

Original Research

Retrospective Study of Childhood Injuries in Age Group 8-15 years

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ABSTRACT:

Background: In preschool children head trauma accounts for 40% of injuries, and one-third of these lesions affect face. The present study was conducted to assess childhood injuries. **Materials & Methods:** The present study was conducted in the department of Community Medicine. It comprised of 280 children age ranged 8-15 years of both genders. Childhood injuries such as dental trauma, knee injuries and upper limb injuries etc. were recorded. **Results:** Age group 8-9 years had 40 boys and 34 girls, 9-10 years had 30 boys and 28 girls, 10-11 years had 10 boys and 20 girls, 11-12 years had 12 boys and 14 girls, 12-13 years had 14 boys and 15 girls, 13-14 years had 24 boys and 10 girls and 14-15 years had 20 boys and 9 girls. Dental injury was seen in 140 patients, knee injury in 100 and limb injury in 40. The difference was significant ($P < 0.05$). Reason for injury was bicycle fall in 100, road side accident in 60 and sports injury in 120 patients. The difference was significant ($P < 0.05$). **Conclusion:** Authors found that maximum child injuries were found in age group 8- 9 years. Maximum number of injuries were seen in boys as compared to girls.

Key words: Child, Dental, Injury

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INTRODUCTION

In preschool children head trauma accounts for 40% of injuries, and one-third of these lesions affect face. Engaging in sport and physical activity has beneficial effects for children, such as physical, cognitive and mental health, but participation also involves a risk of musculoskeletal injuries. Sports-related injuries account for 10-27% of all injury presentations in children 6-18 years in hospital emergency departments in northern European countries.¹ Correspondingly, 25% of all Danish children 10-19 years are treated each year in hospital emergency departments because of sports-related injuries, typically being traumatic injuries to the lower extremities. In epidemiological studies, a traumatic injury is often defined as a macro trauma resulting from a specific, identifiable event, and an overuse injury as caused by repeated micro

trauma without a single, identifiable event responsible for that injury.²

Primary dentition is shown to suffer a higher prevalence of trauma with an average of 30% of children experiencing some dental trauma than children with permanent dentition. Preschoolers showed a high prevalence of traumatic dental injuries (TDI) because of the lack of motor coordination and underdevelopment in physical and emotional growth. According to epidemiological studies from different countries, the frequency of primary tooth injuries ranges from 5% to 31% and approximately 42% of children have their first contact with a dentist due to traumatic injuries.³ The present study was conducted to assess childhood injuries.

MATERIALS & METHODS

The present study was conducted in the Department of Community Dentistry. It comprised of 280 children age ranged 8-15 years of both genders. All were informed regarding the study. Ethical approval was obtained from institute prior to the study.

Patient information such as name, age, gender etc. was recorded. Childhood injuries such as dental trauma, knee injuries and upper limb injuries etc. were recorded. Results were tabulated and subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Table I Age wise distribution of patients

Age group (Years)	Boys	Girls
8-9	40	34
9-10	30	28
10-11	10	20
11-12	12	14
12-13	14	15
13-14	24	10
14-15	20	9
Total	150	130

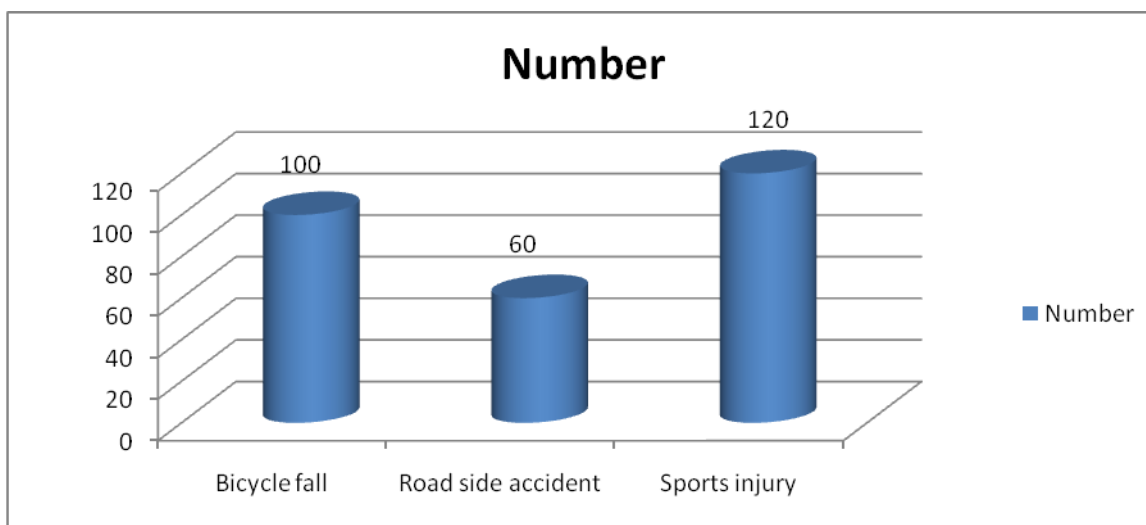
Table I shows that age group 8-9 years had 40 boys and 34 girls, 9-10 years had 30 boys and 28 girls, 10-11 years had 10 boys and 20 girls, 11-12 years had 12 boys and 14 girls, 12-13 years had 14 boys and 15 girls, 13-14 years had 24 boys and 10 girls and 14-15 years had 20 boys and 9 girls.

