Prehospital care and in-hospital mortality of trauma patients in Iran

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**Introduction:** This study determines the effect of prehospital time and advanced trauma life support interventions for trauma patients transported to our trauma center.

**Methods:** This study was a retrospective study of trauma victims presenting to a trauma center in central Iran by Emergency Medical Services (EMS) and hospitalized for more than 24 hours. Demographic and injury characteristics were obtained, including accident location, damaged organs, injury mechanism, injury severity score, prehospital times (response, scene, and transport), interventions, and in-hospital outcome.

**Results:** 2,000 patients were studied with an average age of 36.3 (SD=20.8) years 83.1% were male. A total of 120 patients (6.1%) died during hospitalization. The mean response time, at scene time and transport time were 6.6 (SD=3), 11.1(SD=5.2), and 12.8 (SD=9.4), respectively. There was a significant association of longer transport time to worse outcome (P=.02). There was a trend for patients with transport times over 10 minutes to die (OR: 0.8; 95% CI, 0.1-6.59). Advanced Life Support (ALS) interventions were done for patients with severe injuries (Revised Trauma Score <7) and ALS intervention was associated with more time at the scene. There was a positive association of survival with ALS interventions done in suburban areas (P=.001).

**Conclusion:** In-hospital trauma mortality was more common for patients with severe injuries and long prehospital transport times. While more severely injured patients received ALS interventions and died, these interventions were associated with positive survival trends when conducted in suburban and out-of-city road locations with long transport times.

**Keywords:** Emergency medicine; mortality; prehospital care