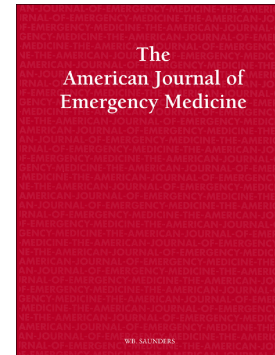


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Impact of prehospital airway management on combat mortality

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Abstract

INTRODUCTION: Analysis of modern military conflicts suggests that airway compromise remains the second leading cause of preventable death of combat fatalities. This study compares outcomes of combat casualties that received prehospital airway interventions, specifically bag valve mask (BVM) ventilation, cricothyrotomy, and supraglottic airway (SGA) placement. The goal is to compare the effectiveness of airway management strategies used in the military pre-hospital setting.

METHODS: This retrospective chart review of 1267 US Army medical evacuation patient care records, compared outcomes of casualties that received prehospital advanced airway interventions. The patients consisted of US military injured in Operation Enduring Freedom January 2011-March 2014. Compared outcomes consisted of vent-, ICU-, and hospital-free days. **RESULTS:** Those with SGA placement experienced fewer vent-free days, ICU-free days, and hospital-free days compared to BVM and cricothyrotomy patients. The groups did not significantly differ in rates of 30-day survival. The odds for survival were not significantly higher for BVM versus SGA patients (OR 1.5, 95% CI 0.2-9.8), cricothyrotomy versus SGA patients (OR 3.9, 95% CI 0.6-24.9), or cricothyrotomy versus BVM patients (OR 2.7, 95% CI 0.5-13.8) in a logistic regression model adjusting for GCS.

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