

CASE REPORT

SUPPLEMENTAL PERMANENT MAXILLARY LATERAL INCISOR: A CASE REPORT

Charlotte Rodrigues¹, Sangeetha R², Mariette D'Souza³

HOW TO CITE THIS ARTICLE:

Charlotte Rodrigues, Sangeetha R, Mariette D'Souza. "Supplemental Permanent Maxillary Lateral Incisor: A Case Report". Journal of Evolution of Medical and Dental Sciences 2014; Vol. 3, Issue 05, February 03; Page: 1081-1084, DOI: 10.14260/jemds/2014/1949

ABSTRACT: Supernumerary teeth, is defined as teeth that exceed the normal dental formula, regardless of their location and morphology it can be found in almost any region of the dental arch both in the primary and permanent dentition. Supernumerary teeth of orthodox shape and size that resemble normal teeth are called 'supplemental teeth'. The supplemental teeth are less common than supernumerary teeth and are often overlooked because of their normal shape and size. The supplemental teeth may cause aesthetic problems, delayed eruption and crowding. They require early diagnosis and treatment to prevent complications. There has been very few documented cases of unilateral supplemental lateral incisors. A case with unilateral supplemental permanent maxillary lateral incisor is presented. The etiology, types and treatment alternatives are discussed.

KEYWORDS: Supplemental Teeth, Permanent Dentition, Supernumerary Teeth.

INTRODUCTION: Supernumerary teeth are defined as teeth in excess of the normal dental formula. Supernumerary teeth, also called hyperdontia, may occur unilaterally or bilaterally, single or multiple and in one or both jaws¹. Supernumerary teeth occur frequently in permanent dentition than in primary dentition. The prevalence rates of supernumerary teeth in the permanent dentition vary between 0.1 and 6.9% and in deciduous teeth is 0.4-0.8%². Primosch classifies supernumerary teeth into two types according to their shape. Supernumerary teeth of normal shape and size (eumorphic) are termed 'supplemental', or 'incisiform', whereas teeth of abnormal shape and size (dysmorphic), are termed 'rudimentary' and include 'conical', 'tuberculate' and 'molariform' teeth³.

The causes of supernumerary teeth are poorly understood, although many theories have been proposed, such as the phylogenetic process of atavism and the dichotomy of the tooth bud. The most accepted theory suggests that these teeth result from localized and independent hyperactivity of the dental lamina, which presumably leads to the formation of additional tooth germs. Genetics is also thought to play a role in the development of supernumerary teeth, as occurrence within the same family is commonly reported⁴⁻⁶.

Supplemental supernumerary teeth are found in a normal sequence of the dentition. They look just like their counterpart and are usually an extra lateral incisor, premolar or molar. Primosch in 1981 reported that the majority of primary extra teeth are supplemental, mostly lateral incisors.

Anomalies of the teeth may involve either number and /or morphology, and may occur either in primary and/or permanent teeth. Difficulties in distinguishing number and morphology occur in the germination and/or fusion of teeth, and in determining whether extra teeth are supplemental or supernumerary⁷.

A case with unilateral supplemental permanent maxillary right lateral incisor is presented.

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Extraoral and intraoral soft tissue examination revealed no abnormalities. On intraoral examination patient presented with complete set of permanent dentition in both maxillary and mandibular arches except third molars in left arches and the presence of supernumerary supplemental unilateral right lateral incisor having morphology similar to that of permanent maxillary right lateral incisor. The intraoral examination revealed crowding of mandibular anteriors, arch length, tooth material discrepancies, midline shift, deep bite and attrition of mandibular anteriors. The Fremitus test was positive (Fig 1).

The crown and root morphology of maxillary lateral incisors were identical to the supplemental tooth. The mesio-distal width at the incisal edges and the cervico-incisal crown length of the permanent maxillary right lateral incisor is equal supplemental tooth. Free flow of floss in the interdental area between 12 and 12S revealed a clear demarcation between the two teeth suggestive of two independent teeth (Fig 2).

An IOPA radiograph was taken in relation to 11, 12, 12S and 13. The crown appears normal with enamel, dentin, pulp and root configuration with sound periodontium in relation to maxillary right lateral incisor and their supplemental twin (Fig 3). The crown and root morphology of both right lateral incisor and supplemental teeth were identical. Other investigations include clinical photographs, full mouth IOPA, OPG and lateral cephalogram.

On examining the cast also revealed crowding of mandibular anteriors, arch length- tooth material discrepancies, midline shift, deep bite and attrition of mandibular anteriors (Fig 4).

The treatment option for this particular case was extraction of the supplemental permanent maxillary right lateral incisor, shifting of upper midline, proximal stripping and alignment of lower anteriors.

DISCUSSION: Supernumerary teeth can be found in almost any region of the dental arch. Supernumerary teeth most commonly involved the premaxilla which has also been established as the predominant location by others ^{4,8}.

The most frequent location is the maxilla, the anterior midline region (mesiodens), where 80% of all supernumerary teeth are found. Supernumeraries appeared in a variety of forms (size and shape). Koch et al. reported 56% conical, 12% tubercular, 11% supplemental and 12% other configurations among their patients⁹. Few authors have reported around 20% of erupted supernumeraries

Occurrence may be single or multiple, unilateral or bilateral, erupted or impacted and in one or both jaws. The conditions commonly associated with an increased prevalence of supernumerary teeth include cleft lip and palate, cleidocranial dysplasia and Gardner syndrome ¹⁰.

