

## **Multiple Supernumerary Teeth In A Non-Syndromic Patient- A Rare Case Report**

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### **Abstract**

Supernumerary teeth are extra teeth or tooth-like structures. Multiple supernumerary teeth are rare in patients without any associated conditions, and the mechanisms responsible for the development of multiple supernumerary teeth in such patients remain unclear. We report a case in which multiple supernumerary teeth in two quadrants of oral cavity developed in a patient without any associated conditions. The three-dimensional CBCT scan was done and the supernumerary teeth were extracted under local anaesthesia.

**Keywords:** supernumerary teeth, supplemental, mandibular.

### **Introduction**

Hyperdontia is defined as additional tooth/teeth seen in either deciduous or permanent dentition. They may occur anywhere in the mouth, can be bilateral or unilateral with or without any associated syndrome.<sup>1</sup> The etiology of hyperdontia is not well understood. Several theories have been put forward to explain the anomaly such as hyperactivity of dental lamina, dichotomy of tooth bud etc. Familial tendency and sex-linked inheritance (males being affected twice as frequently as females) has been demonstrated.<sup>2</sup> Morphological classifications of supernumerary teeth include conical, tuberculate, or supplemental.<sup>3</sup> A fourth category, odontoma, was proposed in Howard but is not universally accepted. Classification on the basis of location include mesiodens,

paramolar, distomolar and parapremolar.<sup>4</sup> There is a difference between supplemental and supernumerary tooth in that the supplemental tooth is characterized by identical form and functions as the adjacent tooth without any anatomical differences, whereas the later has an atypical anatomical form with smaller dimensions than the adjacent tooth.<sup>5</sup> In this article, we present a case in which multiple supplemental teeth along with a conical supernumerary tooth are present in the lower jaw.

### Case Report

A 24-year-old male patient presented with a chief complaint of extra teeth like structures in the lower jaw of his mouth since many years. Also, the patient complained of difficulty in maintaining oral hygiene due to them. The family's medical history was non-contributory, and an extraoral examination did not reveal any abnormality which exclude any of possible syndrome which could be associated with this situation.

An intraoral examination showed an intact dental arch but there were multiple supernumerary teeth in both the quadrants of mandibular dental arch. On lingual aspect of left side of dentition, there were three supernumerary teeth, of which one was conical in shape and two were supplemental premolar teeth and there was one supplemental tooth present between two premolars lingually on the right side.

A CBCT scan was done and it confirmed the presence of four supernumerary teeth in the lower arch and also confirmed the absence of any other impacted supernumerary tooth. (Fig. 1) The positional relationship between the supernumerary teeth and the patient's permanent teeth was also noticed.

All the supernumerary teeth were extracted under local anaesthesia and postoperative healing was uneventful.

### Discussion

Presence of supernumerary tooth in normal dentition is not an unusual phenomenon but the presence of multiple supernumerary teeth in individuals without any syndromic disorder is not common. Developmental disorders that show an association with multiple supernumerary teeth include cleft lip and palate; cleidocranial dysostosis; Gardner's syndrome; Fabry Anderson's syndrome; Ehlers-Danlos syndrome; incontinentia pigmenti and Trico-Rhino-Phalangeal syndrome.<sup>6,7</sup> The reported prevalence of supernumerary teeth ranges between 0.3–0.8% in the primary dentition and 0.1–3.8% in the permanent dentition. Males are affected approximately twice as often as females.<sup>4,6</sup> This report is of a male patient with presence of supernumerary teeth in permanent dentition. Yusof<sup>7</sup> reported an incidence of 60.09% in mandible and 39.91% in maxilla but in our case, all supernumerary teeth were present in mandible. Supernumerary teeth may erupt normally, remain impacted, appear inverted or assume an abnormal path of eruption.<sup>8</sup> All the supernumerary teeth were erupted but in lingual aspect of the normal dental arch in this case. Cortes-Breton Brinkmann et al, in 2013<sup>9</sup>, defined multiple as the presence of three or more supernumerary teeth in a single patient, taking in consideration the fact that cases of three or more non-syndromic supernumerary teeth constituted less than 1% of published literature and that a number of authors have followed the same criteria.

