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Spectrum of Injuries and management of pediatric trauma patients admitted to Trauma Surgery in a level 1 Trauma Centre: a report of 906 cases

Background: Trauma is one of the leading causes of death and disability worldwide. In developed nations trauma is the major cause of death in children older than one. Owing to the poor registry in developing countries, the epidemiology of paediatric injuries is difficult to estimate. Epidemiological analysis is important for clinicians, researchers and policy makers for better preparedness, improving interventions and formulating effective preventive strategies. Paediatric survival is also one of the health performance indicators for a nation.

Aim: To appraise the epidemiology, mechanism of injury, organ specific distribution, management and outcome in paediatric trauma patients admitted to the department of Trauma Surgery.

Methods: Data of all patients ≤ 18 years on index presentation, admitted or transferred to the department of Trauma Surgery from Jan 2012 to Sept 2017 was retrieved from electronic database and deidentified. Each patient record was reviewed for age, gender, mechanism of injury, pattern of injury, findings of primary and secondary survey, ISS, system wise distribution of injuries, requirement of emergency surgery, hospital stay, morbidity and mortality were noted. The data collected was entered in a pre-designed performa and coded in unique alphanumeric codes and subjected to statistical analysis using SPSS version 2. The findings were expressed using percentage, median and mean. The management of various injuries were also recorded and presented descriptively.

Results: Of 906 patients admitted 698 (77%) were males. The predominant cause was Road Traffic Injury in 429 (47.3%) patients. Trauma involving one anatomic region only was found in 445 (49.1%) patients whereas 461 (50.9%) patients had polytrauma. Median ISS was 9. Most common regions injured were abdomen and thorax followed by extremity injuries. 774 patients (85.4%) were discharged to home care. Overall mortality was 14.5%. The most common cause of death was septicaemia followed by hemorrhage.

Discussion: The magnitude of paediatric injuries is significant. Appreciation of pattern of injuries can minimize missed injuries. Results comparable to dedicated paediatric trauma centres can be achieved with attention to paediatric physiologic and anatomic peculiarities. Maintenance of dedicated trauma registries is required to generate effective injury prevention activities in children.