

ORIGINAL ARTICLE

Antibiotic Prophylaxis Prescription in Simple Traumatic Wounds Treated in Emergency Department

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Abstract

Introduction: Currently, considering the advances made in management of traumatic wounds, preventing secondary infections following these accidents is considered a serious challenge. Although using antibiotics for prophylaxis to reduce infection has become less popular, it is still discussed as a method of reducing infection. The aim of the present study is to evaluate the rate and route of antibiotic prophylaxis prescription in traumatic wounds treated in emergency department (ED) and compare it with international standards.

Methods: This cross-sectional study was carried out in the ED of Shohadaye-Hafte-Tir Hospital, Tehran, Iran. Patients with simple traumatic wounds were included via easy non-probability method. Before wound healing, the researcher evaluated the patient's wound regarding appearance, site, cause of injury, length and depth of the wound, time since occurrence of injury, and presence or absence of evident contamination, and determined presence or absence of indication for prescribing antibiotics based on recommendations of approved references in emergency medicine. The researcher asked the patients questions regarding receiving or not receiving antibiotic prophylaxis and its duration after the healing of the wound. Data were analyzed using SPSS-21 after gathering. **Results:** Overall, 296 patients with the mean age of 31.56 ± 14.74 years were evaluated, 816% of which were male. For 268 (90.5%) of the studied patients, antibiotics was prescribed. However, only 58 (19.6%) had indications for prophylaxis prescription. All of the patients who had indications for receiving antibiotics had received antibiotic prophylaxis. According to the results of this study, antibiotic prophylaxis was prescribed without indications in 210 (71%) of the patients. There was a significant difference ($p=0.0001$) between the duration of antibiotic prophylaxis prescription in this study and the standard duration recommended for simple wounds. Duration of antibiotics prescription was more than 3 days regarding wounds with evident contamination ($p=0.018$) and wounds with indication of antibiotic prescription ($p=0.007$). Sex of the patients, wound type, and anatomic site of injury did not have a significant effect on the mean duration of antibiotics prescription compared to the recommended rate ($p > 0.05$). **Conclusion:** Based on the results of the present study, for 71% of the patients with simple traumatic wounds, antibiotic prophylaxis was prescribed without presence of indications and the duration of antibiotic prophylaxis prescription was longer than the standard recommendations.

Key words: Antibiotic prophylaxis; emergency department; wound infection
