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Acute Pancreatitis in the Emergency Department

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Greg Lopez
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Acute Pancreatitis in the Emergency Department

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Introduction: Acute pancreatitis (AP) is a common emergency department (ED) presentation with a variety of outcomes. Stratifying AP severity with scoring systems can allow physicians to effectively manage patient disposition.

Objective: To identify ED pancreatitis patients who will likely be admitted to the ICU or be discharged within 48 hours, and to validate existing pancreatitis severity scores.

Methods: Patients with a final ED diagnosis of AP and/or lipase ≥ 3 times the upper limit of normal were enrolled in a prospective, observational chart review study. Parametric and non-parametric descriptive statistics were used to describe the patient population. Area under receiver operating curve (AUC) was used to determine the predictive accuracy of existing pancreatitis scores.

Results: Ranson criteria, Glasgow-Imrie (GI) criteria, Bedside Index of Severity in Acute Pancreatitis (BISAP), and Harmless Acute Pancreatitis Score (HAPS) were assessed. GI criteria (AUC = 0.77) had the highest predictive accuracy for ICU admission, while Ranson criteria (AUC = 0.62) had the highest predictive accuracy for early discharge. Mean scores of ICU patients were significantly ($p < 0.05$) higher than those of non-ICU patients in all four scoring systems; however, mean scores in ICU patients failed to meet the severe case threshold for all four scoring systems.

Discussion: Existing pancreatitis scoring systems cannot consistently predict AP severity in ED patients. The small difference in mean ICU and non-ICU patient scores illustrates the difficulty of using scoring systems to stratify AP severity in the ED. Further efforts to develop an ED-specific scoring system could allow physicians to more efficiently admit patients.