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FIRST PRIMARY TOOTH ERUPTION;

A SURVEY OF ITS TIMING IN PAKISTANI CHILDREN AND FACTORS AFFECTING ITS CHRONOLOGY

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ABSTRACT… Objective: To find out the eruption timing of the first deciduous tooth and the factors affecting its eruption timing. **Study Design:** This study is hospital based. **Setting:** Lahore and Rajana. **Period:** 07.01.2016 to 28.08.16. **Material and Method:** All the participating children are from 05 months to 13 years age. In this study, information about children's first deciduous tooth eruption, mode of feeding, nutritional status and the family's socioeconomic status is taken from their mother. The data is fed in SPSS for window V 16.0 and calculated the average age at which the first milk tooth is erupted. **Result and Conclusion:** A total of 170 children from both genders were scrutinized. The first deciduous tooth eruption in our study was found to be the mandibular central incisor at the mean age of 8 months (7.86). Girls get early primary dentition than boys, breast and non-breast feeding bears no difference and children from low socioeconomic group have early primary eruption.

Keywords: First deciduous tooth, Chronology, Eruption

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INTRODUCTION

Eruption of a tooth is defined as the process when any tooth or its crown penetrates through the gingiva and can be seen in the oral cavity.[1] Eruption of first deciduous tooth is not a source of pleasure for the mother and the whole family but is an important mile stone for the baby. Its timing may depend upon the sex[2-11] socio-economic status of the family[12,13,14] ethnic group and race[15,22] type of milk feeding[1,14,23] and nutrition of the baby[24,25] and environment[18,6,26] of the baby.

It also varies from place and (Tab-I) country.[27] Overall genetics has significant effect on tooth eruption[19] though some authors point out that there is no difference in chronology of tooth eruption in males and females[27,28] breast and non-breast feeding[2,8,27,29] socio-economic conditions.[2,9] We have undertaken this study in mixed population of rural (Toba Tek Singh) and urban (Lahore) areas of Pakistan to find out the average age at which primary dentition starts and factors controlling its chronology like breast and/or mixed feeding and family status.

MATERIAL AND METHODS

All children attending the hospital pediatric and dental outdoor for different reasons were registered in the study, their first deciduous dental eruption, sex, whether breast fed or otherwise, nutrition, and the socio-economic status of the family were noted. Their data was fed in the SPSS to calculate the overall average age of first primary tooth eruption in different conditions.

RESULTS

1. Out of 170 children from 5 months to 13 years of age, 95 were males and 75 were females. In majority of the cases (86 out of 170), lower central incisor tooth was found to have erupted first at the mean age of 7.75 months in females and 7.96 in males with overall mean age of 7.86.
2. State of breast-feeding: (Tab III, IV) statistically there was no difference in chronology on total breast and mixed feeding.
3. Family status: (Tab V, VI) Children belonging to lower socio-economic status get earlier first deciduous eruption than those of the upper class.

	Author	First Dentition	Leading Sex	Age in months
American	Nanda (4)	LCI	Boys	7.67
Iceland	Magnusson (10)	LCI	Girls	6.89
Brazil	Ferreira, Herediatry (18, 26)	LCI	Boys	8.3
Jordan	Al-Batayneh (30)	LCI	Boys	8
Saudi Arabia	Al-Jasser (3)	LCI	Boys	8.49
Iraq	Baghdady (31)	LCI	Boys	8.4
Sudan	Affan , Eid (1, 8)	LCI	Boys	8.62
Nigeria	Folayan (2)	LCI	Boys	8.09
North India	Narinder (34)	LCI	Boys	8.67
South India	Rao & Rao (27)	LCI	Boys	13.5
Nepal	Gupta (33)	UCI	Boys	11
Standrad	Logan (32)	LCI	Boys	6
Present Study	Rathore, et al.	LCI	Girls	8

Table-I. Data of first primary tooth eruption in different countries

MALE							Total	AVG	FEMALE						Total	Avg
Age(Months)	**5**	**6**	**7**	**8**	**9**	**10**			**5**	**6**	**7**	**8**	**9**	**10**		
Upper Central Incisor	0	3	3	10	4	8	**28**	**8.40**	0	2	8	7	2	5	**24**	**8.0**
Lower Central Incisor	1	12	9	19	13	11	**65**	**7.98**	4	7	15	12	7	6	**51**	**7.5**
Lower Lateral Incisor	0	0	1	1	0	0	**2**	**7.5**	0	0	0	0	0	0	**0**	
Total							**95**	**7.96**							**75**	**7.75**

Table-II. Sex

	MALE						Total	Avg.	FEMALE						Total	Avg.
Age(Months)	**5**	**6**	**7**	**8**	**9**	**10**			**5**	**6**	**7**	**8**	**9**	**10**		
Lower Central Incisor	0	0	2	6	2	5	**15**	**8.6**		1	4	5	1	1	**12**	**7.8**
Lower Central Incisor	0	7	4	11	7	7	**36**	**8.1**	1	2	6	5	4	3	**21**	**7.9**
Lower Lateral Incisor			1	1			**2**	**7.5**								
Total							**53**	**8.1**							**33**	**7.85**

