

PATTERN OF EARLY LOSS OF DECIDUOUS MOLARS & A CROSS SECTIONAL STUDY

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ABSTRACT

A cross-sectional study was conducted at the Department of Oral and Maxillofacial Surgery of Fatima Jinnah Dental College, Karachi to find out the factors responsible for premature loss of deciduous molars in children aged three to nine years. All children aged 3 - 9 years visiting the Dental OPD of Fatima Jinnah Dental College Karachi for extraction of deciduous molars from Feb 2011 to Feb 2012 were included in the study. 256 children formed the study group. The data were collected on a predesigned Proforma filled by a single operator. Parameters taken into consideration were age, sex, tooth brushing and reasons for extraction.

In this study 176 were male and 80 female. Overall 368 deciduous molars were extracted, 237 deciduous molars were extracted in males and 131 in females. Among the investigated subjects, 17% of children reported no tooth-brushing. Caries was the commonest cause of premature loss of deciduous molars accounted for 96.1% followed by tooth fracture 2.3% and malocclusion 1.6%. The frequency of only one deciduous molar loss was 67.2%. Maximum deciduous molar loss 50.7% was observed in children aged 8 years. Most commonly extracted tooth was mandibular left first deciduous molar (37.7%).

Results of this study suggested that improper tooth-brushing dental caries and no-treatment of carious deciduous molars were major risk factors in its early loss.

Key Words: Premature loss, deciduous molars.

INTRODUCTION

Premature loss is defined as “the loss of a deciduous tooth before the time of its natural exfoliation”.¹ The two most common causes of premature loss of deciduous teeth are dental caries and trauma.^{2,3}

The premature loss of deciduous teeth may lead to malocclusion of permanent dentition. It can reduce the space required for the eruption of permanent teeth, which may lead to mal-alignment, crowding, and impaction of the permanent teeth.⁴

The deciduous molars are more prone to dental caries due to presence of pits and fissures on the occlusal surfaces. If the caries is not treated promptly it may lead to extraction of these molars before their normal exfoliation time.

Early loss of deciduous first molars may cause distal drifting of the deciduous canine. Early loss of deciduous second molars is a bigger challenge because they guide the erupting permanent first molars. In the absence of this guidance, the permanent first molars

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due to their innate potential drift mesially and occupy the space of the un-erupted second premolar⁵, which may lead to impaction of second premolars.

This study was conducted to identify the factors involved in early loss of deciduous molars in local population.

METHODOLOGY

All children aged 3 - 9 years visiting the Dental OPD of Fatima Jinnah Dental College Karachi for extraction of deciduous molars from Feb 2011 to Feb 2012 were included in the study.

A total of 368 deciduous molars were analysed from 256 children. The data were collected on a predesigned Proforma by a single operator. Following parameters were taken into consideration age, sex, tooth brushing and reasons for extraction.

The data were analysed in SPSS 13.

RESULTS

A total of 256 children were included in the study with 176 male and 80 female. Fig 1 Overall 368 deciduous molars were extracted, 237 deciduous molars were extracted in males and 131 in females. Table 1

Among the investigated subjects, 17% of children reported no tooth-brushing. Fig 3

Caries was the commonest cause of premature loss of deciduous molars accounted for 96.1% followed by tooth fracture 2.3% and malocclusion 1.6%. Fig 2

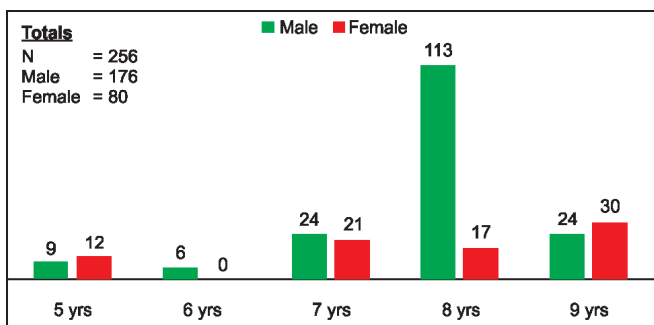


Fig 1: Age and Gender Distribution

TABLE 1: DECIDUOUS MOLAR EXTRACTION (GENDER WISE DISTRIBUTION)

