

## The Relationship between First-Day Body Temperature and Mortality in Traumatic Patients

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**Abstract :** Background: There are many systems and parameters to evaluate trauma patients in the emergency department. Most of these evaluations are to distinguish patients with worse conditions so that the care systems have a better prediction of condition for a better care-giving. The purpose of this study is to determine the relationship between axillary body temperature and mortality in patients hospitalized in the intensive care unit (ICU) with multiple traumas and with other clinical and para-clinical factors. Methods: All patients between 16 and 75 years old with multiple traumas who were admitted into Emergency Department then hospitalized in the ICU were included in our study. An axillary temperature in the first and the second day of admission, Glasgow coma scale (GCS), systolic blood pressure, Serum glucose levels, and white blood cell counts of all patients at the admission day were recorded and their relationship with mortality were analyzed by SPSS software with suitable statistical tests. Results: Axillary body temperatures in the first and second day were statistically lower in expired traumatic patients ( $p=0.001$  and  $p<0.001$  respectively). Patients with lower GCS had a significantly lower first-day temperature and a significantly higher mortality. ( $p=0.006$  and  $p=0.006$  respectively). Furthermore, the first-day axillary temperature was significantly lower in patients with a lower first-day systolic blood pressure ( $p=0.014$ ). Conclusion: Our results showed that lower axillary body temperature in the first day is associated with higher mortality, lower GCS, and lower systolic blood pressure. Thus, this could be used as a predictor of mortality in evaluation of traumatic patients in emergency settings.

**Keywords :** fever, trauma, mortality, emergency

**Conference Title :** ICEM 2015 : International Conference on Emergency Medicine

**Conference Location :** London, United Kingdom

**Conference Dates :** February 16-17, 2015