LİTERATÜR ÖZETLERİ

DR. OKTAY ERAY

09.03.2018

KUŞADASI

İÇERİK

- ACS çalışmaları
  - Oksijen
  - Şok PCI
  - Stabil anjina PCI
- Dağılımsal şok
  - EGDT güncel yorum
  - Agresif ya da permisif sıvı tedavisi
- Tanısal
  - qSOFA ve acil
  - Piller ve MRI
  - EKO ve CPR

AKS ÇALIŞMALARI

OXYGEN THERAPY IN SUSPECTED ACUTE MYOCARDIAL INFARCTION

ROBİN HOFMANN, M.D.

SEPTEMBER 28, 2017
N ENGL J MED 2017; 377:1240-1249
DOI: 10.1056/NEJMOA1706222

OXYGEN THERAPY IN SUSPECTED ACUTE MYOCARDIAL INFARCTION ROBİN HOFMANN, M.D.,

- Zemininde hipoksi olmayan şüpheli MI hastalarında rutin oksijen tedavisinin klinik etkisi belirsiz
  - **Hastalar**: Miyokard enfarktüsü düşünülen ve oksijen satürasyonu %90 üstünde olanlar
  - **Uygulama**: Açık yüz maskesi ile 6 lt/dk oksijen 6-12 saat süreyle tedavi
  - **Karşılaştırma**: Oda havasında solutma
  - **Sonuçlar**: Sağkalım

OXYGEN THERAPY IN SUSPECTED ACUTE MYOCARDIAL INFARCTION ROBİN HOFMANN, M.D.,

- 6629 hasta
- Oksijen grubunda median tedavi süresi 11,6 saat
- Tedavi sonrası median oksijen satürasyonu oksijen grubunda %99, oda havasında %97
- Oksijen grubu hipoksi oranı %1,9 oda havası grubunda %7,7
- Troponin median değeri 946,8ng/dl oksijen tedavi grubu, 983 ng/dl oda havası grup
- BİR YIL İÇİNDE HERHANGİ BİR NEDENLE ÖLÜM AYNI (%5 oksijen %5,1 oda havası)
- 0.97; 95% confidence interval [CI], 0.79 to 1.21; P=0.80

HİPOKSİK OLMAYAN MI HASTALARINDA OKSİJEN KULLANIMI BİR YIL İÇİNDE HERHANGİ BİR NEDENE BAĞLI ÖLÜMÜ AZALTMIYOR

PCI STRATEGIES IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION AND CARDIOGENIC SHOCK

HOLGER THIELE, M.D

DECEMBER 21, 2017
N ENGL J MED 2017; 377:2419-2432
DOI: 10.1056/NEJMOA1710261

PCI STRATEGIES IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION AND CARDIOGENIC SHOCK

HOLGER THIELE, M.D

- Kardiyojenik şokla seyreden miyokard infarktüsünde sorumlu koroner arterin PCI ile revaskülarizasyonu sonuçları olumlu etkiler.
- Buna karşın kardiyojenik şok hastalarının büyük kısmı çok damar hastasıdır ve sorumlu artere yapılmayan PCI'ın olumlu etkisi tartışmalıdır
  - **Hastalar**: Miyokard enfarktüsü ve kardiyojenik şok hastaları
  - **Uygulama**: Sorumlu koroner artere ve aşamalı olarak diğer koronerlere PCI
  - **Karşılaştırma**: Derhal çoklu damar PCI
  - **Sonuçlar**: Sağkalım ve sağkalım sonrası ABY ve diyaliz gereksinimi

PCI STRATEGIES IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION AND CARDIOGENIC SHOCK

- 760 hasta
- 30 günlük mortalite ve diyaliz gereksinimi kombine;
  - 344 hastada 158 (%45.9) yalnızca sorumlu artere PCI grup ve 341 hastada 189 (%55.4) derhal çok damar PCI grup (relative risk, 0.83; 95% confidence interval [CI], 0.71 to 0.96; P=0.01).
- Ölüm için relatif risk; 0.84 (95% CI, 0.72 to 0.98; P=0.03), ve diyaliz için relatif risk; 0.71 (95% CI, 0.49 to 1.03; P=0.07).

