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Can Prehospital Personnel Accurately Triage Patients for Large Vessel Occlusion Strokes?

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prehospital setting is an effective analgesic in selected adult trauma patients. Additionally, ketamine did not demonstrate the adverse effects (eg, respiratory failure or hypotension) typically seen in opioid administration.

17 Prognostic Factors of Poor Outcome in Geriatric Traumatology Patients in the Emergency Department

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Background and Objective: Identification of elderly trauma patients who are likely to have poor outcome may help the emergency physician to provide better management. We sought to evaluate the current management of geriatric traumatology patients in our emergency department (ED) and to identify the prognostic factors of poor outcome in elderly traumatic patients.

Design and Methods: We conducted a retrospective study in an ED over a period of one year, based on file analysis of 768 trauma elderly patients. We included all patients older than 65 years admitted to the ED after a fall, and we excluded critical patients. Epidemiological, clinical, biological, therapeutic, and evolution criteria were collected. We defined poor outcome by mortality at day 28, and we used multivariate logistic regression to obtain the probability of a death at 28 days.

Results: We enrolled 768 patients in the study. Mean age was 78 years [71-85], and the gender ratio was 2.07. Comorbidities included the following: hypertension N = 426 (23%); dyslipidemia N= 257 (14%); diabetes N = 150 (9%); osteoporosis N= 136 (8%); prosthetic orthopedic equipment N = 124 (7%); history of fall N = 139 (8%); dementia N=138 (7%); and depression N=138 (7%). Of the cases involving falls, 67% were of less than two meters. We found that 76.87% of the population took at least three medications. The over-all mortality was 2.2% with 11 patients dead at day 28.

We performed a univariate logistic regression to select the best predictors of mortality at 28 days, which were reduced to three in multivariable logistic regression: the C-reactive protein (CRP) test with an odds ratio (OR) at 1.01 and confidence interval (CI) 95%, 1.00 – 1.01, p = 0.05; the Index Severity Score (ISS) face with an OR at 2.24 and CI 95%, 1.12 – 4.47, p = 0.02; and the hospitalization rate with an OR at 1.71 and CI 95%, 1.07 – 2.72, p = 0.02.

Conclusion: CRP, the ISS face, and being hospitalized appear to predict poor outcome in elderly traumatic patients admitted in the ED. Future prospective and multicentric studies are needed to validate these findings.

18 Can Prehospital Personnel Accurately Triage Patients for Large Vessel Occlusion Strokes?

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Objective: The Field Assessment Stroke Triage for Emergency Destination (FAST-ED) score has been shown to have a higher predictive value compared to the National Institutes of Health Stroke Scale (NIHSS) to identify large vessel occlusion strokes (LVOS). The study suggested that patients with a score of 4 or greater should be taken directly to a comprehensive stroke center where endovascular intervention is available rather than to the closest emergency department (ED). However, the score in this study was assessed when a stroke patient had already arrived at the hospital. To date, no study has been done to validate using the FAST-ED score in the prehospital setting. Our study compares prehospital FAST-ED scores with FAST-ED scores done by emergency medicine senior resident or attending physicians when patients arrive in the ED.

Design and Methods: Miami-Dade County emergency medical services (EMS) personnel were trained to calculate a FAST-ED score for any patient suspected of having an ischemic stroke or transient ischemic attack in the field (EMS FAST-ED). When the patient arrived in the ED of a comprehensive stroke center a physician completed a FAST-ED score (ED FAST-ED). Both numbers were recorded. Imaging was taken in accordance with hospital stroke guidelines. We excluded from the study intracranial hemorrhages seen on the non-contrast brain computed tomography. LVOS were defined as complete or partial occlusion of the internal carotid artery, middle cerebral artery, and basilar artery.

Results: We studied 130 patients whose ages averaged 73.2±18 years. LVO was detected in 28 of 130 patients (22%). There were no differences between the medians for EMS FAST-ED scores (3 [interquartile ratio (IQR) 1-4.25]) and the medians for the physician-generated scores (4 [IQR 1-6]; p = 0.696, Mann-Whitney U test.). Further, the median of the differences between the individual EMS and the ED scores were not different from zero (median for the differences = 0 [IQR -1, 2]; p = 0.67, Wilcoxon signed-rank sum test). In addition, EMS FAST-ED scores were strongly correlated with the physician FAST-ED scores (r² = 0.26; p<0.001).

