

Traumatic Teeth in 2 to 10 Years: In Tertiary Dental Care Centre

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Citation

B Rai, M Madan, R Jain, S Anand. *Traumatic Teeth in 2 to 10 Years: In Tertiary Dental Care Centre*. The Internet Journal of Dental Science. 2006 Volume 4 Number 2.

Abstract

Objectives: To evaluate the etiological, age, sex and number of teeth affected and treatment planning in 2 to 10 year old children.

Methods: We examined 60 children, aged between 2-10 years. The information about age, sex, cause of injury, number of teeth affected and complications were recorded in questionnaire forms.

Results and Conclusion:

Incidence of trauma in girls is higher than in boys and the two-four year old children were more affected as compared to other age groups. Crown fracture is common and restoration is treatment planned in most of teeth. Dentists, physicians and parents should be knowledge about the facial trauma and effect on permanent dentition.

INTRODUCTION

A trauma with accompanying fracture of a permanent incisor is a tragic experience for the young patient and is a problem that requires experience, judgement, and skill perhaps unequaled by any other portion of the dentist's practice. Injuries to the child patient can result in physical and emotional complications not only in children but also in their parents. Injury to the primary dentition may cause structural defects on the succedaneous teeth or affect the position^{1,2}. Dentists and physicians should be aware of the possibility of trauma to permanent tooth buds and parents should be informed as the possibility of defective permanent tooth development. Dentists can appreciate the cases better and carryout effective treatment with knowledge of the potential prognoses of different treatment modalities.

The purpose of this study was to investigate the incidence etiological factors and results of dental trauma on the primary dentition of children in tertiary dental care centre at Rohtak.

MATERIALS AND METHODS

In this study, the records of 375 children, registered for traumatic dental injuries at Deptt. of Oral Diagnosis, Government Dental College and Hospital, Rohtak during a

one year (Dec. 2004 to 12 Jan. 2006) were examined and 60 children (boys:girls = 25:35) with 107 affected deciduous teeth were selected. The children ranged in age from 2 years to 10 years old. The clinical examination of children was performed by dentists and indicated dental radiographs were obtained for each patient. The information about age, sex, cause of injury, number of teeth affected and complications were recorded in questionnaire forms. Types of injury were classified into three groups, according to Andreson and Andreson classification, which has been adopted by World Health Organization³ and as used in previous study⁴.

Vitality test, which are not reliable in small children were not performed so as to avoid pain as previous study⁴. Vertical and horizontal percussion tests were done and discolouration, fistulas and resorptions of the affected teeth were also examined and recorded. A statistical programme (SPSS 7.0) was used to analyze the data descriptively and chi-square tests were performed for statistical analysis.

RESULTS

Figure 1

Table 1 : Age and Gender Distribution of Children with Trauma

| Age | Boys | Girls | Total |
|--------|------|-------|-------|
| 2-4 | 12 | 15 | 27 |
| 4.1-6 | 7 | 12 | 19 |
| 6.1-8 | 4 | 5 | 9 |
| 8.1-10 | 2 | 3 | 5 |

Incidence of trauma in girls is higher than in boys and 2-4 year old children were more affected as compared to their age groups.

Figure 3

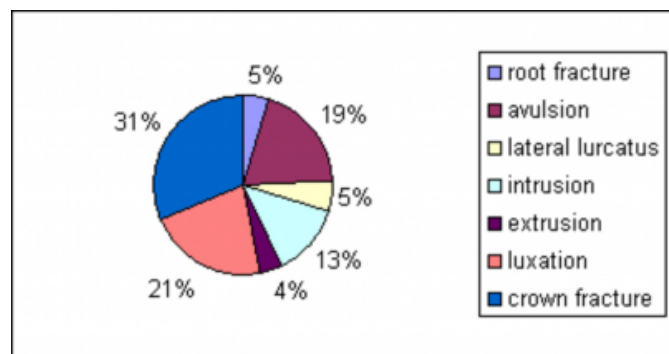
Table 3 : Number of Affected Teeth per Child

| Cause | Boys | Girls | Total |
|-------------------|------|-------|-------|
| Bicycles accident | 3 | 4 | 7 |
| Traffic accident | 2 | 7 | 9 |
| Games | 5 | 5 | 10 |
| Falls | 8 | 6 | 14 |
| Home accident | 2 | 8 | 10 |
| Chair falling | 5 | 5 | 10 |

The main cause of trauma in boys is falls while home accidents in girls.

Figure 4

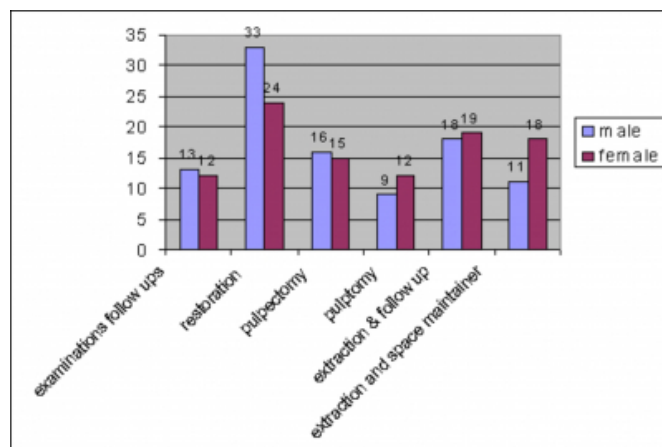
Graphs 1 : Affect of Trauma on Teeth



The 2-4 age groups more traumatic tooth as compared to other age groups.

Figure 5

Graph 2 : The Treatment Planned in Teeth



(Graph-1) Crown fracture is more than followed by luxation, avulsion, intrusion, lateral luxation, root fracture and extrusion.

{image:5}

Restoration is a main treatment planned in most of traumatic tooth. Restored teeth more in females as compared to males.(Graph-II)

The treatment planned in decrease preference, restoration, extraction and follow up, pulpectomy, extraction and space maintainer, examination follow up, pulpectomy, extraction and space maintainer, examination follow up and pulpotomy (Graph-II).

DISCUSSION

Injuries to primary dentition are common, ranging from 4-30% in preschool children^{5,6}. 2-4 year old children were more affected. Previous research showed that slightly more boys had experienced trauma than girls^{4,6,7} while our study more girls were affected. Osuji⁷ found that the 5 years old group had the highest incidence of traumatic injuries but there are studies which report this group 1-3 years^{6,7,8}. It was observed that most affected teeth were the maxillary central incisors and maxilla in general^{5,6,8},⁹ as in this study. The most preferred treatment option for the primary dentition was examination follow up^{4,5,6,7,8},⁹ which in this study restoration is preferred.

The dentists, physicians and parents should be aware of the possibility of trauma to permanent tooth buds and facial deformity.

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