Table-III. Mode of feeding (Mother)

	MALE						Total	Avg.	FEMALE						Total	Avg.
Age(Months)	**5**	**6**	**7**	**8**	**9**	**10**			**5**	**6**	**7**	**8**	**9**	**10**		
Upper Central Incisor	0	3	1	4	2	3	**13**	**8.9**		1	4	2	1	4	**12**	**8.3**
Lower Central Incisor	1	5	5	8	6	4	**29**	**7.8**	3	5	9	7	3	3	**30**	**7.2**
Lower Lateral incisor																
Total							**42**	**8.2**							**42**	**7.8**

Table-IV. Mode of feeding (MIX)

	HIGH GROUP (MALE)						Total	Avg.	HIGH GROUP (FEMALE)						Total	Avg.
Age(Months)	**5**	**6**	**7**	**8**	**9**	**10**			**5**	**6**	**7**	**8**	**9**	**10**		
Upper Central Incisor	0	1			3	3	**7**	**9**					1	2	**3**	**9.6**
Lower Central Incisor	0	2	3	5	5	3	**18**	**8.2**	1	3	3	4	3	1	**15**	**7.5**
Lower Lateral Incisor																
Total							**25**	**8.6**							**18**	**8.6**

Table-V. Socioeconomic status of family

	LOWER GROUP (MALE)						Total	Avg.	LOWER GROUP (FEMALE)						Total	Avg.
Age(Months)	**5**	**6**	**7**	**8**	**9**	**10**			**5**	**6**	**7**	**8**	**9**	**10**		
Upper Central Incisor	0	2	3	10	1	5	**21**	**8.2**		2	8	7	1	3	**21**	**7.8**
Lower Central Incisor	1	10	6	14	8	8	**47**	**8.1**	3	4	10	8	4	5	**34**	**8.1**
Lower Lateral Incisor			1	1			**2**	**7.5**			1	1			**2**	**7.5**
Total							**70**	**7.9**							**57**	**7.8**

Table-VI. Socioeconomic status of family

Family status: (Tab V, VI) babies belonging to lower socio-economical status get earlier first deciduous teething than those of upper class.

DISCUSSION

The world is divided into different races and ethnic groups like Caucasian, Negroid, Mongol, Arabs, Arian and mixed races. We in Pakistan, perhaps, mostly belong to Arian race. If we take a look at the table of the age of the first primary tooth eruption, we arrive at the conclusion that the overall age of the first primary tooth eruption is 8 months which corroborates with what is present in the Arab and the Negroid races.[2,3,8,30,31]

The standard chart of first primary eruption as given by Logan et al.[32] is 6 months age, which is much earlier but it is somewhat in accordance with what is present in the USA (7.67) (4) and Iceland (6.89). [10] This is probably because Logan took his standards from Europeans which is a Caucasian race. On the other hand, this age is a bit late in Nepal i.e 11 months[33] and Southern India (13.5 months)[27] which is perhaps a different race from North India and Pakistan. Besides, the chronology of primary dentition varies from area to area. For instance, mean age of first primary tooth eruption in Northern India is 8.67[34] where as it is 13.5 in South India.[27] So each area should have its own standard dentition chart. In our study, the Lower Central Incisor is the first deciduous tooth which erupts in the oral cavity which goes in accordance with most of the earlier studies. There is one exception of Nepal where the Upper Central Incisor is erupted first.[33] Girls exhibit earlier eruption than boys in our study like few other studies[10,11] who reported girls are the leaders in primary tooth eruption. As far as feeding is concerned, there is no effect of chronology in breast feeding or mixed feeding which is in accordance with other studies.[2,8,27,29] However, it is an interesting finding in our study that the children belonging to the lower socioeconomic status families show early eruption of first deciduous tooth which may be due to the fact that these babies are made to start with solid food intake like Roti (bread) much earlier in the lower socioeconomic population as compared to the upper socioeconomic class of Pakistan.

CONCLUSION

According to this study, in Pakistan, the primary lower central incisor tooth is the first to erupt at the average age of 8 (7.86) months and the eruption time of girls is earlier than the boys. Breast and non-breast feeding plays no part in the chronology, though children of low socioeconomic class get early primary tooth eruption.

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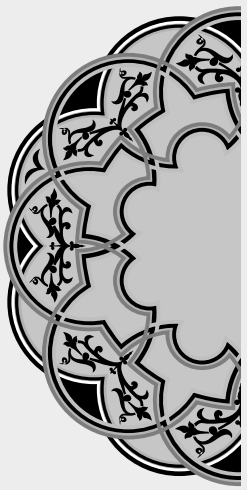

"Knowledge will give you power but character will give you respect."

Unknown

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