PCI STRATEGIES IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION AND CARDIOGENIC SHOCK

- Sorumlu koroner artere yapılan PCI acil çok damar PCI uygulamasına göre sağkalım ve diyaliz gereksinimi açısından daha iyidir

PERCUTANEOUS CORONARY INTERVENTION IN STABLE ANGINA (ORBITA): A DOUBLE-BLIND, RANDOMISED CONTROLLED TRIAL

RASHA AL-LAMEE

LANCET 2018; 391: 31–40 PUBLISHED ONLINE NOVEMBER 2, 2017
HTTP://DX.DOI.ORG/10.1016/ S0140-6736(17)32714-9

PERCUTANEOUS CORONARY INTERVENTION IN STABLE ANGINA (ORBITA): A DOUBLE-BLIND, RANDOMISED CONTROLLED TRIAL

- Stabil anjina hastalarında semptomların azaltılması amacıyla yapılan PCI yapılagelmektedir ve etkinliği bilinmemektedir
- İngilterede 5 merkez, randomize kör (tek)
  - **Hastalar**: Stabil anjina hastaları, tek damar %70 tıkanıklık
  - **Uygulama**: PCI ve antianjinal tedavi
  - **Karşılaştırma**: PCI taklit (plasebo prosedür) ve antianjinal tedavi
  - **Sonuçlar**: Egzersiz süresi

PERCUTANEOUS CORONARY INTERVENTION IN STABLE ANGINA (ORBITA): A DOUBLE-BLIND, RANDOMISED CONTROLLED TRIAL

- İskemik semptomu olan 230 hasta alınıyor
- Tedavi optimizasyonu sonrsı 200 hasta randomize ediliyor
- 105 hasta PCI, 95 hasta plasebo prosedür
- Gruplar arasında birincil sonlanım noktası egzersiz süresi uzaması açısından fark bulunamıyor
- 16·6 s, 95% CI –8·9 to 42·0, p=0·200). Hiçbir hasta ölmedi.

PERCUTANEOUS CORONARY INTERVENTION IN STABLE ANGINA (ORBITA): A DOUBLE-BLIND, RANDOMISED CONTROLLED TRIAL

RASHA AL-LAMEE

ACS YOKSA NEDEN PCI

DAĞILIMSAL ŞOK

Is Early Goal-Directed Therapy or Standard Therapy More Effective in Decreasing Mortality Among Patients With Sepsis?

EBEM Commentators

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nonrandomized studies evaluating early goal-directed therapy in patients with severe sepsis or septic shock with reported mortality outcomes were selected. Studies were excluded if mortality data were not provided, mortality data could not be collected separately for patients who received early goal-directed therapy in conjunction with other sepsis bundles, early goal-directed therapy was used in both study arms, or studies were published before January 2001. If a published abstract met the study inclusion criteria but no article was published or available, then the results were excluded from the main analysis but included in sensitivity analysis.

DATA EXTRACTION AND ANALYSIS

The 4 authors collected multiple predefined variables from all of the

Results

Table 1. Factors explaining mortality differences between randomized and observational studies of early goal-directed therapy versus standard care.

Factor	R^2 Value, %
Time to first antibiotic	87
Antibiotic administration within 6 h	94
Antibiotic administration within 4 h	99
Antibiotic administration within 3 h	99
Appropriate antibiotic use	96

Table 2. Factors associated with mortality differences between early goal-directed therapy and control.

Factor	Relative Risk, *P* Value
APACHE II score	1.05, .003
SOFA score	1.09, .04
Presence of shock	1.007, .006
Time to first antibiotic	1.22, .001
Antibiotic administration within 6 h	0.20, <.001
Antibiotic administration within 4 h	0.16, <.001
Antibiotic administration within 3 h	0.09, <.001

In the systematic review, 19,998 patients were included from 6 randomized trials (n=4,342) and demonstrated a 23% reduction in the risk of mortality in patients treated with early goal-directed

TAKE-HOME MESSAGE

Time to antibiotic administration is the main factor explaining mortality differences between sepsis patients treated with early goal-directed therapy versus standard care in recent observational trials. Early goal-directed therapy was associated with increased mortality risk in patients with severe sepsis.

METHODS

DATA SOURCES

The authors searched PubMed, the Cochrane Library, Evidence-based Medicine BMJ, and the *Annals of Emergency Medicine* Journal Club from January 2001 through January 2016. No language restrictions were applied.

