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Traumatic dental injuries in children in Ghaziabad: Across sectional study

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Abstract

Aim: The purpose of this study was to assess the Prevalance of traumatic dental injuries among school going children between 8-12 years of age. To determine factors associated with traumatic dental injuries.

Materials and method: It is a cross sectional study to evaluate 1000 children of 8-12 years of age group. Schools from all geographical directions were included. RESULTS: In the present study the overall prevalence of traumatic dental injuries was 26%, between the age group of 8-12. It was observed that males showed 27.69% and females showed 22.86% of prevalence of traumatic dental injuries.

Conclusion: The prevalence of dental injuries is high in Ghaziabad region and should be considered as an emerging health problem.

Keywords: Trauma, Traumatic Injuries, Prevalence, Children.

Introduction

Traumatic dental injuries are the most unanticipated event frequently associated in childhood.[1] The incidence of these injuries has markedly increased during the last 10-20 years which not only compromise dental health, but can

also lead to aesthetic, psychological, social and therapeutic problems. One of the greatest assets a person can have is a "smile" that shows beautiful, natural teeth. An untreated and unsightly fracture of an anterior tooth can affect the psychology of a child, his progress in school, and can have more impact on their daily living.[2,3]

Traumatic dental injury to primary teeth can result in complicated problems to the underlying permanent teeth, such as, hypoplasia, discoloration, and delay in eruption time, and tooth malformation, speech defects and emotional impacts, thus affecting the child's quality of life.[4,5]

Although, there are a number of studies that have determined the incidence and prevalence of dental trauma in various parts of India, but lack of such data has been found in Ghaziabad, Uttar Pradesh. Hence the study was undertaken with the aim and objective of determining the prevalence of dental trauma and its correlating factors in District Ghaziabad, Uttar Pradesh.

The purpose of this study was to assess the prevalence of traumatic dental injuries among school going children between 8-12 years of age. The objectives were:

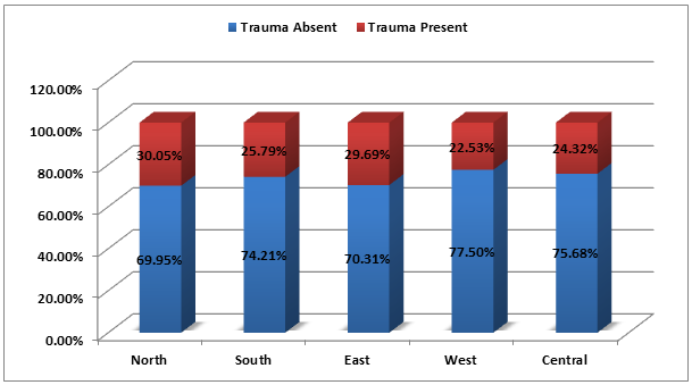
- To determine the prevalence of traumatic dental injuries.
- To determine factors associated with traumatic dental injuries in children.

Methodology

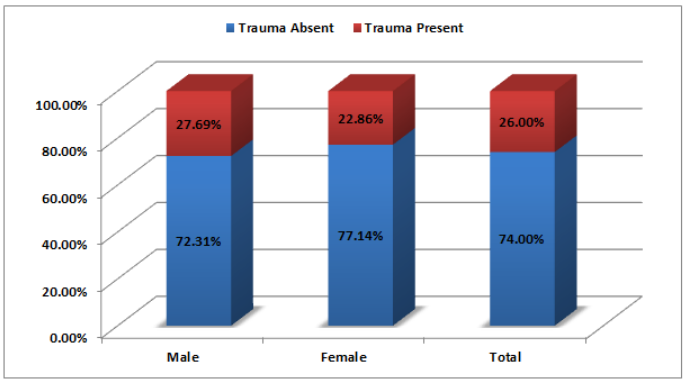
It was a cross sectional analytical study to evaluate 1000 children of 8-12 years age group. Schools from all the geographical directions of Ghaziabad were included. To assume homogeneity of sample, the map of Ghaziabad was procured and the city is arbitrarily divided into different zones-East, West, North, South, Central zones and samples were randomly selected. Voluntary written informed consent was obtained from parents of children participating in study. Permission was obtained from concern authorities of the school. The examination consists of recording of age, gender, type of injury and place of injury. Injuries to permanent teeth are categorized according to Ellis classification as modified by Holland et al.

Results

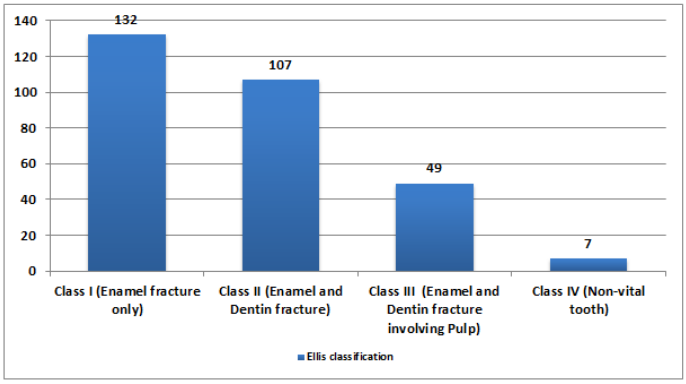
In this study 1000 children were examined & out of these 260 were found to have TDI. The over-all prevalence of dental trauma among the study population was 26%. Males had a higher prevalence of dental injury. Most of the children had Class 1 type of injury. Upper central incisors and Maxillary anterior teeth were most commonly affected with dental trauma. Most of the children suffered dental injuries in school and mostly in the playground and these injuries were due to falling.



