

Bilateral Supplemental Maxillary Lateral Incisors- A Rare Case Report

Abstract

Most Supernumerary teeth are located in the anterior maxillary region. They are classified according to their form and location. A case with bilateral supplemental maxillary Lateral incisors in mixed dentition is rare. The etiology, types and treatment alternatives are discussed.

Key Words

Supernumerary teeth, Supplemental lateral incisors, mixed dentition

Introduction

Supernumerary teeth are those that are additional to the normal complement. Supernumerary teeth, also called hyperdontia, may occur unilaterally or bilaterally, single or multiple and in one or both jaws. They may occur in any region of the dental arch with predilection for premaxilla^{[1],[2]}. According to Bodin et.al^[3] the commonest site for hyperdontia is premaxilla with prevalence of 1.57%. The etiology of hyperdontia is unclear.

Several theories have been suggested regarding their etiology, hyperactivity of dental lamina is being most supported by literature^{[1],[4],[5]}. Among other theories are:

- Atavism, a reversion to a more primitive type of dentition^[6].
- Dichotomy theory by Taylor^[7], which states that tooth bud splits in to two equal or differently size parts, resulting in two teeth of equal size or one normal and one abnormal tooth.
- Heredity: Many authors have suggested inheritance as a key factor in the development of supernumerary teeth, as these are more common in the family of the affected children than in general population [8],[9]. While there may be a genetic influence, this does not appear to follow a simple Mendelian pattern^[10].

Prevalence

Supernumerary teeth have been reported in both the primary and the permanent dentitions. The reported prevalence of supernumerary teeth in the general Caucasian population for the permanent dentition ranges from 0.1 to 3.8%^{[11],[11]}.

The prevalence of supernumerary teeth is lower in the primary dentition and is said to be 0.3–0.8%^{[2],[7]}. Hyperdontia in the primary dentition is often overlooked because supernumerary teeth are often of normal shape, erupt normally and appear to be in proper alignment; and can be mistaken for gemination or fusion anomalies^[12]. Although cases of multiple supernumerary teeth have been reported^{[13],[14]}, they are rare, as are multiple supernumerary teeth in individuals with no other associated diseases or syndromes^{[15],[16]}. The conditions commonly associated with an increased prevalence of supernumerary teeth include Cleft lip and palate, Cleidocranial dysostosis, Gardner's syndrome, Fabry Anderson's syndrome, Chondroectodermal dysplasia and Ehlers–Danlos syndrome.

Classification: Supernumerary teeth may be classified according to morphology and location^{[17],[18]}. In the primary dentition, the morphology is usually normal or conical. The morphology of supernumerary teeth presenting in the permanent dentition is more variable, with the following four morphological types being described:

- **Conical:** This small peg-shaped conical tooth is the most common supernumerary found in the permanent dentition. It develops with root formation ahead of, or at an equivalent stage to, that of permanent incisors and usually presents as a mesiodens between the maxillary central incisors, but rarely erupts labially.
- **Tuberculate:** This type of

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supernumerary, that is larger in size than the conical tooth, possesses more than one cusp or tubercle.

- **Supplemental:** The supplemental supernumerary refers to duplication of teeth in the normal series and is found at the end of a tooth series.
- **Odontoma:** Despite not being universally accepted, most authors agree that odontoma represent a hamartomatous malformation. Bilateral supplemental maxillary lateral incisors have previously been described in the literature^{[19],[20]}, but are regarded as an unusual finding. A case of non syndromic, bilateral supplemental type of maxillary lateral incisors is presented.

Case Report

An 8 year old boy reported to the department of Pedodontics, Himachal Dental College, Sundernagar with the chief complaint of irregularly placed upper front teeth. Patient had Angles class I molar relationship with marked upper arch crowding. On intraoral examination, he presented with mixed dentition in maxillary arch (11,12,12S,13,14,55,16,21,22,22S,63,24,25,26) along with presence of

supernumerary supplemental bilateral lateral incisors having morphology similar to that of permanent maxillary lateral incisors (Fig 1, 2 & 3). The lateral incisors were similar in size with marked anterior crowding. Supplemental right maxillary lateral incisor was in the normal alignment in the arch whereas supplemental left maxillary lateral incisor was rotated distobuccally and placed buccally to normal alignment. Permanent maxillary right canine (13) was seen erupting buccally. There was no significant past medical history nor were there clinical signs of any recognized syndrome associated with multiple supernumeraries. The dentition present in the mandibular arch was mixed dentition (31, 32, 73, 75, 36, 41, 42, 44, 85, 46). An OPG radiograph was taken which had also revealed presence of supplemental lateral incisor with incomplete root configuration (Fig 4). The crown and root morphology of both right and left lateral incisors and supplemental teeth were identical.

Management: Treatment depends on the type and position of supernumerary tooth and on its effect on adjacent teeth. Management of supernumerary tooth should be part of comprehensive treatment plan and should not be considered in isolation.

Usually it is difficult to distinguish the normal tooth from its supplemental twin. Supplemental supernumerary teeth should be observed till the child is old enough, if it is not interfering 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 oral hygiene maintenance.

In the present case two supplemental lateral incisors were causing crowding along with esthetic problem in maxillary anterior region, so decision was taken to extract the supplemental teeth and wait for self alignment of the incisors and canine. In the present case as both the teeth were equally formed the teeth which are more displaced were extracted as reported by Hattab et al^[21] (Fig 5, 6). After extraction, this patient was kept under follow up observation. After 6-months follow up, relieving of the crowding in maxillary anterior region



Fig 1 : Intraoral Photographs Showing Supplemental Lateral Incisors

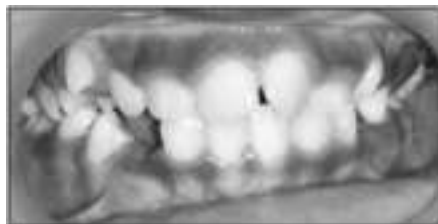


Fig 2 : Intraoral Photographs Showing Supplemental Lateral Incisors



Fig 3 : Intraoral Photographs Showing Supplemental Lateral Incisors



Fig 4 : Opg Showing Supplemental Lateral Incisors



Fig 5 : Intraoral Photographs Showing Extraction Of Supplemental Lateral Incisors

and self alignment of buccally erupting canine in the arch was seen (Fig 7). If any minor orthodontic alignment would be required, decision will be taken after the eruption of full set of permanent dentition and patient is kept under follow up observation.

Discussion



Fig 6 : Intraoral Photographs Showing Extraction Of Supplemental Lateral Incisors



Fig 7 : Intraoral Photographs Showing Relieving Of Crowding With Self Alignment Of Buccally Erupting Canine (6 Months)

Present case is unusual as it demonstrates multiple supernumerary teeth in the anterior maxilla in patient without any syndrome. Supplemental lateral incisors are rare, bilateral cases even rarer, only few cases having been reported in the literature to date. Yusof, in a literature review of multiple supernumerary teeth occurring in the absence of a syndrome, found the anterior maxilla to be an unusual site for this occurrence^[22]. Extraction is not always treatment of choice for supernumerary teeth. Unerupted supernumerary teeth that are symptomless are sometimes best to left in place and kept under observation. Since these supplemental lateral incisors were causing crowding and esthetic problem, so extraction of supplemental teeth was done to prevent further worsening of malocclusion.

Why this paper is important to paediatric dentists?

- Bilateral supplemental teeth are very rare.
- Their differentiation from normal tooth is very difficult.
- Treatment varies depending on the age and dentition of the child.

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