Epidemiology, Geographical Distribution, and Outcome Analysis of Patients with Electrical Burns Referred to Shiraz Burn Center, Shiraz, Iran during 2008-2019

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Abstract

Background: Burn is one of the most significant injuries in industrial and developing societies and is one of the most important traumas leading to hospitalization. The aim of this study was to identify the epidemiology, geographical distribution, and outcome of electric burns in Fars province and to present the distribution map.

Methods: In this descriptive-analytical study, the study population involved all electrical burn victims admitted to Amir al-Momenin and Ghotbeddin Hospitals from 2008 to 2019 in Fars province in the south of Iran. Data were analyzed using SPSS software version 22.

Results: Among a total of 246 patients, the average age was 30.78 ± 11.07. The highest frequency among educational levels was among under-diploma patients (38.6%), and the majority were employed (87.4%). Also, most of the patients were from urban areas (70.3%). The majority of burn incidences occurred at the workplace (57.7%). Also, among the high voltage patients, 25 patients (30.9%) had an amputation, while among low voltage only 12 patients (16.2%) had an amputation. Non-surgical treatment was applied in 68 (28%) cases, while Escharotomy was performed in 28 (11.4%) patients. There was also a statistically significant association between burn voltage and amputation (P= 0.039).

Conclusion: Based on our report, the rate of electrical burn injuries in Iran is still high, which underlines the need for stronger efforts in effective prevention, such as better public education and the establishment of strict regulations regarding the distribution and use of electricity.

Key Words: Burn, Electrical Injury, Iran