Epidemiology of Paediatric Trauma in Malaysia: A Multicenter Study

Hani Yasmin Yahaya1, Muhammad Nur Azmi Baharuddin2, Sabariah Faizah Jamaluddin2, Muhammad Zulhilmi Abu Bakar2, Nadiah Sa’at3

1Department of Emergency Medicine, Hospital Al-Sultan Abdullah Universiti Teknologi MARA (UiTM), Puncak Alam, Malaysia

2Department of Emergency Medicine, Faculty of Medicine, Universiti Teknologi MARA (UiTM), Sungai Buloh, Malaysia

3Biostastics and Research Methodology Unit, School of Medical Sciences, University Science Malaysia (USM), Kubang Kerian, Malaysia

Paediatric trauma remains a regrettable source of premature death and disability worldwide. There are limited studies on the epidemiology of trauma among children in Malaysia. This study aimed to describe the epidemiological characteristics of paediatric trauma in Malaysia. This is a retrospective, multicenter study of trauma across participating centers in the Pan Asian Trauma Outcome Study (PATOS) registry, which included trauma cases aged less than 18 years from 2018 to 2022 in Malaysia. Information on demographics, injury epidemiology, and injury severity scores (ISS) were collected. A total of 3303 patients were included in the study. Most patients were in the adolescent age group (13-18 years, 78.7%), followed by school age (6-12 years, 12.4%) and preschool age (0-5 years, 8.9%) with median age of 16 years. The female-to-male ratio was 1: 3.56. The overall mortality rate was 1.1%, with traumatic brain injury as the highest cause of death. Mortality rate was highest in the adolescent age group compared to other age groups. The leading cause of injury across all age groups was accidental injury (98.2%), in which blunt trauma is the most common (98.8%). The most frequent location of injury was extremities (66.5%). 40.2% of patients have multiple injuries (2 or more injuries). Travelling was the most common mode of injury (46.5%), followed by sports activities (16.7%). Most injuries occur on the streets (83.2%), followed by residential areas (8.4%) and schools (4.1%). 34.5% of the patients required admission, and 10.9% were admitted to the intensive care unit. The overall median ISS was 4. The study provides an overview of the epidemiological characteristics of paediatric trauma in Malaysia. These findings point to potential risk factors that could be targeted for future injury prevention programs.

Keywords

Paediatric trauma, Trauma, Epidemiology