

Head Trauma Patients Presented To Emergency Department; an Epidemiologic Study

Arash Forouzan¹, Kambiz Masoumi^{1*}, Hassan Motamed¹, Alireza Teimouri², Hassan Barzegari¹, Behzad Zohrevandi³, Fatemeh Rasouli¹

1. Department of Emergency Medicine, Imam Khomeini General Hospital, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran.

2. Department of Neurosurgery, Golestan General Hospital, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran.

3. Road trauma Research Center, Guilan University of Medical Sciences, Rasht, Iran.

***Corresponding Author:** KambizMasoumi; Department of Emergency Medicine, Imam Khomeini General Hospital, Ahvaz Jundishapur University of Medical Sciences, Azadegan Avenue, Ahvaz, Khuzestan Province 6193673166, Iran.

Introduction: Traumatic brain injuries are among the most important causes of mortality and disability. Since there is a lot of controversy regarding discharge of head trauma patients, especially those with mild traumatic brain injuries, this study was designed aiming to evaluate traumatic brain injuries from an epidemiologic point of view.

Methods: In this retrospective cross-sectional study, patients with isolated head trauma, and all those who underwent computed tomography (CT) were included using convenience sampling. Demographic data and final diagnosis of the patients were extracted from their medical profile, and were analyzed using SPSS 21 and appropriate statistical tests.

Results: 786 patients with the mean age of 24 ± 16.8 years (range: 0.5 – 75) were evaluated (67.8% male). 42 patients (5.3%) had abnormal CT scan and were hospitalized. 7 of them (16.7% of hospitalized, 3.3% of low-risk, and 0.9% of all patients) were in the group categorized as low-risk regarding probability of brain injuries. 12 (1.5%) participants needed surgery, 2 of which (0.9%) were initially categorized as low-risk. Vomiting was significantly more in patients with abnormal CT scan (45.2%) compared to those who had normal CT scan (19.6%) ($p = 0.0001$). No significant difference was detected between the 2 groups in other symptoms.

Conclusion: The results of this study indicate that by making decisions based on clinical findings alone, there is a probability of about 3.3% error in management of head trauma patients. In addition, 0.9% of the patients initially categorized as low-risk, needed surgical intervention in the end.

Key words: Brain injuries; tomography, X-ray computed; epidemiology; emergency service, hospital