

An Inverted Eruption of Mesiodens: Report of a Rare Case

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ÖZET

Bir meziodensin inverse erüpsiyonu: Nadir bir olgu sunumu

Üst ve alt çenelerin her ikisinde de rapor edilmiş inverse dişlerin büyük çoğunluğu ters olarak gömülü kalmış 3. molar ve premolarlardır. Bununla birlikte intraoral inverse ektopik diş erüpsiyonları nadir olarak rapor edilmiştir. Meziodensler klinikte en sık rastlanan süpernumerer dişlerdir. Yapılan bu olgu sunumunda sert damağın ortasında inverse olarak sürmüş bir meziodens vakası rapor edilmiştir. Meziodensler ayrıca daimi dişlerde dilaserasyon, çapaşıklık, kist formasyonu, kök rezorpsiyonu, anormal oklüzyona neden olabilir ve nazal kaviteye doğru sürebilirler. Erken teşhis ve tedavi ortodontik gereksinimleri ve komplikasyonları önlemek için gereklidir. Bu konuda diş hekimleri hastaları sıkı takip etmeli ve aileleri dişlerin asimetrik sürmesiyle ilgili dikkatli olmaları konusunda uyarmalıdır.

Anahtar sözcükler: Meziodens, süpernumerer, inverse erüpsiyon

ABSTRACT

An inverted eruption of mesiodens: report of a rare case

Inverted teeth have been reported in both maxilla and mandible and most of them are inverted impacted third molars and premolars. However, very few cases of intraoral ectopic inverted tooth eruption have been reported. Mesiodens is clinically the most frequent of all supernumerary teeth. We report a unique case of a mesiodens which inverted erupted in the middle of the hard palate. Mesiodens also may cause dilaceration of permanent teeth, crowding, cyst formation, root resorption, abnormal occlusion and eruption into the nasal cavity. Early diagnosis and treatment are required to prevent complications and orthodontic requirement. The dental professionals should follow-up strictly and also inform parents to be careful about the asymmetric eruption of the teeth.

Key words: Mesiodens, supernumerary, inverted eruption

INTRODUCTION

The term of mesiodens refers to a supernumerary tooth present in the midline of the maxilla between the two central incisors (1-3). It is clinically the most frequent of all supernumerary teeth (4-5).

The etiology of mesiodens remains unknown, but many hypotheses have been reported such as atavism, dichotomy of the tooth bud and hyperactivity of the dental lamina. However the hyperactivity theory which states that supernumerary teeth are derived from independent local hyperactivity of the dental lamina has been more adopted (3-4,6-7). Genetics are also thought to contribute to the development of mesiodens (4).

Mesiodens can occur singly or multiply, and is responsible for disturbances in the eruption of maxillary incisor teeth (1-3).

Most mesiodens never erupt and usually found to be

impacted, with a conical crown and a single root, and often in an inverted position (8-9). When they do erupt, the most common site is behind the central incisors within the premaxilla (3).

Inversion has been defined as 'the malposition of a tooth in which the tooth has reversed and is positioned upside down' (10). Inverted teeth have been reported in both maxilla and mandible, and most of them are inverted impacted third molars and premolars (11). Although inverted impacted teeth may remain in position for years without clinical manifestations and maybe detected in radiographic examinations incidentally, many complications including delayed or ectopic eruption, crowding, diastema, eruption into the nasal floor, resorption of the adjacent root and development of a dentigerous or primordial cysts (10). However, very few cases of intraoral ectopic inverted tooth eruption have been reported (12).

Reported here is a unique case of a mesiodens which inverted erupted in the middle of the hard palate.

CASE REPORT

An 18-year-old male admitted to the Department of Oral Diagnosis for tooth extraction. His complaint was intraoral eruption of a tooth in the midpalatal region (Figure 1). The family medical and dental histories were



Figure 1: Intraoral view of the supernumerary tooth in the mid-palate.



Figure 2: Occlusal radiograph showing presence of a well developed inverted supernumerary tooth.



Figure 3: Photograph of the extracted supernumerary tooth.

noncontributory. No abnormalities in general growth and development or history of trauma were noted. Clinical examination revealed an inverted eruption of a supernumerary tooth in the middle of the hard palate. Radiography was recommended for diagnosis. An occlusal view of the maxilla revealed the presence of an inverted 'mesiodens' supernumerary tooth at the middle of the hard palate (Figure 2). Extraction of the supernumerary tooth was planned. Using a local anesthetic, the supernumerary was extracted without any complication (Figure 3).

DISCUSSION

Most mesiodentes are impacted but eruption occurs in approximately 25% of the cases. Unilateral mesiodons may erupt into a position towards the midline or remain palatal to the incisors (13). Eruption is a continuous movement of a tooth from its developmental location to its functional position. Localized disturbances include primary impaction, ankylosis, and malpositioning of teeth (14).

Mesiodens directions are divided into 3 groups as 'normal direction, inverted and horizontal'. In most previous reports the most common direction of mesiodens was inverted (2,7,15) and in most cases it was totally impacted (4).

An inverted tooth is rather uncommon. The inversion of supplemental or supernumerary teeth (e.g. mesiodens) is somewhat more likely (13,16-18). Inverted impaction has been observed for incisors (19), canines (20), premolars (21) and molars (22).

Eruption of inverted teeth is extremely rare, but has been described for incisors (23) and premolars (24). Inverted eruption may be observed as the appearance of the root apex in the alveolar arch or the perforation of the crown through the inferior cortical plate of the mandible (14). Based on this review of the literature, it is evident that the occurrence of an inverted and downward erupting mesiodens, as noted in the present case report, is extremely rare (12).

This case is unusual in several respects. First, the supernumeraries are rare seen in the palatal region (14). In fact, there are few reports of a supernumerary tooth in this area. Secondly, eruption of inverted mesiodens is a very rare phenomenon with only a few cases reported in literature.

Although in most cases it is unerupted, its presence may cause some clinical problems, especially in the stages of the primary and early mixed dentitions. Most common

complications associated with mesiodens are abnormal central diastema, delayed or prevention of eruption and abnormal tooth eruption (1-2,4,7,25). Especially in the childhood these complications may cause phonation and esthetic problems. Also Alacam et al. reported that mesiodentes can be a risk factor in treatment of trauma cases because of the predisposing factors of dental trauma such as open bite increasing overjet with protrusion of upper incisors and insufficient lip closure (6). Anterior maxillary supernumerary teeth are of great concern in young patients for both the dentist and the parents because of delayed eruption, occlusal and masticatory problems, and for esthetic reasons. Mesiodens or supernumerary tooth also may cause dilaceration of permanent teeth, crowding, cyst

formation, root resorption, abnormal occlusion and eruption into the nasal cavity (1-2,4,7,25-26). Early diagnosis and treatment are required to prevent complications and orthodontic requirement. Parents must be careful about the asymmetric eruption of the teeth.

Supernumerary teeth should be extracted immediately if any of the above cited complications are present. In this reported case, the supernumerary teeth was removed for esthetic reasons, phonation and nutrition problems.

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