STUDY SELECTION

Randomized and observational nonrandomized studies evaluating

Is Early Goal-Directed Therapy or Standard Therapy More Effective in Decreasing Mortality Among Patients With Sepsis?

EBEM Commentators
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Department of Emergency Medicine
Fort Belvoir Community Hospital
Fort Belvoir, VA

Results

CONSERVATIVE FLUID MANAGEMENT OR DERESUSCITATION FOR PATIENTS WITH SEPSIS OR ACUTE RESPIRATORY DISTRESS SYNDROME FOLLOWING THE RESUSCITATION PHASE OF CRITICAL ILLNESS: A SYSTEMATIC REVIEW AND META-ANALYSIS

SILVERSIDES JA, INTENSIVE CARE MED 2017 FEB;43(2):155-170. PMID: 27734109

CONSERVATİVE FLUİD MANAGEMENT OR DERESUSCİTATİON FOR PATİENTS WİTH SEPSİS OR ACUTE RESPİRATORY DİSTRESS SYNDROME FOLLOWİNG THE RESUSCİTATİON PHASE OF CRİTİCAL İLLNESS: A SYSTEMATİC REVİEW AND META-ANALYSİS

- ARDS SIRS ve SEPSİS hastaları hedefleniyor
- 11 RCT değerlendiriliyor
- Heterojenitesi kabul edilebilir düzeyde
- Hemen hemen tüm çalışmalar taranmış
- 2551 hasta ancak 1000 hasta tek çalışmadan

- For the primary outcome of mortality there was no significant difference between patient groups that held up in multiple subgroup analyses, pooled RR 0.92 [95% CI 0.82-1.02].
- There was an association with increased ventilator free days (mean difference 1.82 days [0.53-3.10]) and decreased length of ICU stay (mean difference 1.88 fewer days [-0.12 - -3.64] in the conservative or deresuscitation group
- Renal replacement therapy use was similar between patients in three studies, RR 0.88 [0.64-1.22].

ORIGINAL ARTICLE FREE PREVIEW

Hydrocortisone plus Fludrocortisone for Adults with Septic Shock

Djillali Annane, M.D., Ph.D., Alain Renault, M.Sc., Christian Brun-Buisson, M.D., Bruno Megarbane, M.D., Jean-Pierre Quenot, M.D., Shidasp Siami, M.D., Alain Cariou, M.D., Xavier Forceville, M.D., Ph.D., Carole Schwebel, M.D., Claude Martin, M.D., Jean-François Timsit, M.D., Benoît Misset, M.D., et al., for the CRICS-TRIGGERSEP Network*

March 1, 2018
N Engl J Med 2018; 378:809-818
DOI: 10.1056/NEJMoa1705716

Abstract

BACKGROUND Septic shock is characterized by dysregulation of the host response to infection, with circulatory, cellular, and metabolic abnormalities. We hypothesized that therapy with hydrocortisone plus fludrocortisone or with drotrecogin alfa (activated), which can modulate the host response, would improve the clinical outcomes of patients with septic shock.

METHODS In this multicenter, double-blind, randomized trial with a 2-by-2 factorial design, we evaluated the effect of hydrocortisone-plus-fludrocortisone therapy, drotrecogin alfa (activated), the combination of the three drugs, or their respective placebos. The primary outcome was 90-day all-cause mortality. Secondary outcomes included mortality at intensive care unit (ICU) discharge and hospital discharge and at day 28 and day 180 and the number of days alive and free of vasopressors, mechanical ventilation, or organ failure. After drotrecogin alfa (activated) was withdrawn from the market, the trial continued with a two-group parallel design. The analysis compared patients who received hydrocortisone plus fludrocortisone with those who did not (placebo group).

RESULTS Among the 1241 patients included in the trial, the 90-day mortality was 43.0% (264 of 614 patients) in the hydrocortisone-plus-fludrocortisone group and 49.1% (308 of 627 patients) in the placebo group (P=0.03). The relative risk of death in the hydrocortisone-plus-fludrocortisone group was 0.88 (95% confidence interval, 0.78 to 0.99). Mortality was significantly lower in the hydrocortisone-plus-fludrocortisone group than in the placebo group at ICU discharge (35.4% vs. 41.0%, P=0.04), hospital discharge (39.0% vs. 45.3%, P=0.02), and day 180 (46.6% vs. 52.5%, P=0.04) but not at day 28 (33.7% and 38.9%, respectively; P=0.06). The number of vasopressor-free days to day 28 was significantly higher in the hydrocortisone-plus-fludrocortisone group than in the placebo group (17 vs. 15 days, P<0.001), as was the number of organ-failure–free days (14 vs. 12 days, P=0.003). The number of ventilator-free days was similar in the two groups (11 days in the hydrocortisone-plus-fludrocortisone group and 10 in the placebo group, P=0.07). The rate of serious adverse events did not differ significantly between the two groups, but hyperglycemia was more common in hydrocortisone-plus-fludrocortisone group.

