ISSN: 0975-833X

Available online at http://www.journalcra.com

International Journal of Current Research
Vol. 8, Issue, 07, pp.34179-34181, July, 2016

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

CASE STUDY

NON SYNDROMIC IMPACTED HYPERDONTIC PREMOLARS: 2 CASE REPORTS AND REVIEW OF LITERATURE

***,[1]Dr. Madhusudhanreddy, [2]Dr. N. Govindraj Kumar, [2]Dr. Swetha, P. and [2]Dr. A. NagaSupriya**

[1]Department of Oral and Maxillofacial Pathology and Microbiology, Lenora Institute of Dental Sciences, Rajahmundry, Andhra Pradesh, India
[2]Department of Oral and Maxillofacial Pathology and Microbiology, Vishnu Dental College, Bhimavaram, Andhra Pradesh, India

ARTICLE INFO

Article History:
Received 25th April, 2016
Received in revised form
09th May, 2016
Accepted 23rd June, 2016
Published online 16th July, 2016

Key words:

Non syndromic, Hyperdontic, Premolars.

ABSTRACT

Tooth that is present in addition to the normal set of dentition was termed as supernumerary tooth or hyperdontia. They may be erupted or unerupted, single, multiple, unilateral or bilateral, and in one or both jaws. Multiple supernumerary teeth are rare in individuals with no other associated diseases or syndromes. Here we discussed two interesting cases of supernumeraries in female patients without any associated syndromes.

Citation: Dr. Madhusudhanreddy, Dr. N. Govindraj Kumar, Dr. Swetha, P. and Dr. A. NagaSupriya, 2016. "Non syndromic impacted Hyperdontic premolars: 2 case reports and review of literature", *International Journal of Current Research*, 8, (07), 34179-34181.

INTRODUCTION

Dental anomalies usually reflect either a change in tooth number, size, shape or structure. These anomalies occur mainly because of the complex interaction between genes and environmental factors during tooth development. A supernumerary tooth is defined as those that are present in excess of the normal complement of human dentition and constitutes a unique developmental anomaly of patterning and morphogenesis (Rena *et al*., 2007). Occurrence of these teeth is seen in both deciduous and permanent dentition, but they are more common in permanent dentition. Supernumerary teeth may occur singly, multiply, unilateral or bilateral and in maxilla, mandible or both (Nazif *et al*., 1993; Vinodhkumar and Sruthi, 2014). Frequency of occurrence is more in males with male: female ratio of 2:1 (Nazif *et al*., 1993). Multiple supernumerary teeth are commonly associated with variable syndromes (Nazif *et al*., 1993; Moore *et al*., 2002; Sujatha *et al*., 2012). Non syndromic multiple supernumerary is a low prevalence condition and is often common in mandibular premolar region (Nazif *et al*., 1993; Yousof, 1990). We reported 2 interesting cases of non-syndromic, impacted, asymptomatic, multiple supernumerary teeth in mandibular premolar region detected in OPG during routine dental checkup.

****Corresponding author: Dr. Madhusudhanreddy***
Department of Oral and Maxillofacial Pathology and Microbiology, Lenora Institute of Dental Sciences, Rajahmundry, Andhra Pradesh, India.

Case 1:

A 34 year old female patient had reported to the department of Oral Pathology with a chief complaint of pain in the right upper back tooth region. Family and medical history were noncontributory. Intra-oral examination revealed tooth pain in relation to 17 & 46, missing teeth 36 & 47, root stumps of 37 & 18, spacing observed between 31 & 41, with poor oral hygiene status. Mandibular left quadrant showed one mesially rotated supernumerary teeth exhibiting similar morphology of premolar but with smaller dimensions (Fig. 1). The extra oral examination revealed no abnormalities. OPG was advised for complete evaluation of status of the tooth and jaw bone. Careful examination of OPG revealed 2 distally and 2 mesially impacted supernumerary teeth in the mandibular right and left quadrants (Fig. 2). With these clinical and radiographic

features, thorough general examination was done to rule out any syndromes and none were detected in this case.

Case 2:

A 40 year female patient reported to the department of oral pathology with a chief complaint of missing tooth in the left upper jaw. Family, medical history was noncontributory. Intra-oral examination revealed missing 27 which was extracted due to gross decay. OPG was advised for complete evaluation of status of the tooth and jaw bone.

