



Supernumerary Teeth Adjacent to Fully Erupted Third Molars in all four Quadrants: A Case Report

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ABSTRACT

Supernumerary teeth are formed due to disturbances during the developmental stages of a tooth. The prevalence of supernumerary teeth is higher in the maxilla than the mandible and shows a predilection for the male gender. They may also demonstrate a familial tendency. Such teeth may lead to complications like impaction/altering the eruption path of adjacent teeth, as well as an increased risk of pathologies. Management of these extra teeth is mandated as and when they have been screened, identified, and noted to damage the adjacent teeth or other dentoalveolar structures. This case report presents an extremely rare case of distomolars in all four quadrants in a non-syndromic patient with no positive familial history.

1. Introduction

Hypodontia or hyperdontia (variance in the number of teeth) is a common anomaly in the dentoalveolar structures of the oral cavity. Hyperdont or supernumerary teeth are the ones that are more than the normal number of twenty deciduous teeth or the thirty-two permanent teeth. They erupt into the oral cavity or are impacted within the alveolar bone. Such anomalies commonly occur in the maxillary arch along the midline, near the permanent molars, or the premolar region.^[1] The prevalence of supernumerary teeth in humans ranges from 0.3% to 0.8% in the primary dentition and 0.52% to 2% in the permanent dentition.^[2] Such teeth are more prevalent in the maxilla than the mandible and are more common among males (2:1) than in the female population.^[3] Supernumerary teeth can be categorized into paramolars (located in close vicinity of maxillary molars), mesiodens (located in the maxillary midline between the two central incisors), and distomolars (located distal to the third molar tooth – can be positioned either palatally, buccally, or proximally between the third molars and structurally resemble a small, rudimentary tooth).^[4]

2. Case Presentation

A 33-year-old male presented to the outpatient unit of the Department of Dental Surgery at the Government General Hospital, Eluru, Andhra Pradesh, India, with a complaint of pain in the upper left region of the mouth. Clinical examination revealed no extra-oral abnormalities. Mouth opening and mandibular movements were within normal limits. Intra-orally, all permanent

teeth were seen in the oral cavity except the left maxillary lateral incisor and all four first permanent molars (root stumps of the right mandibular first permanent molar were noted). History revealed previous extraction due to dental caries of the first permanent molars in the maxillary arch and the left mandibular quadrant, along with loss of the left maxillary lateral incisor due to trauma during childhood. The right mandibular second molar and the left maxillary third molar were noted to be decayed. The second and third molar teeth in the first, second, and third quadrants were noted to be tilted mesially. Further examination revealed one more tooth-like structure next to the decayed third molar teeth in both the maxillary quadrants. These structures were fully erupted and placed distal to the completely erupted third molars (Fig 1a and 1b).

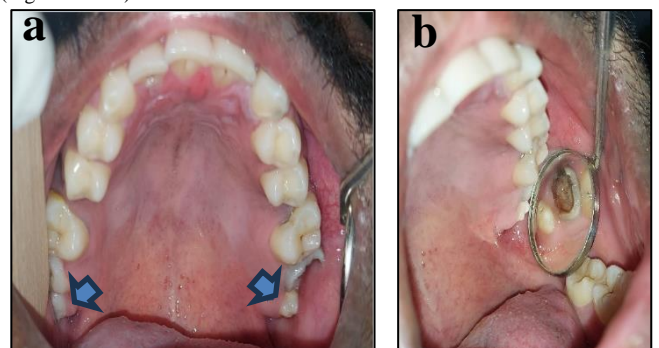


Fig. 1. (a) Supernumerary teeth (arrows) distal to the erupted third molars. (b) Supernumerary tooth distal to the left maxillary third molar.

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Radiographic examination via an orthopantomogram (OPG) (Fig 2) confirmed the clinical findings of a tooth-like structure distal to both the maxillary third molars. The OPG further demonstrated unerupted, tooth-like, radio-opaque structures distal to the fully erupted mandibular third molar

teeth lying just below the soft tissue. No other supernumerary teeth were noted within the alveolar bone of either arches. Family history was non-contributory, and the patient was non-syndromic, with no relevant past medical history or current debilitating medical conditions.

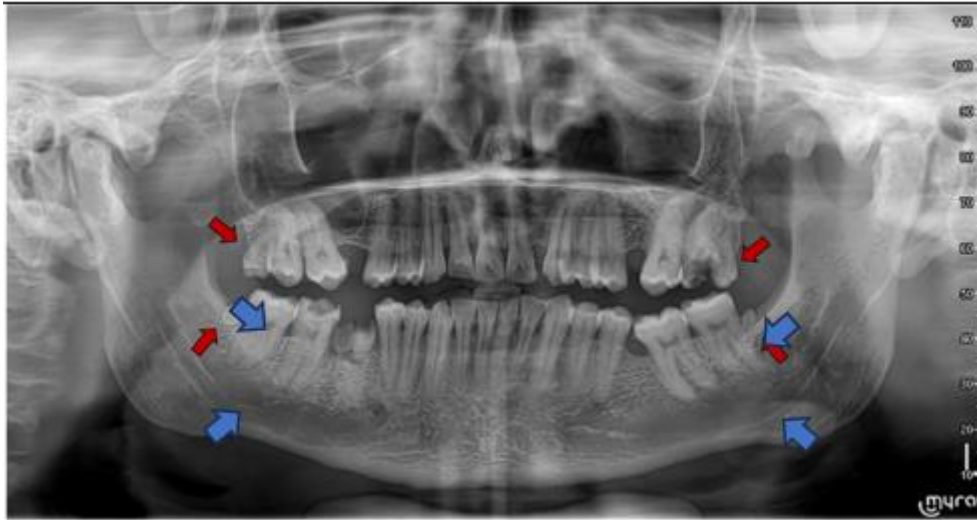


Fig. 2. The OPG showing supernumerary teeth (marked by arrows) distal to the third molars in all quadrants.