Related Articles

EDITORIAL MAR 1, 2018
A Role for Hydrocortisone Therapy in Septic Shock?
A.F. Suffredini

EDITORIAL MAR 1, 2018
A Role for Hydrocortisone Therapy in Septic Shock?
A.F. Suffredini

ORIGINAL ARTICLE MAR 1, 2018
Adjunctive Glucocorticoid Therapy in Patients with Septic Shock
B. Venkatesh and Others

Feedback

HYDROCORTISONE PLUS FLUDROCORTISONE FOR ADULTS WITH SEPTIC SHOCK

- **CONCLUSIONS**
- In this trial involving patients with septic shock, 90-day all-cause mortality was lower among those who received hydrocortisone plus fludrocortisone than among those who received placebo
- Among the 1241 patients included in the trial, the 90-day mortality was 43.0% (264 of 614 patients) in the hydrocortisone-plus-fludrocortisone group and 49.1% (308 of 627 patients) in the placebo group (P=0.03). The relative risk of death in the hydrocortisone-plus-fludrocortisone group was 0.88 (95% confidence interval, 0.78 to 0.99).

TANISAL ÇALIŞMALAR

Low Accuracy of Positive qSOFA Criteria for Predicting 28-Day Mortality in Critically Ill Septic Patients During the Early Period After Emergency Department Presentation

Sung Yeon Hwang, MD; Ik Joon Jo, MD; Se Uk Lee, MD; Tae Rim Lee, MD; Hee Yoon, MD; Won Chul Cha, MD; Min Seob Sim, MD; Tae Gun Shin, MD*

*Corresponding Author. E-mail: taegunshin@skku.edu.

Study objective: We determine the diagnostic performance of positive Quick Sequential Organ Failure Assessment (qSOFA) scores for predicting 28-day mortality among critically ill septic patients during the early period after emergency department (ED) presentation.

Methods: This was a retrospective cohort study at a tertiary care academic center. We reviewed a registry of adult (≥18 years) patients who received a diagnosis of severe sepsis or septic shock during an ED stay from August 2008 through September 2014. We identified the point at which patients met 2 or more of the 3 qSOFA criteria (indicating a positive qSOFA score) simultaneously during the initial 24 hours. The diagnostic performance of positive qSOFA score for

*Corresponding Author. E-mail: taegunshin@skku.edu.

Study objective: We determine the diagnostic performance of positive Quick Sequential Organ Failure Assessment (qSOFA) scores for predicting 28-day mortality among critically ill septic patients during the early period after emergency department (ED) presentation.

Methods: This was a retrospective cohort study at a tertiary care academic center. We reviewed a registry of adult (≥18 years) patients who received a diagnosis of severe sepsis or septic shock during an ED stay from August 2008 through September 2014. We identified the point at which patients met 2 or more of the 3 qSOFA criteria (indicating a positive qSOFA score) simultaneously during the initial 24 hours. The diagnostic performance of positive qSOFA score for predicting 28-day mortality was assessed (on ED arrival and within 3, 6, and 24 hours after ED presentation).

Results: A total of 1,395 patients were included, and the overall 28-day mortality was 15%. For patients with positive qSOFA score, 28-day mortality was 23% (95% confidence interval [CI] 19% to 28%) on ED arrival, 20% (95% CI 17% to 23%) at 3 hours, 20% (95% CI 17% to 22%) at 6 hours, and 17% (95% CI 15% to 20%) at 24 hours. Positive qSOFA score for predicting 28-day mortality had a sensitivity, specificity, and area under the receiver operating curve, respectively, of 39% (95% CI 32% to 46%), 77% (95% CI 75% to 80%), and 0.58 (95% CI 0.55 to 0.62) on ED arrival; 68% (95% CI 62% to 75%), 52% (95% CI 49% to 55%), and 0.60 (95% CI 0.57 to 0.63) within 3 hours; 82% (95% CI 76% to 87%), 41% (95% CI 38% to 44%), and 0.61 (95% CI 0.58 to 0.64) within 6 hours; and 91% (95% CI 86% to 94%), 23% (95% CI 21% to 25%), and 0.57 (95% CI 0.54 to 0.59) within 24 hours.

