

Multiple Non-Syndromic Bilaterally Erupted Para Premolars in the Mandibular Arch: A Case Report

Amit Mehra¹, Amit Rekhi²

¹Professor, Department of Orthodontics and Dentofacial Orthopedics, Himachal Institute of Dental Sciences, Himachal Pradesh, India

²Senior Lecturer, Department of Public Health Dentistry, Uttaranchal Dental and Medical Research Institute, Uttarakhand, India

ABSTRACT

Supernumerary teeth are the teeth present in addition to the normal set of teeth and are not uncommon in the general population. Presence of supernumerary teeth may affect the aesthetics of an individual and hence need appropriate management. It is however rare to find multiple supernumerary teeth which are not associated with any

syndromes. Non-syndromic multiple supernumerary teeth have a predilection to occur in the mandibular premolar region. This paper reports an unusual case of an 18 year old boy with two completely erupted additional premolars on either side of the mandibular arch.

Keywords: Para Premolars; Supernumerary Teeth; Non-Syndromic

INTRODUCTION

Supernumerary teeth are a developmental anomaly characterized by the presence of extra teeth in an otherwise normal dentition. These teeth may be single or multiple, unilateral or bilateral, erupted or impacted, and may be present in either of the jaws and in both primary and permanent dentition [1]. They may be frequently associated with syndromes but may also be present in the absence of any systemic pathology. Prevalence rate of supernumerary teeth for permanent and primary dentitions vary between 0.5%–5.3%, and 0.2%–0.8% respectively [2]. Single supernumeraries occur in 76-86% of cases, double supernumeraries occur in 12-23% of the cases, and multiple supernumerary teeth are very rare, accounting for less than 1% of cases [3]. The supernumerary premolars account for only 10% of all the supernumerary cases and are mostly seen in the permanent dentition, the prevalence of which is in between 0.075% and 0.26% [2].

Supernumerary teeth cause certain clinical problems such as failure to erupt, displacement of a permanent tooth, crowding, or dentigerous cyst formation. Treatment is aimed at extraction of supernumeraries before problems arise, or at minimizing the effect if other teeth have already been displaced [4]. The presence of multiple

supernumerary premolars in the absence of any associated syndromes or systemic conditions is relatively rare. A few studies have reported the presence of unilateral or bilateral para-premolars in the mandibular arch but no study could be found where pair of supernumerary premolars were seen on either side of the arch [5-7]. This paper describes a case where multiple (two) supernumerary premolars were present on both sides of the mandibular arch.

CASE REPORT

An 18-year-old male presented to the department of orthodontics and dentofacial orthopedics with a chief complaint of misaligned teeth and food lodgment. He was not aware of the presence of any extra teeth in his mouth. Medical, dental and family history was non-contributory. Extra oral examination did not reveal any abnormality, particularly clavicles were normal indicating diagnosis of non-syndrome associated supernumerary tooth anomaly.

Intraoral examination revealed regular set of permanent dentition in Angle's class I malocclusion along with two completely erupted supernumerary premolars on either side of the mandibular arch lingual to the permanent first and second premolars (Figure 1). They resembled the permanent premolars in morphology and

Conflict of Interest: None declared

This article has been peer reviewed.

Article Submitted on: 11th November 2016

Article Accepted on: 23rd March 2017

Funding Sources: None declared

Correspondence to: Dr Amit Rekhi

Address: Department of Public Health Dentistry, Uttaranchal Dental and Medical Research Institute, Uttarakhand, India

E-mail: rekhiamit@gmail.com

Cite this Article: Mehra A, Rekhi A. Multiple non-syndromic bilaterally erupted para premolars in the mandibular arch: a case report. J Pioneer Med Sci. 2017; 7(3):33-35

Figure 1: Intra-oral image of mandibular arch



Figure 2: Intra-oral image of maxillary arch



Figure 3: Orthopantomogram of the patient



hence were considered as a supplemental type of supernumerary teeth. The maxillary dentition did not show any erupted supernumerary teeth (Figure 2). An orthopantomogram (Figure 3) and intraoral periapical radiographs of the patient were taken evaluate the complete dentition. The radiographs revealed two supernumerary teeth placed lingual to the regular set of mandibular premolars on both sides and revealed an unerupted para-premolar in the right maxillary arch. No other pathologies could be seen. The supernumerary teeth resembled normal premolars and were of normal size and shape with completely formed roots.