As part of patient management, the chief complaint was addressed, and the grossly decayed left maxillary third molar, along with the adjacent supernumerary distomolar tooth, was extracted under local anesthesia. After extraction, the distomolar examination revealed that the crown demonstrated five cusps, and the root was a single tapered root (Figs. 3a, 3b, and 3c).

Bleeding was controlled, and the patient was sent home with post-operative instructions. A follow-up review was done after one week, and the extraction site was observed to have satisfactory healing. The extraction of root stumps of the right mandibular first permanent molar was planned for the following appointment.

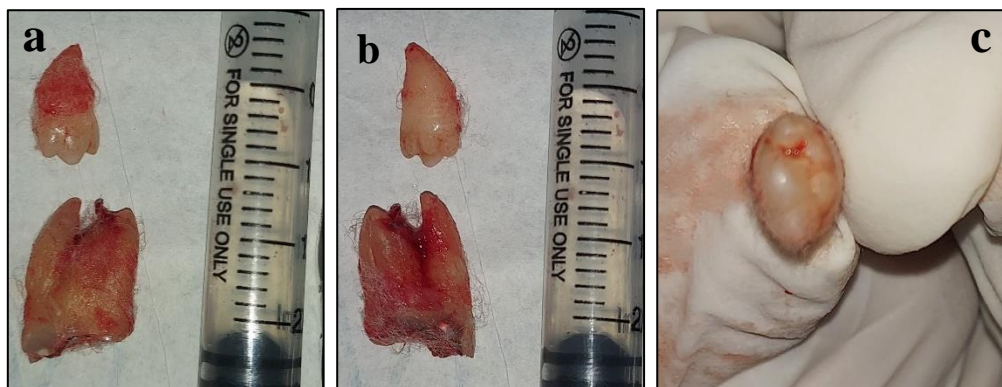


Fig. 3. The extracted distomolar shows a single tapered root (a & b) and the crown shows five cusps (c). (The extracted left maxillary third molar is also seen).

3. Discussion

Supernumerary teeth can result from anomalies in the dental lamina, forming an additional tooth germ. They can also be formed from a split in the permanent tooth bud. In the mandibular arch, the bicuspid region predominates for supernumerary teeth. In contrast, they are mostly found in the anterior region of the maxillary arch and may indicate a familial pattern.^[5] The presence of supernumerary teeth can lead to complications such as changing the eruption position and pattern of teeth in the quadrant/region and increased risk of pathologies like follicular cysts, fistulae, and

ameloblastoma.^[4] Literature reveals reports of supernumerary teeth present at various locations in either arches, unilaterally, or bilaterally, but reports of fourth molars in all four quadrants are scarce. Vadane A and Garde J reported four cases with fourth molars in single or multiple quadrants, but the supernumerary teeth were not seen in all four quadrants in the same patient.^[3] Similarly, Ogbureke E reported a positive familial history for supernumerary teeth in a patient with six supernumerary teeth in the premolar region. Five teeth had erupted (lingual to the premolar of both quadrants in the mandibular arch and palatally in the right quadrant of the maxillary arch). One tooth was

impacted within the alveolar bone in the left maxillary quadrant.^[6] Prasad R et al. reported impacted distomolars in all four quadrants in a 19-year-old male patient. Due to the patient's age, only the crown structures formed in the impacted distomolars. They were embedded within the alveolar bone distal to the partially impacted third molars.^[7] Clementini M et al. reported a similar finding in a 22-year-old male who displayed four impacted fourth molars in all quadrants, where the impacted fourth molars were seen to cause a change in the eruption path of the mandibular molars (leading to their impaction within the alveolar bone) along with distal tipping of the maxillary molars due to eruptive forces of the maxillary fourth molars on the root tips of the erupting maxillary third molars.^[8] The current case report showcases a rare finding of the presence of supernumerary fourth molars in all quadrants, with the maxillary fourth molars mimicking single-rooted premolars and being fully erupted into the oral cavity, the left mandibular fourth molar appearing to be a miniature tooth and the right mandibular fourth molar seen as a calcified structure distal to the mandibular third molars, lying just beneath the alveolar mucosa and unerupted into the oral cavity.

4. Conclusion

Supernumerary teeth should be treated and managed as and when observed and identified in the oral cavity. A radiographic examination and a thorough familial and medical history for any concomitant syndromic presentation should be noted. When left untreated, such teeth may lead to complications and may cause damage to the normal teeth in the region/quadrant. In the present reported case, the supernumerary teeth may have caused accelerated mesial tilting of the permanent molars due to the early loss of the first permanent molar in the same quadrant. In turn, this may result in compromised occlusion and masticatory efficiency.

Conflict of Interest

The authors declared that there is no conflict of interest.

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