

SUPERNUMERARY TOOTH IN THE PRIMARY MOLAR REGION: REPORT OF A RARE CASE

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ABSTRACT

Supernumerary teeth and fusion are developmental anomalies of teeth affecting the primary as well as permanent dentition. Fusion occurs mostly in the mandibular anterior region while supernumerary teeth have a definite predilection for the anterior maxilla. In this article we report an extremely rare case of a fused maxillary supernumerary molar in the primary dentition in a three-year-old girl. The crown morphology of the supernumerary tooth resembled with the two primary first molars fused together. The anomalous tooth demonstrated two separate pulp chambers, six cusps and possibly six roots. An erupted supernumerary maxillary lateral incisor was also observed. As the patient presented with pain and interference with occlusion, non-surgical extraction of the fused supernumerary molar was performed.

KEY WORDS

Supernumerary tooth, supernumerary molar, primary dentition.

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INTRODUCTION

Supernumerary teeth are defined as the teeth present in excess of normal number of teeth.¹ They occur in both the primary as well as in the permanent dentition. Its prevalence varies between 0.3-0.8% in the primary dentition and 0.1-3.8% in the permanent dentition.^{1,3} Though permanent supernumeraries are more common in males, no definite gender predilection is observed in the primary dentition.^{1,2}

Supernumerary teeth can be classified according to their morphology and location. According to morphology, a supernumerary tooth can be conical, tuberculate or supplemental. Positional variations of these anomalies include mesiodens, paramolar, and distomolar.

A single supernumerary tooth is more frequent and occurs in 76-86% of cases, double supernumeraries in 12-23% of cases, and multiple supernumeraries are found in less than 1% of cases.^{4,6}

Primary supernumeraries when present are frequently localized in the maxillary anterior region. Their occurrence in the molar region is extremely rare in the primary dentition with very few cases reported in the literature to date.^{7,9} Here we describe an extremely rare case of a supernumerary tooth in the primary molar region.

CASE REPORT

A three and a half-year-old girl reported to our department with the chief complaint of pain in the upper left molar region. Her medical history was unremarkable. Her intraoral examination revealed a primary dentition. The patient presented a supernumerary tooth disto-buccal to the maxillary left primary second molar. [Figure 1]

The clinical crown of the supernumerary tooth was larger than the adjacent teeth and resembled that of the two fused primary first molars. The supernumerary tooth was found to be carious with grade one mobility. History revealed that the anomalous tooth was present since last six months. The patient also had another well aligned



Figure 1. Intraoral photograph of the patient showing supra-erupted supernumerary molar disto-buccal to the primary left second molar.

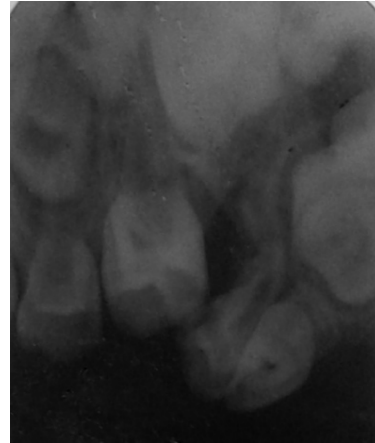


Figure 2. Periapical radiograph of the supernumerary molar

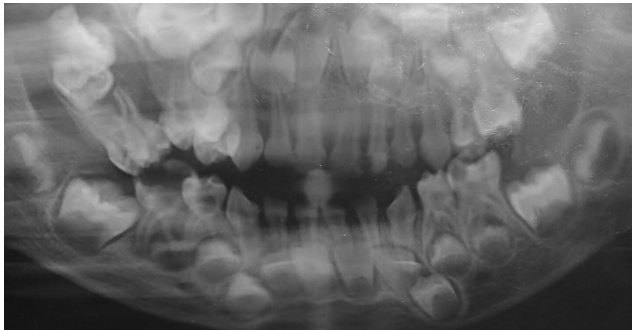


Figure 3. Panoramic radiograph showing two maxillary supernumerary teeth, one in the molar region and another in the lateral incisor region on the contralateral side. A permanent supernumerary successor of the supernumerary primary molar is also evident.



Figure 4a. Photograph showing the extracted supernumerary primary molar.



Figure 4b. Palatal aspect of the supernumerary teeth.



