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Bilateral Non-Syndromic Multiple Supernumerary Teeth- A Rare Case Report

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Hyperdontia or supernumerary teeth is the development of an increased number of teeth, other than the normal dentition. Supernumerary teeth can be single or multiple, unilateral or bilateral. Supernumerary teeth are mostly associated with syndromes and their presence in a non-syndromic patient is not common. Early diagnosis and management should be done to reduce complications caused by this developmental anomaly.

KEYWORDS: Supernumerary teeth, Non-syndromic, Bilateral.

INTRODUCTION

Development of an increased number of teeth in the maxillary or mandibular arch is known as Hyperdontia. The additional number of teeth is termed Supernumerary.^{1,2} Their prevalence has been reported to be 0.3-0.6% and 0.1%-3.8% in the deciduous and permanent dentition respectively.^{2,3} Most supernumerary teeth develop during the first two decades of life, although some cases have been reported in the older age groups. The cases involving single tooth hyperdontia are more commonly reported in literature followed by the involvement of multiple teeth. In case of a single supernumerary tooth, the most common site of association is the anterior maxilla. The supernumerary teeth can be classified as mesiodens, distomolars and paramolars.¹ Various syndromes have been associated with multiple supernumerary teeth such as Cleidocranial dysplasia, Cleft lip and palate, Gardner's syndrome etc.² On the other hand, non-syndromic multiple supernumerary teeth are reported to be less frequent. Non-syndromic multiple supernumerary teeth occur most frequently in the mandibular premolar region.^{2,3} Radiographic investigations are necessary to assess the position of supernumerary tooth. They include IOPAR, occlusal radiographs in intra-oral radiography. On the other hand, panoramic radiography is also an important additional tool in diagnosing the anomaly.

Supernumerary teeth can lead to malocclusion, crowding and delayed eruption of adjacent teeth. Early diagnosis and management is important to decrease the effects and complications of supernumerary teeth on the adjoining teeth.^{1,2}

This report presents a case of an adult non-syndromic male patient with four supernumerary teeth resembling premolars. These were present bilaterally in the mandibular arch which makes it a unique and rare finding.

CASE REPORT

A 26 year old male came with a chief complaint of pain in the left lower back region of jaw since 2 months. The pain was primary in incidence, sudden in onset, intermittent in frequency, aggravated on chewing food, relieved by discontinuation of the same. The pain did not radiate to any other region of the face or neck. The medical and family histories were non-contributory.

On extra-oral examination, no gross facial asymmetry was seen. The extra-oral view is shown in figure 1.

On intra-oral hard tissue examination (figure 2.), two supernumerary teeth were noted w.r.t the lingual aspect of 34, 35 and one w.r.t 44, 45

respectively. The teeth show presence of cusps on the occlusal surface.

The soft tissue examination was done. A soft tissue bulge was noted in the region of the lingual attached gingiva w.r.t 36.

A provisional diagnosis of non-syndromic multiple supernumerary teeth was given. The patient was advised analgesic for his pain relief. The differential diagnosis given was Gardner's syndrome, Ehler Danlos syndrome.

The investigations included Intra-oral periapical radiographs and mandibular cross-sectional occlusal radiograph.

The intra-oral periapical radiograph of the mandibular right posterior region (figure 3a) revealed teeth like radio-opacities resembling premolars with completely formed roots and a closed apex. The radiodensities of enamel, dentin and pulp could be well distinguished. Similarly, the mandibular posterior left region (figure 3b) showed a supernumerary premolar between 34 and 35. Additionally, an impacted supernumerary premolar with intact follicular space was noted in close proximity to the middle third of the root of 36.

The mandibular cross-sectional occlusal radiograph (figure 4) revealed the presence of a supernumerary premolar lingual to 34. A bulge in the lingual cortical plate w.r.t 35 was seen. The supernumerary premolars w.r.t lingual aspect of 44 and 45 were seen.

Based on the clinical and radiographic findings, a final diagnosis of multiple non-syndromic supernumerary teeth was given.

DISCUSSION

Hyperdontia or supernumerary teeth are a rare clinical entity in a non-syndromic individual. According to various studies, hyperdontia is more prevalent in the permanent dentition with a male predisposition.⁴ The patient in the reported case was an adult male with a completely developed permanent dentition. The supernumerary teeth can be single or multiple, unilateral or bilateral, or involving both the jaws.² Multiple supernumerary teeth are usually associated with syndromes such

as Gardner's syndrome, Cleidocranial dysplasia, cleft lip and palate, Ehler Danlos syndrome.⁵ The patient in the present case did not have any gross facial anomaly, mental retardation, skeletal abnormalities which indicates the presence of a syndrome. The occurrence of multiple supernumerary teeth is reported to be a rare phenomenon in non-syndromic patients. The most common location for the presence of non-syndromic multiple supernumerary teeth is the mandibular premolar region.⁴ In the present case, the patient had four supernumerary teeth, two each in the mandibular right and left quadrants in the premolar region which is a rare occurrence.

The exact etiology of hyperdontia remains still unknown. Various theories have been postulated as follows:

1. The phylogenetic theory of atavism
2. Genetic and environmental factors
3. Dichotomy theory
4. Hyperactivity of the dental lamina (most accepted theory)

Multiple supernumerary teeth are thought to represent a third partial dentition in human beings which possibly supports the hypothesis of atavism (reappearance of ancestral features).^{1,6} Genetic and environmental factors are also known to play a role in the etiology. Another theory suggests that the supernumerary tooth is formed as a result of dichotomy of the tooth bud.⁵ However; the most accepted hypothesis in literature is the hyperactivity of dental lamina which suggests the formation of supernumerary teeth due to independent and local activity of the dental lamina.^{1,2,4}

The diagnosis of this rare anomaly is usually made on routine clinical and radiographic examinations.^{1,2,5} Intra-oral periapical radiographs offer greater resolution and reveal the relationship and effects of the supernumerary teeth to the adjacent teeth. Occlusal radiography provides a wider view and is often helpful in determining the bucco-lingual position of the supernumerary teeth. Both these techniques are useful in diagnosing impacted supernumerary teeth.

The adverse effects of supernumerary teeth are crowding, diastema formation, retention of teeth or delayed eruption, root resorption or displacement of the adjacent teeth all of which require intervention.^{1,3,7} In the present case, patient complained of pain which is one of the

main chief complaints regarding supernumerary teeth.

Various forms of intervention are present for the treatment of Hyperdontia including orthodontic treatment, extraction of the offending tooth/teeth. Careful and meticulous treatment planning should be done in the cases of multiple syndromic non-syndromic supernumerary teeth. In this case, the patient was advised extraction of the impacted supernumerary premolar and the same was performed.

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Figure 1. Extra-oral photograph of the patient



Figure 2. Intra-oral photograph



Figure 3(a). IOPAR mandibular right posterior region

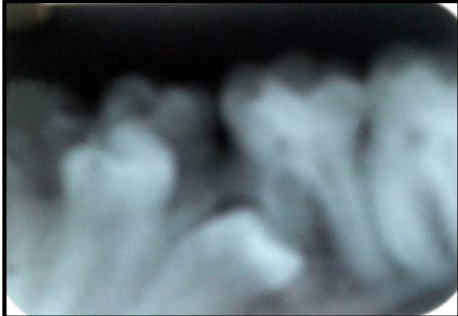


Figure 3(b). IOPAR mandibular left posterior region



Figure 4. Mandibular occlusal radiograph