

Occult Multiple Supernumerary Premolar Teeth: Two Case Reports of Post Permanent Dentition

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Abstract: Supernumerary teeth are the teeth present in addition to the normal set of teeth. They may be single, multiple, unilateral or bilateral, erupted or unerupted and in one or both jaws. Multiple supernumerary teeth are rare in individuals with no other associated diseases or syndromes. Our case presents with four supernumerary premolars, asymptomatic, of which one was erupted and three were unerupted and surrounded by follicular cyst with no associated syndrome.

Key words: Supernumerary • Premolar Teeth • Post Permanent Dentition

INTRODUCTION

Dental anomalies are associated with both the primary and the permanent dentitions and can affect either the morphology or the number of teeth. Although these anomalies occur infrequently, they can cause esthetic, spacing and periodontal problems [1]. Supernumerary teeth, or hyperdontia, are the existing of additional teeth to the normal series in the dental arches. The etiology of supernumerary teeth is not fully understood. Both genetic and environmental factors have been proposed and a sex-linked mode of inheritance has been suggested, as supernumerary teeth are twice as common in males as in females in the permanent dentition [2]. It has been suggested that, it may be due to dichotomy of the tooth bud or due to hyper activity theory, suggesting that they are formed as a result of local, independent, conditioned hyper activity of dental lamina [3]. It occurs in both primary and permanent dentition, but is more common in permanent dentition [4]. The prevalence of supernumerary teeth ranges from 0.8 to 2.1% in deciduous and permanent dentition, respectively [3].

Supernumerary teeth may erupt normally, stay impacted, appear inverted or assume an ectopic position or an abnormal path of eruption. Supernumerary teeth are

commonly found in premaxilla followed by maxillary molars, mandibular molars, premolars, lateral incisors and canine region [5]. The supernumerary teeth may be single, multiple, unilateral or bilateral, erupted or unerupted and in one or both jaws. Multiple supernumerary teeth are rare in individuals with no other associated diseases or syndromes [5]. The supernumerary teeth can cause problems for the eruption and alignment of normal dentition. Associated problems can range from failure of eruption, displacement, crowding, adjacent teeth root resorption, formation of dentigerous cyst or they can be just asymptomatic [3]. Supernumerary teeth are sometimes associated with genetic syndromes like cleidocranial dysplasia, Gardner's syndrome and Ehlers-Danlos syndrome [6].

Here is an interesting case report of a non-syndromic patient with multiple developing supernumerary teeth found in 50 year old adult male patient.

Case Reports

Case 1: A 50 year old man reported to the private dental clinic with a chief complaint of decayed teeth in the lower back teeth region and missing teeth in both lower and upper back teeth region. The intra oral examination of the maxillary arch revealed permanent dentition with both first

molars and left second premolar missing and a diffuse swelling in the left palatal rugae area with respect to canine (Figure 1). On palpation, swelling was firm and the borders were in-continuous with the surrounding area. Mandibular arch revealed permanent dentition with decayed second molars and right first molar missing. An extra tooth resembling premolar was found lingual to second premolar (Figure 2). There was no history of trauma present. Patient has a history of extraction of three molars and left second premolar, three years back in a private dental clinic, as they were decayed. The extra oral and general examinations revealed no abnormalities. There were no similar findings in any of the family members.

An orthopantomograph and intra oral radiograph in the left premaxillary region was taken.

Careful examination of radiographs revealed the presence of four supernumerary teeth resembling premolar, one in maxilla and three in mandible (Figure 3). A horizontally impacted supernumerary tooth was found in relation to left maxillary canine and first premolar which was palatally placed and surrounded by well defined radiolucency, thus giving rise to the swelling in palate (Figure 3, 4). Mandibular arch showed the presence of bilateral impacted supernumerary teeth resembling premolar. A diagonally impacted tooth was found in between left mandibular canine and first premolar (Figure 3, 5). On the right side a similar tooth was found between mandibular canine and first premolar which was vertically impacted. Both of these teeth showed a well defined radiolucency which is almost 2X2 cm in size. Another partially erupted supernumerary tooth was noticed lingual to second premolar on the right side (Figure 3, 6).

Extraction of all four supernumerary teeth was advised along with associated cyst enucleation.

Case 2: A 35 year old man reported to the private dental clinic with a chief complaint of decayed teeth in the lower and upper back teeth region. The intra oral examination of the maxillary arch revealed permanent dentition with grossly destructed first molars of both the side and right first premolar (Figure 7). Mandibular arch revealed permanent dentition with grossly destructed third molar, left first molar and right second premolar (Figure 8). There was no significant family and past dental history. The extra oral and general examinations revealed no abnormalities. There were no similar findings in any of the family members.



