Non-syndromic multiple supernumerary teeth: A case report

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Abstract
Multiple supernumerary teeth are usually associated with syndromes. It is uncommon to find multiple supernumerary in absence of any known syndrome. Majority of the supernumerary teeth are seen in patients suffering from orofacial clefts, cleidocranial dysostosis, and Gardner’s syndrome. The present article documents a case report of nine supernumerary teeth, six involving the maxilla and three in the mandible, in a non-syndromic patient. Their detection was an incidental clinical finding. A thorough clinical and radiographic examination confirmed the exact number of supernumerary teeth present. It is advisable to review the patients on a regular basis to assess the status of these teeth.

Key words: Non-syndromic, supernumerary teeth, multiple hyperdontia

Introduction
Supernumerary teeth or hyperdontia is defined as teeth that exceed the normal dental formula, regardless of their location and morphology. They can occur in both dentitions, being more frequent in the permanent series. In addition, the condition is more prevalent in males than in females, with a proportion of 2:1. Multiple supernumerary teeth are usually associated with syndromes such as Gardner syndrome, Fabry-Anderson syndrome, Ehler-Danlos syndrome, Cleidocranial dysplasia, etc. It is uncommon to find multiple supernumerary in absence of any known syndrome.

Such teeth can erupt normally, remain impacted, invert, reach heterotopic positions, or show abnormal eruptive patterns. Their development may be responsible for a number of complications such as crowding, failure of eruption, displacement, rotation, diastema, dilacerations, concrescence, resorption of adjacent roots, pulpal necrosis, pathological fractures, and at times cyst formation.

Supernumerary teeth can be classified according to their position or anatomy. By position, a supernumerary tooth can have different names, such as the mesiodens (located between central incisors), distomolars (distal to third molars), or paramolars. According to anatomy, a supernumerary tooth can be classified as conical, tuberculated (more than one cusp), or supplemental (duplication of a tooth in the normal series). Odontoma would be a fourth anatomic category of supernumerary teeth, but this classification has not been universally accepted.

The etiology of supernumerary tooth is still not completely understood. However, a number of theories have been proposed: atavism, tooth germ dichotomy, hyperactivity of the dental lamina, and genetic factors comprising a dominant autosomal trait characterized by low penetrance.

The authors present a report of non-syndromic multiple supernumerary teeth involving all the quadrants.
Case Report

A 37-year-old Indian male patient reported to the outpatient clinic with pain and sensitivity to hot and cold in lower left back tooth region for a few days. Familial and medical history was unremarkable. On intraoral examination, a mesial proximal caries in mandibular left first molar (36) and a lingually placed partially erupted supernumerary tooth resembling a premolar in between 35 and 36 was noticed (Figure 1). An intraoral periapical radiograph (IOPAR) revealed that the caries in 36 was deep approximating the pulp. A diagnosis of chronic irreversible pulpitis was made and the patient was advised root canal therapy. The radiograph also showed an impacted supernumerary tooth mesial to first molar (Figure 2). On further clinical examination, a buccally placed supernumerary tooth was observed distal to maxillary left first molar (26) (Figure 3). A panoramic radiograph (OPG) was advised to look for any other undetected supernumerary teeth. The OPG showed additional impacted supernumerary teeth involving all the four quadrants (Figure 4). IOPA radiographs were advised to confirm the presence and exact number of supernumeraries present (Figure 5 and 6). Past dental history revealed that two years back the patient had undergone extraction of 16 along with an impacted tooth in the same region, as conveyed to him by his dentist. Therefore, there were a total of nine supernumerary teeth six in the maxilla (including the one, which had already been extracted) and three in the mandible. All the supernumerary teeth detected were asymptomatic and not associated with any pathology or abnormality. A conservative approach was preferred and a decision to review the patient periodically was made. The patient was advised periodic reviews for early detection and treatment of any abnormality.

Figure 1: Intraoral photograph showing lingually placed partially erupted supernumerary tooth in between 35 and 36

Figure 2: IOPA radiograph of 36 showing impacted supernumerary tooth mesial to first molar

Figure 3: Intraoral photograph showing buccally placed supernumerary tooth distal to maxillary left first molar
Discussion

There are a few reported cases of multiple supernumerary teeth in non-syndromic patients, with a prevalence of 0.15-3.8% in permanent dentition. In majority of the cases (76-86%) they occur as single teeth, followed by two supernumerary teeth in 12-23% of the patients and multiple supernumeraries are relatively rare and account for 2-8%. A few reports have suggested the presence of multiple supernumerary teeth in absence of syndromes in the mandible, and as premolars. It has been reported that supernumerary teeth are most often located in the maxilla. Mesiodens is the commonly observed supernumerary tooth, followed by premolars and fourth molars.

Prevalence of 5 or more supernumerary teeth is less than 1%. A few reports have suggested the presence of multiple supernumerary teeth in absence of syndromes in the mandible, and as premolars. It has been reported that supernumerary teeth are most often located in the maxilla. Mesiodens is the commonly observed supernumerary tooth, followed by premolars and fourth molars.

The present case also reported with a greater number of supernumerary teeth in the maxilla (six) in contrast to mandible (three), which is similar to other published data. Seventy five percent of the supernumerary teeth reported remain impacted within the jaw and are asymptomatic. These hence remain undetected on clinical examination, and get noticed during routine radiographic examination.

One should always advise for a full mouth radiographic view such as OPG if one or more supernumerary teeth are observed clinically to detect other supernumerary teeth which may remain impacted. In the present case too, most of the supernumerary teeth were impacted, which were detected on the panoramic radiograph.

Presence of supernumerary teeth may lead to delayed eruption or non-eruption of permanent teeth, or even malformation of the neighboring teeth. Other complications include displacement or rotation of neighbouring teeth, resorption of adjacent teeth or roots, root malformations secondary to the pressure exerted by the supernumerary teeth, and the development of cysts.

The supernumerary teeth can either be extracted or followed up by frequent clinical and radiographic monitoring. The decision to choose either of the management strategies is to some extent dependent on the position of the tooth in the arch.
and associated clinical manifestations. Each case must be therefore assessed individually concerning its treatment taking into account untoward developments like malocclusion, retention of permanent teeth or tendency for cyst formation etc.\cite{21} In addition, the possibility of delayed development of supernumerary teeth\cite{1,2,22} should be kept in mind and periodic radiographic examination must be performed to detect the same.

References