Table II Type of injury

Injury	No. of patients	P value
Dental injury	140	0.01
Knee injury	100	
Limb injury	40	

Table II shows that dental injury was seen in 140 patients, knee injury in 100 and limb injury in 40. The difference was significant (P < 0.05).

Graph I Reason of injury



Graph I shows that reason for injury was bicycle fall in 100, road side accident in 60 and sports injury in 120 patients. The difference was significant (P < 0.05).

DISCUSSION

Traumatic injuries may reflect only one part of the overall injury representation in children, illustrated in a recent study with 2.5 times more overuse (growth-related) than traumatic injuries of the lower extremities. Injuries occur as the maturing child and adolescent is more vulnerable to physical and physiological stress than adults, yet, overuse injuries including growth-related injuries, such as apophyseal injuries, may be underestimated since these injuries are not registered in specific settings like hospital emergency departments or orthopaedic sport clinics.⁴ Recording overuse injuries may be complicated by the fact, that there is no clearly identified onset and not necessarily a time loss from sport participation. Dental trauma in primary teeth may cause pain and loss of function and may also affect the development of the middle third of the face, permanent teeth and occlusion, which may result in physical, emotional and behavioural problems in children and their parents or guardians.⁵

For a long time gender and age were considered the main risk factors for TDI in primary teeth but other factors receive more attention, like the type of activity at the time of an accident and environmental, behavioural and socioeconomic factors.⁶ The present study was conducted to assess childhood injuries.

We found that age group 8-9 years had 40 boys and 34 girls, 9-10 years had 30 boys and 28 girls, 10-11 years had 10 boys and 20 girls, 11-12 years had 12 boys and 14 girls, 12-13 years had 14 boys and 15 girls, 13-14 years had 24 boys and 10 girls and 14-15 years had 20 boys and 9 girls.

Altun et al⁷ found that trauma was seen in 217 primary teeth, which implies that the number of injured primary teeth was 1.69 per child. The maxillary central incisors were the most frequently affected teeth, they were followed by maxillary lateral incisors, while the least affected were mandibular central incisors. Traumatic dental injuries involved periodontal tissue times more frequently than hard dental and pulp tissue. The main cause of teeth injury was fall and the majority of injuries occurred at home. Of 128 patients who received treatment 71 (55.5%) also had soft-tissue injuries. The distribution of soft-tissue injuries by gender was not statistically significant. Comparing children with soft-tissue injuries and those without them, a statistically significant difference was found in the time of arrival. The results of this study showed the need of informing about preventive measures against falls at home and the methods of providing first aid in dental trauma injuries.

Knee injuries result from a complex interaction of multiple non-modifiable and modifiable, intrinsic and extrinsic risk factors and inciting events. This complexity may be one of the reasons, why the knowledge of risk factors of knee injuries is inconclusive, also in children and adolescents, besides methodological and study differences. Nevertheless, in injury prevention research, investigating components that may form or be part of causes to injuries is

important.⁸ Risk factors for knee injuries may be associated with injury risk, but not necessarily causal related as a statistical association is no proof of causation.⁹

CONCLUSION

Authors found that maximum child injuries were found in age group 8- 9 years. Maximum number of injuries were seen in boys as compared to girls.

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