

Mesiodens - A Report Of Two Cases

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Abstract: *Mesiodens is a supernumerary tooth located in the premaxilla between the two central incisors that causes a variety of dental problems such as impaired dentofacial aesthetics, malocclusion, and sometimes may lead to cyst formation. The prevalence of mesiodens ranges from 0.15 % to 1.9 %. The present case report deals with the non-surgical management in a patient presenting with mesiodens in maxilla.*

Keywords: *Ectopic, malocclusion, supernumerary teeth.*

I. INTRODUCTION

Supernumerary teeth are developmental anomaly characterized by extra teeth in addition to the normal dentition. It can affect both maxilla and mandible; however, it is more commonly encountered in the upper jaw. The term mesiodens was coined by Bolt in 1917 and it is the most common type of supernumerary tooth, found in the central region of premaxilla between two central incisors. The overall prevalence of mesiodens is between 0.15% to 1.9%. Nagveni et al reported the prevalence of 1% among Indian children with a slight male predilection.

The exact etiology of mesiodens remains unclear; however, different theories have been suggested which include genetic and environmental factors, hyperactivity of dental lamina, dichotomy, syndromic conditions like cleft lip, cleft palate, cleidocranial dysostosis and Gardner's syndrome.

Mesiodens can occur individually or as multiples (mesiodentes), may appear unilaterally or bilaterally, and often do not erupt. Mesiodentes can significantly alter both occlusion and appearance by altering the eruption path and the position of the permanent incisors and may lead to delayed eruption of permanent teeth, dilacerations, abnormal root development of maxillary incisors and/ or crowding or spacing of the anterior teeth. Other less frequent complications include root resorption of adjacent teeth, formation of dentigerous cyst

and nasal eruption. Whether there are one or multiple supernumerary teeth, management and treatment are the same. Therefore, early diagnosis and treatment of mesiodens is important for preventing such complications. This article presents a report of two cases of mesiodens encountered during routine dental check-up and its non-surgical management.

II. CASE REPORTS

CASE 1

A 25-year old male patient reported to the department of Periodontology, Subharti Dental College & Hospital, Meerut for routine dental check-up. Upon intraoral examination presence of mesiodens between the maxillary central incisors was identified. The patient's medical and dental history was non-contributory and his family history of an additional teeth was also nonsignificant.

CLINICAL PRESENTATION

Clinical examination revealed an additional tooth in between the maxillary central incisors. The mesiodens was conical/ peg form in shape and smaller in size when compared

to the adjacent central incisors. The molar relations were normal with centric occlusion and centric relations coincident [Fig 1 & 2]. The mandibular dental arch was well aligned and dental midlines were coincident with the facial midline, profile was straight with competent lips. Overall, gingival and periodontal examination revealed healthy tissues.



Figure 1: Case 1 - Facial view showing mesiodens



Figure 2: Case 1 - Maxillary occlusal view showing mesiodens

CASE 2

A 28-year old male patient reported to the department of Periodontology, Subharti Dental College & Hospital, Meerut with a chief complain of a small tooth between the upper front teeth. Intraoral examination revealed the presence of mesiodens between the maxillary central incisors. As in case 1, the patient's medical and dental history was non-contributory and his family history of an additional teeth was also nonsignificant.

CLINICAL PRESENTATION

A conical/ peg shaped mesiodens, smaller in size as compared to the adjacent central incisors was present. The mesiodens presented with a blunt or flat incisal edge unlike that of case 1 and was present slightly palatal in relation to the centrals. The molar relations were normal with centric occlusion and centric relations coincident. Labial tipping of

the right maxillary central incisor over the mesiodens was also observed [Fig. 3 & 4]. Overall, gingival and periodontal examination revealed healthy tissues with pockets 3-4 mm in relation to the mesiodens.



Figure 3: Case 2 - Facial view showing mesiodens



Figure 4: Case 2 - Occlusal view showing mesiodens

RADIOGRAPHIC EXAMINATION

The intro-oral periapical radiograph of the same region was taken. There was no pathologic finding associated with the mesiodens in both the cases. The root of mesiodens was completely formed and slight dilacerations was observed in case 1.

III. MANAGEMENT

Keeping in mind the esthetics, treatment goals of extraction of the mesiodens followed by fixed orthodontic treatment in order to close the diastema was explained to the patients. However, the patients were apprehensive and refused to undergo any surgical intervention. Thus, non-surgical therapy of oral prophylaxis in both the cases and curettage of periodontal pockets in relation to the mesiodens in case 2 was done. Oral hygiene instructions were reinforced and the patients were recalled at 1, 3, 6 & 12 months for routine

check-up. Both the patients remained symptomless at subsequent follow-up visits.

IV. DISCUSSION

On the basis of their occurrence, mesiodens can be classified as (a) rudimentary – associated with permanent dentition, (b) supplemental- associated with permanent dentition. Based on their morphology, they can be (a) eumorphic – similar to a normal-sized central incisor, (b) dysmorphic - these have different shapes and size, and are categorized into conical, tuberculate and molariform.⁸ The rudimentary mesiodens is normally smaller in size. Conical mesiodens usually occur singly. They are generally peg-shaped and are usually located palatally between the maxillary central incisors, tending to displace the erupting permanent central incisors, often have a completely formed root and can erupt into the oral cavity. The tuberculate mesiodens are barrel shaped with several cusps or tubercles and have incompletely formed root. The molariform mesiodens is a rare type which has a premolar like crown and incompletely formed. The present case was of a rudimentary, conical mesiodens.

Although, extraction of mesiodens has been advocated due to esthetic concerns, Garvey recommended monitoring of mesiodens in the following situations; satisfactory eruption of succeeding teeth, absence of any associated pathologic lesions and risk of damage to the vitality of the related teeth. It has also been recommended to keep the symptomless mesiodens in place under observation. The same was done in the present cases.

V. CONCLUSION

Mesiodens is the most prevalent and interesting dental anomaly that the clinician chances upon. Delayed, ectopic or

asymmetric eruption of the central incisors should alert the dentist to the probability of mesiodens. The early removal of the supernumerary teeth in order to prevent complications is the treatment of choice; however, symptomless cases could be left untreated with regular follow-up.

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