

**MANAGEMENT OF SUPPLEMENT TOOTH IN MANDIBULAR ANTERIOR REGION
DURING MIXED DENTITION PERIOD: A RARE CASE REPORT****Dr. Saraswati Vaviya*, Naik Saraswathi V., Nadig Basappa, Shetty Srinidhi S.**

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Article Received on 23/10/2023

Article Revised on 13/11/2023

Article Accepted on 03/12/2023

ABSTRACT

A supernumerary tooth is an abnormality in regard to number of teeth and occasionally encountered clinically in pediatric dentistry cases. Such tooth can cause abnormal tooth eruption and/or malalignment. Though occurrence of supplement tooth in maxillary anterior region is common, its occurrence in mandibular anterior region is rare. Aim of the present case report is to describe the management of supernumerary tooth (supplement tooth) in mandibular region during mixed dentition period to prevent malocclusion and any further complication associated with it.

KEYWORDS: Supernumerary teeth, supplemental tooth, mandibular anterior regions, mixed dentition.**INTRODUCTION**

A supernumerary tooth is an abnormality in regard to number of teeth and occasionally encountered clinically in pediatric dentistry cases. Such tooth can cause abnormal tooth eruption and/or malalignment, and is usually observed in the maxillary anterior region, while occurrence in the mandibular anterior region is rare.^[1] The prevalence of supernumerary teeth in north Indian population was 0.8% out of which 0.7% were located in maxilla and 0.1% in mandible^[2] and in south Indian population found 1.2% out of which 66.7% were located in the maxilla and 33.3% in the mandible.^[3] In permanent dentition, there is a reported incidence of mesiodens of 0.15 to 3.8% in which about 50 to 83% of all supernumerary teeth were found in anterior region.^[4]

Supernumerary teeth have been classified mainly based on their morphology and location. According to the morphology as conical, tuberculate, supplemental, and odontoma. Scheiner and Sampson (1997) classified it as mesiodens, paramolar, distomolar, and parapremolar.^[5] Supernumerary teeth may be associated with conditions such as cleidocranial dysplasia, Gardner syndrome, and cleft lip and cleft palate. Clinically, it can cause disorders like retention of primary teeth, delayed eruption of permanent teeth, ectopic eruptions, tooth displacements, follicular cysts, and other alterations which require surgical as well as orthodontic treatments.^[6]

When a supernumerary tooth occurs in the mandibular anterior region, it is often not detected until its eruption into the oral cavity. Although routinely professional pedodontist perform panoramic radiographic

examination in mixed dentition period. When a supernumerary tooth erupts in a patient that has experienced eruption of all normal teeth, crowding of the dentition is noticed. In such cases, the supernumerary tooth is extracted and followed by orthodontic treatment.^[1] We here present rarest of the rare case report of an 8 years old patient with 5 mandibular incisors, each of which had an appearance of incisor-like tooth.

CASE REPORT

An 8-year-old boy presented with decayed teeth in lower right back region of the jaw. Medical history did not reveal any relevant positive findings. Clinical examination revealed mixed dentition with following teeth presents:
16 5 54 53 12 11 21 63 64 65 26
46 85 84 83 42 41 31 32 s 74 75 36

Intraoral examination revealed class I molar relationship with five mandibular incisors with early exfoliation of left deciduous canine. A supernumerary tooth, morphologically similar to the permanent mandibular incisors was present. (Figure no. 1) OPG and IOPAR examination revealed the supernumerary tooth closely resembled mandibular incisors (Figure no. 2). In the present case, distinguishing between a normal tooth and its supplemental "twin" was difficult. Tooth root morphology and development of all the mandibular incisors were similar, thus the left lateral most tooth was considered as a supplement tooth. Clinical finding also revealed, early exfoliation of left deciduous canine and space was occupied by erupting incisor which was considered as supplement tooth. Extraction was also

planned i.r.t lower right deciduous canine (Figure no. 3) to prevent the midline shift and treatment for the rare case was done followed by lingual arch space maintainer

to maintain the space for succedaneous permanent canines. (Figure no. 4)

PHOTOGRAPHS



Figure No. 1: Pre-operative photographs a) Front view b) Right side view c) Left side view d) Maxillary occlusion view e) Mandibular occlusion view.



Figure no. 2: Radiograph a) OPG b) IOPAR.



Figure No. 3: Extracted supplement tooth a) buccal view b) proximal view c) Supplement tooth and right deciduous canine.



Figure No. 4: Post-operative photographs a) Front view b) Right side view c) Left side view d) Maxillary occlusion view e) Mandibular occlusion view.

DISCUSSION

Stafne reported that the incidence of supernumerary teeth in permanent dentition was 1-3%. Most common supernumerary tooth is mesiodens, which is usually small and conical, placed between maxillary incisors.^[7] This is generally followed by maxillary lateral incisor, maxillary fourth molar and mandibular third premolars, in descending order. Maxillary premolar, maxillary canine and mandible fourth molar are the least common ones. Approximately 90-98% of all the supernumerary teeth occur in maxilla, with a strong predilection for the anterior region. Their incidence in the mandibular anterior region is very rare about 0.01%.^[8] Previously Keiichiro Tsujino et al. reported impacted supplemental tooth in mandibular anterior region in 7 year old boy.^[1] Patients with a supernumerary tooth in the mandibular

anterior region usually must undergo extraction, as the affected tooth often causes malalignment.^{[7],[8],[9]}

Although diagnosis of a supernumerary tooth with an abnormal mesiodens-like morphology is not difficult, it is sometimes challenging to determine the status of such a tooth with an incisor-like shape.^[1]

In the present case, distinguishing between a normal tooth and its supplemental "twin" was difficult. The tooth root morphology and development of all the mandibular incisor was similar so we considered the left lateral most tooth as a supernumerary tooth, though could not easily decide as they had similar shapes and development. Based on the finding, early exfoliation of left deciduous canine and space was occupied by

erupting supplemental tooth which was decided to extract. Previous reports of incisor-like supernumerary teeth in the mandibular anterior region were mostly cases in which all incisors had erupted and a supernumerary tooth was discovered due to malalignment or periodontal problems.^{[7],[10]}

On the other hand, there have been few reports of cases such as the present in which a supernumerary tooth was treated during the mandibular anterior exchange period.^{[1],[8],[11]} Cho reported selection and extraction of a single erupted incisor in a 7-year-old patient with a total of 5 incisors in the mandibular anterior region, successful induction of eruption of the impacted tooth into the dentition without orthodontic treatment.^[12]

During the early transition from the mixed to the permanent dentitions, developmental changes occur in the arch, including even the leeway space. Usually, the first molars move mesially into the leeway space and arch length decreases. A fixed lingual arch on the mandibular molars is an effective device to maintain arch length by controlling mesial movement of the molars and to prevent the collapse of the mandibular incisors in a lingual direction. The lingual arch is not only an appliance for maintaining space for the eruption of the permanent teeth, but also an important way to resolve marginal crowding, by controlling space use in the mandibular arch.^[13]

Our experience in the present case indicates that in patients with an incisor-like supernumerary tooth found in the mandibular anterior region, a favorable dentition state can be induced with limited invasion if an appropriate incisor is selected and extracted during the early mixed dentition period and maintaining space to eruption of permanent succedaneous teeth.

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