

NON SYNDROMIC MESIODENS - HIDDEN LAMBS AMONG NORMAL FLOCK! : A CASE REPORT

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ABSTRACT:

Supernumerary teeth are a relatively frequent disorder of odontogenesis characterized by an excess number of teeth. The incidence of supernumerary teeth in the maxillary anterior region is high and can lead to midline diastema. Mesiodens are frequently associated with various craniofacial anomalies, including cleft lip and palate, Gardner's syndrome and cleidocranial dysostosis to name a few. The present case discusses a rare occurrence of a Mesiodens with another supernumerary teeth located palatally, in a 25 year old non-syndromic adult patient.

Key words: Mesiodens, Supernumerary teeth, Odontogenesis, Midline diastema



INTRODUCTION:

Extra teeth or supernumerary teeth may present in both the permanent and the primary dentitions, but are five times less frequent in the primary dentition. The most common type of supernumerary tooth as indicated by Alberti et al is mesiodens, occurring in 0.15% to 1.9% of the population. Mesiodens can occur individually or as multiples (mesiodentes), may appear unilaterally or bilaterally, and often do not erupt.^[1]

The first documented report of supernumerary teeth has been found in ancient human skeletal remains since the Lower Pleistocene era. Until recently, the most primitive evidence of the presence of mesiodens goes back to 13000 years ago when it was found among the remains of an Australian aborigine.^[2]

One-third of all patients with a mesiodens also have other supernumerary teeth; however, some patients present with mesiodentes in conjunction with congenitally missing teeth. Mesiodentes

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are frequently associated with various craniofacial anomalies, including cleft lip and palate, Gardner's syndrome and cleidocranial dysostosis.^[3]

Mesiodens can cause delayed or ectopic eruption of the permanent incisors, which can further alter occlusion and appearance. Management of supernumerary teeth depends on the type and position of the tooth.^[4]

The present case discusses the rare occurrence of a Mesiodens associated with another supernumerary teeth located palatally in a 25 year old non-syndromic female patient.

CASE DETAIL:

A 25 year old female reported to our institution with a complaint of irregularly placed upper front teeth. On elaborative history taken, patient could not recall any of her near and distant family members having similar dental problem. Patient had no significant medical history and was appearing well nourished and of normal built and height.

On, intra-oral examination, patient presented with fair oral hygiene, with all soft tissues appearing normal in color, texture and consistency. She had all permanent teeth present in her oral cavity with, some of them showing mild attrition. On further evaluation, two supernumerary teeth were noticed in maxillary anterior region. One of the supernumerary tooth was present in between two maxillary central incisors and other one was seen palatal to left maxillary central incisor (Figure 1). Both of the supernumerary teeth were non carious, fully erupted, conical in shape and were firm in placement. No other

significant dental observations were made.

To rule out any other non-erupted teeth (supernumerary, supplemental, impacted or retained) a radiographic evaluation including, IOPA, and OPG was carried out. However, OPG did not reveal any other significant dental abnormality except for the presence of two supernumerary teeth in maxillary anterior segment. Further, IOPA showed presence of two well-formed supernumerary teeth with conical crowns, with sound root structure and healthy peri-apical tissues (Figure 2).

Earlier literature reviews have found these supernumerary teeth to be associated with certain syndromes, viz. craniofacial anomalies, Gardner's syndrome , cleidocranial dysostosis to name a few. To rule out any such incidence of syndrome, a thorough systemic examination by medical physician was performed. However no other significant findings were made.

A multidisciplinary approach was adopted for the management of the case. Extraction of both the supernumerary teeth, followed by orthodontic realignment was planned. However patient wished for the corrective treatment without extraction of the supernumerary teeth, which was not possible in the present case. Even after proper counselling of the patient she did not turn up later for alternative measures.

DISCUSSION:

Dental formula of human beings are pre-determined but can be occasionally more than usual. Such teeth are called as supernumerary teeth. Higher frequency of

supernumerary teeth was noted in man than in woman with ratio of 2:1.^[5]

Mesiodens is the most common supernumerary tooth followed by distomolar. Previous articles have reported that in 33% of the cases, a supernumerary tooth in the primary dentition is followed by the supernumerary tooth complement in the permanent dentition.^[6]

Three different theories related to the origin of different types of supernumerary have been suggested in literature. It was originally postulated that supernumerary anterior teeth represented a phylogenetic relic of extinct ancestors who had three central incisors. Another theory suggests, dichotomy of the tooth bud to be responsible for supernumerary tooth. And lastly, according to hyperactivity theory, supernumeraries are formed as a result of local, independent, conditioned hyperactivity of the dental lamina.^[7]

Numerous reports identified the effects of supernumerary teeth on the dentition mainly malocclusion, median diastema, rotation or displacement of incisors, delay in eruption, root resorption, pulp necrosis, cyst formation and dilacerations of developing teeth. But no such effect on dentition was observed in our case, possibly owing to the palatal placement of second supernumerary teeth and adequate spacing in dental arch of the patient.^[8]

According to their shape and size, Mesiodens can be classified into two categories namely eumorphic teeth resembling the central incisor with normal shape and size and dysmorphic teeth with different shapes and sizes which are further categorized into conical,

tuberculate, supplemental and odontomas. In our case both the supernumerary teeth were dysmorphic and were conical in shape.^[1]

Supernumerary teeth may or may not be seen in the oral cavity, in later scenario they may be either impacted or submerged in the jaw bones. Also, many a times they are seen as an oral component of various syndromes, which makes their early detection prudent to overall prognosis of the syndrome. Thus early detection of supernumerary teeth by means of radiographic investigations can help the physician locating the tip of iceberg for the hidden abnormalities in the patient. Therefore it is always advisable to do a complete body check-up in such cases for some unfortunate patients. These investigations must include chest and skull radiograph, hormonal levels, USG of abdomen, careful skin and hair analysis to name a few.^[9]

In our case, on carrying out all the above mentioned investigations, nothing significant was recorded. So we ruled out any coincidental presence of any accompanying known syndrome for this patient.

Treatment varies from extraction of supernumerary teeth or extraction coupled with orthodontic correction. Mesiodens can be extracted in two ways - early extraction before root formation of the permanent incisors and late extraction after root formation of the permanent incisors.^[10]

For proper eruption and alignment of adjacent teeth, mesiodens should be extracted in early mixed dentition, this will reduce the need for orthodontic treatment.^[11]

CONCLUSION:

Clinician should be alert enough to correlate the delayed, ectopic or asymmetric eruption of the central incisors with the possibility of a Mesiodens or other supernumerary teeth. The clinician should have accurate

radiographs including panoramic, periapical and occlusal views with an alert in mind related to possible existence of any syndrome complex. Sometimes, finding these supernumerary teeth have revealed numerous diagnoses of rarer syndromes.

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FIGURES:



Figure 1: Clinical Appearance



Figure 2: Radiographic Appearance