

A SUPERNUMERARY MAXILLARY PREMOLAR: A CASE REPORT

Elitsa Dzhongova

*Department of Oral and Maxillofacial Surgery, Faculty of Dental Medicine,
Medical University of Varna*

ABSTRACT

INTRODUCTION: Supernumerary teeth are regarded as one of the most common dental anomalies. Occurrences may be single or multiple, unilateral or bilateral, and in one or both jaws. Incidences of supernumerary teeth are primarily found in permanent dentitions; however, they may rarely be encountered in primary dentitions as well. The presence of multiple supernumerary teeth is usually associated with certain conditions or syndromes such as cleft lip/palate, cleidocranial dysplasia (CD), Gardner's syndrome, Down syndrome, etc. Supernumerary teeth (hyperdontia) can be defined as any tooth or tooth structure that is in excess in the presence of 20 deciduous, or 32 permanent teeth in one individual.

AIM: The aim of this article is to show clinical case with a supernumerary maxillary premolar, especially when there are other supernumerary teeth in one dentition without any records of present syndromes or genetic predisposition

CASE PRESENTATION: The subject of this clinical study was an old patient, with complains of maxillary sinus pain. The intraoperative observations established that the supernumerary tooth was surrounded by bone tissue and no communication with the sinus cavity was observed.

RESULTS: Although no communication with the sinus cavity was observed, there were no complaints and complications after the extraction of the supernumerary tooth. The patient was called for a follow-up one week and six months after the extraction and had no complaints.

CONCLUSION: Supernumerary teeth are not uncommon and their detection in most cases happens to be accidental, but the rare phenomenon of supernumerary premolars is of special research interest, especially when there are other supernumerary teeth in one dentition without any records of present syndromes or genetic predisposition.

Keywords: *supernumerary tooth, parapremolar, hyperdontia*

Address for correspondence:

Elitsa Dzhongova
Faculty of Dental Medicine
Medical University of Varna
84 Tzar Osvoboditel Blvd
9002 Varna
e-mail: elica.djongova@mu-varna.bg

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INTRODUCTION

Supernumerary teeth are regarded as one of the most common dental anomalies. Occurrences may be single or multiple, unilateral or bilateral, and in one or both jaws. Incidences of supernumerary teeth are primarily found in permanent dentitions; however, they may rarely be encountered in primary dentitions as well. The presence of multiple supernumerary teeth is usually associated with certain condi-

tions or syndromes such as cleft lip/palate, cleidocranial dysplasia (CD), Gardner's syndrome, Down syndrome, etc.

Supernumerary teeth (hyperdontia) can be defined as any tooth or tooth structure that is in excess in the presence of 20 deciduous, or 32 permanent teeth in one individual. According to some studies, hyperdontia is more often observed in permanent dentitions than in deciduous dentitions with more frequency for the upper arch than the lower arch with a ratio of 10:1 (1). In terms of gender, male patients are found to be affected twice as much compared to female patients (2).

The etiology of the development of supernumerary teeth is not completely understood and remains unclear. There are several theories about their formation, the most recognized one being associated with hyperactivity of the dental lamina and proliferation of its epithelial remnants (3). Other theories suggest hyperdontia is linked to the division of a tooth germ into two as well as to the combination of genetic and environmental factors (4, 5). Supernumerary teeth frequently mimic adjacent normal teeth shape and may occur everywhere in the dental arch, but are most often found in the maxillary region (6, 7). Complications associated with supernumerary teeth sometimes include impaction, delayed eruption or ectopic eruption of adjacent teeth as well as overcrowding and misalignment of teeth in the dentition. In addition, when located in the anterior maxillary region, supernumerary teeth may come in contact with and penetrate the nasal cavity (2). This condition may lead to the formation of follicular cysts associated with significant bone destruction. Early removal of supernumeraries will result in favourable alignment of the remaining teeth and achieving normal occlusal relationships.

Those teeth can be classified according to their shape, location (topography), orientation, and chronology. Garvey et al. divide their occurrences into single and multiple (8). Single supernumerary teeth are categorized on the basis of their morphological form as conical (peg-shaped), tuberculate (with several tubercles or cusps), supplemental (additional) and odontomas, which, in turn, are divided into compound odontomas and complex odontomas. Primosch groups supernumeraries into two types ac-

ording to their form: supplemental and rudimentary. Supplemental or eumorphic are supernumerary teeth of normal form and size, whereas rudimentary or dysmorphic are those that have abnormal shape and smaller size (9).

AIM

The aim of this article is to present a clinical case with a supernumerary maxillary premolar, especially when there are other supernumerary teeth in one dentition without any records of present syndromes or genetic predisposition.

CASE PRESENTATION

A 69-year-old patient with chief complaints of maxillary sinus pain was referred by an ENT specialist for an extraction of retarded roots and untreatable maxillary teeth bilaterally. The intraoral examination did not reveal any additional teeth, but the orthopantomography image revealed the presence of one supernumerary tooth in the region of the left maxillary premolars and another supernumerary situated just behind mandibular tooth #48. The size of each supernumerary tooth was smaller compared to the second premolar and mandibular wisdom tooth, respectively.

The patient had concomitant hypertension, asthma, hypothyroidism, and NSAID allergy. The patient's medical history contained no record of other family members with supernumerary teeth or any previously established diseases or syndromes normally associated with their occurrence.

