

## Non-Syndrome Patient with Multiple Supernumerary Teeth: Case Report

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**Abstract:** Polydentia is a variation in excess in the number of the teeth. Supernumerary teeth appear, especially in the maxilla, mostly between the central incisors (mesiodens) and in molars region. These positions are followed by the maxillary fourth molars, maxillary paramolars, mandibular premolars, maxillary lateral incisors, mandibular fourth molars and maxillary premolars. Supernumerary teeth may occur in single or multiple numbers bilateral occurrence is uncommon. It is rare to find multiple supernumeraries in individuals with no other associated disease or syndrome. The purpose of this study is to present, a case with multiple supernumerary teeth in non-syndrome patient.

**Key words:** Polydentia, supernumerary teeth, rare cases, mesiodens, Italy

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### INTRODUCTION

Polydentia or hyperdontia can be defined, as a variation in excess in the number of the teeth that can be found in both primary and permanent dentitions (Prabhu *et al.*, 1998; Ito and Difalco, 2003). It is a relatively uncommon dental anomaly. According to literature, the prevalence of supernumerary teeth in permanent dentition is 1-14% (Khambete and Kumar, 2012). Supernumerary teeth appear especially in the maxilla, mostly between the central incisors and in molars region (Giganti *et al.*, 2001; Prabhu *et al.*, 1998). These positions are followed by the mandibular premolars, maxillary lateral incisors, mandibular fourth molars and maxillary premolars (Khambete and Kumar, 2012). Supernumerary teeth may occur in single or multiple numbers bilateral occurrence is uncommon and large percentage of supernumerary teeth remains impacted, unerupted and usually asymptomatic; radiograph plays an important role in diagnosis of these. Multiple supernumerary teeth are usually associated with various syndromes (such as cleidocranial dysplasia, Gardner's syndrome, Sotos syndrome, etc.), but they are rare as an isolated dental anomaly (Raitz and Laragnoit, 2009). Males are affected approximately twice as often as females (Hans *et al.*, 2011). The etiology is not completely understood. The majority of supernumerary teeth are considered to develop as a result of hyperactivity of the dental lamina (Kokten *et al.*, 2003; Reddy *et al.*, 2013). Other theories hypothesize a genetic or traumatic origin. According to Garvey *et al.* (1999), supernumerary teeth can be classified in:

- Supplemental when supernumerary is a duplication of teeth in the normal series
- Conical when supernumerary has a conic shape
- Tuberculate when supernumerary possesses >1 cusp or tubercle
- Odontoma that represents a hamartomatous malformation of dental germs

This classification is based on form of the supernumerary teeth but different authors distinguish teeth on the basis of position. According to the position, the supernumerary teeth are classified as:

- Mesiodens when supernumerary tooth appears between the upper central incisors
- Parapremolar if the supernumerary is a rudimentary tooth and appears in premolar region
- Paramolar if the supernumerary is a rudimentary tooth and appears in molar region
- Fourth molars or distomolars if the supernumerary tooth is distal to the third molars

Generally, these teeth remain included and they represent a chance discovery during a routine clinical and/or radiographic examinations. Surgical avulsion is indicated when the supernumerary cause symptoms. In contrast, if the supernumerary are asymptomatic controversy exists regarding the optimal treatment. Several researchers propose an avulsion of these teeth, whilst others suggest no treatment. The purpose of this study is to present a case with a symptomatic multiple supernumerary teeth in non-syndrome patient.

## CASE REPORT

An 17 years old male was referred to the department by his local practitioner. His presenting complaint was the partial eruption of the first lower left premolar. The patient referred no pain or functional limitations. Both medical



Fig. 1: Panoramic radiograph revealed 4 permanent fourth molars into the jaws (UR9, UL9, LR9, LL9). In addition it showed 2 supplemental lower premolars



Fig. 2: First and second right lower premolars are correctly aligned into the mandibular dental arch



Fig. 3: Partial eruption of the first lower left premolar

and dental histories were noncontributory. Extraoral examination revealed no abnormalities and intraoral examination revealed the partial eruption of the first lower left premolar. The panoramic radiograph (Fig. 1) revealed 4 permanent fourth molars within the jaws (UR9, UL9, LR9, LL9). The fourth molars were all present distal to the third molars. In addition, patient have 2 supplemental lower premolars. The supplemental right lower premolar are unerupted and its crown impacted the first right premolar but both first and second right lower premolars are correctly aligned into the mandibular dental arch (Fig. 2). In contrast, the crown of supplemental left lower premolar impacted the root of first left lower premolar and caused the partial eruption of the first lower left premolar (Fig. 3). No occlusal hindrance was caused by this partial erupted tooth. The anamnesis allowed to exclude stomatological pathologies, congenital anomalies and genetic or syndromical alterations. The patient was not aware of the occurrence of supernumerary teeth in other family member. The patient was informed of the diagnosis but declined surgical treatment.

## DISCUSSION

This studies illustrates a rare case of multiple supernumerary teeth associated with no other systemic disorders or syndromes. Both shape and dimension the supernumerary were normal, thus they are supplemental teeth. Cases of bilateral supplemental premolar or molar teeth have been reported in literature (Kaya *et al.*, 2011; Bhardwaj *et al.*, 2012; Reddy *et al.*, 2013) in contrast contemporary occurrence of both supplemental molars and premolars is far less frequently. The presence of supplemental teeth in the absence of an associated systemic condition or syndrome is rare (Reddy *et al.*, 2013). The prevalence of supplemental molars teeth for permanent dentition in various populations is between 1 and 2% (Kokten *et al.*, 2003) whilst the prevalence of the supernumerary premolars is between 0.075-0.26%. Supernumerary teeth may erupt normally or remain impacted. Supernumerary impacted are usually asymptomatic and most cases are diagnosed by chance during inspection of radiographs prior to the commencement of dental treatment. Effects of supernumerary teeth on the dentition can be multiple. Supernumerary teeth may erupt normally or remain impacted but in either case their presence may cause complications (Reddy *et al.*, 2013). When a supplemental teeth erupt it can cause orthodontic complications such as:

- Crowding due to a diminution of the space in the dental arch
- Malocclusion

- Retentions or ectopic eruptions of adjacent teeth of normal serie
- Delayed eruption or displacement of adjacent teeth (Dubuk *et al.*, 1996)
- Mandibular disorders, if supernumerary cause occlusal hindrance

Instead if the supernumerary remain impacted it cangive origin to:

- Pulp necrosis and root resorption of the adjacent teeth, due to the pressure exerted by supernumerary crowns (Timocin *et al.*, 1994)
- Formation of diastema between the molars (Dubuk *et al.*, 1996)
- Follicular cyst, due to the degeneration of the follicular sacs
- Neoplasm (Scheiner and Sampson, 1997)
- Pain in the molar area
- Neuralgias of the Trigeminous when the supernumerary compresses the nerve (Vennarini *et al.*, 1993)

The therapy of choice is the extraction of the supernumerary teeth for the purpose of eliminating the symptomatology and/or of preventing complications. When patients with hyperdontiaare asymptomatic and decline sugical treatment, it is need to have periodical clinical and radiographic controls. Consequently, if patients start to show any pathologic change it is advisable to remove these supernumerary teeth immediately (Mali *et al.*, 2012).

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