Occurrence of double mesiodens and an inverted mesioden: a report of 2 rare cases

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Abstract

Supernumerary teeth are extra teeth in comparison to normal dentition. Mesiodens in the most commonly encountered supernumerary teeth. Mesiodens refers to an unerupted supernumerary tooth in the midline of maxilla, between the central incisors. They may occur as single or multiple. But mostly they are seen as single and multiple cases that have been reported are extremely rare. Moreover they erupt in a normal sequence as that of natural teeth. It is present as a conical shape crown with small size and completely formed root or may mimic a natural tooth. It can also remain unerupted and cause problems such as malocclusion and they are detected incidental findings on routine radiographic examination. This report present two rare cases, first in which 2 mesiodens are present one having a conical crown and other having a molariform crown, and the second case in which an inverted impacted mesioden was incidentally found on routine radiographic examination.

Keywords: Mesiodens, Inversion, Supernumerary tooth, Double, Impacted

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Introduction

By definition, supernumerary teeth are extra teeth in comparison to normal dentition. The first ever case defining a supernumerary tooth was reported between AD 23 and 79. They are a developmental disturbance occurring during odontogenesis resulting in the formation of teeth in excess of the normal number[1,2].

Supernumerary teeth are a relatively frequent disorder of odontogenesis characterized by an excess number of teeth, with mesiodens being the most frequent[3]. The term mesiodens is used to refer to an unerupted supernumerary tooth in the midline of maxilla, between the central incisors[4]. The incidence of occurrence of mesiodens is 0-1.9% for deciduous teeth and between 0.15-3.8% for permanent teeth with male to female occurrence ratio of 2:1[5].

The mesiodens may present as a rudimentary morphology with a cone-shaped crown, generally smaller in size than the adjacent normal teeth. It may also be found to mimic a natural tooth shape. The root is often totally formed, and may be curved or globular. Only 25% of all mesiodens spontaneously erupt into the oral cavity. In general, they remain impacted and asymptomatic; and are commonly discovered during routine radiographic examination[6].

Through this article we present two cases of mesiodens *firstly*, with the presence of double mesiodens present on the palatal side and *secondly*, an impacted inverted mesiodens which was encountered accidently during radiographic investigation, as almost negligible cases of this kind has been reported in literature.

Case Report

Case 1: A 10 year old female reported with a complaint of forwardly placed upper front tooth (Fig. 1). Intraoral examination revealed the presence of two mesiodens on the palatal aspect one situated adjacent to 12 having a molariform shape (Fig. 2) and the other adjacent to 11 with a conical shape. The left permanent central incisor was placed labially. Soft tissues were normal. There was no relevant medical history. Intraoral radiograph was taken which revealed with mesiodens overlapping 11 and 21 respectively having completely formed root (Fig. 3).

Case 2: An 11 year male reported to the department with a complaint of space between the upper front teeth. The soft tissues were normal with no evident medical history. The periodontal status of the patient was good. An intraoral radiograph was taken which revealed an inverted impacted mesioden situated in between 11 and 21 with completely formed crown and root Fig. 4).

Fig. 1: Labially erupted 21

Fig. 2: Double Mesiodens placed adjacent to 11 and 21 (Black Arrows)

Fig. 3: Intraoral radiograph of the double mesiodens (White Arrows)

Fig. 4: Intraoral radiograph showing the impacted inverted mesioden

Discussion

Originally it was postulated that mesiodens reported a phylogenetic relic of extinct ancestors who had three central incisors. A second theory known as dichotomy suggests that the tooth bud is split to create two teeth, one of which is the mesiodens. The third theory involving hyperactivity of the dental lamina is the most widely supported. According to this theory, remnants of the dental lamina or palatal offshoots of active dental lamina are induced to develop into an extra tooth bud, which results in a supernumerary tooth[7].

Mesiodens can be classified on the basis of their occurrence in the permanent dentition (rudimentary mesiodens) and according to their morphology (conical, tuberculate or molariform)[8]. Conical mesiodens resemble natural teeth in both size and shape whereas rudimentary mesiodens exhibit abnormal shape and smaller size. Conical mesiodens are generally peg – shaped and are located palatally between the maxillary central incisors which have completely formed root and can also erupt in the oral cavity. However, they may also be found inverted with the crown pointing superiorly in which case they are less likely to erupt in the oral cavity[9].

Tuberculate mesiodens are barrel shaped with several cusps or tubercles and have incomplete or abnormal root formation and rarely erupt. The rarest form or mesiodens is the molariform mesiodens, which has a premolar like crown and a completely formed root[10].

In the first case the double mesiodens was seen in the anterior maxillary region on the palatal aspect. The mesioden placed adjacent to 12 was molariform in shape and the mesioden placed adjacent to 11 was conical in shape. And in the second case an impacted inverted mesioden was incidentally found on a routine radiographic examination, which after extraction was found to be conical in shape.

In conclusion the cases presented here are rare, since a very few case of such type have been reported. The occurrence of double mesiodens and inverted impacted mesioden has a clinical significance as they may be a reason of crowding in the maxillary anterior region, the former being a visible factor and latter being an invisible factor for the same.

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