

Non-Syndrome Multiple Supernumerary Teeth: Case Report

Sendroma Bağlı Olmayan Çok Sayıda Sürnümerer Diş

Kaan GÜNDÜZ,^a
Hakan AVSEVER,^a
Ümit KARAÇAYLI,^b
Bülent PİŞKİN^c

Departments of
^aOral Diagbosis and Radiology,
^bMaxillofacial and Dental Disorders
and Surgery,
GATA Dental Center, Ankara
^cClinic of Posthetic Treatment,
Van Military Hospital, Van

Geliş Tarihi/Received: 23.03.2009
Kabul Tarihi/Accepted: 29.09.2009

Yazışma Adresi/Correspondence:
Kaan GÜNDÜZ
GATA Dental Center,
Oral Diagnosis and Radiology,
Ankara,
TÜRKİYE/TURKEY
kgunduz@omu.edu.tr

ABSTRACT Teeth in excess of the normal number are referred to as supernumerary teeth. Supernumerary teeth may occur anywhere in either jaw in both dentitions. Supernumerary teeth are classified based on their morphology and location in the dental arch. The supernumerary teeth that occur in the molar area are called paramolar, those that occur distally to the third molar are called distomolar, those that occur between the maxillary anterior central teeth are called mesiodens. Multiple supernumerary teeth are associated with cleidocranial dysplasia and Gardner syndrome but non-syndrome multiple supernumerary cases are very rare. Multiple supernumerary teeth are mostly encountered in mandibular premolar area. In this case report we will present clinical and radiographic manifestations and management of an 22 year old female patient who was referred to Oral Diagnosis and Radiology Department for routine control with 11 supernumerary teeth.

Key Words: Tooth, supernumerary; tooth abnormalities; abnormalities, multiple

ÖZET Normal diş sayısından fazla dişler sürnümerer dişler olarak ifade edilir. Sürnümerer dişler her iki dentisyonda çenelerin herhangi bir bölgesinde oluşabilir. Sürnümerer dişler dental arktaki pozisyonlarına ve morfolojilerine göre sınıflandırılır. Molar bölgede oluşan sürnümerer dişler paramolar, üçüncü moların distalinde yer alanlar distomolar, maksiller santral dişlerin arasında lokalize olursa mesiodens olarak isimlendirilir. Multiple sürnümerer dişler Kleidokraniyal displazi ve Gardner sendromu gibi sendromlarla birlikte görülür. Sendroma bağlı olmayan multiple sürnümerer dişlerin görülmesi çok enderdir. Multiple sürnümerer dişler en çok mandibulada premolar bölgesinde izlenir. Bu vaka raporunda 11 süpnümerer dişi bulunan ancak kliniğimize rutin kontrol amacıyla başvuran 22 yaşındaki kadın hastanın klinik ve radyolojik belirtileri ve tedavi planlamasını sunacağız.

Anahtar Kelimeler: Diş, fazla; diş anomalileri; anormallikler, çoklu

Türkiye Klinikleri J Dental Sci 2010;16(3):301-4

Supernumerary teeth are the one of the developmental dental abnormalities. They are defined as the extra tooth/teeth that develops in addition to the normal complement of teeth in the primary or permanent dentition in any region of dental arch. The term “supplemental” is sometimes used when the extra teeth have normal morphology.¹⁻⁵ Supernumerary teeth have been reported in the literature over the years as a well-recognized clinical phenomenon.⁶⁻⁹ Multiple supernumerary teeth are associated with cleidocranial dysplasia and Gardner syndrome.^{1,10-12} However, it is very

rare to find multiple supernumeraries in individuals with no other associated disease or syndrome.¹³⁻¹⁸ In such cases the maxillary anterior region is the common site of occurrence.¹⁵

CASE REPORT

An 22 year old Caucasian female patient was referred to Oral Diagnosis and Radiology Department for routine control. The familial, medical and dental histories were non-contributory. General extra-oral examination did not show any significant findings. Intra-oral examination revealed absence of left permanent maxillary canine and a supernumerary premolar tooth in left mandible. Panoramic radiograph revealed 11 supernumerary teeth (ST) with various stages of root development (Figure 1). In the maxilla there were seven supernumerary teeth. For detailed evaluation of supernumerary teeth, 4 periapical radiographs are taken from four quadrants. On the left side there were (one distomolar, two premolar shaped teeth and one supernumerary tooth germ between the canine and first premolar. On the right side there were three premolar shaped teeth) (Figure 2, 3). The left permanent maxillary canine was impacted. In the mandible, four supernumeraries were present: on the right side there was (one distomolar and one premolar teeth and on the left side there were two premolar teeth) (Figure 4, 5).

A general physician was consulted who confirmed there was no associated syndrome. Based on the dental findings and the absence of any associated disorder or syndrome, we decided on a diagnosis of non-syndrome multiple supernumerary teeth.

