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Study of Traumatized Anterior Teeth in School Children in the Kandy District of Sri Lanka

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ABSTRACT

The purpose of this study was to look at a population of Sri Lankan school children in order to study an array of parameters related to traumatized anterior teeth. These parameters included the prevalence, aetiology, the place of occurrence, type of injury, type of tooth injured and relationship of trauma to malocclusion. Two different samples were selected for this study. The first sample consisted of 2000 school children which included one thousand 8 year olds and one thousand 12 year olds. The schools were selected randomly from five divisions in the Kandy district. The other sample consisted of 4618 children aged 1 to 16 years who visited the Paedodontic clinic, Faculty of Dental Sciences, University of Peradeniya.

In the Kandy school children the prevalence of traumatized anterior teeth was 3.50 % in the 8 year olds and 14.4 % in the 12 year olds and the average was 8.95 %. The prevalence of traumatized anterior teeth was 4.33 % in children who attended the Paedodontic clinic at the Faculty of Dental Sciences, University of Peradeniya. It was found that the children in the age group of 9 - 12 years had the highest number of traumatic injuries. In addition in both studies the males received more injuries than females with a ratio of 2 : 1.

It was found that the main cause of dental injuries was due to falls (school survey - 78.57 % , university study - 74.00 %) followed by sports (school survey - 11.50 % , university study - 6.70 %) and collisions (school survey - 5.59 % , university study - 8.00 %). The majority of the injuries occurred at home (school survey - 73.18 % , university study - 58.00 %) followed by school (school survey - 11.73 % , university study - 29.50 %) and playground (school survey - 5.50 % , university study - 8.33 %) for both samples.

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The upper central incisor received more injuries than any other anterior tooth (school survey - 62.22 % , university study - 80.03 %). The study at the Paedodontic clinic showed that the most common type of dental injuries was the Class II type (WHO classification), which involves enamel and dentine, while the school survey showed that the most common type of dental injury was Class I type (WHO classification) which involves fractures confined to enamel only. In the study carried out with the patients who turned up at the Paedodontic clinic with traumatic injuries to the anterior teeth it was found that children with British Standards Institute's Class II Division 1 malocclusion had sustained more injuries (59.67 %). In contrast, in the school survey when children with fractures were analyzed, more injuries were seen in the group with British Standards Institute's Class I malocclusion (56.43 %).

In conclusion the prevalence of traumatized anterior teeth in the university (Paedodontic clinic) study and the school study was 4.33 % and 8.95 % respectively. The majority of the children had sustained their dental injuries at home. The common cause for dental injury was due to falls. The common type of fractures were either fractures involving enamel only (Class I - WHO classification) and fractures involving enamel and dentine (Class II - WHO classification). Furthermore children who showed a tendency towards protrusion had a high risk of obtaining fractures of anterior teeth due to trauma.

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