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# A rare occurrence of Impacted Unilateral Supplemental Lateral Incisor in mixed dentition: Early Diagnosis and Treatment - A Case Report

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**Abstract**

Supernumerary teeth are commonly observed in permanent dentition, while their occurrence in primary dentition is quite rare. These additional teeth, which closely resemble normal dentition in terms of shape and size, are referred to as 'supplemental teeth'. Supplemental teeth are less common than supernumerary teeth and are often overlooked because of their similarity with the normal morphology of the tooth. Additional teeth can lead to aesthetic concerns, delayed tooth eruption, and crowding issues, necessitating prompt diagnosis and treatment to avoid further complications. The case reported here is one of the impacted unilateral supplemental teeth impeding the eruption of permanent maxillary lateral incisor, and it emphasizes the importance of early diagnosis and treatment during early mixed dentition.

**Keywords:** Supernumerary teeth; Supplemental teeth; Lateral incisor.

## Introduction

Supernumerary teeth are defined as teeth that surpass the standard dental formula. It is an additional tooth to the normal series of the dental arch.1-3 Supernumerary teeth occur less frequently in primary dentition than in permanent dentition.1,4,6 They have a reported prevalence of 1% - 4% in permanent dentition 2,3,6,7 and 0.2% - 1.9% in primary dentition. 1,3,8,9 Interestingly, 35% - 50% of supernumerary teeth in primary dentition are superseded by extra teeth in the same location in the permanent dentition. 11, 12 Males are affected twice as frequently as females. 5 Primosch1

classifies supernumerary teeth into two types according to shape. Supernumerary teeth that are of normal shape and size (eumorphic) are referred to as 'supplemental' or 'incisiform', while teeth that are of abnormal shape and smaller size (dysmorphic) are termed 'rudimentary' and encompass 'conical', 'tuberculate', and 'molariform' teeth.[1]

The exact etiology of its occurrence is unknown; however, several theories have been put forward to justify their presence.[2] One theory suggests that the additional tooth is created as a result of a dichotomy of the tooth bud, another theory, hyperactivity theory, which states that supernumeraries are formed as a result of local, independent, conditioned hyperactivity of dental lamina. Genetics may also play a role in the anomaly and it does not follow a simple mendelian pattern. 2,14Supplemental lateral incisors are rare and its prevalence among various populations lies between 0.05% and 1.59%. They occur more commonly in maxilla than in mandible and majority occur unilaterally and erupted.[10]

So this case report here shows the rare presence of an impacted unilateral supplemental teeth that emphasizes the importance of early diagnosis and treatment during early mixed dentition.

**Case Report**

An 8-year- old boy reported to the Department of Pedodontics and Preventive Dentistry, Himachal Dental College, Sunder Nagar with the chief complaint of over retained milk teeth in the upper anterior region of the mouth. The patient's medical history was non-contributory, there was no previous trauma to the teeth or jaws, and extraoral examination revealed no abnormality. There was no family history of congenital anomalies. Intraoral examination along with Panoramic and periapical radiographs showed mixed dentition, together with unilateral supplemental impacted maxillary lateral incisor in the upper left anterior region of the mouth (Figure 1,2) Other findings revealed deep carious lesion with pulpal exposure in relation to 84; pulpectomy to be carried out. Grossly decayed in relation to 74; band and loop space maintainer to be given. The over retained 62 was extracted and the patient was called after a week for the surgical extraction of the supplemental lateral incisor. The position of the supplemental supernumerary tooth was estimated using the SLOB rule. In our case the tooth was present buccally.

On the day of surgery after giving local anesthesia block, extraction of the supplemental lateral incisor was carried out by raising a full thickness mucoperiosteal triangular flap and exposing the underline bone. Then the hard tissue was removed using a bone cutting bur fitted inside a high speed contra-angle along with saline syringe sprays, exposing the supplemental supernumerary tooth. The tooth was then removed to facilitate the eruption of permanent left lateral incisor as shown in (Figure 3). The clinical and postoperative radiograph can be seen in (Figure 4).

