proBNP $>$ 125 pg/ml 2- En az biri: a. Altta yatan yapısal kalp hastalığı (LVH,LAE) b. <u>Diyastolik disfonksiyon</u>
Yorum	hem <u>diyastolik</u> hem de <u>sistolik disfonksiyon</u> söz konusu	orta derecede sistolik disfonksiyona eşlik eden <u>diyastolik disfonksiyon</u>	LV duvar kalınlığında artış, LA dilatasyon, LV dolum kapasitesinde azalma, artmış LV dolum basıncı mevcuttur.

HFrEF= Heart Failure with Reduced EF, HFmrEF= Heart Failure with Mid-Reduced EF HFpEF= Heart Failure with preserved EF, LVH= Left Ventricular Hypertrophy, LAE= Left Atrial Enlargement, NP: natriuretic peptides

Semptomatik Sınıflamaya Göre :

#### New York Heart Association (NYHA) konjestif kalp yetersizliği sınıflaması:

Sınıf 1	Günlük olağan fiziksel aktivitelerinde <u>kısıtlanma olmayan</u> kalp hastaları
Sınıf 2	Fiziksel aktivitelerinde <u>hafif kısıtlanma</u> olan kalp hastaları
Sınıf 3	Fiziksel aktivitede <u>belirgin kısıtlanma</u> olması, ev içinde yürümek gibi çok hafif aktivitelerle bile semptomların ortaya çıkması
Sınıf 4	<u>Istirahatte bile</u> nefes darlığı olması

Zamanlamaya Göre Sınıflamaya Göre :

Kronik kalp yetmezliği: Daha önce KY ile başvuran hastalar

Stabil kalp yetmezliği: Tedavi sonrası 1 ay boyunca klinik durumda değişiklik olmayan hastalar

Dekompanse kalp yetmeliği: Kronik kalp yetmezliği kötüleşmesi ile oluşan durum

Yeni başlangıçlı (de-nova) kalp yetmezliği: Akut ya da subakut süreçte KY gelişirse yeni başlangıçlı

Konjestif kalp yetmezliği: Akut yada kronik volüm yüküne bağlı KY

## Epidemiyoloji :

Kalp yetmezliğinin(HF) gelişmiş ülkelerde prevalansı erişkin nüfusta % 1-2, >70 yaş nüfusta ≥ %10 dur. 55 yaşında yaşam boyu HF riski; erkekler için % 33 kadınlar için% 28 dir. 65 yaş üstü efor dispnesi ile hastaneye başvuran hastaların 1/6'sı tanı almamış HF hastalarıdır (çoğunlukla HFrEF). Kalp yetersizliği olan hastalarda mortalite yıllık % 8-12 civarında seyretmektedir.

HFrEF daha yaşlı popülasyonda, kadınlarda ve geçmişinde hipertansiyon ve atriyal fibrilasyon olanlarda daha sık görülmektedir. HFrEF'de kardiyak nedenli hastaneye yatışlar daha fazlayken, HFrEF'de kardiyak olmayan nedenlerle hastaneye yatış daha sık görülmektedir.

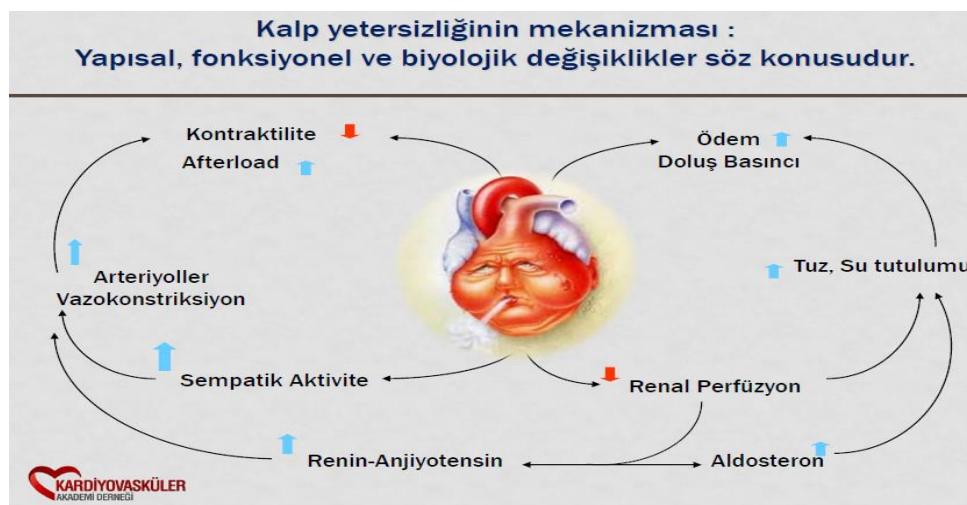
## Etyoloji:

Etyolojide myokard hastalıkları, anormal dolum durumları ve aritmiler sorumlu tutulmaktadır.

