Epidemiological study on trauma caused by traffic accidents in children under 8 years

Leila Kouchaki Nejad Eram-sadati 1 ; Marieh Hosseinpour 2 ; Zahra Mohtasham-Amiri 3 ; and Zahra Haghdoost 4

1 MA in Human Resources Management, Trauma Research Center, Guilan University of Medical Sciences, Rasht, Iran
2 MSc in Physiology, Trauma Research Center, Guilan University of Medical Sciences, Rasht, Iran
3 Associate Professor of Preventive and Social Medicine, Guilan University of Medical Sciences, Trauma Research Center, Rasht, Iran
4 MSc of Nursing, Guilan University of Medical Sciences, Trauma Research Center, Rasht, Iran

Trauma Monthly. 20(Special Issue): e28502, DOI: 10.5812/traumamon.28502

Article Type: Research Article; epub: Mar 1, 2015;

Abstract

Background: Trauma is the most common cause of death in children. Road traffic injuries account for a significant percentage of trauma cases in children and it is a cause of disability.

Objective: An epidemiological study of factors associated with trauma caused by traffic accidents in children under 8 years of age who were hospitalized in Rasht Poursina Hospital was sought.

Materials and Methods: In a descriptive study, the medical records of 170 children under 8 years of age affected by traffic accidents that were admitted to Rasht Poursina Hospital were reviewed. Information on age, gender, time of accident, location of accident, type of road, the injured situation, the vehicle carrying the injured child, the use of safety equipment, site of injury, and the
clinical outcomes were collected from a checklist and the data were analyzed using descriptive statistics.

**Results:** A total of 170 children affected by traffic accidents and the demographic factors were 57.1% male and 42.9% female with a mean age 4.8 ± 5. Most crashes occurred out of town (38.2%), on a main street (54.7%), and in the evening (52.7%). Most were pedestrians (47.6%) and passengers (33.5%). A total of 26.9% of children were in the back seat. Of passengers, 17.8%, 8.9%, and 2.2% used a seatbelt, a crash helmet, and a child seat, respectively; and 71.1% did not use any safety devices. A total of 41.4% of patients were transported by EMS. In terms of anatomical location, head and neck (58.8%), and lower extremities (48.2%) were the most common sites of injury, respectively. With regard to the fact that the trauma mortality rate was 3%, in most cases (53.3%), accident victims were discharged from the hospital with complete recovery.

**Conclusion:** The results showed that pedestrians were the most vulnerable group and most children had injuries of the head and neck that can leave them with permanent complications. Therefore, focusing on road safety for this particular population group seems necessary.

**Keywords:** Epidemiology; Trauma; Child