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Predictors for Survival of Penetrating Trauma Using Emergency Department Thoracotomy in an Urban Trauma Center: The Cardiac Instability Score

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Background

Emergency department thoracotomy (EDT) is a procedure used in an attempt to save lives of patients in extremis. This study aims to determine predictors of survival and futility by proposing a scoring scale that measures cardiac instability and its use in predicting survival of victims of penetrating trauma undergoing EDT.

Methods

This retrospective study analyzes patients who underwent EDT during a 45-month period at Howard University Hospital, Washington, DC. Vital signs and Glasgow Coma scale (GCS) scores were analyzed at the scene and in the emergency department. A cardiac instability score (CIS) was devised to assign values to vital signs, and the GCS was based on scores from the emergency department.

Results

Emergency department vital signs, female gender, absence of cardiopulmonary resuscitation (CPR), and high CIS were found to be statistically significant predictors of survival.

Conclusions

The CIS correlated with survival of patients who underwent EDT and was found to be statistically significant in determining the outcome of an EDT.

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Keywords

survival; surgery; predictor; emergency care

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