Myokard hastalıkları : İskemik kalp hastalıkları, toksik hasar, madde, ağır metal, ilaçlar (sitotoksik, immunomodulatör, antidepresanlar, NSAİİ, antiaritmikler, anestezikler), radyasyon, immün aracılı inflamatuar hasar, enfeksiyon/enfeksiyon dışı (miyokardit, otoimmün), infiltrasyon (Malignite/malignite dışı (amiloidoz, sarkoidoz, Glik. Dep. Hast.) Metabolik bozukluklar (Hormonal (DM, troid bzk, akromegali, addison,...) ve Beslenme eksikliği/obezite ) ve genetik anomalilikler sayılabilir.

Anormal dolum durumları ise ; hipertansiyon, kapak ve miyokard yapısal defektleri, perikardiyal ve endomyokardiyal patolojiler, artmış output durumları(Ciddi anemi, sepsis, tirotoksikoz, gebelik, av fistül) ve volüm fazlalığı (Bb yetmezliği, iatrojenik sıvı fazlalığı) durumlarıdır.

Tüm bu nedenler sonunda artmış sempatik hiperaktivite arteriyoller vazokonstriksiyona neden olur. Berberinde aktive olan renin-anjiotensin-aldosteron sistemi, vücutta su tuz tutulumuna yol açar. Bu da vücutta ödem ile sonuçlanır. Renal perfüzyon azalır. Sonuçta kalbin kontraktilitesi azalır, afterload artar.



## Prognоз

KY hastalarında çok sayıda ölüm ve/veya hospitalizasyon üzerine prognostik faktörler mevcuttur. Ancak klinik uygulanabilirlikleri sınırlıdır ve KY'deki kesin risk sınıflandırması hala zordur. Mortaliteyi gösterecek pek çok risk skoru mevcutken, hastaneye yatışı öngörecek yeterli veri yoktur.

## Tanı

Kalp yetmezliği tanısı mevcut semptom ve bulgular ışığında destekleyici temel tetkikler ile konulur. Temel semptom ve bulgular aşağıdaki tabloda ayrıntılı verilmiştir.

Semptomlar	Bulgular
<b>TİPİK</b>	<b>DAHA SPESİFİK</b>
Nefes darlığı Ortopne <u>Paroksismal nokturnal dispne</u> Azalmış egzersiz toleransı Yorgunluk, dinenememe Ayak bileğinde şişme	Artmış juguler venöz basınc Hepatojuguler reflü S3 gallop Laterale yer değişmiş apikal kalp atımı
<b>FAHA AZ TİPİK</b>	<b>DAHA AZ SPESİFİK</b>
Nokturnal öksürük Wheezing Şişkinlik hissi İştah kaybı Konfüzyon Depresyon Çarpıntı Sersemlik Senkop Öne eğilmekle nefes darlığı	Kilo alımı (>2kg/hf) Kilo kalybi (iler KY) Kaşeksi Periferal ödem Raller <u>Plevral effüzyon</u> Taşikardi Düzensiz nabız <u>Takipne</u> <u>Cheyne-Stokes solunumu</u>

## Temel İlk Tetkikler

EKO: Tanısal değeri yüksektir. Atrial ve ventriküler volümeler, sistolik ve diyastolik disfonksiyon, duvar kalınlığı, kapak fonksiyonları ve pulmoner hipertansiyonu gösterir.

NATRİÜRETİK PEPTİTLER : EKO'ya hemen ulaşılmadığında NP seviyesi bakmak yapılması gereken ilk tanısal testtir. NP, sınır değerin altındaysa EKO ile değerlendirmeye gerek yoktur. Sınır değerler: KRONİK: BNP < 35 pg/mL , NTproBNP) < 125 pg/Ml

AKUT: BNP < 100 pg/mL, NT-proBNP < 300 pg/ mL

Negatif prediktif değeri HFpEF ve HFrEF için daha yüksektir, dışlamak için kullanılmalıdır. Tanı için kullanılmamalı. AF, yaş ve renal yetmezlik yüksek NP değerlerini etkileyen en önemli faktörlerdir. Obez hastalarda normal popülasyona göre oransal olarak daha düşük değerler görülür.

EKG: EKG anormallikleri KY olasılığını arttırmak ama spesifitesi düşüktür. Tamamen normal EKG, KY'ni dışlar. (sensitivitesi %89)

Akciğer Grafisi : Alternatif tanıları dışlamada yardımcı olur, pulmoner venöz konjesyon ve ödemi gösterebilir.

Transtorasik Ekokardiyografi (TTE): Sağ ve sol ventrikül sistolik ve diyastolik fonksiyonunu saptamada seçilecek yöntemdir. Kalp yetmezliği tanısında ilk yapılmış gereken temek taktiktir.

Transözefageal Ekokardiyografi (TEE): Rutinde önerilmiyor, kapak hastalıkları, aort disseksiyonu, kongenital kalp hastalıkları, endokardit, kardiyoversiyon öncesi AF hastasında intrakaviter trombusu saptamak için kullanılabilir.

