Case Report

An Unusual Case of Bilateral Maxillary and Mandibular Para Premolar: A Case Report

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Abstract

The presence of supernumerary teeth is not uncommon in the general population. They occur more frequently in patients with a family history of such teeth. It is rare to find multiple supernumeraries in individuals with no other associated disease or syndrome. There have been very few documented cases of bilateral maxillary and mandibular supernumeraries in the premolar region. An unusual case of a 35-year-old man with six para premolars and complete dentition is presented.

Key Words: Premolars; Supernumerary teeth; Panoramic radiography; nonsyndromic

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INTRODUCTION

Teeth present in excess of the normal series of dentition are called supernumerary teeth. The condition of having supernumerary teeth is referred to as hyperdontia. Supernumerary teeth can occur in primary or permanent dentition, but are more frequently reported in permanent dentition. They can occur in different forms, unilaterally or bilaterally and either in the maxilla or mandible. Supernumerary teeth may be an incidental finding on a radiograph or the cause for failure of eruption of permanent teeth. The most common supernumerary tooth is the mesiodens that occurs between the maxillary central incisors [1]. Heredity may also play a role in the occurrence of this anomaly, as supernumeraries are more common in the relatives of affected children than in the general population [2].

Occurrence of supernumeraries is reported to be 0.2 to 0.9 % of the general population and is seen more frequently in permanent dentition [3]. Approximately 90% of cases present in the maxilla with a strong predilection for the incisor region (mesiodens), followed by maxillary and mandibular fourth molars (distomolars or distodens), premolars, canines and lateral incisors [4]. Hyperdontia exhibits a 2:1 male predominance [4].

Supernumerary teeth can be classified on the basis of their morphology or position. On the basis of morphology, they are classified as

1. Supplemental (where the tooth has a normal shape for the teeth in that series)
2. Tuberculate (also called "barrel shaped")
3. Conical (also called "peg shaped")
4. Compound odontome (multiple small tooth-like forms)
5. Complex odontome (a disorganized mass of dental tissue) [5].

On the basis of position, a supernumerary tooth may be referred to as a mesiodens, para premolar, para molar, or a distomolar [6]. Multiple supernumerary teeth are usually associated with conditions such as cleft-lip and palate or syndromes like cleidocranial dysplasia and Gardners syndrome [7]. However, it is rare to find multiple supernumeraries in individuals with no other associated disease or syndrome [8]. Bilateral para premolars affecting both jaws are extremely rare. We describe the occurrence of non-syndromic multiple parapremolars in a male patient.

CASE REPORT

A 35-year-old man came to the Department of Conservative Dentistry and Endodontics, Bhabha College of Dental Sciences, Bhopal with a chief complaint of pain in relation to the lower left first molar. The family, medical and dental history was negative. The patient was healthy with no mental retardation.The facial appearance was normal and presented no skeletal or other abnormalities suggestive of any syndrome (Fig 1).

Extra oral examination did not reveal any abnormalities. Intra oral examination revealed presence of full complement of permanent teeth except for the lower third molars, and supernumerary teeth were present in all four quadrants. A deep carious lesion with pulpal involvement was present in relation to 36. Another finding was a grossly decayed 18.

In the upper arch, supernumerary teeth resembling conical or triangular shaped crown were present in between normally appearing 14 and 15, 24 and 25 without any displacement of the permanent teeth.

Fig1. Extra oral photograph of the face to exclude syndromic abnormalities

In the lower arch, four erupted supplemental teeth resembling premolars were present. Two were located lingual to 34 and 35 and subsequently displacing same. On the right side, two supplemental teeth were present; of which one was lingual to 44 and 45 and the other was between 45 and 46 (Figs 2 and 3).

A panoramic radiograph was taken to rule out any underlying pathology or unerupted supernumerary teeth that showed unerupted 13 present at the floor of the right maxillary sinus and apex of 14 and 15.

Supplemental supernumerary teeth showed a small crown-root proportion with a conical-shaped root and no bone or root resorption. Panoramic radiograph showed impacted 38 and 48 with over-retained deciduous canine in relation to 13 (Fig 4). 36 was treated endodontically, followed by a full metal crown.18 was extracted under local anesthesia. Supernumerary teeth were not causing any kind of discomfort for the patient and patient was informed about the position of his teeth and importance of regular follow-ups.

DISCUSSION

There is no complete understanding of the etiology of supernumerary teeth.

Fig 2. Upper and lower arch showing multiple supernumery teeth

Fig 3. Upper and lower arch study models

Though a number of theories have been put forth, most commonly accepted explanations are dichotomy of the tooth bud. Another theory suggests that supernumeraries are formed as a result of local independent condition, hyperactivity of the dental lamina [9]. On the other hand, genetic factors may also play an important role in the origin of pathology.

Although until recently the precise mechanism of transmission was not known, the underlying hereditary pattern has gradually been elucidated, thanks to the publication of different cases in which several members of one family presented hyperdontia [9].

Although multiple supernumerary teeth appear to develop more often in patients with some relative with at least one supernumerary tooth, the hereditary trait does not exhibit a simple Mendelian pattern [10].

There are few cases of multiple supernumerary teeth published in the literature not associated with complex syndromes [9]. Different studies have reported a 0.15% to 3.8% prevalence of supernumerary teeth in the permanent dentition. Single supernumerary teeth are found in 76-86% of the cases, while two supernumerary teeth are found in 12-23% of the cases, and three or more such teeth in the same

Fig 4. Panoramic radiograph showing multiple supernumerary teeth and impacted 13, 38 and 48

individual are only found in 2-8% of cases [9]. However, based on a study conducted by Rajab and Hamdan, this percentage was less than 1% when hyperdontia comprises five or more supernumerary teeth, while Açikgöz et al. reported a 0.06% prevalence of multiple supernumerary teeth [11, 12]. According to a study performed by Hyun et al., the prevalence of non-syndromic multiple mandibular supernumerary premolars was around 0.029% [13]. The conical type of supernumerary teeth is relatively common in the anterior maxilla (75%), while supplemental supernumerary teeth can occur in any location of the dental arch, with predilection to the maxillary lateral incisors (7%) [14]. Supernumerary teeth may be totally asymptomatic and may be discovered as an incidental finding. However, presence of multiple supernumerary teeth is associated with problems of displacement, rotation, impaction, ectopic eruption of the adjacent teeth, resorption of the teeth and even formation of cysts. In the present documented case, full complement of permanent dentition was in normal occlusion and the patient was completely asymptomatic and presence of the supernumerary teeth was an accidental finding. There are no fast set rules for management of supernumerary teeth; the management of supernumerary teeth depends on its location and presence of associated complications.

The various treatment modalities for impacted teeth include observation, intervention, relocation of the supernumerary tooth and extraction. If the supernumerary tooth is unerupted, it is generally better to wait till the root formation of the teeth in its vicinity is completed before its extraction. The extraction of supernumerary teeth should be carried out carefully, without causing damage to the roots of the adjacent teeth and adjacent anatomical structures. Extraction is generally considered when there is failure of eruption of permanent teeth or potential complications such as crowding, root resorption, impaction and cyst formation. If the supernumerary teeth are not causing any complications and also do not interfere with orthodontic treatment, they can be monitored periodically.

Kokich et al. describe the surgical and orthodontic management of impacted teeth and identify their position and angulation, length of treatment, available space and the presence of keratinized gingival tissue as critical factors that can affect the prognosis and treatment outcomes [15]. Each case has to be evaluated on an individual basis and early detection greatly helps the treatment outcome.

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