Figure 4c. Proximal view of the maxillary supernumerary mola.

supplemental supernumerary tooth in the maxillary right lateral incisor region. The patient had carious left maxillary first molar and left mandibular second molar teeth.

The periapical radiograph of the supernumerary molar revealed that it was a union of two individual crowns with two separate pulp chambers.[Figure2]

In addition, radiographically it was apparent that the supernumerary molar had separate roots. Alveolar resorption was visible on the radiograph around the mesial and distal roots of the anomalous tooth. On the panoramic radiograph, all tooth buds except the third molars were identified. Furthermore, a seemingly distinct supernumerary successor of the supernumerary molar was also visible on the radiograph. [Figure 3]

Based on the clinical and radiographic examinations, a diagnosis of primary supernumerary molar was made. Since the patient presented with pain and mobility, non-surgical extraction of the accessory molar was planned and performed in the next appointment. Extracted tooth was found to be carious. Also seen was a clear occluso-cervical groove separating the crown of the supernumerary molar into two halves.[Figure 4a, 4b & 4c]

Other carious teeth were treated and oral hygiene instructions were given. The parents were informed about the presence of a succedaneous supernumerary tooth in relation to the supernumerary primary molar. In addition, we advised the parents for periodic follow-up of the patient and maintenance of good oral hygiene.

DISCUSSION

This report presents a case of maxillary primary supernumerary molars in a three and a half-year-old girl. The anomalous tooth was diagnosed as supernumerary molar because the left maxillary primary first and second molars of normal series were present. Although the supernumerary tooth was located distobuccal to the maxillary left second molar, it did not resemble its adjacent tooth.

The clinical as well as the radiographic examination, suggest that the fusion is partial, as the size of the supernumerary tooth was nearly equal to the size of two primary first molar crowns fused together. In addition, the anomalous tooth in the present case demonstrated two separate pulp chambers, six cusps and possibly six roots.

Fusion of primary molars is rare with few cases reported till date. Caceda et al, presented a case of complete fusion of maxillary primary molars in a six-year-old boy where the morphology of the macro molar did not match either of the two maxillary molars.¹⁰ The anomaly had a total of six cusps, single pulp chamber, and four distinct roots. Dhindsa et al, reported a case of incomplete fusion of mandibular left first molar with a supernumerary tooth.¹¹ The tooth had divided pulp chambers and three distinct roots. Acs et al, presented a case with bilateral double teeth involving the primary maxillary molars with two separate pulp chambers and several roots.¹² Conversely, the present report demonstrates an incomplete fusion of two primary supernumerary teeth in the maxillary molar region. The visibly clear occluso-gingival grooves on the buccal and lingual surfaces of the supernumerary molar indicated where the fusion of two supernumerary teeth had occurred.

The exact etiology of supernumerary teeth is not clearly known. Both genetic and environmental factors play an important role in its formation. Familial occurrence of supernumeraries, the definite predilection for certain sites, and its presence in some syndromes suggest that heredity might be an etiologic factor. Several other theories such as atavism or phylogenetic theory, dichotomy or abnormal splitting of tooth bud, hyperactivity of dental lamina have also been suggested.¹⁻³ The etiology of fusion is also not clearly known. Probably some physical force or pressure provokes the contact between the developing tooth germs. This is followed by a necrosis of the epithelial cells that separates them leading to fusion.¹⁰⁻¹²

The most common syndromes related with supernumerary teeth are cleidocranial dysplasia, Gardner syndrome, Downs syndrome, cleft lip and palate, Sturge weber syndrome.¹⁻³ Fusion has also been reported to be associated with syndromes like Wolf-Hirschhorn syndrome, achondroplasia, focal dermal hypoplasia, osteopetrosis, and chondroectodermal dysplasia.¹⁰⁻¹² Our patient did not exhibit any syndromic features.

Supernumerary teeth predominantly occur in the premaxillary region. When these teeth are present in the molar region they can be either paramolars or distomolars. Paramolars are located buccally or lingually/palatally to one of the molar series, usually between second and third molars while distomolars are present distal or distolingual to third molars.⁴ Paramolars are often rudimentary in shape, less frequent in the maxilla, occasionally bilateral, and rare in primary dentition with only one case reported in the reported to date.⁴ Shimizu et al., reported a case of unilateral maxillary paramolar in the primary dentition.⁷ Our case is extremely rare as it involves fusion of two supernumerary teeth in the maxillary molar region that too in the primary dentition.