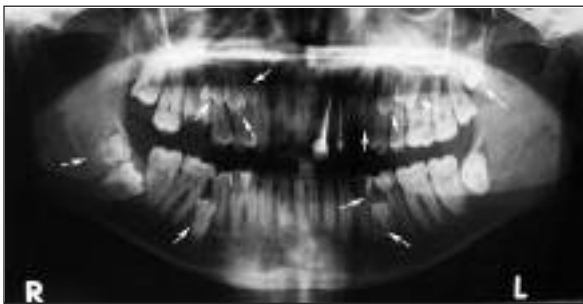


FIGURE 1: Panoramic radiograph showing the supernumerary teeth (arrows).

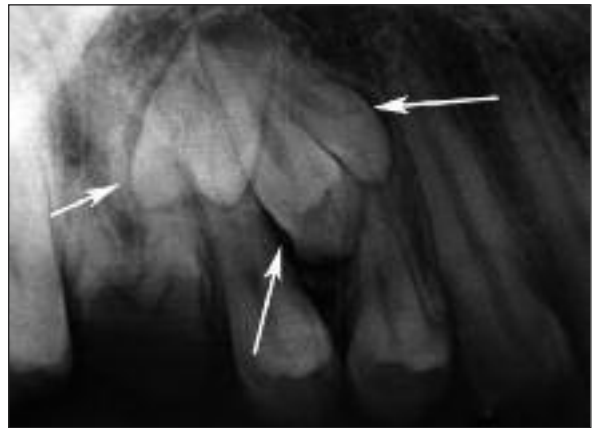


FIGURE 2: Periapical radiography of the right maxillary premolar region showing three supernumerary premolars (arrows).

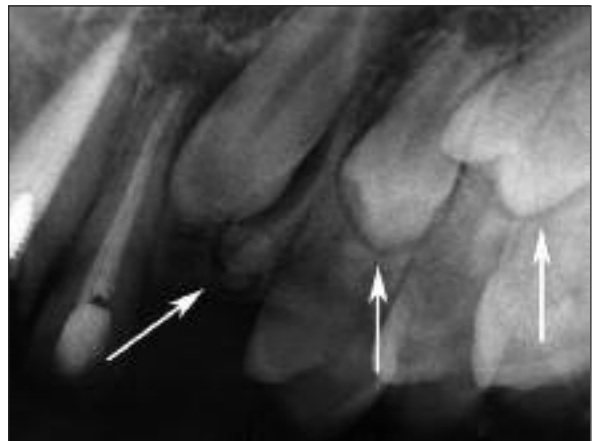


FIGURE 3: Periapical radiograph of the left maxillary premolar region showing two supernumerary premolars (white arrows) and one supernumerary tooth germ between the left canine and first premolar (left white arrow).

Because of these supernumerary teeth were asymptomatic, we decided to leave in their place and keep them under observation and has been given information about her disease and our decision.

DISCUSSION

There are some syndromes which associated with supernumerary teeth such as Gardner syndrome and cleidocranial dysplasia. Clinical examination and patient history did not show any other clinical features such as partial or complete absence of clavicles, excessive mobility of shoulders as in cleidocranial dysplasia.^{3,12} It was all compatible with general physician's evaluation. According to general physician there were no signs such as multiple



FIGURE 4: Periapical radiography of the right mandible showing one supernumerary premolar tooth (arrow).



FIGURE 5: Periapical radiography of the left mandible showing two supernumerary premolar teeth (arrows).

enostosis, multiple osteomas, cutaneous sebaceous cysts, subcutaneous fibromas or multiple polyps as in Gardner syndrome.

Teeth in excess of the normal number are referred to as supernumerary teeth (ST). ST may occur anywhere in either jaw in both dentitions. They are most frequently seen in the maxillary anterior and molar regions and more frequently seen in the permanent dentition (Table 1).^{1,5} Heredity was believed to be an important aetiological factor in the occurrence of ST.³ Multiple supernumerary teeth are usually associated with developmental disorders or syndromes such as cleidocranial dysplasia and Gardner syndrome. Occurrence of multiple supernumerary teeth in the absence of any associated syndrome is rare.^{14,18} Multiple ST are mostly

seen in mandibular premolar area.^{1,5,8,10,15} In this case we detected 3 premolar shaped supernumerary teeth in mandibular premolar area. The prevalence of ST in the premolar region has been reported as 0.2-10.9%.¹⁵ Despite of the prevalence of single supernumeraries occur in 76-86%, the prevalence of five or more ST has been reported less than 1% (Table 2).^{3,8} In the present case eleven supernumerary teeth found in both jaws.

ST are classified based on their morphology and location in the dental arch. The ST that occur in the molar area are called paramolar, those that occur distally to the third molar are called distomolar.² In this case, eleven ST were found, nine of them were resembling the premolar teeth and two of them were molar shaped distomolar.

TABLE 1: Supernumerary teeth location, age and sex correlation.

	Mandible	Maxillary	Anterior area	Premolar area	Molar area	Total supernumerary teeth	Mean of age	Sex
Yagüe et al ¹⁰	23.53%	76.47%	35.29%	32.36%	32.35%	34	16.23	6M/2F
Rajab et al ³	5.9%	94.1%	93.1%	6.5%	0.5%	202	10.1	105M/47F
De Oliveira Gomes et al ⁷	8.7%	91.3%	91.6%	8%	0.4%	460	9.3	207M/98F

TABLE 2: Rates of prevalence of supernumerary teeth.

