

# A Rare Case of Bilateral Maxillary Paramolars between 1st and 2nd Molars

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## ABSTRACT

Paramolars are supernumerary teeth usually found buccally or palatally near the molars.

Very few articles are found in the literature about bilateral maxillary paramolars. Most of the cases, the paramolars are situated between the second and third molars, while in very few cases, as in our case it was found between first and second molars. The present article presents a case of bilateral maxillary paramolars in a 26-year-old male patient and its management.

**Keywords:** Paramolars, Supernumerary tooth, Extra tooth, Fusion, Supplementary teeth.

**How to cite this article:** Shetty YN. A Rare Case of Bilateral Maxillary Paramolars between 1st and 2nd Molars. *J Orofac Res* 2012;2(1):52-55.

**Source of support:** Nil

**Conflict of interest:** None declared

## INTRODUCTION

Supernumerary teeth may be seen anywhere in the oral cavity. Supernumerary teeth develop from the third tooth bud arising from the dental lamina near the permanent tooth bud or probably from the splitting of the permanent tooth bud itself. They are defined as those teeth that are present in addition to the normal series of teeth in both the deciduous and permanent dentition. They may appear as a single tooth or multiple teeth on one side of the arch or bilaterally. It can be completely erupted or impacted in the maxilla or mandible or in both the jaws. Paramolars have a striking predilection for maxilla than the mandible and they are more frequently found in males compared to females in a ratio of 2:1 (Munshi and Munshi, 2001).<sup>1</sup> Paramolars can be seen more commonly on one side of the arch, but they can also be seen bilaterally in the arch as in our case. The prevalence of supernumerary teeth has been recorded to be greater in the permanent dentition (1.5-3.5%) as compared to primary dentition (0.2-0.8%) (Winter, 1999).<sup>2</sup> Supernumerary teeth are situated especially in the premaxillary region (90%), with 93% of them in central incisor region, with 25% of those located in the midline. Of the remaining 10%, about 4 and 1.5% are located in the mandibular premolar and maxillary canine regions respectively (Rajab and Hamdan, 2002).<sup>3</sup> Supernumerary teeth are found to be associated with some syndromes like Gardner's syndrome, cleidocranial dysplasia (Bruning et al, 1957)<sup>4</sup> and in patients with cleft lip and palate (Soames and Southam, 1993)<sup>5</sup> and less

commonly with Ehlers-Danlos syndrome, Fabry's disease, chondroectodermal dysplasia, incontinentia pigmenti and tricho-phalangeal syndrome.

Supernumerary teeth are classified according to their morphology, location and form, i.e. size and shape. According to the morphology, they are classified as accessory and supplemental. According to the location, supernumerary teeth are classified into mesiodens, paramolar and distomolar, etc. The most commonly seen supernumerary tooth is mesiodens. Mesiodens is a typical conical supernumerary tooth, situated between the maxillary central incisors. Supernumerary teeth which occur in the molar region are divided into two types—paramolars and distomolars. Paramolar is a supernumerary tooth usually small and rudimentary, situated buccally or palatally to one side of the maxillary molars or in the interproximal space buccal to the second and third molars (Dubuk et al, 1996)<sup>5</sup> and distomolar is a supernumerary tooth which is located distal to the third molar (Kakolewska-Maczynska and Zyszko, 1990).<sup>6</sup>

Bilateral ectopic occurrence of paramolar in the maxillary molar region contributing to the development of localized periodontitis in the molar region was reported by Hou et al, 1995.<sup>7</sup> This paper reports a case of bilateral maxillary paramolars situated between the first and second molars without any association with any developmental disorders (Fig. 1).

## CASE REPORT

A 26-year-old male patient reported to the clinic with the chief complaint of food lodgment teeth in the upper arch on



**Fig. 1:** Intraoral picture of bilateral paramolars

the left side. On intraoral examination, extra teeth were found on the palatal side, between the right 1st and 2nd maxillary molars and the left 1st and 2nd maxillary molars. The crowns of these extra teeth had no caries. There was a class II amalgam restoration on 16. Both the paramolars were palatally placed, which is very rare. No other relevant clinical features were evident. Patient's medical and family history was not relevant and there were no signs of any systemic diseases or syndromic features. The supernumerary tooth on each side of the right and left quadrant were diagnosed as a paramolars. Patient was informed about the extra tooth and its possible complications like food lodgment, which was in fact his chief complaint at the time of presentation. They may also interfere in alveolar bone grafting and implant placement (Ballal et al, 2007).<sup>8</sup> Intra-oral periapical radiograph and occlusal radiograph were advised to the patient, but unfortunately the patient refused, so we had to do extraction of the paramolars in two visits under local anesthesia. There was no postoperative complications as the patient was advised to keep his socket clean after extraction to prevent food lodgment, which in turn causes dry socket. In our case, the healing in both the sockets was uneventful (Figs 2 and 3).