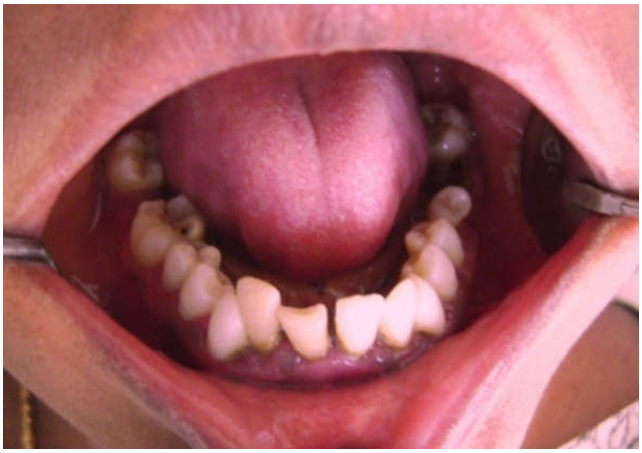

Fig. 1. Clinical picture showing supernumerary teeth in the mandibular left quadrant (case 1)

Fig. 2. Orthopantomograph showing supernumeraries in relation to right and left mandibular quadrants (case 1)

Fig. 3. Clinical picture showing permanent dentition (case 2)

Fig. 4. Orthopantomograph showing impacted supernumeraries one in the right quadrant and two in left quadrant (case 2)

Careful examination revealed 3 impacted supernumerary teeth in the mandible, one in the right quadrant and two in the left quadrant. The impacted supernumerary teeth were fully formed and resembling premolars. With these clinical and radiographic features, thorough general examination was done to rule out any syndromes and none were detected in this case.

DISCUSSION

Supernumerary teeth may erupt normally or remain impacted and their presence may lead to complications like malocclusion, diastema, delayed eruption, rotations, cystic lesions and resorption of adjacent teeth (Nazif *et al*., 1993; Yousof, 1990; Joaquin Alvira-Gonzalez and Cosme Gay-Escoda, 2012). Reports of supernumerary teeth are common in dental literature and most often being discovered on radiographic examination of dental patients who are totally unaware of these problems (Acikgoz *et al*., 2006). Orthopantomograph is the most important aid in the diagnosis of dental, oral and craniofacial disorders and is preferred over periapical radiographs. The present cases were evaluated for syndromes but none of the syndromic characteristics were evident. So these cases can be categorized under non syndromic multiple supernumerary teeth (Joaquin Alvira-Gonzalez, Cosme Gay-Escoda, 2012). Supernumeraries which were discussed in these two cases were morphologically and positionally similar to that of premolar. Supernumerary premolars accounts for about 10% of all supernumerary cases and their prevalence in permanent dentition ranges from 0.075-0.26% (Hyun *et al*., 2008). Occurrence of Supernumerary premolar is most common in mandible (Yousof, 1990; Rubenstein *et al*., 1991; Scanlan and Hodges, 1997; Anastasia Fardi *et al*., 2011; Rajab and Hamdan, 2002). Single supernumerary premolar varies for about 76-86%, double varies for 12-23% and multiple accounts for less than 1% cases (Sasaki *et al*., 2007). Reported prevalence of supernumerary premolars is more in males than in females (Gokselsimsek Kaya *et al*., 2011; Sasaki *et al*., 2007; Yague-Garcra *et al*., 2009). Numerous syndromes are associated with supernumerary teeth such as cleidocranial dysplasia, gardners, cleft lip and palate etc (Ferres-Padro *et al*., 2009; Anegundi *et al*., 2008; Xiu-Ping Wang and Jiabing Fan, 2011). But in our two cases supernumeraries were seen in females and not associated with any syndromes. Exact etiology of supernumerary teeth is unknown but several theories were put

forward to explain the formation of supernumerary teeth is atavism, splitting of the tooth bud and a combination of genetic and environmental factor (Yousof, 1990; Ferres-Padro *et al*., 2009; Anegundi *et al*., 2008; Xiu-Ping Wang and Jiabing Fan, 2011; Solares and Romero, 2004). However the most commonly accepted theory is hyperactivity of dental lamina (Yousof, 1990; Xiu-Ping Wang and Jiabing Fan, 2011). Our cases showed supernumeraries based on any one of the above causes. These supernumerary teeth were detected during routine radiographic examination. Although numerous complications associated with impacted supernumerary teeth were reported in the literature, of which the most common include dentigerous cyst and root resorption of adjacent teeth (Solares and Romero, 2004) which were not reported in our cases. Clinically if there is any delay in the eruption of tooth for more than 6 months, supernumeraries should be suspected. Early diagnosis, evaluation and proper treatment are required to reduce the complication. In our cases medical, family histories and extra oral examination were not suggestive of any syndrome or metabolic disorders.

Conclusion

Non syndromic multiple supernumerary tooth has a very low prevalence with high incidence of premolars in men. Occurence of bilateral supernumerary teeth is common Characteristic of non syndromic cases. The present cases are different that the patients were females and mandibular occurrence which is a rare phenomenon.

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