The mucoperiosteal flap was closed with the interrupted sutures (Figure 5) and the sutures were removed one week following extraction. The patient was recalled for trimonthly clinical and radiographical examinations in order to closely follow the eruption pathway of the permanent teeth.

The patient is still under follow up.

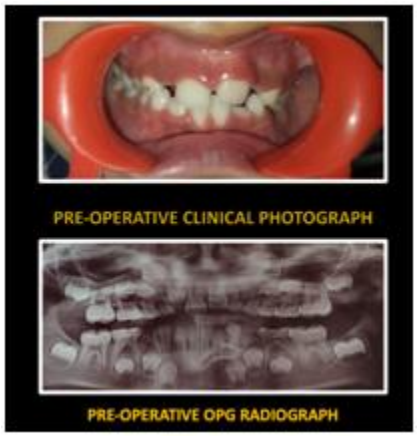


Figure 1


Figure 2


Figure 3

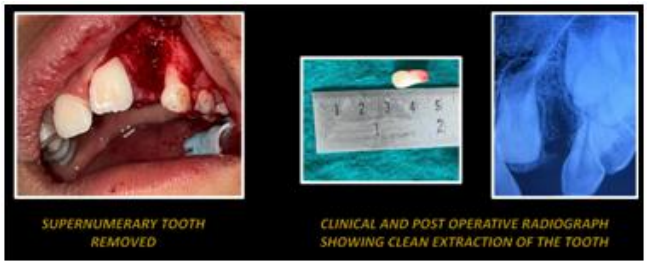


Figure 4


Figure 5

**Discussion**

Supernumerary teeth are seldom seen in primary dentition, as stated in the literature. Humerfelt et al8articulated that hyperdontia in primary dentition is often overlooked because the additional teeth often erupt normally, are of normal shape and appear to be in proper alignment, absinthe case reported here. The sporadic occurrence of supernumerary deciduous teeth may be due to the fact that they often erupt normally, making them easily overlooked. Additionally, many children do not receive their first dental check-up until their permanent front teeth come in, which means any supernumerary deciduous teeth that have already erupted and fallen out may not be noticed. Differentiating between a regular tooth and its extra 'twin' can be challenging, as the supplemental tooth may have unique characteristics like a deep palatal pit and coronal invagination. Supplemental teeth, as then am implies, refer to teeth that are duplications of teeth in the normal series and is found at the end of a tooth series. Supernumerary teeth are typically found in the front upper jaw area in both primary and permanent dentition. However, they are more commonly seen in permanent dentition as extra maxillary and mandibular lateral incisors. Supplemental primary teeth are most likely to appear a supper central incisors. 8, 13 In the case reported here, the supplemental teeth was unilateral maxillary lateral incisor. Supernumerary teeth may occur singly, multiply, unilaterally or bilaterally in the maxilla, mandible or both.1, 3, 14 multiple supernumerary teeth are reported to be associated with a number of syndromes, including cleft lip and palate, cleidocranial dysostosis, Gardner’s syndrome and Chondroectodermal dysplasia. While supernumerary teeth not linked to any syndrome are highly uncommon, no syndrome was detected in the case described in this report. 3

Hyperdontia in primary dentition may indicate hyperdontia in permanent dentition. A careful radiographic survey of both dental arches will provide the clinician and the parents with a preview of any potential problems likely to develop during the course of the child's growth and development.15Various pathological conditions are associated with supernumerary teeth, including impaction, delayed eruption, or ectopic eruption of adjacent teeth; crowding development of median diastema eruption in tote floor of the nasal cavity formation of primordial or follicular cysts, with significant bone destruction root resorption of adjacent teeth and esthetic problems, including those associated with crowding.[1,2,6,16,17] The presence of an extra tooth also has a great potential to disrupt the normal occlusion and early intervention to remove it is usually needed to obtain reasonable alignment and correct occlusal relationship. If two teeth are equally well formed, the tooth that is displaced the most should be extracted when making decisions regarding the extraction of extra teeth.[13]

**Conclusion**

It is crucial to detect and treat supernumerary teeth early on to avoid issues with the eruption and alignment of the regular dentition. Timely intervention is key in preventing any potential complications.

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