For scores ≥4 EMS FAST-ED had a sensitivity of 0.57 and a specificity of 0.70, and ED FAST-ED scores had a sensitivity of 0.68 and a specificity of 0.72. The area under the receiver operating characteristic curve for EMS was

0.617±0.13 and for the ED was 0.623±0.13. The Youden's index for these tests was 0.33 for physicians' scores and 0.22 for EMS scores.

Conclusion: Although this work is based on a small sample, the findings suggest that FAST-ED scores assessed by prehospital personnel were not different from those obtained by physicians at the ED. The FAST-ED score between the two groups had a comparable sensitivity, specificity and accuracy for predicting LVOS.

19 Comprehensive Approach to Sustainable Reduction in Emergency Department Opioid Prescribing

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Objective: Despite the strict regulation of opioids, the majority of individuals who develop opioid use disorder are introduced to opioids through prescription pain medication. While emergency physicians contribute minimally to the overall number of opioid prescriptions, they treat a high volume of patients with painful conditions and are often at least the initial prescriber of opioids for such patients. The present quality improvement (QI) project aimed to decrease the rate of opioids administered in the emergency department (ED) and prescribed at discharge.

Design and Method: The QI project consisted of three distinct interventions: 1) monthly non-anonymous feedback to all providers regarding their opioid prescription patterns compared to the provider group; 2) removal of hydromorphone from the decentralized, automated, medication dispensing system; and 3) addition of an "Alternative to Opioids" order set to the computer provider order-entry system. The intervention spanned a four-month period from October 2018 to January 2019 in a 27-bed community hospital ED that sees about 50,000 patients annually. We compared opioid administration and prescription to the same months in the preceding year to account for seasonal variation.

Results: There were 12,897 patient-visits in the pre-intervention period compared to 12,372 in the post-intervention period. The normalized morphine milligram equivalents (MME) administered and prescribed per patient decreased 32.3% from 10.2 to 6.9. The average MME of opioids administered before and after the intervention (12.6 vs 12.9, $p = 0.33$) or prescribed for outpatient therapy (72.6 vs 69.1, $p = 0.11$) did not differ. The exposure of our

community to opioids was reduced by 45,800 MME over the study period.

Conclusion: The intervention produced a significant and sustained reduction in the administration and prescription of opioids. The average dose administered did not differ, suggesting that patients who required opioid pain control were not undertreated. Fewer individual patients were exposed to opioids as part of their treatment, theoretically decreasing the risk of dependence, abuse, and addiction. The intervention required minimal resources to implement and is easily scalable to a variety of settings.

20 Telephone Follow-Up After Pediatric Emergency Department Discharge – Does It Impact the Likelihood of Return Visits?

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Background: Successful transitions of care from the pediatric emergency department (ED) to home can be impacted by comprehension of discharge instructions, medication adherence, and primary care follow-up. Post-discharge communication has been used to identify barriers to ongoing care after discharge. While follow-up calls after ED discharge have been associated with improved adherence and primary care follow-up, some research suggests a higher likelihood of return visits for patients called. In this study, we analyzed predictors of nurse-directed telephone follow-up after discharge from a pediatric ED and the rate of return visits.

Methods: We performed a retrospective cohort study of patients <19 years old discharged from an academic pediatric ED between 3/1/2015-8/31/2016. Staff nurses called discharged patients within 72 hours with a standardized survey to assess follow-up and symptoms. We used multivariate logistic regressions to evaluate relationships between patients called, those reached, and those not called, and 72-hour and seven-day return visits. These data were controlled for by age, insurance type, and race.

Results: Of the 25,152 patients discharged from the pediatric ED during this time period, 7378 (29%) had calls attempted; 4110 (16.3%) were reached and completed the survey. Patients reached were less likely to return in 72 hours compared to those not reached (2.6% vs 5.4%; adjusted odds ratio [aOR] 0.5; 95% confidence interval [CI], 0.40-0.59). Similarly, patients reached were less likely to return within seven days (6.0% vs 8.2%; aOR 0.71; 95% CI, 0.62-0.82) (Table 1). Few patients needed clarification on instructions