Graph 1: Distribution of Trauma among the population.



Graph 2: Male – Female Comparison



Graph 3: Type of Injury Based on Elli's Classification

Discussion

Traumatic dental injury is not a result of disease but a consequence of several factors that will accumulate throughout life if not properly treated. For this study, children between 8–12 years of age were chosen, as during this period there is the maximum physiologic growth and development and the children are actively involved in lot of outdoor activities.[6,7] The prevalence of traumatic dental injuries in this study was 26%. The prevalence noted is higher as compared to earlier studies done by Patel MC et al in 2012.[2] While in the study done by Alireza Navabazam et al[8]. in 2014, prevalence of about 27.56% was recorded which was comparatively higher. In this study the boys: girl ratio was 1.20:1 that showed that males are more prone to traumatic injuries than females & it was found to be statistically significant. Similar findings were observed in studies conducted by Gupta k et al in 2002 and by Traebreet in 2003.[2,9] The higher percentage of traumatic injuries in the boys could be attributed by the fact that boys engage in leisure activities or sports of generally more aggressive nature.[10] The peak age to sustain injury was found to be 7-8 years . This survey identified that children between 7-8 years of age are more prone to injuries to anterior teeth & this is supported by study conducted by Rocha et al in 2001. The study found that the majority of injuries occurred in the maxillary central followed by the maxillary lateral incisors. This could be due to early eruption of maxillary central incisors than maxillary lateral incisors & thus are at risk for a longer period of time & also that the central incisors are more buccally placed & are prone to the external environment. In this study the most common cause was fall in playground followed by impact/collisions. Similar results were presented by Tandon et al and Abanto J et al[11] in 2015. It was observed that most of the injuries were occurred at school (89%), followed by home (11%).

Conclusion

Study observed the children in mixed dentition period as the population at risk. Hence, prevention through health promotion and correction of predisposing risk factors should be carried out in early mixed dentition period to reduce the prevalence of dental injury and to avoid the financial costs of treatment. An effort can be made to reduce the prevalence of traumatic injuries by taking into consideration the following measures. Educational programs where by the children and their parents are given information regarding the preventive and treatment aspects of this commonly occurring condition. Health promotion policies should aim to create an appropriate and safe environment.

References

1. Mittal S., Dogra M., Mittal K., Pathania V., Kaur J. Prevalence of traumatic dental injuries and its correlates among school going children between 8-12 years of age in Sundernager, Himachal Pradesh – a short study. Indian J Dent Sci. 2015;2(7):5-8.
2. Patel MC, Sujan SG. The prevalence of traumatic dental injuries to permanent anterior teeth and its relation with predisposing risk factors among 8-13 years school children of Vadodara city: an epidemiological study. J Indian Soc Pedod Prev Dent. 2012;30(2):151-7

3. Carvalho JC, Vinker F, Declerck D. Malocclusion, dental injuries and dental anomalies in the primary dentition of Belgian children. Int J Paediatr Dent. 1998;8(2):137-41
4. Dua R, Sharma S. Prevalence, causes, and correlates of traumatic dental injuries among seven-to-twelve-year-old school children in Dera Bassi. Contemp Clin Dent. 2012;3(1):38-41.
5. Murthy AK, Mallaiah P, Sanga R. Prevalence and Associated Factors of Traumatic Dental Injuries Among 5- to 16-year-old Schoolchildren in Bangalore City, India. Oral Health Prev Dent. 2014;12(1):37-43.
6. Cortes MI, Marcenes W, Sheiham A. Prevalence and correlates of traumatic injuries to the permanent teeth of schoolchildren aged 9-14 years in Belo Horizonte. Brazil. Dent Traumatol. 2001;17(1):22-6.
7. Rodríguez JG. Traumatic anterior dental injuries in Cuban preschool children. Dent Traumatol. 2007;23(4):241-2.
8. Navabazam A, Farahani SS. Prevalence of traumatic injuries to maxillary permanent teeth in 9- to 14-year-old school children in Yazd, Iran. Dent Traumatol. 2010;26(2):154-7.
9. Norton E, O'Connell Ac.Traumatic dental injuries and their association with malocclusion in the primary dentition of Irish children. Dent Traumatol. 2012;28(1):81-6.
10. Carvalho B, Franca C, Heimer M, Vieira S, Colares V. prevalence of dental trauma among 6-7 year old children in the city of recife, PE, Brazil. Braz J Oral Sci. 2011;11(1):72-5.
11. Abanto J, Tello G, Bonini GC, Oliveria LB, Mukarami C, Bonecker M. Impact of traumatic dental injuries and malocclusion on quality of life of preschool children: a population based study. Int J Pediatr Dent. 2015;25(1):18-28.