Fig. 1: Small swelling in the left side of the palate i.r.t canine



Fig. 2: Lingually erupted supernumerary premolar



Fig. 3: Orthopantomograph showing multiple impacted teeth



Fig. 4: Intra oral radiograph showing a horizontally impacted tooth



Fig. 5: IOPA showing diagonally impacted supernumerary tooth in the left mandible



Fig. 6: IOPA showing two supernumerary teeth, one erupted and one unerupted



Fig. 7: Maxillary arch showing grossly destructed teeth



Fig. 8: Mandibular arch showing grossly destructed teeth



Fig. 9: Orthopantomograph showing multiple impacted teeth

An orthopantomograph and intra oral radiographs were taken. Careful examination of radiographs revealed the presence of three vertically impacted supernumerary teeth resembling premolar in the mandible, two in relation to left mandibular canine, first premolar and second premolar and another one in relation to the right mandibular second premolar region. Supernumerary tooth in relation to right mandibular second premolar showed a well defined radiolucency which is almost 1X1 cm in size (Figure 9).

Extraction of all grossly destructed teeth and restoring the lost teeth was advised. Patient was made aware of the presence of occult supernumerary teeth and its complications.

DISCUSSION

Reports of supernumerary teeth are quite common in dental literature, such teeth often being discovered on radiographic examination of dental patients who are totally unaware of this disorder. Supernumerary teeth are more likely to be present in patients whose relatives also possessed supernumeraries, although inheritance does not follow a simple Mendelian pattern [7]. Most commonly in the recent days these reports are seen in younger age group because of the increased dental awareness in the population but very rarely they are discovered in the older age group when they remain completely asymptomatic.

Amongst the supernumerary teeth, mesiodens is the most common with frequency of 47 to 67% of cases followed by distomolars with 26%, paramolars with 15% and parapremolars with 8 to 9% [8]. According to Fernandez *et al.* the second most frequent group of supernumerary teeth were the premolars (24.1%), located in the mandible in the lingual position, Fernández-Montenegro *et al.* [9] as in the present cases. Stafne states that, supernumerary premolars are usually of normal form and 75% are impacted or generally unerupted and more likely to develop in mandible than maxilla [10].

Cases involving one or two supernumerary teeth most commonly involve the anterior maxilla, followed by the mandibular premolar region [11] When multiple supernumerary teeth are present, the most common site affected is the mandibular premolar region. [12] Single supernumerary tooth occur in 76 to 86 per cent of cases, double supernumerary teeth in 12 to 23 per cent of cases and multiple supernumeraries in less than 1 per cent of cases [13].

McNamara *et al.* [14], Rodriguez-Armijo *et al.* [15] and Hedge and Munshi [16] stated that the identification and discovery of most of supernumerary premolars was carried out via radiological examination, as they normally do not produce any symptoms and were found in patients usually older than 15 years. Supernumerary teeth can be either eumorphic which display similar morphology to their corresponding tooth type, or heteromorphic which show distinct forms such as conical or pin, tuberculate, infundibular, or molariform of tooth. Generally, supernumerary premolars are found eumorphic, Fernández-Montenegro *et al.* and Stafne [9,10] as in the present cases where as others are most commonly heteromorphic [9].

There are several cases where anterior maxillary supernumerary teeth were present in early age and these patients also developed mandibular premolar supernumerary teeth in their adolescent years. No associated syndromes were found in any of the cases [17]. It is found that supernumerary premolars and paramolars would seem to fit in a model of post permanent dentition development consistent with continued dental lamina activity and thus found in the later ages after the tooth development [18].

Effects of supernumerary teeth on the developing dentition vary. There may be no effect with the supernumerary tooth or teeth discovered either as a chance radiographic finding or following their eruption. Crowding may be evident due to an increased number of erupted teeth. Failure of eruption of adjacent permanent teeth is the most frequent occurrence and occurs in 30 to 60 per cent of cases [11, 19].

The supernumerary or adjacent teeth may be displaced and ectopic eruption of either is not uncommon. Supernumerary teeth may also cause diastemata, root resorption of adjacent teeth, malformation of adjacent teeth such as dilaceration and loss of vitality of adjacent teeth. [18] Early diagnosis, proper evaluation and appropriate treatment are essential, if these complications are to be avoided or minimized [16, 20].

In the present cases, though the patients had multiple premolar supernumerary teeth, there were no above mentioned problems and patient remained asymptomatic throughout and the present finding was just an accidental one. So the present cases can be an example for asymptomatic multiple supernumerary teeth and the reason behind could be the late development of these teeth as post permanent dentition i.e. after the development of permanent dentition. However to overcome any problem in the forth coming period, prophylactic extraction of these teeth are advised.

CONCLUSION

In this paper, we have reported two cases of multiple supernumerary premolars in middle aged men, associated with follicular cyst. Supernumerary teeth have remained asymptomatic without causing any symptomatic effect on the dentition of the patient. Every case should be observed keenly for the presence of any developmental abnormality in all ages in order to prevent the further consequences which might come up in the future because of them.

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