

Pattern of Eruption of the Third Molar Teeth in the Age Group of 17-25 years of Medical College Students

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Abstract :

Introduction : Every individual person in his lifetime has two sets of teeth, the one of which appears early and falls off are temporary or milk or deciduous teeth. The temporary are replaced by the permanent teeth. The third molar teeth appears in the particular age of life and hence, is more of interest of study in forensic odontology.

Objective : To study the eruption of third molar teeth among the age group of 17-25 years of Medical college students from the urban and rural background. **Methods :**

The present study was carried out for the eruption of third molar among the 150 medical students of the age group of 17-25 years. The study was carried out in the Department of Forensic Medicine and Toxicology of Medical College, Ahmednagar, Maharashtra. The examination for the eruption of the third molar was done physically without employing any X-ray or modern techniques and the collection of demographic information. **Results :** The eruption of third molar teeth was seen in 54% cases among the 150 cases and in the remaining cases it was not erupted. Out of total 109 Urban dwellers, 55 cases (50.45%) showed the eruption of third molar teeth and 54 cases (49.54%) did not. And 41 Rural cases, the eruption was seen in 26 cases (63.41%) while was absent in 15 cases (36.58%)

Introduction : The ever increasing rate of the crimes in this modern era; the identification and identity aspects has gain immense importance.⁽¹⁾ The several parameters among which the third molar eruption is also considered for age estimations and identification. The milk teeth appear first and then are replaced by the permanent teeth. Along with the appearance of permanent teeth, we can see the eruption of the molars. Usually, these are last to appear and are seen as an important tool for the age estimation. The identity aspect considers the dental carries, cementum filling, silver filing, gold filing, braces etc.⁽²⁾

Objective : To study the eruption of the third molar among the age group of 17-25 years. And also to examine the differences in eruption of third molar among the Urban and Rural Dwellers.

Methods :

Place -

Department of Forensic Medicine and Toxicology, Medical College, Ahmednagar.

Subjects -

150 Medical college students (80 males & 70 females) of the age group of 17-25 years from the urban and rural background.

Data collection -

Manual examination of the jaw using the lens and note down the information regarding age, sex and residency.

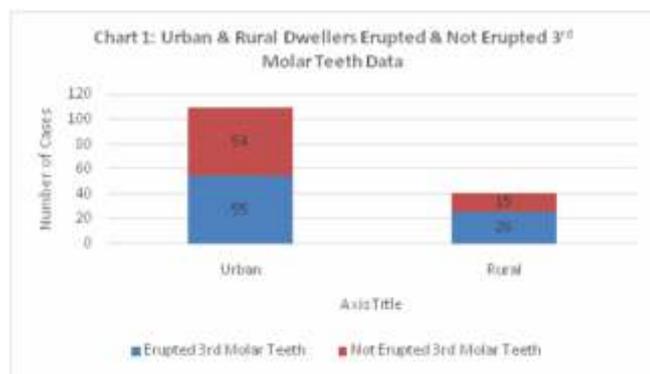
The data received was entered in Excel sheet and analysed.

Results : In our study, we examined the Medical college students of the age 17-25 years. Out of the total 150 cases, 84 cases (54%) the eruption of the third molar was seen and the remaining 66 cases (44%) it has not erupted.

We had examined 80 males and 70 females. Among the 80 males, 50 cases (62.5%) and among the 70 females, 38 cases (54.28%) third molar teeth has erupted. (Table 1)

Table 1: Relationship Between Age & 3rd Molar Eruption in Males & Females

Age Group (yrs)	Males		Females	
	Erupted 3 rd Molar Teeth	Not Erupted 3 rd Molar Teeth	Erupted 3 rd Molar Teeth	Not Erupted 3 rd Molar Teeth
17-18	1	7	2	2
18-19	2	5	6	6
19-20	7	5	7	8
20-21	6	3	5	5
21-22	7	3	7	5
22-23	12	4	6	4
23-24	9	2	4	1
24-25	6	1	1	1



The urban and rural dwellers also showed some significant differences. Out of the total 109 Urban dwellers, 55 cases (50.45%) showed the eruption of third molar teeth and 54 cases (49.54%) did not. Out of 41 rural cases, the third molar teeth eruption was seen in 26 cases (63.41%) while in 15 cases (36.58%) it was absent. (Chart 1)

Discussion : The third molar tooth is an important material of identification. It is also called as wisdom tooth because it erupts between the age of 17-25 years, considered as the age of maturity. Lall and Townsend found that 1/3rd molar tooth erupted between the ages of 15 and 16; 2/3rd molar tooth can be seen in 16-17 years and 3/3rd molar tooth in 17 years of ages.⁽³⁾

But the study indicates that only 4 cases were reported for their eruption between 17-18 years.

The eruption of third molar teeth is seen earlier in males than the females irrespective of the mandibular or maxillary origin.^(4,5)

The study shows that, among the 80 males, in the 50 cases (62.5%) third molar has erupted and among 70 females, 38 cases (54.28%) the third molar eruption was seen. This study also suggests that in the males as the age increases from 17 years third molar eruption increases from 11% to 80%. Whereas in the females the eruption shows constant phenomenal growth of 40-50%.

There was some rare phenomenon seen by Dr. J. P. Modi in which the eruption was seen in 14 years old Muslim, and 15 years old Hindu boy. Also similar findings was seen by Venkatrao who studied a case where there was no eruption of third molar at the age of 60 years.^(2,3)

But in our study we have seen the third molar in the erupting stage at the age of 17 years in majority of the subjects and the complete eruption was seen by the age of 25 years.

The silver impregnation, dental caries, super-added tooth etc., is used while recording the dental data in medico-legal cases. In case of mass disaster, the dentition can help in the establishing the identity of the victims. Different aspects regarding identification of the subject are- race, age, sex, blood group, DNA profiling etc., are also possible to make the identity of the individual.⁽¹⁾

The role of diet and the masticatory functions plays an important role in the development of the human adult jaw. Non-refined and fibrous diet in the rural populations is beneficial for the development of the trigonal spacing in the jaw for the third molar to erupt. Whereas in the western type of food containing less fibrous or almost no fibrous content may be the cause of late eruption of third molar in the urban dwellers. Diseases and the nutritional deficiencies may delay the eruption of third molar teeth. Facial growth, jaw size, and tooth size determines the eruption pattern, impaction and incidence of agenesis of third molars.⁽⁶⁾

The above study confirms the wide variations in the eruption of third molar in the age group of 17-25 years of the Indian Urban and Rural populations. The eruption of third molar teeth is seen earlier in the rural population than the urban population. The rural population shows eruption in 63.41% cases which is significantly higher than

the urban population with 50.45% cases showing eruption of the third molar teeth.

Conclusion : The identity aspect of third molar is of immense importance in medicolegal cases. In our study we conclude that the third molar teeth appears earlier in the males than the females. Besides in this study, we have come across the comparative difference in the eruption of third molar teeth among the urban and rural dwellers. The eruption of the third molar teeth is seen a bit earlier in the rural dwellers than the urban dwellers.

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