	Upper Right		Upper Left		Lower Left		Lower Right		
	54	53	64	65	74	75	84	85	Total
Male	36	0	21	10	104	0	38	28	237
Female	23	0	26	0	35	23	12	12	138
Total	59	0	47	10	139	23	50	40	368

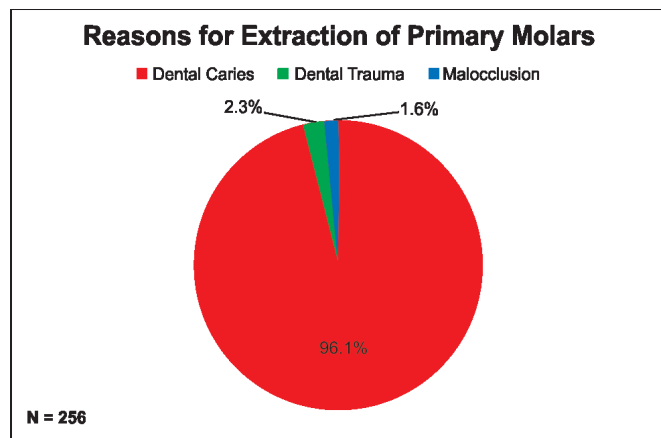


Fig 2: Reasons for extraction

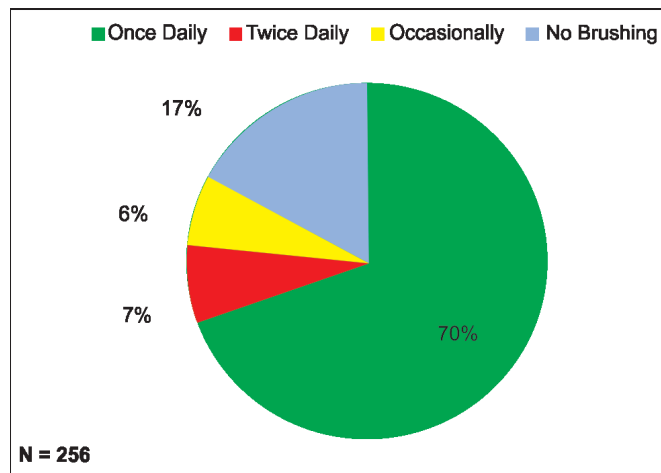


Fig 3: Frequency of Brushing

The frequency of only one deciduous molar loss was 67.2%. Maximum deciduous molar loss 50.7% was observed in children aged 8 years.

Most commonly extracted tooth was mandibular left first deciduous molar (37.7%).

DISCUSSION

It is the responsibility of the deciduous dental care physician to monitor the developing dentition in children. To facilitate the transition from deciduous to permanent dentition children should visit the dentist regularly to avoid early loss of deciduous teeth.⁶

Premature loss of deciduous teeth is regarded as the most common local factor leading to a malocclusion. A premature loss of deciduous teeth may lead to crowding, caused by migration of the adjacent teeth.⁷

Conservation of the deciduous dentition is an important factor in harmonic development of dental arches. Studies by Seward et.al and Northway also blamed caries to be the most important factor in development of malocclusion, both agreed that premature loss of deciduous dentition results narrowing of the required space for eruption of permanent successors.^{8,9}

Caries was the commonest cause of premature loss of deciduous molars accounted for 96.1%. Poor oral hygiene and lack tooth brushing can lead to periodontal problems in the present study 17% of the children were found to not brushing at all.

This study showed a small difference in gender distribution for early loss of deciduous molars but this difference was not significant, literature also shows similar results².

Amongst the study group 67.2% children showed loss of only one deciduous molar. Maximum deciduous molar loss 50.7% was observed in children aged 8 years this result is consistent with other previous studies.^{10,11}

Premature loss of a deciduous tooth, not only cause loss of function, but also leads to malocclusion and impaction of permanent teeth. Vigilance of general dentist may avoid the need for premature extraction of deciduous molars. Timely restoration of the carious deciduous molar can save the future dentition from occlusal disturbances and will reduce the risk of future orthodontic treatment.

CONCLUSION

Results of this study suggested that improper tooth-brushing, dental caries and no treatment of car-

ious deciduous molars were major risk factors in its early loss. Every effort must be taken to restore rather than extract the carious teeth.

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