

MULTIPLE SUPERNUMERARY TEETH- A CASE REPORT

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Aim: The aim of this case report is to present a case of a non-syndrome male patient with multiple supplemental supernumerary teeth in two quadrants of his mouth.

Background: Supernumerary teeth are described as the teeth formed in excess of the number found in a normal dentition. Prevalence of supernumerary teeth varies between 0.1% and 3.8% in the general population. Multiple supernumerary teeth are not a common occurrence, although a single or a few supernumerary tooth/teeth in each case have been widely reported in the literature.

Report: A 15-year-old male presented for a routine orthodontic check up. A routine intra-oral radiographic evaluation showed the presence of multiple supernumerary teeth which were located in the mandibular right and left premolar regions. In addition there was a dentigerous cyst associated with unerupted right lower canine. The family's medical history was non-contributory, and an extra oral examination did not reveal any abnormality.

Summary: It is rare to find multiple supernumerary teeth in individuals with no other associated diseases or syndromes. This case report presents a case of a non-syndrome male patient with multiple supplemental supernumerary teeth in two quadrants of his mouth.

Keywords: Non-syndrome, supernumerary teeth, multiple supernumerary teeth.

INTRODUCTION

Supernumerary teeth are described as the teeth formed in excess of the number found in a normal dentition and may or may not mimic the normal shape. Multiple supernumerary teeth are not a common occurrence and have been reported in the literature over the years as a well-recognized clinical phenomenon¹. Multiple supernumerary teeth are commonly associated with variable syndromes. However the presence of multiple supernumerary teeth in the absence of any associated systemic condition/syndrome is unusual^{2,3,4}. Multiple supernumerary teeth are associated with cleidocranial dysplasia and Gardner syndrome^{5,6}. In such cases, the mandibular premolar region is the common site of occurrence². This case report presents a case of a non-syndrome male patient with multiple supplemental supernumerary teeth in two quadrants of his mouth

ETIOLOGY

The exact etiology of supernumerary teeth is still obscure although many theories have been proposed. Two popularly accepted theories are: The dichotomy theory of tooth germs states that the tooth bud splits into two equal or different sized

parts, resulting in two teeth of equal size or one normal and one dimorphic tooth respectively. This hypothesis is supported by animal experiments in which split germs have been cultivated in vitro⁷. Localized and independent hyperactivity of dental lamina is the other accepted theory, which suggests supernumerary teeth are formed as a result of local, independent, conditioned hyperactivity of dental lamina⁷.

Classification of supernumerary teeth may be on the basis of position⁸ or form⁹. Positional variations include:

1. Mesiodens - present in the incisor region.
2. Paramolars - present beside a molar.
3. Disto-molars - present distal to the last molar.
4. Parapremolars - present beside a premolar.

Based on the shape they can be of four types:

1. Conical: peg shaped teeth.
2. Tuberculate: made of more than one cusp or tubercle. They are barrel shaped, usually invaginated.
3. Supplemental: resemble normal teeth. May be an incisor, premolar or a molar
4. Odontome: does not resemble any teeth but

is only a mass of dental tissue

The supernumerary teeth can cause problems for the eruption and alignment of normal dentition. Associated problems can range from failure of eruption, displacement, crowding, adjacent teeth root resorption, formation of dentigerous cyst or they can be just asymptomatic.

CASE REPORT

A 15 year old male reported of Department of Orthodontics, Himachal Institute of Dental Sciences, Poanta Sahib with a chief complaint of irregular and protruding teeth (Fig 1 a,b). On extra oral examination, patient had bimaxillary protrusion. Intraoral examination revealed that upper patient had over-retained 85, 83, 74 and 75 (Fig 2). Right lower canine (43) was missing. Tooth no 34 and 35 were pushed into buccal crossbite by retained deciduous teeth (Fig3). On

digital radiographic examination, three supernumerary teeth were found in the mandibular premolar region. There were two supernumerary on right side of mandible (Fig 4 a,b,c) and one on left side in the premolar region (Fig 5). All supernumerary had rudimentary roots whereas crowns were well calcified. The crown of first supernumerary on right side was close to periapical area of 44 and second one was lingual to unerupted 45. This arrangement of addition teeth was confirmed in occlusal view. There was a single supernumerary tooth on lingual aspect of 35. Radiographic evaluation also revealed



Fig. 1 (a, b) Pretreatment Facial Photograph



Fig. 2 Lower model showing retained deciduous teeth

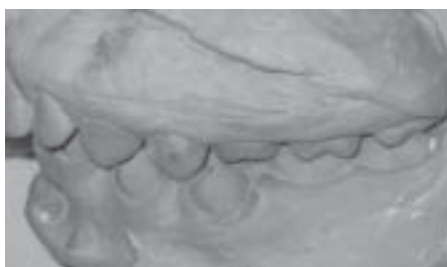


Fig. 3 Tooth no 34 and 35 in crossbite

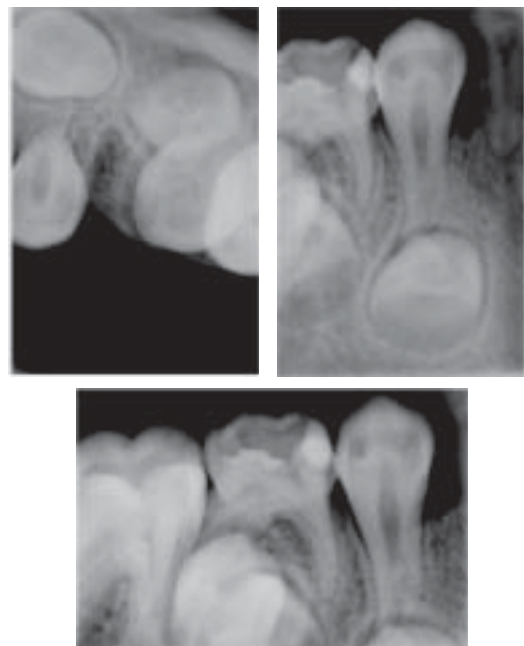


Fig 4 (a,b,c) Intraoral periapical and occlusal digital radiographs showing two supernumeraries in 44 and 45 region