	One supernumerary tooth	Two supernumerary teeth	Three or more supernumerary teeth
Rajab ³	77%	18.4%	4.6%
Hattab ⁴	76-86%	12-23%	0-1%
Şermet ¹⁷	94.33%	3.77%	1.88%

ST are usually impacted and sometimes in inverted position.⁵ Ten of the 11 supernumeraries in our case were impacted and all the supplemental teeth were oriented normally.

Approximately 75% of supernumerary teeth are impacted and asymptomatic, and most of these teeth are diagnosed coincidentally during radiographic examination.^{1,8,15} Panoramic radiographs give us precious review about supernumerary teeth. In addition to panoramic radiography, occlusal radiographs may be a choice in determining location and number of unerupted supernumerary teeth.¹⁹ Conventional radiographic techniques are useful enough unless in the presence of large cystic formation.

It has been stated that development of supernumerary teeth may cause various pathoses such as delayed eruption and displacement of permanent teeth. These were also seen in our case. If they cause delay, non-eruption or displacement of permanent teeth, root resorption of adjacent teeth due to the pressure and cystic formations, then extraction is recommended.^{1,8,9,13,15}

As observed in the literature, delayed of eruption, orthodontic problems and displacement of permanent teeth were seen supernumerary teeth cases. The current literature supports removal of unerupted supernumerary teeth because the most common complications are cyst formation (9%) and damage the neighbouring teeth (14%).¹⁶

REFERENCES

1. Shafer WG, Hine MK, Levy BM. Supernumerary teeth. A Textbook of Oral Pathology. 4th ed. Philadelphia: WB Saunders; 1993. p.47-9.
2. Gündüz K, Çelenk P. [A retrospective study of distomolar teeth]. *Türkiye Klinikleri J Dental Sci* 2006;12(3):83-6.
3. Rajab LD, Hamdan MA. Supernumerary teeth: review of the literature and a survey of 152 cases. *Int J Paediatr Dent* 2002;12(4):244-54.
4. Hattab FN, Yassin OM, Rawashdeh MA. Supernumerary teeth: Report of three cases and review of the literature. *ASDC J Dent Child* 1994;61(5-6):382-93.
5. Garvey MT, Barry HJ, Blake M. Supernumerary teeth--an overview of classification, diagnosis and management. *J Can Dent Assoc* 1999;65(11):612-6.
6. Arathi R, Ashwini R. Supernumerary teeth: A case report. *J Indian Soc Pedod Prev Dent* 2005;23(2):103-5.
7. De Oliveira Gomes C, Drummond SN, Jham BC, Abdo EN, Mesquita RA. A survey of 460 supernumerary teeth in Brazilian children and adolescents. *Int J Paediatr Dent* 2008;18(2):98-106.
8. Liu JF. Characteristics of premaxillary supernumerary teeth: a survey of 112 cases. *ASDC J Dent Child* 1995;62(4):262-5.
9. King NM, Lee AM, Wan PK. Multiple supernumerary premolars: their occurrence in three patients. *Aust Dent J* 1993;38(1):11-6.
10. Yagüe-García J, Berini-Aytés L, Gay-Escoda C. Multiple supernumerary teeth not associated with complex syndromes: a retrospective study. *Med Oral Patol Oral Cir Bucal* 2009;14(7):E331-6.
11. Üçok Ö, Karakurumer K, Mermut S, Özen T. [Gardner syndrome (A case report)]. *Türkiye Klinikleri J Dental Sci* 1998;4(2):110-3.
12. Yılmaz HH, Üçok Ö, Doğan N, Özen T, Karakurumer K. [Cleidocranial dysplasia (case report)]. *The Journal of Cumhuriyet University Faculty of Dentistry* 2002;5(1):33-5.
13. Gündüz K, Muglali M. Non-syndrome multiple supernumerary teeth: a case report. *J Contemp Dent Pract* 2007;8(4):81-7.
14. Açıköz A, Açıköz G, Tunga U, Otan F. Characteristics and prevalence of non-syndrome multiple supernumerary teeth: a retrospective study. *Dentomaxillofac Radiol* 2006;35(3):185-90.
15. Yusof WZ. Non-syndromal multiple supernumerary teeth: literature review. *J Can Dent Assoc* 1990;56(2):147-9.
16. Díaz A, Orozco J, Fonseca M. Multiple hyperodontia: report of a case with 17 supernumerary teeth with non syndromic association. *Med Oral Patol Oral Cir Bucal* 2009;14(5):E229-31.
17. Şermet Ü, Yıldırım S. [Prevalence of supernumerary teeth of 3-12 aged children in Konya: A retrospective study]. *SÜ Dişhek Fak Derg* 2007;16(1):14-7.
18. Sivapathasundharam B, Einstein A. Non-syndromic multiple supernumerary teeth: report of a case with 14 supplemental teeth. *Indian J Dent Res* 2007;18(3):144.
19. White SC, Pharaoh MJ. *Dental Anomalies. Oral Radiology Principles and Interpretation.* 6th ed. St. Louis: Mosby; 2009. p.295.