## DISCUSSION

The occurrence of paramolar is a relatively uncommon dental finding. The exact etiology of this anomaly is unknown. Various factors have been proposed as etiologic factors for development of this anomaly (Scheiner and Sampson, 1997);<sup>9</sup> (Rao and Chidzonga, 2001).<sup>10</sup> Several theories have been suggested, such as the phylogenetic reversion theory-atavism, the dichotomy theory-splitting of the tooth bud into two parts, dental lamina hyperactivity theory and a combination of genetic and environmental factors. The third theory hypothesized that some malformations of the dental germ, caused by traumatic

factors occurring before the eruption of teeth can be cause of anomalies in excess of teeth, such as paramolar. The most accredited theory sustains that teeth in excess of the normal number are of genetic nature and this would also explain the presence of supernumerary teeth in the relatives of subjects affected with this dental anomaly (Gallas and Garcia, 2000).<sup>11</sup> We had taken detailed family history from the patient, but we could not find any evidence of any relative or family members having the clinical presentation. Incidence of paramolar in the primary dentition is extremely rare. Supernumerary teeth show strong association with developmental disorders, such as cleft lip and palate. Only one case of paramolar in primary mandibular molar region has been reported (Shimizu et al, 2007).<sup>12</sup> Predominantly paramolar is usually seen on one side only. Only two cases of bilateral presentation of paramolar, one in the mandible (Kim et al, 1973)<sup>13</sup> and the other in the maxilla (Hou et al, 1995)<sup>14</sup> have been reported. Supernumerary teeth can cause numerous complications. The presence of paramolar can leads variety of clinical problems, such as crowding, due to insufficient space for the eruption of other teeth; malocclusion due to a diminution of the space in the dental arch when the paramolar erupts; retention or ectopic eruptions of adjacent teeth which are still not erupted; delayed eruption or displacement of adjacent teeth; periodontal disease and caries, if the paramolar presence causes interferences with oral hygiene procedures, traumatic bite, due to its buccal position they may cause laceration to the buccal mucosa; pulp necrosis and root resorption of the adjacent teeth, due to the pressure exerted by the paramolar tooth, formation of diastema between the molars; interference with orthodontic treatment; follicular cyst, due to the degeneration of the follicular sacs; neoplasm pain in the molar area and neuralgia of the trigeminal nerve, when the paramolar compresses the nerve (Vennarini et al, 1993).<sup>14</sup> Although radiographs play an important role in assessment of both the location and the typing of supernumerary teeth, the rarity, with which paramolar entity occurs, along with its complex characteristics, often makes it difficult to diagnose on radiographs. In general, periapical, occlusal, and panoramic radiographs are sufficient for providing the information about supernumerary teeth. These radiographs do not provide detailed information concerning the three-dimensional relationship between supernumerary or ectopically impacted teeth and adjacent structures. As the paramolar is usually seen on buccal or lingual to the arch, overlapping of this structure with the normal molars occurs, which may result in misdiagnosis of this structure. Nowadays, CBCT (cone-beam computerized tomography) has innovated the concept of dentistry imaging, allowing



**Fig. 2:** Extracted left paramolar



**Fig. 3:** Extracted right paramolar

three-dimensional reconstruction of a patient's face and skull. The new generation equipments permit the visualization of soft and hard tissues, surpassing conventional images in relation to the linear measurements of maxilla, location and extension of dental resorption, radicular position, and presence of radicular fractures and diagnosis of bony lesions. These equipments therefore allow a general view of the maxilla mandibular complex. Besides these advantages, the CBCT utilizes a conical beam system of X-rays which exposes the patient to a single circular movement, and then to a smaller radiation level with faster acquisition of images and lower costs (Schmitt, 2006). Hence, it is an important new diagnostic hardware to provide necessary information for the surgical planning and to protect patients against unnecessary risks (Dodson, 2005).<sup>15</sup> The CBCT permits the execution of three-dimensional reconstructions in providing the information on axial, sagittal and coronal planes (Ferreira-Junior et al, 2009).<sup>16</sup> Supernumerary teeth are usually asymptomatic and the patient does not come to the clinic unless he has any problem, most commonly food lodgment. The most common treatment for paramolar is extraction in order to prevent the complications. However, other treatment modality for unerupted supernumerary teeth is to leave the tooth as it is and use a wait and watch approach the tooth should be immediately extracted.

The indications for removal of supernumerary teeth are as follow:

1. There is associated pathology.
2. Altered eruption or displacement of adjacent tooth is evident.
3. Permanent tooth eruption has been delayed due to the presence of a supernumerary tooth.
4. Increase of caries due to the presence of supernumerary teeth which makes area inaccessible to maintain oral hygiene.
5. Severely rotated teeth leading to further complication.
6. Orthodontic treatment needs to be carried out to align the teeth.
7. Compromises implant placement.
8. Compromised esthetic and functional status.
9. Malocclusion due to disturbance in path of eruption by reducing arch circumference.
10. Supernumerary teeth may get fused with the normal teeth thus, affecting normal morphology of the involved teeth.

### Treatment Done

In our present case, paramolars on both sides were extracted because they were associated with gingival inflammation

around the tooth and food lodgment. Extraction was performed carefully, to prevent damage to the palatal root of both the molars. A word of caution is required in these cases, clinicians must also be careful while doing the extraction, as sometimes supernumerary teeth are fused with the adjacent tooth structure at the crown, or the root level which may make extraction difficult and might have to go for transalveolar extraction.

### CONCLUSION

Supernumerary teeth can be present in any region in the oral cavity. Private practitioners and clinicians should be aware of the various types of supernumerary teeth and make a treatment plan after thorough clinical and radiographic examination. The presentation of a clinical case with bilateral paramolar is a extremely rare phenomenon. Very few articles have been published related to bilateral paramolars in the maxilla. The patient usually complains of food lodgment as in our case and the best treatment is to extract the teeth to prevent any further harm to the molars.

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