Conclusion: The diagnostic performance of positive qSOFA score for predicting 28-day mortality was low in critically ill septic patients, particularly during the early period after ED presentation. The study requires further prospective validation because of limitations with its retrospective design and use of single-center data. [Ann Emerg Med. 2018;71:1-9.]

Please see page 2 for the Editor's Capsule Summary of this article.

Editor's Capsule Summary

What is already known on this topic

The Quick Sequential Organ Failure Assessment (qSOFA) was recently introduced as an easy tool to identify infected patients with high risk of subsequent deterioration.

What question this study addressed

The prognostic performance of qSOFA scores during the initial 24 hours of hospitalization to predict 28-day mortality among 1,395 patients identified in the emergency department (ED) with sepsis.

What this study adds to our knowledge

Positive qSOFA score (2 or more points) at ED presentation and 3, 6, and 24 hours had poor sensitivity and specificity for predicting 28-day mortality.

How this is relevant to clinical practice

This informs clinical practice by suggesting that qSOFA may need more investigation and refinement before widespread use as a method of risk stratification of ED patients with suspected infection.

initial way to identify patients with suspected infection who

arrival to 24 hours after ED presentation. We also evaluated the cumulative proportions of positive qSOFA score and the positive components of each qSOFA criterion during the first 24 hours after ED arrival.

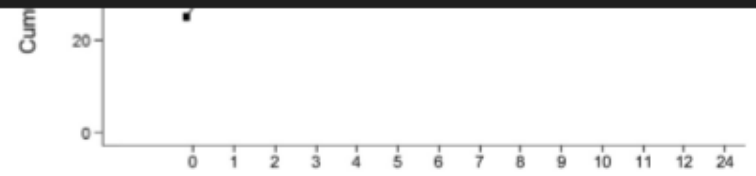
MATERIALS AND METHODS

Study Design and Setting

This was a single-center, retrospective study of patients who presented to the ED at Samsung Medical Center (a 1,960-bed, university-affiliated, tertiary care referral hospital located in a metropolitan city with an annual census of 70,000). The study period was from August 2008 through September 2014.

Adult patients who met the criteria for severe sepsis or septic shock during their ED stay were registered for data collection and quality improvement activity in our institution's registry, under implementation of an educational program at our institution, the Emergency Approach to Sepsis Treatment, which began in 2008 to highlight early recognition and timely management of severe sepsis and septic shock. Our previous studies in regard to severe sepsis or septic shock used the same registry data.[5-10] The institutional review board of Samsung Medical Center approved this study. Informed consent was waived because this study was retrospective, observational, and anonymous.

Selection of Participants



Time (hr)		0	1	2	3	4	5	6	7	8	9	10	11	12	24
Positive qSOFA (Total 1,395)	n	350	528	644	717	783	830	875	911	941	966	975	995	1,007	1,104
	%	25	38	46	51	56	60	63	65	67	69	70	71	72	79

Figure 2. Cumulative proportion of patients with positive qSOFA score.

sensitivity of positive qSOFA score was low (39%; 95% CI 32% to 46%) on ED arrival. The sensitivity increased to 68% (95% CI 62% to 75%) within 3 hours, 82% (95% CI 76% to 87%) within 6 hours, and 91% (95% CI 86% to 94%) within 24 hours. The specificity of positive qSOFA score was 77% (95% CI 75% to 80%) on ED arrival, 52% (95% CI 49% to 55%) within 3 hours, 41% (95% CI 38% to 44%) within 6 hours, and 23% (95% CI 21% to 25%) within 24 hours. The area under the receiver operating curve was 0.58 (95% CI 0.55 to 0.62) on ED arrival, 0.60 (95% CI 0.57 to 0.63) within 3 hours, 0.61 (95% CI 0.58 to 0.64) within 6 hours, and 0.57 (95% CI 0.54 to 0.59) within 24 hours. The presence of one or more of the criteria made qSOFA presentation of severe sepsis or pneumonia.

