Eruption of Permanent Teeth among the Deori Boys of Mahadevpur Deori Village Of Arunachal Pradesh, India

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Abstract: The present study is an attempt to describe the eruption of permanent teeth among the Deori boys of Mahadevpur Deori village of Arunachal Pradesh. A total of 217 boys aged between 5 and 14 years were orally examined. Probit transformation of Fisher and Yates (1957) is adopted to calculate the median age at eruption of each individual tooth. The results show that eruption of permanent teeth begins at the median age of 5.70 years and completes by 10.80 years. The earliest tooth to erupt, among all, is the first mandibular molar of the left quadrant. Canine occupies the central position in the sequence of eruption in both jaws of the right quadrant and lower jaw of the left quadrant. However, first premolar occupies the intermediate position in upper jaw of the left quadrant. Further, the final tooth to erupt is the second maxillary molar of the left quadrant.

Keywords: Deori. Eruption. Mandibular. Maxillary. Permanent teeth

1. INTRODUCTION

Estimation of dental age is an important tool for planning treatment and forms a valuable asset in diagnosis and treatment planning during the developmental years [2, 12]. The formation of teeth, development of dentition and growth of craniofacial complex are closely related [16]. Several studies have shown variation in eruption pattern and timing of individual teeth among individuals from different ethnic and racial groups [7, 15, 18]. The changes in the living habits, food habits, and oral hygiene habits may have its influence on the eruption of teeth in human race [17]. The objective of the present study is to determine the age and sequence of permanent tooth eruption among the Deori boys of Mahadevpur Deori village of Arunachal Pradesh, India.

2. MATERIALS AND METHODS

The data was based on a cross-sectional study of 217 Deori boys who are aged between 5 and 14 years. Information regarding eruption of permanent teeth was obtained by orally examining these children who were apparently healthy. The date of birth of school going children was recorded according to the school register whereas for the non-school going children, their age was recorded as given by the parents. The age of each individual was calculated following the decimal age calendar given by Weiner and Lourie [20]. Each tooth was recorded as absent or present in the oral cavity. Present refers to any visible portion of the tooth which had pierced the gum. Some missing permanent teeth were recorded as erupted when the subjects could recall their eruption or extraction time. Each tooth was coded as I.C.P.M. which stands for incisors, canines, premolars and molars respectively.

A probit transformation method of Fisher and Yates [5] was adopted to calculate the median age of eruption of each tooth. Calculations for the right and left sides of maxilla and mandible was done separately as well as for the two sides combined.

3. RESULTS AND DISCUSSION

Table 1 represents the median age of eruption of permanent teeth among the Deori boys according to side and jaw. The earliest tooth to emerge is the first mandibular molar of the left quadrant (5.70 years) followed by first mandibular molar of the right quadrant (5.90 years). Also, the earliest tooth to emerge in the maxilla is first molar of the left quadrant (6.00 years). The side-wise comparison of maxilla shows that majority of the right quadrant teeth erupt earlier than the left quadrant. In contrary, a similar or very close median age of eruption is observed between all the left and right mandibular teeth.
Thereafter, the first maxillary molar emerges (5.80 years) followed by central incisor (6.40 years) among the Deori boys, majority of the mandibular teeth erupt earlier than their maxillary counterparts. A side-wise comparison further show similarity regarding the eruption sequence in the upper jaw while the canine occupies the same position in the lower jaw.

Pooling both the quadrants together, the earliest tooth to erupt is the first mandibular molar followed by incisors of both the jaws. The first premolar occupies the middle position in the sequence in the upper jaw while the canine occupies the same position in the lower jaw.

4. CONCLUSION

The first mandibular molar is the earliest tooth to erupt in the entire dentition among the Deori boys. Majority of the mandibular teeth erupt earlier than their maxillary counterparts. A side-wise comparison show slight difference in the sequence of eruption in both the upper and lower jaws. The present study also show close resemblance in the sequence of eruption of permanent teeth with the other populations of India, especially, Northeast India.
5. REFERENCES