Most of the supernumeraries in the primary dentition erupt in the oral cavity and are asymptomatic. They are discovered during the radiographic examination of the oral cavity. Rajab et al, indicated that 73% of primary supernumerary teeth erupt while only 13-34% of permanent supernumeraries remain impacted.¹³ Humerfelt et al, pointed out that primary supernumeraries are often overlooked because these teeth often erupt normally and adjusted well in the dental arches.¹⁴ In our patient the maxillary lateral incisor was asymptomatic as well as well aligned, therefore, no treatment was rendered on it.

However, not all supernumeraries are asymptomatic. The associated complications of supernumerary teeth include crowding, rotation, impaction, root resorption of adjacent teeth and development of cystic lesion.³ As the patient in this case presented with complications like pain and mobility, non-surgical extraction of the maxillary supernumerary molar was performed. Both supernumerary teeth as well as fusion in the primary dentition exhibit greater chances of anomalies in the permanent dentition.^{15,16} On radiographic examination of our patient, a supernumerary successor of the anomalous tooth was visible.

CONCLUSION

This paper presents a supernumerary maxillary molar in a three and a half-year-old patient which is unusual in the primary dentition. In addition, the anomalous tooth was formed by partial fusion of two eumorphic supernumerary teeth, crown morphology of which resembled with that of the first primary molar. Furthermore, radiographic examination indicated that the anomalous tooth was accompanied by a supernumerary successor.

REFERENCES

1. Liu JF. Characteristics of premaxillary supernumerary teeth: a survey of 112 cases. *ASDC J Dent Child* 1995;62:262-65

2. Primosch RE. Anterior supernumerary teeth-assessment and surgical intervention in children. *Pediatr Dent* 1981;3:204-15
3. Garvey MT, Barry HJ, Blake M. Supernumerary teeth an overview of classification, diagnosis and treatment. *J Can Dent Assoc* 1999;65:612-6
4. Nayak G, Shetty S, Pitalia D. Paramolar - a supernumerary molar: A case report and an overview. *Dent Res J* 2012;9(6):797-803
5. Neville BW, DammDD. Allen CM, Bouquot JE. *Oral & Maxillofacial Pathology*, 2nd ed. Philadelphia: WB Saunders;2002:69-73
6. So LL. Unusual supernumerary teeth. *Angle Orthod* 1990;60:289-92
7. Shimizu T, Miyamoto M, Arai Y, Maeda T. Supernumerary tooth in the primary molar region. A case report. *ASDC J Dent Child* 2007;74:151-3
8. Trenouth MJ, Bedi R. Supernumerary primary first molar and first premolar: clinical report. *Pediatr Dent* 1983;5:214-216
9. Park MS, Park HW, Lee JH. Supernumerary tooth in the primary molar region: case report. *J Korean Acad Pediatr Dent* 2011;38:51-54
10. Caceda JH, Creath CJ, Thomas JP, Thornton JB. Unilateral fusion of primary molars with the presence of a succedaneous supernumerary tooth: case report. *Pediatr Dent* 1994;16:53-55
11. Dhindsa A, Garg S, Damle SG, Opal S, Singh T. Fused primary first mandibular macromolar with a unique relation to its permanent successors: A rare tooth anomaly. *Eur J Dent* 2013 :239-242
12. Acs G, Cozzi E, Pokala P . Bilateral double primary molars: case report. *Pediatr Dent* 1992; 14: 115–16.
13. Rajab LD, Hamdan MA. Supernumerary teeth: Review of the literature and a survey of 152 cases. *Int J Pediatr Dent* 2002;12:244-54
14. Humerfelt D, Hurlen B, Humerfelt S. Hyperdontia in children below 4 years of age: a radiographic study. *J Dent Child* 1985;52:121-24
15. Mukhopadhyay S, Mitra M. Anomalies in primary dentition: their distribution and correlation with permanent dentition. *J Nat Sci Biol Med* 2014;5:139-43
16. Gelin ME. The distribution of anomalies of primary anterior teeth and their effect on permanent successors. *Dent Clin North Am* 1984;28:69-80