Mandibular mesiodens and maxillary mid-palatal mesiodens: Rare occurrences

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Abstract Mesiodens is the most common supernumerary teeth located mesial to both centrals; appearing peg shaped in a normal or inverted position. Their occurrence in the mandibular region is very rare and in the maxilla, most commonly they occur in the premaxillary region. Here we present a case of mandibular mesiodens and a case of midpalatal mesiodens in a seven year old.

Case Report-1

A seven year old boy reported to our department for routine dental check up. His family and medical histories were non-contributory. Extra oral examination did not show any abnormality. Intra oral examination revealed mixed dentition stage with class I molar relationship. A conical shaped tooth was located between the permanent lower central incisors, resulting in lack of space for the eruption of laterals (Fig. 1). Radiographically, a completely formed mesiodens with a conical crown and a root (Fig. 2) was seen, hence it was diagnosed as conical mesiodens. Extraction was done under local anesthesia and the patient is kept under observation for closure of the space and eruption of mandibular laterals.

Introduction

Supernumerary teeth are excess number of teeth as compared to the normal dental formula1. Approximately 90–98 percent of all supernumeraries occur in the maxilla with a particular predilection for the premaxilla2. Mesiodens are the most common type of supernumerary tooth3. The term Mesiodens is used to refer an unerupted supernumerary tooth in the central region of the maxilla or mandible between two central incisors4. A supernumerary tooth in the mandibular incisor region is very rare2. According to dental literature only two percent of the supernumerary teeth occur in the anterior mandible region5. Here we present a case of mandibular mesiodens in a seven year old boy. In the maxilla, most commonly they occur in the premaxillary region but here we report a case of midpalatal mesiodens in a seven year old girl.

Case Report-2

A seven year old girl accompanied by her father reported to our department with the chief complaint of tooth erupting in the middle of the palate. Her family and medical histories were unremarkable. Extra orally no abnormality was detected. Intra oral examination revealed mixed dentition stage with class I molar relationship. A conical shaped tooth was located in the place of deciduous upper left central incisor between the deciduous upper right central incisor and the left lateral incisor. Another partially erupted conical crown was noticed in the middle of the palate (Fig. 3). Radiographically, a completely formed mesiodens with a conical crown and a root (Fig. 4a and 4b) was seen between the incisors and one more was placed horizontally in the
mid palatal region at the crown end of the permanent upper right central incisor tooth bud. The erupted mesiodens was extracted and the partially erupted mid palatal one was surgically removed. At six months of follow up we noticed normal eruption of permanent upper central incisors.

Discussion

Mesiodens is the most common of supernumerary teeth located mesial to both centrals; appearing peg shaped in a normal position or inverted position.

Fig. 1 Intraoral view of the mandibular mesiodens

Fig. 2 Mandibular mesiodens on periapical image indicated by the arrow

Fig. 3 Intraoral view of the conical mesiodens and partially erupted midpalatal mesiodens

Fig. 4a IOPA radiograph of conical and midpalatal mesiodens indicated by the arrow

Fig. 4b Occlusal view of conical and midpalatal mesiodens indicated by the dotted circle
The incidence of supernumeraries in the mandible is low, as very few cases \(^6,7\) have been reported in the literature till date and mesiodens in mid palatal region have seldom \(^8\) been reported in the literature.

Several theories have been put forward concerning the cause of supernumeraries. The most widely accepted of these is the hyperactivity theory, which implies that supernumerary teeth are the result of excessive but organized growth of the dental lamina. Remnants of the dental lamina or palatal extensions of the active dental lamina are induced to develop into an additional tooth bud, which results in a supernumerary tooth \(^10\).

In children, 85% of anterior supernumeraries remain unerupted and 65% interfere with the normal eruption of the maxillary permanent incisors \(^11\). In case-1 the mesiodens was impeding the eruption of lower permanent laterals and in case-2 mesiodens were interfering with the eruption of the maxillary permanent incisors. Early diagnosis in both the cases could have prevented the interferences with the eruption of permanent incisors.

Management depends upon the type of mesiodens, its position, relation to other teeth and their effect on adjacent teeth. Extraction is not always the treatment of choice for supernumerary teeth. Unerupted supernumerary teeth that are symptomless do not appear to be affecting the dentition in anyway and those which are found by chance are sometimes best left and kept under observation \(^12\). In our patients the treatment of choice was extraction of the supernumerary tooth with orthodontic treatment if required as appropriate. In case 1 and 2 the erupted mesiodens were extracted and the partially erupted one was surgically removed.

Periodic recall check ups are necessary in such cases, as in 75% of cases extraction of the mesiodens during mixed dentition resulted in spontaneous eruption and alignment of the adjacent teeth \(^13\). So “wait and watch” policy was adopted in our cases.

**Conclusion**

A mesiodens could be suspected if there is an asymmetric eruption pattern of the maxillary incisors or delayed or ectopic eruption. Early diagnosis and treatment of patients with supernumerary teeth are important to prevent or minimize complications, which in turn could reduce the need for future orthodontic treatment.

**References**