It has been observed that single supernumerary tooth is the most common.<sup>6</sup> The most common location for a single supernumerary has been cited as anterior maxilla, specifically the midline. In contrast, multiple supernumerary teeth have been found to occur more frequently in the premolar region.<sup>7</sup> This reported case also showed presence of multiple supernumerary teeth in the premolar region. Studies showed that 69.1% of the

supernumerary teeth had a supplemental morphology and 30.9% were heteromorphic.<sup>9</sup> Similarly, in this case, majority, i.e., 75% of the supernumerary teeth had a supplemental morphology, 25% had a conical morphology.

Orthopantomogram has been the modality of choice for investigating the status of supernumerary teeth, but the introduction of cone-beam computed tomography (CBCT) has proved as the most effective three-dimensional means of examining dental and associated osseous structures. CBCT aids in knowing the exact positioning of supernumerary teeth with respect to adjoining structures. Thus, CBCT is regarded as the best choice for investigating multiple supernumerary teeth.<sup>10</sup> Thus, we also used CBCT scan in our case.

Usually the supernumerary teeth are not associated with complications but if present, the complications include prevention or delay of eruption of associated permanent teeth; displacement or rotation of permanent teeth; crowding; incomplete space closure during orthodontic treatment; dilaceration, delayed or abnormal root development of associated permanent teeth; Root resorption of adjacent teeth; complications with the supernumerary itself; late-forming supernumerary teeth.<sup>11</sup>

There are no established guidelines regarding management of supernumerary teeth, but few things need to be considered. If the teeth are asymptomatic with no radiographic evidences of any pathologies and not likely to interfere with orthodontic tooth movement, (location beyond teeth apices) they can be monitored with periodic radiographic examination. But if the patient does not want to risk any complications, considerations can be given to extraction. If associated with roots of permanent teeth, waiting till the completion of root development should be considered to minimize the chances of root damage. But if the supernumerary teeth are associated with any sort of

complications like cysts or tumors, obstruction to normal teeth eruption, hindrance to orthodontic tooth movement and unaesthetic appearance, extraction is a logical management in those cases.<sup>12</sup> Extraction was done in our case owing to patient's willingness for the same due to his complaints.

### **Conclusion**

Mandibular supernumerary teeth are very uncommon which can pose a variety of problems. Knowledge of the existence of such supernumerary teeth and proper investigation is important from the clinical point of view. But the immediate management of such problems may vary and is decided by the clinician considering various factors.

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**Legends Figures**

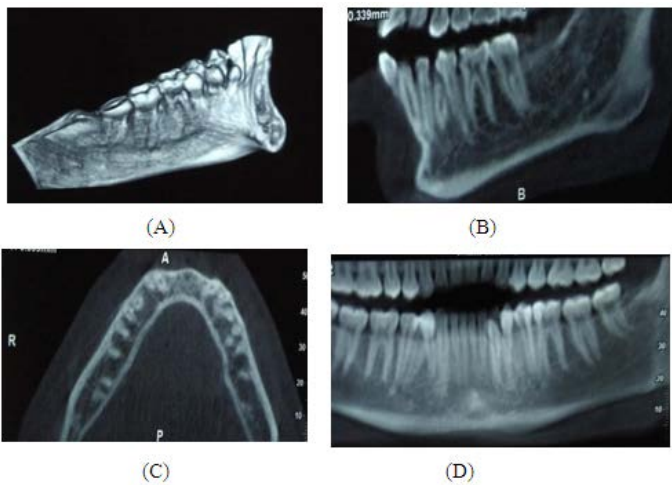


Figure 1: CBCT sections (A) Sagittal section of left side (B) Sagittal section of right side (C) axial view (D) panoramic view