



Service Priorities and Programmes
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Development of Simplified Emergency Trauma Score in rating injury severity and predicting mortality in emergency setting

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Introduction

Trauma scores have been used in assessing injury severity and predicting mortality of the injured. However, majority of the trauma scores were unable to give scoring within a short period of time, thus were not used in emergency setting.

Objectives

To develop a Simplified Emergency Trauma Score for rating injury severity, triaging and predicting mortality in emergency setting.

Methodology

A retrospective cohort analysis of trauma patients from the Hong Kong East Cluster Trauma Registry was conducted. A new Simplified Emergency Trauma Score was developed based on trauma database from 2007 to 2009 and validated by 2010 and 2011 database. Potential parameters for predicting mortality were first identified by univariate analysis and subsequently evaluated by binary logistic regression. The Simplified Emergency Trauma Score was compared with the commonly used trauma scores using receiver operating characteristic curves.

Result

There were 1057 patients in developing the Simplified Emergency Trauma Score and 850 patients in validating the score. Four parameters: age, Glasgow Coma Scale, respiratory rate and injury were identified. A simplified regression equation was established. Setting the cutoff point at 55, the sensitivity and specificity of the Simplified Emergency Trauma Score were 72% and 95% respectively. The area under the receiver operating characteristic curve of Simplified Emergency Trauma Score was 0.945 in the validation database which was comparable with the existing trauma scores (Injury Severity Score, New Injury Severity Score, Revised Trauma Score, Trauma and Injury Severity Score). Conclusions: A new Simplified Emergency Trauma Score was developed. It could help the health professionals in rating injury severity, triaging and predicting mortality in emergency setting.