

Non Syndromic Molariform Mesiodens: A Report of 5 Cases with Review of Literature

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Abstract: Incidence of molariform mesiodens in the maxillary midline is rare. This paper reports a case series of the presence of a molariform mesiodens in the dentition. Early diagnosis is important appropriate treatment that often reduces the requirement of surgery, orthodontic treatment and other complications.

Keywords: Molariform mesiodens, Supernumerary teeth

INTRODUCTION

Supernumerary teeth or hyperdontia can be defined as any teeth or tooth substance in excess of the usual configuration of 20 deciduous and 32 permanent teeth, regardless their location and morphology [1-3]. It may be singly/multiply, unilaterally/bilaterally, and in one/both jaws, more commonly in the central region of the upper or lower jaw [3]. Extra teeth may present in both the permanent and the primary dentitions but are 5 times less frequent in the primary dentition [4, 5]. Family history is one of the predisposing factors [6]. Molariform type of supernumerary teeth as reported in the present case series is rare and uncommon.

Here the authors are presenting a series of 5 cases with molariform mesiodens, a rare anomaly. All the patients were examined carefully, there were no other systemic disorders, dental anomaly and it were not associated with any relevant family history and of consanguineous marriage. For all the patients written consent was obtained.

CASE REPORT 1

A 12 year old boy with his father reported to the department of Oral medicine and radiology with the complaint of teeth with unusual appearance in upper front teeth region. On intraoral examination, two mesiodens were noticed in maxillary anterior region with multiple lobes or tubercles on the occlusal surface with missing permanent maxillary centrals (Fig. 1). Radiographic examination revealed two mesiodens with completely formed roots and the presence of three cusps

on occlusal surface, well demarcated on the radiograph causing impaction of both permanent centrals (Fig. 2).



Fig. 1: Two mesiodens with multiple lobes



Fig. 2: Orthopantomograph showing two molariform mesiodens and impacted centrals

CASE REPORT 2

A 17 year old male patient reported with two extra teeth in upper front teeth region causing difficulty

in speech and in mastication. Clinically, two palatally placed mesiodens were found having molariform appearance causing severe crowding with rotation of left central incisor and lingual displacement of left lateral incisor (Fig. 3). Occlusal radiograph confirmed the two molariform mesiodens with multiple cusps and also revealed another well developed, conical, inverted supernumerary tooth placed between the apex of one mesiodens and right central incisor having completely formed root (Fig. 4). Based on clinical and radiographic findings, both supernumerary teeth were diagnosed as molariform mesiodens with one inverted impacted.



Fig. 3: Two palatally placed mesiodens with four lobes



Fig. 4: Occlusal radiograph showing two multilobed mesiodens and one inverted impacted mesiodens

CASE REPORT 3

A 32 year old female reported with spacing in upper front teeth region. She was concerned about the unesthetic appearance. Clinical examination revealed that the patient had one extra tooth palatal to left lateral incisor with multiple cusps resulting in spacing of the maxillary anteriors as well as rotation of left lateral incisor and missing right central incisor (Fig. 5). Soft tissue was normal, there was no relevant medical and family history and the patient was otherwise healthy and not associated with any syndrome. Occlusal radiographic was carried out to evaluate the condition of mesiodens. Radiograph revealed molariform mesiodens with completely formed root and congenitally missing 11 (Fig. 6).



Fig. 5: Introral appearance of molariform mesiodens palatally to left lateral incisor with missing right central incisor



Fig. 6: Occlusal radiograph showing the position of mesiodens and congenitally missing right central incisor

CASE REPORT 4

A 32 year old female visited the OPD with a complaint of dirty teeth. On clinical examination an extra tooth was noticed in the midline between the maxillary centrals. The Patient had normal complete permanent dentition with no other abnormalities. The morphology of the tooth crown was found to be unusual as it had 2 lobes same as premolar, one of them was located labially and the other was lingually shifted towards left central incisor causing slight proclination of the same and anterior crowding (Fig. 7). Radiographic examination showed a molariform mesiodens with complete root formation (Fig. 8).



Fig. 7: Clinical appearance of multilobed mesiodens between permanent maxillary centrals



Fig. 8: Periapical radiograph showing molariform mesiodens

CASE REPORT 5

A 30 year old male patient was referred to the department of Oral medicine and radiology with a complaint of spacing between upper front teeth. On intraoral examination one mesiodens was found in maxillary anterior teeth region with missing right central incisor and anterior spacing (Fig. 9). Radiographic examination revealed one molariform mesiodens with congenitally missing right central incisor (Fig. 10).



Fig. 9: Intraoral appearance of mesiodens



Fig. 10: Periapical view showing mesiodens and missing right central incisor

DISCUSSION

Supernumerary teeth are defined as any teeth that are in excess of the normal number. Mesiodens are

the most common supernumerary teeth. When multiple, it is referred to as mesiodentes. It can significantly alter both occlusion and appearance by altering the eruption path and the position of the permanent incisors [7, 8].

Incidence of supernumerary teeth is high in permanent dentition, affecting both genders. It is more common in males, with the male to female ratio of 2:1 [9].

Three theories are mentioned in literatures but it remains controversial. First theory which is known as phylogenetic reversion (atavism) postulated that mesiodentes represented a phylogenetic relic of extinct ancestors who had three central incisors, now been largely discarded by embryologists. Second theory reports that the tooth bud is split to create two teeth, one of which is the mesiodens. The third theory is widely supported. According to it, remnants of the dental lamina or palatal offshoots of active dental lamina are induced to develop into an extra tooth bud those results in a supernumerary tooth. Genetics is also considered as the cause for the development of mesiodentes [5, 10-12].

The relative frequency of occurrence of different supernumerary in decreasing frequency is, upper lateral incisors, mesiodens, upper central incisor, followed by bicuspid [13].

According to its morphology mesiodens can be classified as conical, supplemental and tuberculate type [14]. Clinically conical mesiodens are peg shaped, develops with root formation ahead of or at an equivalent stage to that of the central incisor. Tuberculate mesiodens is more common; root formation is delayed compared with that of the adjacent teeth. It often interferes with the eruption of incisors. Supplemental mesiodens is more frequent than resembles the tooth of the normal series and rarely remains unerupted [15, 16].

Mesiodens may affect the dentition in various ways such as crowding or abnormal diastema, displacement and / or rotation, failure of eruption, hindrance to orthodontic movement, enlargement of the follicle and possible cystic change, root abnormalities - dilacerations of the developing root [8].

Complications including retention of primary teeth, delayed eruption of permanent teeth as shown in case number one, closure of eruption path, rotation as in case number two and three and retention, crowding as shown in case number four, root resorption, pulp necrosis and diastema as well as nasal eruption and formation of dentigerous and primordial cyst.

Management of supernumerary teeth should be done carefully. It depends on the type and position of the tooth.

A thorough radiographic examination helps in the estimation of the exact location of the supernumerary tooth [17]. Munns reported that the earlier the mesiodens is removed, the better the prognosis [18]. Russel and Folwarczna stated that for better alignment of teeth mesiodens should be extracted in the early mixed dentition stage [19]. Solares stated that extraction of mesiodens in the early mixed dentition is beneficial in order to facilitate spontaneous eruption and alignment of the incisors [20].

CONCLUSION

A careful examination by clinical and radiographic methods is mandatory to evaluate presence of any extra teeth, otherwise it can lead to further complications. Early diagnosis of a mesiodens minimizes the treatment required. Extraction of the mesiodens in the early mixed dentition stage may facilitate space for the eruption of permanent teeth, prevents crowding and other complications.

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