Case Report

SURGICAL REMOVAL OF A PALATALLY PLACED IMPACTED MESIODENS: A CASE REPORT

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Abstract

Mesiodens are supernumerary teeth that may present either individually or as multiples (mesiodentes). They may appear either unilaterally or bilaterally, and most often do not erupt at all. They may remain locked in the same position for many years, without presenting any clinical expressions. In certain situations, due to the presence of mesiodens, certain complications may occur like over retained primary teeth, closure of the path of eruption, rotation and delayed eruption of permanent teeth, crowding/malocclusion, root resorption, pulp necrosis, diastema as well as nasal eruption and formation of dentigerous and primordial cyst. This report is a case of an 8 year old child who reported with a complaint of delayed eruption of an upper left front tooth. On radiographic examination, we found that there was an impacted supernumerary tooth in relation to upper central incisor region which was removed surgically.

Keywords: Impacted teeth; Mesiodens; Surgical removal.

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INTRODUCTION

Hyperdontia is a condition of having supernumerary teeth, which are defined as extra teeth present in addition to the normal dentition number.\(^1\) The most commonly occurring supernumerary tooth is the mesiodens.\(^2\) The term mesiodens was initially given by Balk in 1917 to represent a supernumerary tooth that is located mesial to both central incisors, appearing as a peg-shaped crown in either normal or an inverted position.\(^3\) The overall prevalence of mesiodens is between 0.15% and 1.9%.\(^4^6\)

Different studies have reported that the prevalence of supernumerary teeth is low
(1.5%) and has preference for maxillary anterior region. Supernumerary teeth may present as a component of many syndromes and are also seen in cleft lip and palate, cleidocranial dysplasia etc.\textsuperscript{8,9}

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Figs. 1 – 6: 1). Preoperative view, 2). Preoperative IOPA showing the supernumerary location, 3). Intraoperative view showing exposure of mesiodens, 4). The extracted mesiodens, 5). Postoperative view after suturing and exposing the unerupted central incisor, 6). Postoperative IOPA
CASE REPORT

An 8 year old male child reported to the Department of Pedodontics and Preventive Dentistry, Maharaja Ganga Singh Dental College and Research Centre, Sri Ganganagar, Rajasthan, complaining of delayed eruption of upper left front tooth. (Fig. 1) No relevant history of trauma was obtained on the affected side. On clinical examination, upper right central incisor (#11) had erupted and it was in proper occlusion whereas the left central incisor (#21) was still covered with soft tissue and had not erupted. Intraoral periapical radiograph was done and revealed an impacted mesiodens between two permanent central incisors. (Fig. 2)

The proper position of this tooth was confirmed using the SLOB rule, which revealed that the tooth was placed palatally. We planned to remove the impacted mesiodens by raising a palatal flap since it was confirmed that the supernumerary tooth was on the palatal side. After removal of the supernumerary tooth, the area was thoroughly cleaned with betadine solution and the flap was placed back exposing the unerupted central incisor and sutured with simple interrupted method of suturing. (Fig. 3-5)

DISCUSSION

Supernumerary teeth, which occur predominantly along the maxillary midline, are termed as mesiodens. It has been found that only 25% of the maxillary anterior supernumerary teeth erupt. Nazif et al reported that only 6% of the impacted mesiodens are found to be in a labial position. The vast majority (80%) are reported to be positioned palatally with the remaining 14% located between the roots of the permanent central incisors.

Morphologically, the mesiodens appear as a rudimentary tooth with a cone-shaped crown, smooth and smaller size than the normal teeth. Sometimes, these supernumerary teeth may present with a tuberculate shape and a normal size, or may even be found to mimic a natural tooth. The root is generally formed completely and is often found to be globular in structure. The mesiodens is often found between the maxillary central incisors, in particular towards the palatal, along the sagittal median plane, giving it its name.

Treatment of mesiodens depends on several factors and consideration of these variables will determine whether to manage surgically or to observe the condition. The first factor is the child’s age, in the very young patient the ability to tolerate a surgical procedure is of prime concern. The benefit of early treatment must be important for the long-term justifying the unpleasant experience affecting psychological maturity of the patient.

Second factor is the stage of dental development of the adjoining teeth and the extent of proximity of the mesiodens to the central incisors. In cases where there is immature root development, the risk of doing surgical trauma to the developing roots of the permanent incisors and the possible damage to the future dental development of incisors should be taken into consideration. Those mesiodens that are quite closely positioned with respect to the developing permanent incisors can alter the location of the permanent tooth bud, and may even impede their eruption, or alter the root development. Surgical removal of the same supernumerary teeth may lead to the same sequelae with surgical trauma. In such instances, where the surgical approach endangers the viability of the subtle developing tissue, it may be appropriate to delay treatment.
Finally, the dentist must also assess the relative location of the mesiodens inside the premaxilla whether it is present palatally or labially. The amount of bone removal required and the potential damage to the existing developing incisors must be considered with respect to the surgical access. In children, usually the eruption of mesiodens is quite possible; however, complete eruption is not that frequent. With time, some mesiodens’ might erupt partially and thus provide a more favourable surgical approach.11,13

REFERENCES


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