Stres Ekokardiyografi: İndüklenebilir miyokardiyal iskemiyi göstermede kullanılabilir.

Kardiyak Manyetik Rezonans (CMR): Sağ-sol ventrikül hacmi, kütlesi ve EF'sini ölçümede altın standart yöntemdir, iskemik ve non-iskemik kalp yetmezliği ayrılmışında gadoliniumlu MR tercih edilmelidir.

SPECT/PET: Miyokardiyal iskemi ve canlılığı değerlendirmede kullanılabilir.

Koroner Anjiyografi: Tedaviye dirençli anginası , semptomatik ventriküler artımı olan yada kardiyopulmoner resüsitasyon (KPR) sonrası spontan dolaşımı sağlanan hastalarda revaskülarizasyon ihtiyacını değerlendirmede kullanılır.

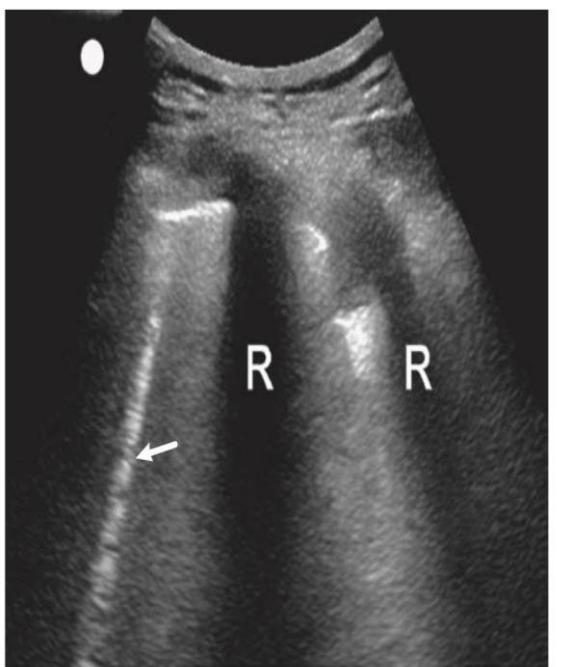
Kardiyak Bilgisayarlı Tomografi: Düşük-orta riskli koroner arter hastalığı (KAH) olan ya da buna eşdeğer non invaziv stres test sonuçları olan hastalarda koroner anatomsayı görüntülemek için kullanılabilir.

Diger Tanisal Testler: Hgb, wbc, Na, K, ure, kreatinin (GFR), karaciğer fonksiyon testleri (KCFT), glukoz, HbA1c, lipid profili, ferritin, TSH bakılmalıdır.

#### POCUS (POINT-OF-CARE CARDIOPULMONARY)

Pocus kalp tamponadı dahil olmak üzere nefes darlığı sol ventrikül fonksiyonunu ve hacim durumunu belirleyebilir, ancak kapsamlı eko yerini tutmaz. Yatakbaşı eko 3 soruyu yanıtlayabilir:

1. pulmoner tıkanma belirtileri var mı?
2. ivc boyutu ve bunun çökebilirliğini ölçerek hacim yüklenmesi belirtileri var mı?
3. sol ventrikül EF düşük mü normal mi?



Pulmoner us ilk olarak B-çizgilerine bakılarak pulmoner konjesyon olup olmadığını belirlemek için kullanılır.

Sonografik B-çizgileri akciğer ödeminde görüldüğü gibi, lenfatik tıkanıklığa bağlı olarak akciğer interlobüler septasında şişme olduğunda visseral ve parietal plevranın arayüzünde ortaya çıkan halkalı artefaktlardır.

Ön ve arka göğüs boyunca 2 den fazla B-çizgisinin varlığı patolojiktir, alveolar ve interstisyel ödem için oldukça spesifiktir.

B-çizgiler, pulmoner ödemden kaynaklanmayan diğer durumlarda (pulmoner fibröz, pulmoner kontüzyon, bilateral pnömoni vb.) mevcut olabilceğinden, artmış santral venöz basıncı hızlı değerlendirilmesi gereklidir.

İVC boyutu >2cm veya kollaps indeksi <%50, yüksek santral venöz basıncı göstergesidir.

Belirgin bir akciğer hastalığının yokluğunda, bu ölçümler pulmoner kapiller wedge basıncı ve akut kalp yetmezliği ile oldukça ilişkilidir.

Pulmoner emboli veya triküspit yetersizliği dahil olmak üzere sağ kalp basıncında yükselmeye neden olsun diğer klinik durumları aramak için usg kullanılmalı; bunların her ikisi de kalp yetmezliği uyumlu ivc değişikliğine neden olabilir.

*Kaynaklar:*

1.2016 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure: The Task Force for the diagnosis and treatment of acute and chronic heart failure of the European Society of Cardiology (ESC)

2.Developed with the special contribution of the Heart Failure Association (HFA) of the ESC

3.Piotr Ponikowski, Adriaan Volume:37 , Issue:27, 14.07.2016