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Case Report

Rare bilateral incisiform supernumerary teeth: A case report

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ABSTRACT

An increased number of teeth in relation to normal dental formula is called hyperdontia, and the additional tooth are termed as supernumerary tooth. A supplemental tooth is a supernumerary tooth that closely resembles in shape to its adjacent teeth with which they are associated and supplements for occlusion. Primary dentition presents with lower prevalence of supernumerary teeth compared to permanent dentition. This report presents supplemental teeth in primary dentition.

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1. Introduction

Odontogenesis is a complex biological process involving systematic cascading interactions between epithelial component and mesenchymal component, which are the branchial arch ectoderm and the ectomesenchyme respectively.¹ Tooth number, shape and size of teeth are determined by the initiation and morphogenetic stages of tooth development.

Molecular evidence of replication signals throughout initiation and morphogenesis is reflected clinically in the associations with abnormalities in number, size and shape.² Discrepancies in the number of teeth that develop are frequent. The present case is a 7-year-old boy with non-syndromic bilateral supplemental tooth in primary dentition.

2. Case Presentation

A 7-year-old boy visited the department of Pediatric and Preventive Dentistry for routine dental check-up. Medical, family, and dental history were non-contributory. General and extra oral examinations were negative. Intraoral

examination revealed presence of an extra tooth which mimicked primary lateral incisors in their appearance on either side of maxillary quadrants (Figures 1, 2, 3 and 4). Bilateral supplemental teeth are identified according to their morphology. Dental caries in relation to 55,54, 65 and gross decay in relation to 64 was noted (Figure 4). Based on the intra oral periapical - radiographs, bilateral supernumerary teeth mesial to primary canine was diagnosed (Figures 6 and 7). Based on clinical findings and radiographic interpretations, the final diagnosis is bilateral supplemental teeth mesial to the maxillary primary canines. Since dental abnormalities had not compromised his oral health, preventive and restorative procedures were completed and regular follow ups are planned to intervene at appropriate intervention time.

3. Discussion

Supernumerary teeth are the extra teeth in normal set of dentition. They closely resemble to the group of teeth to which it belongs or may bear little resemblance in size or shape to the teeth with which it is associated. Supernumerary teeth are classified as mesiodens, para-molars, distomolar and para-premolars

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Fig. 1: Intraoral Photograph



Fig. 4: Maxillary arch showing supernumerary teeth bilaterally distal to lateral incisor teeth on either side.



