

Mesiodens in the Primary Dentition: A Rare Occurrence

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Abstract

Supernumerary teeth occur frequently in the permanent dentition, but they are rare in the primary dentition. Mesiodens is a supernumerary tooth with a cone shaped crown and a short root. The etiology of supernumerary teeth is still unknown and not well understood. Incidence of mesiodens in children varies from 0.15 - 0.38%. Morphologically, mesiodens may be of three types: the most commonly seen is conical, while tuberculate and supplemental types are less common.

Keywords: Supernumerary teeth; Mesiodens; Primary dentition.

Introduction

The supernumerary tooth present in the midline of the maxilla between the two central incisors is referred to as 'mesiodens.' The occurrence of mesiodens in the primary dentition is very rare when compared to the permanent dentition. The incidence of mesiodens in permanent dentition ranges from 0.15 to 3.8%, whereas in primary dentition it ranges from 0 to 1.9%.^{1, 2, 3} They are twice more common in boys, while no significant sex distribution is noted in primary supernumerary teeth.⁴ Mesiodens may at times erupt normally or then stay impacted or follow an abnormal path of eruption.³ Mesiodens or mesiodentes may produce a variety of complications, for example, crowding, delayed eruption, diastema, rotations, cystic lesions, and resorptions of adjacent teeth, etc., to the developing dentition/occlusion of a child. Supernumerary teeth may occur as a single isolated dental

anomaly or in association with other developmental anomalies, or syndromes such as cleft palate and cleft lip, cleido-cranial dysostosis, Down's syndrome, and Gardner's Syndromes.⁴

Supernumerary teeth of the premaxillary region may appear in a variety of shapes though the most common type is conical or peg shaped (61%).⁵ The other two commonly present are tuberculate and supplemental (adjacent tooth like).

Various theories have been put forward to explain the etiology of supernumerary teeth, which includes phylogenetic reversion (atavistic theory), split in tooth bud (dichotomy theory), locally conditioned hyperactivity of the dental lamina (dental lamina theory), and a combination of genetic and environmental factors (unified etiologic explanation).⁶

We are hereby presenting a case report of a 5year old boy with well maintained primary dentition who had come to our department as a part of the school dental health programme who on routine checkup was found to have a mesiodens.

Case Report

As a part of the school dental health programme that is conducted by our department of Pediatric and Preventive Children Dentistry, the Class I students of a

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nearby school were brought in for a normal routine checkup. No extraoral abnormality was detected (Fig 1) and his family and medical history were non contributory as we derived later from the parents.

Intra-oral examination revealed a complement of the primary dentition in a well-maintained oral health. A conical mesiodens

was noted between the central incisors (Fig 2). Occlusal radiograph showed a completely formed mesiodens with a conical crown and a root (Fig 3).

It was decided to keep the mesiodens under observation rather than going in for extraction, a decision can be taken once the eruption of the permanent central incisors begins.

Fig. 1: Extra-Oral View Showing no Abnormality



Fig. 2: Conical Mesiodens



Fig. 3: Occlusal View Showing Mesiodens



Fig. 4: Model Showing Mesiodens



Discussion

Mesiodens account for a 45-67% of all supernumerary teeth.⁷ Balk defined mesiodens as the most common of supernumerary teeth located mesial to both centrals, appearing peg shaped in a normal position or inverted position.⁸ Authors have also mentioned that the anterior midline of maxilla is the most common site of supernumerary tooth in which case the supernumerary tooth is known as

mesiodens.⁹ Very few supernumerary teeth have been reported for the primary dentition.⁸ The present case is quite unusual as this reports a mesiodens in primary dentition which is rare.

Supernumerary teeth are classified according to their shape and size (morphology) and location. The present case, reports of a conical mesiodens.

Conical mesiodens has certain characteristics, which are as follows:³

- They are usually located between the permanent maxillary central incisors but rarely erupt labially.
- They erupt during childhood.
- They usually have complete root formation ahead of the adjacent teeth.
- They rarely cause delay in eruption of central incisors, but may cause alteration of path of eruption of these teeth.

A labially positioned mesiodens may cause palatal deflection of an incisor that may erupt with a rotation or in reverse bite relationship. Other clinical problems associated with mesiodens are the development of malocclusion, ectopic eruption of adjacent teeth, cystic changes in the follicle, etc. Detection of mesiodens or supernumerary teeth is best achieved by clinical examination and radiography (IOPA, Occlusal, Orthopantomogram).

In case of unerupted mesiodens, before surgical extraction is attempted, the location of the tooth/teeth and the state of root formation of adjacent teeth must be ascertained.

In the present case, the erupted conical mesiodens in the boy was of not much concern to the parents and the boy. The extraction was delayed until the eruption age of permanent central incisors as the parents were not willing and agreed to do the same as soon as a problem could be detected.

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