DISCUSSION

The etiology of supernumerary teeth is poorly understood although many theories have been put forth. The most accepted explanations include dichotomy of the tooth bud and local hyperactivity of the dental lamina. The oldest theory of atavism is related to phylogenetic reversion. Genetic role has also not been ruled out although a precise pattern has not been found yet and since individuals with some other dental anomalies and developmental disorders are the ones who frequently present with the supernumerary teeth, combination of hereditary and environmental factors have also been considered in the etiology [7-9].

Supernumerary teeth are associated with Gardner's syndrome, Cleidocranial dysplasia, Fabry-Anderson Syndrome, Ehlers-Danlos Syndrome, Down's syndrome, Crouzon's Disease, Hallermann Streiff Syndrome, and Orodigitofacial Dysostosis to name some. They may also be associated with other dental anomalies, such as hypodontia, taurodontism, gemination, and macrodontia[9]. It is rare to find multiple supernumerary teeth not associated with any syndromes. The prevalence rates of supernumerary premolars vary among different populations. The most common location for non-syndromic multiple supernumerary teeth is the premolar region in the mandible with a predilection towards males [2, 9]. A majority of supernumerary premolars are of the supplemental type and develop later than their normal counterparts.

Morphologically, supernumerary teeth can be classified as accessory and supplemental and based on syndrome as syndrome-associated and non syndrome-associated [10]. Supernumeraries

may erupt normally or may remain impacted or inverted in the jaw or reach heterotopic position. These teeth may result in conditions such as delayed or noneruption, displacement of permanent teeth, resorption or malformation of adjacent roots, and cyst formation [9]. In the premolar area, common complications associated with supernumerary teeth are cyst formation (9%) and damage to neighbouring teeth (13%) [10]. Pain due to compression of the supernumerary premolars on the adjacent teeth and their closeness to the mental and inferior dental nerves has also been reported [2].

Supernumerary teeth are usually asymptomatic and most cases are an incidental finding during a dental visit. Usually if the teeth are asymptomatic, it can be left in place and kept under observation. Surgical removal should be considered based on the pathological sequelae associated with it or need for orthodontic treatment. An orthopantomogram should be advised as a part of routine investigation to rule out the presence of multiple supernumerary teeth. It is imperative to evaluate the patient clinically and radiologically when a single supernumerary is detected to rule out association with syndromes and for its appropriate and timely management. Surgical removal of supernumeraries should be performed with great caution to avoid damaging adjacent permanent teeth, which may cause ankylosis of these teeth and consequently may create difficulty in orthodontic treatment. Moreover, the possibility of supernumeraries' fusion to the neighboring teeth should be kept in mind.

REFERENCES

1. Farahani RM, Zonuz AT. Triad of bilateral duplicated permanent teeth, persistent open apex, and tooth malformation: A case report. *J Contemp Dent Pract.* 2007; 8 (7): 94-100.
2. Kaya GS, Yapic G, Omezli M, Day E. Non syndromic supernumerary premolars. *Medicina Oral Patologia Oral y Cirugia Bucal.* 2011; 16(4): e522-25.
3. Kantor ML, Bailey S, Burkes JE. Duplication of the premolar dentition. *Oral Surg Oral Med Oral Pathol* 1988; 66 (1): 62-64.
4. Proffit WR, Fields HW, Sarver DM. Treatment of nonskeletal problems in preadolescent children. In: *Contemporary Orthodontics*. Fourth Edition. St Louis: Mosby 2007: 449.
5. Arathi R, Ashwani R. Supernumerary teeth: A case report. *J Indian Soc Pedod Prev Dent.* 2005: 103-05
6. Kasat VO, Saluja H, Kalburge JV, Kini Y, Nikam A, Laddha R. Multiple bilateral supernumerary mandibular premolars in a non-syndromic patient with associated orthokeratized odontogenic cyst- A case report and review of literature. *Contemp Clin Dent.* 2012;3 (6): S248-52.
7. Chanagay SKV, Singh V, Bantwal SR, Muniyappa M. An Unusual Case of Bilateral Maxillary and Mandibular Para Premolar: A Case Report. *J Dent (Tehran).* 2013; 10(4): 383-87.
8. Shah A, Gill DS, Tredwin C, Naini FB. Diagnosis and management of supernumerary teeth. *Dental Update.* 2008; 35(8): 510-20.
9. Acikgoz A, Acikgoz G, Tunga U, Otan F. Characteristics and prevalence of non-syndrome multiple supernumerary teeth: a retrospective study. *Dentomaxillofac Radiol.* 2006; 35(3): 185-90.
10. Kalra N, Chaudhary S, Sanghi S. Non-syndrome multiple supplemental supernumerary teeth. *J Indian Soc Pedod Prev Dent.* 2005; 23(1): 46-48.