Fig. 2: Right lateral view



Fig. 5: – Mandibular occlusal view



Fig. 3: Left lateral view

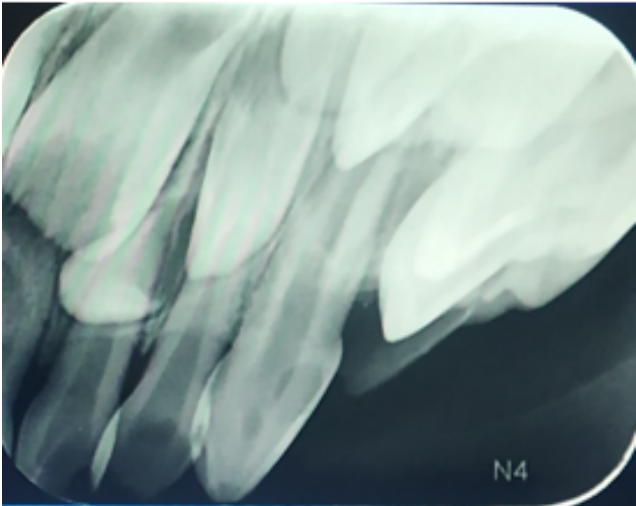


Fig. 6: IOPAR of first quadrant

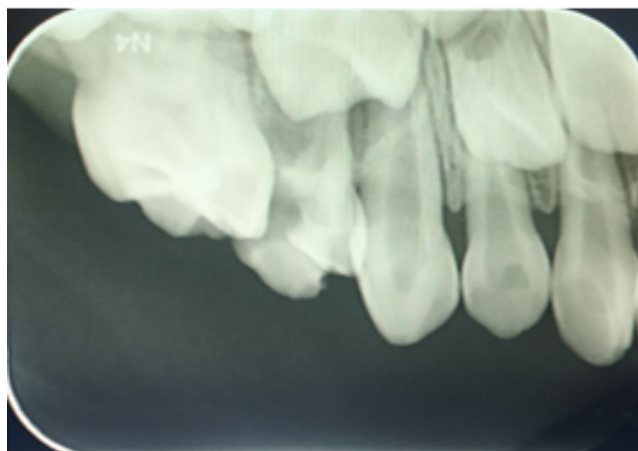


Fig. 7: IOPAR of second quadrant

according to the location. Based on the morphology, it is classified as conical, tuberculate, supplemental, odontome.³ This report describes the supplemental type of supernumerary teeth.

The incidence of supernumerary teeth is 0.8% for primary dentition and 2.1 % for permanent dentition. A possible explanation for the low incidence could be less detection by parents, reasonable alignment of supernumerary tooth or teeth due to spaced dentition. Most children have their first dental check-up after the permanent anterior teeth erupts and hence, primary anterior supernumerary teeth which have erupted and exfoliate normally often go unnoticed.⁴

A cross-sectional study of 4180 South Indian children reported a prevalence rate of 0.23% with male predominance (3:2), with common location being the right maxillary arch associated with central and lateral incisors.⁵ They may occur as single or multiple, unilateral or bilateral, erupted or impacted and in one or both jaws. The most common supernumerary tooth is the mesiodens.

Multiple supernumerary teeth are often associated with syndromes. Commonly associated syndromes are: Gardiner's syndrome, Cleidocranial dysplasia, cleft lip and palate,³ Apert syndrome, Crouzon disease, Down's syndrome,^{6,7} Chondroectodermal dysplasia,⁸ familial adenomatous polyposis, trichorhinophalangeal syndrome type-1, Rubinstein-Taybi syndrome, Nance-Horan syndrome, Opitz G/BBB syndrome, oculofaciocardiodental syndrome, Robinow syndrome. Kreiborg- Pakistani syndrome, Ellisvan Creveld syndrome, Goldenhar syndrome, Noonan syndrome.⁹

In similar cases, supplemental teeth have been associated with fusion¹⁰ and have been reported to be present in both dentitions.⁶ The exact etiology is unknown and does not support the Mendelian pattern.³ The most accepted etiology is hyperactive dental lamina, other suggested etiologies are: atavism, dichotomy of tooth germ,^{1,11} genetic and multifactorial. The dental lamina hyperactivity

theory states that a supplemental form develops from the lingual extension of an accessory tooth bud whereas a rudimentary form would develop from the proliferation of the epithelial remnants of the dental lamina.¹²

Supernumerary teeth have various effects on developing dentition causing malocclusion. It can cause crowding, diastema, delayed eruption or retention, ectopic eruption, delayed or abnormal root formation, resorption of adjacent teeth, deformity and/or loss of vitality in adjacent teeth, and cysts.¹³ Therefore, early intervention is as important as the prevention for permanent dentition.

The treatment options for a supernumerary tooth includes:¹⁴

1. In asymptomatic cases it is desirable to wait and watch.
2. Extraction followed by wait and watch.
3. Extraction followed by orthodontic treatment.

4. Conclusion

A rare case of bilateral supplemental teeth mesial to maxillary primary canines is reported. The care takers of the child were informed about the additional tooth, and the need for subsequent treatment of the carious teeth. Since orthodontic treatment has not been determined precisely and has no associated pathology, there is no need for the supplemental tooth extraction.

5. Declaration of Patient Consent

Parent's written consent for participation and consent is available upon request.

6. Source of Funding

None.

7. Conflict of Interest


None.


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