LIMITATIONS

There are some limitations to this study that should be considered. First, our study population consisted of critically ill patients with severe sepsis and septic shock, half of whom required ICU admission. We did not include patients with uncomplicated infections or patients receiving end-of-life care who might decline initial diagnostic tests or treatments. Originally, our study data were collected primarily for performance improvement of initial management of severe sepsis and septic shock in the ED. As a result, the illness severity of our population was higher than that of the original study,[4] which might cause overestimation of the diagnostic performance. However, although the patients who needed early identification and aggressive treatment had already manifested severe illness at ED presentation, a considerable number did not meet the criteria for positive qSOFA score during the early period after ED presentation, suggesting that qSOFA should be cautiously interpreted in the ED.

Second, this was a single-center study conducted in the ED of a tertiary care academic institution, so the generalizability of these results to other settings is limited.

Table 3. Proportion of patients with each qSOFA component during 24 hours after ED arrival *

Safety of Magnetic Resonance Imaging in Patients with Cardiac Devices

•Saman Nazarian, M.D., Ph.D., ,

DECEMBER 28, 2017
N ENGL J MED 2017; 377:2555-2564
DOI: 10.1056/NEJMOA1604267

- **BACKGROUND**
- Patients who have pacemakers or defibrillators are often denied the opportunity to undergo magnetic resonance imaging (MRI) because of safety concerns, unless the devices meet certain criteria specified by the Food and Drug Administration (termed "MRI-conditional" devices).

- **METHODS**
- We performed a prospective, nonrandomized study to assess the safety of MRI at a magnetic field strength of 1.5 Tesla in 1509 patients who had a pacemaker (58%) or an implantable cardioverter–defibrillator (42%) that was not considered to be MRI-conditional (termed a "legacy" device). Overall, the patients underwent 2103 thoracic and nonthoracic MRI examinations that were deemed to be clinically necessary.

- **RESULTS**
- No long-term clinically significant adverse events were reported. In nine MRI examinations (0.4%; 95% confidence interval, 0.2 to 0.7), the patient's device reset to a backup mode. The reset was transient in eight of the nine examinations. In one case, a pacemaker with less than 1 month left of battery life reset to ventricular inhibited pacing and could not be reprogrammed; the device was subsequently replaced. The most common notable change in device parameters (>50% change from baseline) immediately after MRI was a decrease in P-wave amplitude, which occurred in 1% of the patients.

- **CONCLUSIONS**
- We evaluated the safety of MRI, performed with the use of a prespecified safety protocol, in 1509 patients who had a legacy pacemaker or a legacy implantable cardioverter–defibrillator system. No long-term clinically significant adverse events were reported. (Funded by Johns Hopkins University and the National Institutes of Health; ClinicalTrials.gov number, NCT01130896.)

Resuscitation 114 (2017) 92–99

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Review

Accuracy of point-of-care focused echocardiography in predicting outcome of resuscitation in cardiac arrest patients: A systematic review and meta-analysis☆

Po-Yang Tsou[a], Jeantte Kurbedin[b], Yueh-Sheng Chen[c], Eric H. Chou[b], Meng-tse Gabriel Lee[d], Matthew Chien-Hung Lee[e], Matthew Huei-Ming Ma[d], Shyr-Chyr Chen[d], Chien-Chang Lee[d,f,*]

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diography in the assessment of short-term survival in patients with cardiac arrest.
Methods: PubMed and EMBASE were searched from inception to July 2016 for eligible studies that evaluated the utility of POC echocardiography in patients with cardiac arrest. Modified QUADAS was used to appraise the quality of included studies. A random-effect bivariate model and a hierarchical summary receiving operating curve were used to summarize the performance characteristics of focused echocardiography.
Results: Initial search identified 961 citations of which 15 were included in our final analysis. A total of 1695 patients had POC echocardiography performed during resuscitation. Ultrasonography was mainly utilized to detect spontaneous cardiac movement (SCM) and identify reversible causes of cardiac arrest. Subcostal, apical and parasternal views were used to identify cardiac tamponade, pulmonary embolism, and pleural view for tension pneumothorax. Results of meta-analysis showed that SCM detected by focused echocardiography had a pooled sensitivity (0.95, 95%CI: 0.72–0.99) and specificity (0.80, 95%CI: 0.63–0.91) in predicting return of spontaneous circulation (ROSC) during cardiac arrest, with a positive likelihood ratio of 4.8 (95% CI: 2.5–9.4) and a negative likelihood ratio of 0.06 (95%CI: 0.01–0.39).
Conclusion: POC focused echocardiography can be used to identify reversible causes and predict short-term outcome in patients with cardiac arrest. In patients with a low pretest probability for ROSC, absence of SCM on echocardiography can predict a low likelihood of survival and guide the decision of resuscitation termination.

