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## qSOFA in Blunt Trauma Victims' Risk Assessment



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In a new study, researchers examined the ability of the recently described quick Sequential Organ Failure Assessment Score (qSOFA) to predict outcomes in blunt trauma patients presenting to the emergency department (ED). They found that qSOFA scores are directly associated with adverse outcomes in blunt trauma victims. The findings are published in *The American Journal of Surgery*.

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A number of risk assessment tools are used in trauma victims. The qSOFA score was recently introduced as a novel method to simply and quickly estimate risk of inpatient mortality in patients outside the intensive care unit (ICU) with suspected infection. The qSOFA has also been shown to predict mortality in ED patients without suspected infection.

The present study sought to determine if the qSOFA score calculated in the ED would also be associated with outcomes following blunt trauma, as it uses three readily assessed variables: Glasgow Coma Score (GCS), systolic blood pressure (SBP), and respiratory rate (RR). The researchers reviewed data from the trauma registry at a Level 1 Trauma Centre for all adult blunt trauma admissions between 1 January 2010 and 30 September 2015. qSOFA scores were the sum of binary scores for the three variables ( $RR \geq 22$ ,  $SBP \leq 100$  mmHg, and  $GCS \leq 13$ ).

Overall, there were 7,064 admissions (5,664 admissions had qSOFA = 0, 1,164 had qSOFA = 1, 223 had qSOFA = 2, and 13 had qSOFA = 3). Analysis of data showed that higher qSOFA scores were associated with greater injury severity, increased ICU admission, and higher complication rates. In addition, qSOFA scores were associated with in-hospital mortality (1.7% with qSOFA = 0; 8.7% with qSOFA = 1; 22.4% with qSOFA = 2; 23.1% with qSOFA = 3). On multivariate analysis, qSOFA score was an independent predictor of mortality.

"We found that elevated qSOFA scores were directly associated with increased need for major surgery, ICU admission, mechanical ventilation, ICU length of stay, hospital length of stay, complications, and mortality in univariate analyses," the research team wrote. "The qSOFA score was also directly associated with injury severity, as determined by additional clinical examination, subsequent imaging, and/or surgery."

The study findings suggest that the qSOFA score may be of use as a simpler, additional tool to help predict the need for advanced resources in blunt trauma victims. "Early recognition of an initial or perhaps serially abnormal qSOFA score could help guide earlier allocation of intensive resources to those patients at higher risk of death," the team pointed out.

Limitations of this study are its retrospective nature and that it represents the findings of single trauma centre's registry data, the researchers said.

Source: [The American Journal of Surgery](#)

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