Reciprocal Abstract

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Annals of Emergency Medicine

Bloodless management of the anemic patient in the emergency department

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Anemia is a commonly encountered condition in emergency medicine; transfusion of packed red blood cells is commonly performed for anemic patients in the emergency department (ED), but some patients are unable to accept transfusion of blood products due to medical or religious concerns. The unique, acute, and time-sensitive nature of emergency medicine practice requires that physicians maintain an enhanced awareness of bloodless medicine treatment modalities. Identification of bloodless medicine patient preferences in the ED can help guide physicians in the recommendation of acceptable methods of treating anemia in this patient population. A focus on early hemostasis and resuscitation, instead of attempts to convince the patient to accept blood transfusion, can be lifesaving in patients with acute bleeding. Treatment strategies including the use of methods to reduce unnecessary blood loss, enhance red blood cell production, and increase the oxygen-carrying capacity of blood should also be considered early in patient presentation. Timely involvement of the Hospital Liaison Committee can help facilitate successful interpersonal communication and shared decision making between emergency physicians and bloodless medicine patients. By embracing an understanding of bloodless medicine patient needs as well as available treatment strategies, emergency physicians can contribute to optimal overall outcomes for anemic bloodless medicine patients.

Emergency Medicine Journal

Early warning scores to assess the probability of critical illness in patients with COVID-19

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Objective: Validated clinical risk scores are needed to identify patients with COVID-19 at risk of severe disease and to guide triage decision-making during the COVID-19 pandemic. The objective of the current study was to evaluate the performance of early warning scores (EWS) in the ED when identifying patients with COVID-19 who will require intensive care unit (ICU) admission for high-flow-oxygen usage or mechanical ventilation.

Methods: Patients with a proven SARS-CoV-2 infection with complete resuscitate orders treated in nine hospitals between 27 February and 30 July 2020 needing hospital admission were included. Primary outcome was the performance of EWS in identifying patients needing ICU admission within 24 h after ED presentation.
Results: In total, 1501 patients were included. Median age was 71 (range 19–99) years and 60.3% were male. Of all patients, 86.9% were admitted to the general ward and 13.1% to the ICU within 24 h after ED admission. ICU patients had lower peripheral oxygen saturation (86.7% vs 93.7, \( p \leq 0.001 \)) and had a higher body mass index (29.2 vs 27.9, \( p = 0.043 \)) compared with non-ICU patients. National Early Warning Score 2 (NEWS2) \( \geq 6 \) and q-COVID Score were superior to all other studied clinical risk scores in predicting ICU admission with a fair area under the receiver operating characteristics curve of 0.740 (95% confidence interval (CI), 0.696–0.783) and 0.760 (95% CI, 0.712–0.800), respectively. NEWS2 \( \geq 6 \) and q-COVID Score \( \geq 3 \) discriminated patients admitted to the ICU with a sensitivity of 78.1% and 75.9%, and specificity of 56.3% and 61.8%, respectively.

Conclusion: In this multicentre study, the best performing models to predict ICU admittance were the NEWS2 and the Quick COVID-19 Severity Index Score, with fair diagnostic performance. However, due to the moderate performance, these models cannot be clinically used to adequately predict the need for ICU admission within 24 h in patients with SARS-CoV-2 infection presenting at the ED.

Keywords: COVID-19, emergency department, intensive care, risk management

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External validation of a low HEAR score to identify emergency department chest pain patients at very low risk of major adverse cardiac events without troponin testing

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O’Rielly et al. Can J Emerg Med 2021. doi:10.1007/s43678-021-00159-y http://caep.ca/resources/cjem/

Annals of Emergency Medicine

Association of advanced airway insertion timing and outcomes after out-of-hospital cardiac arrest

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Study objective: While often prioritized in the resuscitation of patients with out-of-hospital cardiac arrest, the optimal timing of advanced airway insertion is unknown. We evaluated the association between the timing of advanced airway (laryngeal tube and endotracheal intubation) insertion attempt and survival to hospital discharge in adult out-of-hospital cardiac arrest.
**Methods:** We performed a secondary analysis of the Pragmatic Airway Resuscitation Trial (PART), a clinical trial comparing the effects of laryngeal tube and endotracheal intubation on outcomes after adult out-of-hospital cardiac arrest. We stratified the cohort by randomized airway strategy (laryngeal tube or endotracheal intubation). Within each subset, we defined a time-dependent propensity score using patients, arrest, and emergency medical services systems characteristics. Using the propensity score, we matched each patient receiving an initial attempt of laryngeal tube or endotracheal intubation with a patient at risk of receiving laryngeal tube or endotracheal intubation attempt within the same minute.

**Results:** Of 2146 eligible patients, 1091 (50.8%) and 1055 (49.2%) were assigned to initial laryngeal tube and endotracheal intubation strategies, respectively. In the propensity score-matched cohort, timing of laryngeal tube insertion attempt was not associated with survival to hospital discharge: 0 to lesser than 5 min (risk ratio (RR) = 1.35, 95% confidence interval (CI), 0.53–3.44); 5 to lesser than 10 min (RR = 1.07, 95% CI, 0.66–1.73); 10 to lesser than 15 min (RR = 1.17, 95% CI, 0.60–2.31); or 15 to lesser than 20 min (RR = 2.09, 95% CI, 0.35–12.47) after advanced life support arrival. Timing of endotracheal intubation attempt was also not associated with survival: 0 to lesser than 5 min (RR = 0.50, 95% CI, 0.05–4.87); 5 to lesser than 10 min (RR = 1.20, 95% CI, 0.51–2.81); 10 to lesser than 15 min (RR = 1.03, 95% CI, 0.49–2.14); 15 to lesser than 20 min (RR = 0.85, 95% CI, 0.30–2.42); or more than/equal to 20 min (RR = 0.71, 95% CI, 0.07–7.14).

**Conclusion:** In the PART, timing of advanced airway insertion attempt was not associated with survival to hospital discharge.

**Canadian Journal of Emergency Medicine**

**Investigation and treatment of asymptomatic bacteriuria in older patients with delirium: a cross-sectional survey of Canadian physicians**

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**Objectives:** Current guidelines suggest assessing non-infectious causes and careful observation before giving antibiotics to delirious patients with asymptomatic bacteriuria. Our study aims to describe the current practice of Canadian physicians regarding the investigation and treatment of asymptomatic bacteriuria in delirious older patients (aged ≥ 65 years).

**Methods:** Our team of medical experts designed and reviewed a cross-sectional online survey. Study participants were physicians who conduct their clinical practice in Canada and care for older patients with delirium in their current practice. Potential study participants were reached through Canadian associations: Canadian Geriatrics Society, the Canadian Association of Emergency Physicians, the Association des Médecins d’Urgence du Québec, and members of Choosing Wisely Canada.

**Results:** A total of 297 physicians were included. The main results show 79.4% of our participants request a urine dipstick or urinalysis in delirious patients, and 52.4% immediately order a urine culture with the urinalysis. If bacteriuria is found in delirious but afebrile patients without urinary symptoms, 38% of physicians immediately treat with antibiotics, 33.8% wait for culture before initiating treatment, 14.4% treat if no other cause is found for delirium, and only 13.7% would refrain from giving antibiotics. Results from respondents were similar for delirious patients with known cognitive impairment. Participants were almost unanimous (92.5%) in saying they need clear guidelines regarding the treatment of bacteriuria in older delirious patients.

**Conclusion:** This survey highlights the heterogeneous clinical management of asymptomatic bacteriuria in delirious patients and the need for clear guidelines for patients.

**Keywords:** Delirium, asymptomatic bacteriuria, geriatric