

A Rare Presentation of Primary Supernumerary Tooth in Maxilla Preventing the Eruption of Maxillary First Premolar: A Case Report

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Abstract

Supernumerary tooth is a developmental anomaly and has been argued to arise from multiple etiologies. These teeth may remain embedded in the alveolar bone or can erupt into the oral cavity. When it remains embedded, it may cause disturbance to the developing teeth. The erupted supernumerary tooth might cause aesthetic and/or functional problems especially if it is situated in the maxillary anterior region. But a impacted primary supernumerary tooth embedded in alveolar bone and resulting in prevention of eruption of posterior tooth is a rare finding, which made us to prepare this case report of a primary supernumerary tooth embedded in the alveolar bone and preventing the eruption of maxillary first premolar.

Keywords: Supernumerary tooth; Maxilla.

Introduction

Development of the tooth is a continuous process with a number of physiologic growth processes and various morphologic stages interplay to achieve the tooth's final form and structure. Interference with the stage of initiation, a momentary event, may result in single or multiple missing teeth (hypodontia or oligodontia respectively) or supernumerary teeth¹. A supernumerary tooth is one that is additional to the normal series and can be found in almost any region of the dental arch². The term mesiodens denotes a supernumerary tooth located between the maxillary central incisors³.

There seems to be a racial variation in the prevalence of supernumeraries with a frequency higher than 3% in Mongoloid races⁴. In the primary dentition, the incidence is

said to be 0.3%-0.8% and in the permanent dentition 1.5%-3.5%⁵. The prevalence of supernumerary tooth in primary dentition is lower because it is under reported⁶ and it is often overlooked, because the supernumerary teeth are often of normal shape (supplemental type), erupt normally, and appear to be in proper alignment; and can be mistaken for germination and fusion anomalies⁷. There is no significant sex distribution in primary supernumerary teeth; however, males have been shown to be affected more in the permanent dentition than females. These vary between populations studied^{1,4}. The most common location of supernumerary teeth is at the premaxillary region and it may cause pathological condition such as failure of eruption of the maxillary incisors, displacement or rotation of the permanent tooth,^{1,8}. Most of the supernumerary in the primary dentition are of the supplemental type and seldom remain impacted and an odontome type having no regular shape.

In most of the conditions where supernumerary teeth are found in primary dentition, these teeth are found to be impacted. The most common cause being odontomas. A surgical procedure to remove primary supernumerary has to be planned very carefully to prevent any injury to permanent tooth underlying it⁹.

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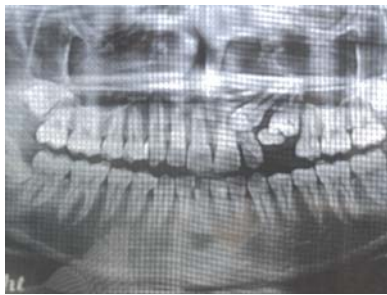
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Case report

A 15 year old female patient reported with the complaint of delayed eruption of upper teeth. No history of pain was reported. On radiographic examination, the orthopantomogram revealed the presence of a primary supernumerary tooth embedded in the alveolar bone and circumscribing the crown

Figure 1 : OPG showing the supernumerary tooth in relation to left maxillary first premolar and displacing left maxillary canine mesially



Discussion

An anomaly of the number of teeth (supernumerary teeth) contributes to about 0.15 to 1.5% in Caucasians with males having two times more predilection than females¹⁰.

The etiology for supernumerary teeth is not completely understood. Various theories exist for the different types of supernumerary teeth. One theory suggests that the supernumerary tooth is created as a result of a dichotomy of the tooth bud. Another theory, well supported in the literature, is the hyperactivity theory, which suggests that supernumeraries are formed as a result of local, independent, conditioned hyperactivity of the dental lamina^{11, 12}.

Heredity may also play a role in the occurrence of this anomaly, as supernumeraries are common in the twins, siblings, and sequential generation of single family than in the general population¹³. However, the anomaly does not follow a simple mendelian pattern.

of maxillary left first premolar[24] and displacing the left maxillary canine[23] mesially (Figure 1). Since in the present case supernumerary tooth was circumscribing the maxillary first premolar[24], both supernumerary tooth and the maxillary first premolar[24] were extracted (Figure 2) and the pathway was made for the eruption of the mesially displaced left maxillary canine[23].

Figure 2 : Extracted supernumerary tooth with the maxillary first premolar



Presence of supernumerary tooth may produce the following problems

- a. Malocclusion due to disturbance in path of eruption by reducing arch circumference.
- b. Prevent eruption of developing teeth.
- c. External root resorption of adjacent teeth due to pressure from erupting supernumerary tooth.
- d. A deviated path of eruption may show supernumerary tooth erupting in abnormal locations like nasal cavity, orbit, inferior border of mandible, and sometimes weakening the bone to form a more prone site for fracture.
- e. An untreated supernumerary tooth may get transformed into a cyst especially dentigerous cyst¹⁴.

In the present case, a primary supernumerary tooth embedded in the alveolar bone and preventing the eruption of maxillary first premolar was reported which is a rare finding.

Reference

1. Hattab FN, Yassin OM, Rawashdeh MA. Supernumerary teeth: Report of three cases and review of the literature. *ASDC J Dent Child* 1994; 61: 382- 393.
2. Garvey MT, Barry HJ, Blake M. Supernumerary teeth – an overview of classification, diagnosis and management. *J Can Dent Assoc* 1999; 65: 612-616.
3. Sykaras SN. Mesiodens in primary and permanent dentitions. *Oral Surg* 1975; 39: 870-874.
4. Tay F, Pang A, Yuen S. Unerupted maxillary anterior supernumerary teeth: report of 204 cases. *ASDC J Dent Child* 1984; 51: 289-294.
5. Mason C, Azam N, Holt RD, Rule DC. A retrospective study of unerupted maxillary incisors associated with supernumerary teeth. *Br J Oral Maxillofac Surg* 2000; 38: 6.
6. Taylor GS. Characteristics of supernumerary teeth in the primary and permanent dentition. *Dent Pract Dent Record* 1972; 22: 203-208.
7. Humerfelt D, Hurlen B, Humerfelt S. Hyperdontia in children below four years of age: a radiographic study. *ASDC J Dent Child* 1985; 52: 121-124.
8. Koch H, Schwartz S and Klausen B. Indications for surgical removal of supernumerary teeth in the premaxilla. *Int J Oral Maxillofac Surg* 1986; 15: 273-281.
9. Otsuka Y, Mitomi T, Tomizawa M, Noda T. "A review of clinical features in 13 cases of impacted primary teeth". *IJPD* 2001; 11(1): 57-63.
10. Gulati M.S, Gupta L. Multiple Supernumerary premolars. *JISPPD* 1997; 15(3): 83-84.
11. Liu JF. Characteristics of premaxillary supernumerary teeth: A survey of 112 cases. *ASDC J Dent Child* 1995; 62:262-265.
12. Levine N. The clinical management of supernumerary teeth. *J Can Dent Assoc* 1961; 28: 297-303.
13. Ersin NK, Candan U, Alpoz A R, Akav C. Mesiodens in primary, mixed and permanent dentitions: A clinical and radiographic study. *J Clin Pediatr Dent* 2004; 28: 295-298.
14. Robert E, Primosch. Anterior supernumerary teeth- Assessment and surgical intervention in children. *AAPD* 1981; 3(2): 204-215.

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