

**CASE STUDY****DIAGNOSIS AND SURGICAL REMOVAL OF A PALATALLY IMPACTED MESIODENS****<sup>1,\*</sup>Ansari Manhal, <sup>2</sup>Jacob Anoop, <sup>1</sup>Shetty Kushal and <sup>1</sup>Sowmya, B.**<sup>1</sup>Department of Pedodontics & Preventive Dentistry, A.J Institute of Dental Sciences, Mangalore<sup>2</sup>Department of Pedodontics & Preventive Dentistry, Educare Institute of Dental Sciences, Malappuram, Kerala**ARTICLE INFO****Article History:**Received 22<sup>nd</sup> February, 2017

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15<sup>th</sup> March, 2017Accepted 20<sup>th</sup> April, 2017Published online 19<sup>th</sup> May, 2017**ABSTRACT**

One of the commonest developmental dental anomaly is the presence of supernumerary teeth. The prevalence of supernumerary teeth in the jaws varies. Among the supernumerary teeth, 86% of the prevalence for the maxillary anterior region which is the mesiodens (Regula *et al.*, 2010). This tooth can be either impacted or can erupt into the oral cavity. This report presents a case of a 10 year old girl with a palatally placed impacted mesiodens in the maxillary anterior region which was surgically removed.

**Key words:**Supernumerary teeth,  
Mesiodens, Surgical extraction.

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**INTRODUCTION**

Supernumerary or hyperdontia is a developmental anomaly characterized by presence of excess tooth/ teeth in the arch. The most common type of supernumerary tooth is the mesiodens (Alberti *et al.*, 2006). It can occur as single, multiple, unilateral or bilateral (Prasad *et al.*, 2014). This excess tooth during the primary/ mixed dentition can result in esthetic problems and is one of the major concerns for the parents. Different studies compared and reported the prevalence of supernumerary teeth is low (1.5%) and has a prevalence for maxillary anterior region (Regula *et al.*, 2010). In some syndromes, supernumerary tooth may present as a part of the symptom also seen in cleft lip and palate, cleidocranial dysplasia etc. (Prasad *et al.*, 2014; Meighani and Pakdaman, 2010)

**Case report**

A 10-year-old girl reported to the department of Pedodontics with her parents complaining of a swelling and unerupted tooth in the maxillary anterior region (Figure 1). Clinical and radiographic examinations were carried out. On clinical examination, the swelling was asymptomatic and on radiographic examination, presence of a palatally impacted

mesiodens was noticed (Figure 2). This mesiodens was preventing the eruption of 21. Hence it was planned for surgical removal of the mesiodens under local anaesthesia (Figure 3 & 4). After the procedure, the surgical site was sutured and post extraction instructions were given. The patient was recalled after 1 month for review.



**Figure 1. Pre-operative buccal view showing the swelling in relation to 21**

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**Figure 2. Pre-operative radiograph showing the impacted mesiodens in relation to 21**



**Figure 3. Flap raised, tooth located and surgically extracted**



**Figure 4. Extracted mesiodens**

## DISCUSSION

Supernumerary teeth or hyperdontia is a developmental anomaly resulting in an increase in the number of teeth. Various studies have reported the prevalence of supernumerary teeth 0.5-3%. This extra tooth during the primary/ mixed dentition can result in esthetic problems and is one of the major concerns for the parents. (Ferrazzano *et al.*, 2014) Mesiodens is a supernumerary tooth that occurs among the maxillary central incisors. According to the literature, the present case reports the presence of tooth among the upper incisors and in the inverted position, adding to the statistics that 80% up to 90% of the supernumerary occur in the maxilla (Miranda *et al.*, 2016). Among these, almost half is found in the anterior region with the prevalence of 0.15% to 1.9%. (Acharya, 2015) The possible causes might be the cleft palates, tumors, trauma, cleft lip, malformation and genetic factors. In this report there was an impacted mesiodens which was causing hindrance for the eruption of the permanent tooth. When no clinical sign is apparent and the mesiodens is asymptomatic and impacted, it can lead to many complications including delayed eruption, crowding, spacing, impaction of

permanent incisors, abnormal root formation, alteration in the path of eruption of permanent incisors, median diastema, cystic lesions, intraoral infection, rotation, root resorption of the adjacent teeth or even eruption of incisors in the nasal cavity. Therefore, the potential detrimental effects in young children make it mandatory to extract unerupted supernumerary teeth. Radiographic examination of the jaws is, therefore, imperative. In routine analyzes of supernumerary teeth, radiographs required are periapical, orthopantomogram. a principle: (Houston *et al.*, 1992) The horizontal tube shift method. A true lateral radiograph of the incisor region assists in locating the supernumeraries that are lying deeply in the palate and enables the practitioner to decide whether a buccal rather than a palatal approach should be used to remove them.

## Conclusion

According to various studies the frequency of the supernumerary teeth is 1.5 - 3% and may cause an array of symptoms and complications. Early diagnosis and timely surgical intervention can reduce or eliminate the need for orthodontic treatment and reduce complications to the regular dentition. However, their diagnosis is very difficult based on just clinical appearance; the key in diagnosis is radiographic examination. The presented case shows that the correct mesiodens diagnosis allows the treatment and the case solution, minimizing complications and enabling a better prognosis.

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