TAKE-HOME MESSAGE

Point-of-care echocardiography demonstrating no spontaneous cardiac motion is associated with lower likelihood of return of spontaneous circulation and survival to hospital admission. This may be used to assist with decisionmaking about resuscitation termination.

METHODS

DATA SOURCES

The authors searched PubMed and EMBASE from inception to July 2016. Their search strategy combined terms related to echocardiography with terms related to cardiopulmonary resuscitation. The authors limited their search to human studies. In addition to the database searches, the authors also manually checked the reference lists of reviews and primary studies known to the authors before the review.

STUDY SELECTION

Does Spontaneous Cardiac Motion, Identified With Point-of-Care Echocardiography During Cardiac Arrest, Predict Survival?

EBEM Commentators
Michael D. April, MD, DPhil
Brit Long, MD
Department of Emergency Medicine
SAUSHEC
Fort Sam Houston, TX

Results

Summary of meta-analysis outcomes for 1,695 patients and 15 studies.

Outcome	No. Studies	No. Patients*	Sensitivity (95% CI)	Specificity (95% CI)	LR+ (95% CI)	LR− (95% CI)	AUROC (95% CI)	I^2 (95% CI)
ROSC	8	543	95 (72–99)	80 (63–91)	4.8 (2.5–9.4)	0.06 (0.01–0.39)	0.93 (0.91–0.95)	98 (97–99)
Survival to hospital admission	10	1,018	90 (83–94)	78 (64–88)	4.1 (2.3–7.4)	0.13 (0.07–0.24)	0.92 (0.90–0.94)	82 (61–100)

ZAMAN KALIRSA ÇALIŞMASI ☺

THROMBECTOMY 6 TO 24 HOURS AFTER STROKE WITH A MISMATCH BETWEEN DEFICIT AND INFARCT

JANUARY 4, 2018
N ENGL J MED 2018; 378:11-21
DOI: 10.1056/NEJMOA1706442

- **METHODS**
- We enrolled patients with occlusion of the intracranial internal carotid artery or proximal middle cerebral artery who had last been known to be well 6 to 24 hours earlier and who had a mismatch between the severity of the clinical deficit and the infarct volume, with mismatch criteria defined according to age (<80 years or ≥80 years). Patients were randomly assigned to thrombectomy plus standard care (the thrombectomy group) or to standard care alone (the control group).

- The coprimary end points were the mean score for disability on the utility-weighted modified Rankin scale (which ranges from 0 [death] to 10 [no symptoms or disability]) and the rate of functional independence (a score of 0, 1, or 2 on the modified Rankin scale, which ranges from 0 to 6, with higher scores indicating more severe disability) at 90 days.

- **RESULTS**
- A total of 206 patients were enrolled; 107 were assigned to the thrombectomy group and 99 to the control group. At 31 months, enrollment in the trial was stopped because of the results of a prespecified interim analysis. The mean score on the utility-weighted modified Rankin scale at 90 days was 5.5 in the thrombectomy group as compared with 3.4 in the control group (adjusted difference [Bayesian analysis], 2.0 points; 95% credible interval, 1.1 to 3.0; posterior probability of superiority, >0.999)

- the rate of functional independence at 90 days was 49% in the thrombectomy group as compared with 13% in the control group (adjusted difference, 33 percentage points; 95% credible interval, 24 to 44; posterior probability of superiority, >0.999). The rate of symptomatic intracranial hemorrhage did not differ significantly between the two groups (6% in the thrombectomy group and 3% in the control group, P=0.50), nor did 90-day mortality (19% and 18%, respectively; P=1.00).

- **CONCLUSIONS**
- Among patients with acute stroke who had last been known to be well 6 to 24 hours earlier and who had a mismatch between clinical deficit and infarct, outcomes for disability at 90 days were better with thrombectomy plus standard care than with standard care alone.