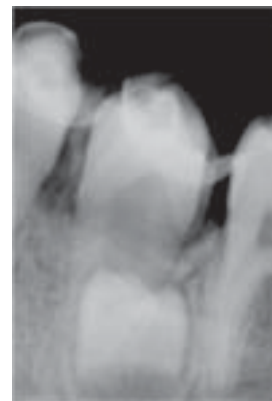


Fig. 5 Supernumerary in 35 region

impacted right lower canine and associated cystic formation (Fig 6). A general physician was consulted who confirmed there was no associated syndrome. As the general and extra oral examination was non-contributory, the diagnosis of non-syndrome associated supernumerary teeth was made. The patient was advised extraction of supernumerary teeth prior to commencement of orthodontic treatment. The patient was referred to the Department of Oral Maxillofacial Surgery for surgical extraction of all supernumeraries and irretrievable 43. Cystic lesion associated with 43 was enucleated (Fig 7). The extracted supernumeraries resembled a lower premolar. The roots were underdeveloped and had capsule attached to them (Fig 8). The recovery was unremarkable. Since it was all first premolar extraction case according to the anchorage requirements, no extraction was done in fourth quadrant as 43 had been extracted. The patient is under active orthodontic treatment and follows up for the last 2 years and has not shown any signs

of recurrence and cystic lesion has recovered completely (Fig 9 a,b,c).

DISCUSSION

It is rare to find multiple supernumerary teeth with no associated diseases or syndromes. The few studies have found the prevalence of supernumerary teeth in permanent dentition to range from 0.15% to 3.8%.¹⁰ Scheiner¹¹ reported an occurrence of 11.1% for multiple supernumerary teeth, while Asaumim¹⁴ found the prevalence for multiple supernumerary teeth to be 1%, and ArxN¹² found it to be 2%. However, where multiple supernumerary teeth' is taken to mean five or more supernumerary teeth, the prevalence has been reported as less than 1%.¹³ In the present case three supernumerary teeth were found. Several researchers have also proposed multiple supernumerary teeth are part of a post permanent dentition.¹⁰ According to common opinion, multiple supernumerary teeth in the dental arch are mostly seen in the maxillary

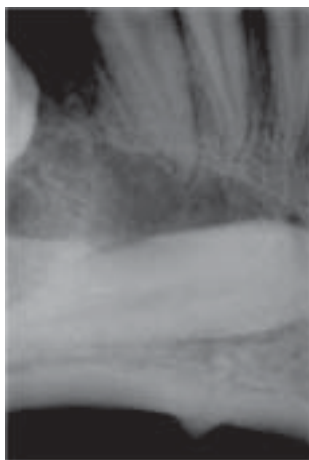


Fig. 6 Horizontally impacted 43 and Cystic formation



Fig. 8 Extracted supernumerary

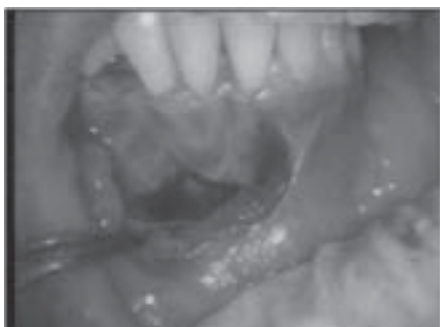


Fig. 7 Surgical site after extraction of 43 and enucleation

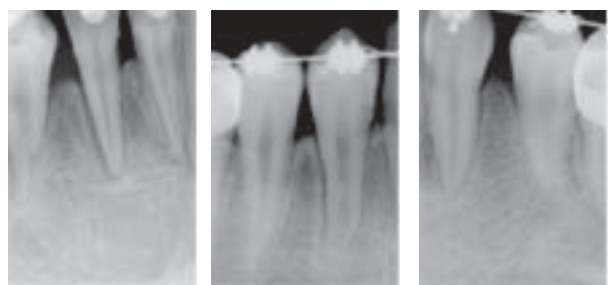


Fig. 9 (a, b, c)

anterior region followed by the maxillary molar region¹⁰ However, it has been reported multiple supernumerary teeth are very rarely seen, and the prevalence of supernumerary teeth in the premolar region has been reported as 0.2-10.9% in various studies.¹⁰ In this present case all three supernumerary teeth were seen in the premolar regions. It has been stated development of supernumerary teeth may cause various pathologies. Approximately 75% of supernumerary teeth are impacted and asymptomatic, and most of these teeth are diagnosed coincidentally during radiographic examination¹⁰. Early diagnosis is important in order to minimize the risk of complications resulting from supernumerary teeth. If they have caused delay or non-eruption of permanent teeth, displacement of permanent teeth, root resorption of adjacent teeth due to the pressure and cystic formations, then extraction is recommended.¹⁻¹⁴ However, extraction of asymptomatic supernumerary teeth that do not affect the dentition may not always be necessary, but they should be followed through periodic examinations. Since there is a risk of tooth bud recurrence, follow-up on these patients is recommended.

SUMMARY

Multiple supernumerary teeth are usually associated with syndromes but can occur, although rarely, without such an association. This case report presents a case of a non-syndrome male patient with multiple supplemental supernumerary teeth in two quadrants of his mouth. The importance of the use of a full mouth radiographs to evaluate a patient's condition is emphasized whenever a supernumerary tooth is detected irrespective of whether the patient has any syndrome or not.

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