

Mandibular bilateral unerupted non-obstructing supernumerary premolars as a rare paradental anomaly

Vineet Gupta, Puneet Kumar¹, Prince Kumar², Nishant Lakhani³

Department of Oral and Maxillofacial Pathology, DJ Dental College, Modinagar, Ghaziabad,
¹Public Health Dentistry and ²Prosthodontics, Shree Bankey Bihari Dental College and Research
 Center, Ghaziabad, ³Private Practitioner, Tagore Garden, New Delhi, India

Address for correspondence:

Dr. Vineet Gupta,
 C-40, East Krishna Nagar, Delhi, India.
 E-mail: ving.3@gmail.com

ABSTRACT

Non-syndromal multiple supernumerary teeth are most commonly seen in mandibular premolars region, followed by the molar and the anterior regions respectively. Dental literature rarely reports symmetrical supernumerary teeth in all four quadrants. However, supernumerary premolars may not become radiographically visible until the patient's normal premolars have erupted. This article presents a case of a 45-year-old male with bilateral unerupted fully formed, buccally angulated, supernumerary premolars in the mandibular region without any obstruction to the eruption of mandibular first and second premolars. There was no syndrome associated. The delayed development of the supernumerary teeth in the premolar region supports the hypothesis that these teeth were part of a post-permanent dentition.

Key words

Bilateral, non-obstructing, premolars, supernumerary, unerupted

INTRODUCTION

Extra teeth in dentition are termed "Supernumerary teeth" and are a very well known dental phenomenon. These 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. If such teeth closely resemble the adjacent teeth, they are classified as supplemental. On the other hand, if they present abnormal shape and size, they are termed rudimentary. Supernumerary teeth can remain impacted for many years without clinical, pathologic, or orthodontic complications. Multiple supernumerary teeth are not a common occurrence and have been reported in the literature over the years as a well-recognized clinical phenomenon. Supernumerary teeth are estimated to occur in the maxilla 8.2 to 10 times more frequently than the mandible. Supernumerary premolars represent between 8% of all supernumerary teeth.^[1-3] Their reported prevalence ranges between 0.3-0.8% in the primary dentition and 0.1-3.8% in the permanent

dentition.^[1,2,4] They are more likely to develop in the mandible than in the maxilla and usually resemble the normal premolars in shape and size.^[2] Supernumerary premolars occur three times more in males than in females, indicating a sex-linked inheritance, with the highest frequency of occurrence in the mandibular premolar region (74%).^[2,4] They are also the most common supernumerary teeth in the mandibular arch (7%).^[2] Supernumerary premolar locations are predominantly lingual. The buccally located ones are partially or completely erupted.^[3-5] Seventy-five percent of these teeth are impacted, unerupted, and generally asymptomatic, and the majority are of a supplemental type.^[2,4] Bodin, Julin, and Thomsson reported that only 2% of the supernumerary premolars exhibited any pathological changes and indicated that these teeth should be left untreated rather than risk surgical damage.^[6]

Removal of unerupted supernumeraries involves the risk of damage to the adjacent structures and a decision should be made whether to remove or monitor them. Early surgical intervention is recommended when the supernumerary is causing problems, such as, hindering the eruption or malposition of permanent teeth.

This article reports a case of mandibular, bilateral, fully formed, unerupted, buccally directed supernumerary premolars which lay dormant without the need for any surgical removal.

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CASE REPORT

A 45-year-old Indian male presented with chief complaint of mild pain in upper and lower arch since 2 to 3 days. The grossly carious, painful, first premolar on mandibular left side was extracted by us two months ago on patients will. Clinically, gum infection was found and accordingly, treatment was given. However, an orthopantomogram was taken to aid in the diagnosis. It revealed mandibular bilateral unerupted extra premolars [Figure 1] without impeding the eruption of other normal premolars. Diagnosis was further authenticated by occlusal radiograph, which confirmed buccal eruption of the supernumerary premolars. No pathology was detected bilaterally. Thus, it was decided that there was no need for surgical removal of unerupted extra premolars on both the sides. The patient's medical history was insignificant. Radiographic investigations of the parents and the sibling were undertaken to rule out the hereditary component.

DISCUSSION

Cases of bilateral supplemental premolar teeth developing later than their counterparts have been reported in literature. Reports have demonstrated that supernumerary premolar teeth develop approximately 7 to 11 years after normal development and it appears that this case may be a similar example.^[3,5] Supernumerary premolars are reported to have a wide range of expressions. A majority of these have been found to lie dormant between the roots of permanent premolars and molars as reported by Solares *et al.*^[7] However, cases have been reported where these teeth have hindered the eruption of some permanent teeth. Scanlan and Hodges reported a case in which supernumerary teeth had blocked the eruption of second permanent mandibular molars.^[8] Hyun *et al.* have also reported a case in which the supernumerary premolar had led to root resorption of an adjacent tooth.^[9]

In this case, the bilaterally impacted supernumerary premolars presented with no obstruction to the eruption of the first and second premolars on both the sides. Usually, the buccally located Supernumerary premolars



Figure 1: Orthopantomogram depicting bilateral supernumerary premolars

are partially or completely erupted but in this case, buccally located bilateral premolars were found to be completely unerupted with no pathology, which is a rare finding.^[4,10-12] When supernumerary teeth are discovered, a decision needs to be made whether to remove or monitor them. Surgical removal of impacted teeth involves the risk of damage to the adjacent structure, and therefore, a decision needs to be made with regard to the surgical risks and the benefits of removal.

In this case, it was decided not to remove supernumerary teeth, as there was no obstruction in the eruption of the first and second mandibular premolars and occlusion also had developed normally. In this case, the presence of the supernumerary teeth was an incidental finding on radiograph as both supernumerary teeth were unerupted. This is in keeping with other studies where case reports have been presented. Also, the sex predilection for occurrence of supernumerary premolars among males were emphasized once again by the present case.^[4,13] In present case, the age at identification of the supernumerary is quite high i.e., 45 years and this would be indicative of the late development of these supernumerary teeth. Previous case reports show a large age variation depending on when these teeth are identified on radiograph.^[4,14] The stage of development of the supernumerary teeth is in keeping with the late development of these teeth, so in general the earlier the tooth is identified, the less well developed the tooth presents. Also, in older patient it is more likely that there is full development of the crown and root of the supernumerary tooth.^[2,4,14] Supernumerary teeth are often identified with certain syndromes such as Gardner's syndrome. However, the patient in this study did not present with any syndrome. The aetiology of supernumerary teeth is complex. However, it is generally agreed that, although a genetic component may exist, environmental factors cannot be discounted.^[2,4,15]

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