Clinical and radiographic identification of all the teeth is very important for a good treatment planning. It may be difficult to formulate an ideal treatment plan for all cases with supernumerary teeth.

Treatment depends on the type and position of the supernumerary teeth and its effect or potential effects on adjacent teeth. The management of a supernumerary tooth should form part of a

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comprehensive treatment plan and should not be considered in isolation. Different approaches to deal with such conditions have been reported in the literature. Early diagnosis is of paramount importance to minimize the risks of complications resulting from supernumerary teeth. However, the best time for removal depends on the careful evaluation of each situation.¹¹

Some authors recommend immediate removal of the tooth so as to prevent costly future orthodontic intervention, the others claim that extraction of asymptomatic supernumerary teeth that do not affect the dentition may not always be necessary, although they should be periodically monitored. Furthermore, when supernumerary primary teeth are detected, parents should be warned of the possible consequences to the permanent dentition as these teeth may be replicated in the permanent series in 50 % of the cases.^{5, 8, 9, and 12}

In the present case it was decided to extract the supplemental lateral incisor to allow for proper alignment of the teeth. The patient is under regular follow up.

Based on the literature, it is possible to conclude that a supplemental unilateral lateral incisor is a condition which causes aesthetic and functional disturbances. So, early diagnosis and treatment plan is necessary.

CONCLUSION: In summary, supernumerary teeth in the permanent maxillary lateral incisor regions are relatively common. Supplemental maxillary lateral incisors often erupt into the dental arch and may be missed during routine dental checkups.

Supplemental supernumerary teeth should be observed to prevent its interference with the development and eruption of adjacent teeth. Removal of supernumerary teeth is recommended in cases where they are causing any pathological changes or crowding along with esthetic problem and difficulty in maintenance of oral hygiene.

REFERENCES:

1. Singla A, Negi A, Case with bilateral supplemental maxillary lateral incisors. *Indian Journal of Dental Sciences*. 2010; 2(1): 1- 4.
2. Szkaradkiewicz AK, Karpinski TM. Supernumerary teeth in clinical practice. *J Biol Earth Sci* 2011; 1 (1): M1 -M5.
3. Primosch RE. Anterior supernumerary teeth-assessment and surgical intervention in children. *Pediatr Dent* 1981; 3:204-215.
4. Liu JF. Characteristics of premaxillary supernumerary teeth: a survey of 112 cases. *ASDC J Dent Child* 1995; 62: 262-265.
5. Levine N. The clinical management of supernumerary teeth. *J Can Dent Assoc* 1961; 28: 297-303.
6. Cadenat H., Combelles R., Fabert G. et al. *Rev. Stomatol. Chir. Maxillofac* 1977; 78, 341-346.
7. Joanna Janiszewska O, Barbara Wedrychowska S, Maria S. Fusion of Lower Deciduous Lateral Incisor and Canine – Review and Report of Two Cases. *Dent. Med. Probl.* 2008, 45, 1, 82–84.
8. Rajab LD, Hamdan MAM. Supernumerary teeth: review of the literature and a survey of 152 cases. *International Journal of Paediatric Dentistry*. 2002; 12(4):244–254.
9. Koch H, Schwartz O, Klausen B. Indications for surgical removal of supernumerary teeth in the premaxilla. *International Journal of Oral and Maxillofacial surgery*. 1986; 15(3):273–281.

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10. Scheiner MA, Sampson WJ. Supernumerary teeth: a review of the literature and four case reports. Aust Dent J. 1997; 42:160-165.
11. Di Biase DD. The effects of variations in tooth morphology and position on eruption. Dent Pract.1971; 22: 95-108.
12. R.Thirunavukkarasu, M.Ramasamy, B.Srinivasan, R.Satish. Orthodontic Management of Supplementary Tooth: A Case Report. Int. Journal of Contemporary Dentistry.2011; 2(3):145-148.



Fig. 1



Fig. 2

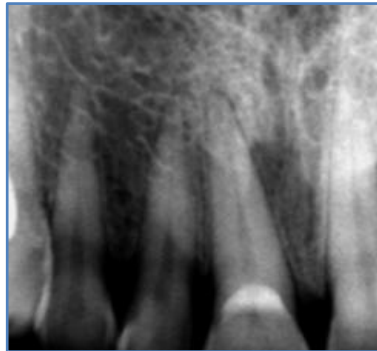


Fig. 3



Fig. 4

AUTHORS:

1. Charlotte Rodrigues
2. Sangeetha R.
3. Mariette DSouza

PARTICULARS OF CONTRIBUTORS:

1. Professor, Department of Oral and Maxillofacial Pathology, Ambedkar Dental Collge & Hospital, Bangalore.
2. Senior Lecturer, Department of Oral and Maxillofacial Pathology, K LE's Institute of Dental Sciences, Bangalore.
3. Prosthodontist and Implantologist, Trinity Dental Care Medicare Centre. Udupi.

NAME ADDRESS EMAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Sangeetha. R,
W/o. Srikanth K,
#33, 5th Cross, SBM Colony,
Mathikere, Bangalore – 560054.
E-mail: sangeethasrikanth04@gmail.com

Date of Submission: 03/01/2014.
Date of Peer Review: 04/01/2014.
Date of Acceptance: 18/01/2014.
Date of Publishing: 28/01/2014.