Epidemiology of Upper Extremity Trauma in Patients Visiting the Emergency Department; a Brief Report

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Abstract

Introduction: Considering its high prevalence and cost as well as frequent complications, trauma is one of the major health problems in Iran. Knowing the epidemiologic characteristics of these patients could be helpful in arrangement for decreasing the burden of disease. This study was aimed to evaluate the epidemiology of upper extremity trauma among patients visiting trauma unit of emergency department (ED).

Methods: The present cross-sectional study was done using census method on all patients with upper extremity trauma visiting the ED of Imam Hossein Hospital, Tehran, Iran in 2012. Required data were gathered using a checklist consisting of questions regarding demographic data (age, sex), trauma mechanism, time of trauma, type of trauma, and therapeutic measures taken. Gathered data were statistically analyzed via SPSS version 19.0.

Results: 751 patients with the mean age of 27 ± 7.6 years were evaluated. 616 (82%) patients were male and the highest frequency belonged to the age range of 20 – 30 years with 248 (33%) cases. 339 (45.1%) accidents had occurred between 8 AM and 4 PM. Injury caused by motorcycle accidents was the most common mechanism of trauma among those evaluated with 185 (24.6%) cases. 575 (76.6%) cases had an isolated extremity trauma and 176 (23.4%) had multiple trauma that included extremity trauma. The most prevalent injuries that needed surgical intervention were distal radius fracture with 143 (34%) cases, soft tissue injury with 75 (17.8%) cases, and isolated ulna fracture with 46 (10.9%) cases.

Conclusion: Based on the results of this study, the most common cases of upper extremity trauma occurred in men, age range of 20 – 30 years, spring, and between 8 AM and 4 PM. The most common trauma mechanism was motorcycle accident and distal radius fracture was the most prevalent injury that needed surgical intervention.

Keywords: Wounds and injuries; motorcycles; upper extremity; emergency department; epidemiology