As the main complaints involved pain coming from the upper jaw and the maxillary sinuses in particular, the treatment plan consisted of extraction of tooth #17, tooth #25 as well as the supernumerary tooth behind it. The intraoperative observations established that the supernumerary was not in contact with tooth #25 and was surrounded by bone tissue. The supernumerary looked like a miniature replica of the maxillary premolar. No communication with the sinus cavity was observed. The other supernumerary tooth, situated behind the right mandibular wisdom tooth, was left unextracted as no complaints were associated with it. It was determined that it would not interfere with the prosthetic restoration and can be removed at a later stage, if necessary.

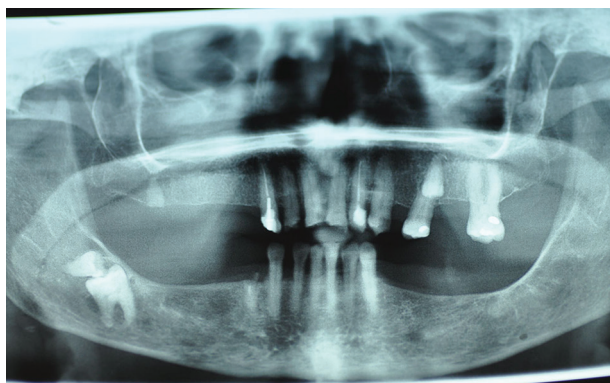


Fig. 1. Ortopantomography (OPG)

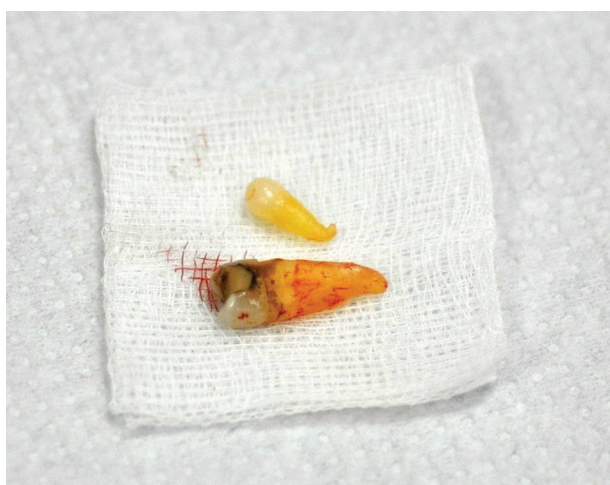


Fig. 2. Teeth after extraction

RESULTS

Although no communication with the sinus cavity was observed, there were no complaints and complications after the extraction of the supernumerary tooth. The patient was called for a follow-up one week and six months after the extraction and had no complaints.

DISCUSSION

A supernumerary tooth can be defined as additional, relative to the regular number of teeth in a dentition, and can be found in almost any region of the dental arch (8). Although not prevalent, the presence of supernumeraries is not uncommon. They present an interesting find, especially in the region of premolars. Previous research has shown that supernumerary teeth are most often found in the anterior maxillary region (mesiodens), followed by the fourth molars of the maxilla, the same tooth in the mandi-

ble, and then the premolars, canines, and lateral incisors (10).

According to their position in the dental arch supernumerary teeth can be classified as mesiodens, parapremolars, paramolars, and distomolars. A mesiodens is a typical conical supernumerary tooth located palatally between the maxillary central incisors, while a parapremolar is found in the premolar region, often resembling a premolar. Paramolars are supernumerary teeth in the molar region, frequently next to the normal molars, situated lingually or palatally; distomolars are most often found directly distal to third molars. Furthermore, supernumerary tooth position has been observed to be vertical, transverse or inverted.

The occurrence of supernumerary teeth after the loss of permanent dentition is referred to as post-permanent dentition (11). This phenomenon is relatively rare and may be due to the influence of masticatory forces on the prosthetic field. Although supernumeraries are most commonly found in the jaws, other positions have also been recorded, e.g. in the gingiva, maxillary tuberosity, soft palate, maxillary sinus, nasal cavity, sphenomaxillary fissure, and in the orbit (11).

Another interesting fact is that a supernumerary occurrence is most often associated with the presence of diseases or syndromes. Prior studies have established that supernumerary teeth without certain conditions and syndromes are primarily found in the mandible, whereas other research argues that supernumeraries are observed to occur more commonly in the maxilla, most likely referring to the high prevalence of mesiodens (11, 12). It is worth noting that in the present clinical case reported, the supernumerary tooth extracted was found in the upper jaw along with another supernumerary right paramolar in the lower jaw in a female patient without any evidence of present syndromes or genetic predisposition.

Studies in dental literature do not yet provide an exact treatment protocol for the treatment of supernumerary teeth. Overall, the usual treatment plan is limited to clinical observation when no pathology is involved, or extraction when the supernumerary prevents the eruption of permanent teeth and is associated with the formation of follicular cysts, or

when prosthetic or orthodontic treatment is thereby hindered.

CONCLUSION

Supernumerary teeth are not uncommon and their detection in most cases happens to be accidental or, depending on their position, their detection may be linked to different types of clinical indications, such as a delayed or unerupted tooth, ectopic eruption, overcrowding, radicular cysts formation, root resorption, loss of vitality, gingival inflammation, periodontal abscesses, pericoronitis, etc. The rare phenomenon of supernumerary premolars is of special research interest, especially when there are other supernumerary teeth in one dentition without any records of present syndromes or genetic predisposition.

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