IMPACTED TWIN SUPERNUMERARY PREMOLARS : A CASE REPORT

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Supernumerary teeth are frequently encountered by dental surgeons in their day to day practice. Few of them, erupt in the oral cavity but most of them remain impacted. Both of these types may be symptomatic or may remain symptom free for long or even for ever. In routine, supernumerary teeth are found as single entity. Very few cases have been reported of two or more supernumerary teeth existing together(1). A case of unusual impacted twin supernumerary premolars which were symptomatic and needed surgical intervention, is reported here.

Key words : Supernumerary teeth, X-rays, premolars.

Supernumerary teeth are teeth that are present in addition to the usual number of teeth in the dental arch. Most comprehensive study of supernumerary teeth was published by stafne in 1942. Still reported several cases of supernumerary teeth and indicated that in countries like southern Nigeria approximately one person in every 100, has one or extra supernumerary teeth (2) . These teeth occur in 0.3 to 3.8% of population (3). They are found in both maxilla and mandible. Most common location for supernumerary teeth in the mandible is in premolar region (4).

Ratio of prevalence of supernumerary teeth in maxilla and mandible is 8.2 : 1 (5) While most of the supernumerary teeth are found in the arch or near to the dentition, but cases have been reported where in supernumerary teeth have been found in aberrant cations as tuberosity, palate, maxillary sinus, nasal cavity etc.

Macphee (1935) reported 0.3% of school children as having supernumerary teeth erupted, while clayton (1956) found radiographic evidence of supernumerary teeth in 2.4% of children (6)

CASE REPORT

A 20 year old male patient reported to the department of oral surgery, college of dental science & hospital, Rau Indore with a chief complaint of pain and swelling in the lower right inner aspect of the jaw of duration 15 days. Patient had experienced pain earlier as well, that had subsided on taking medication from a general practioner. Figure-1

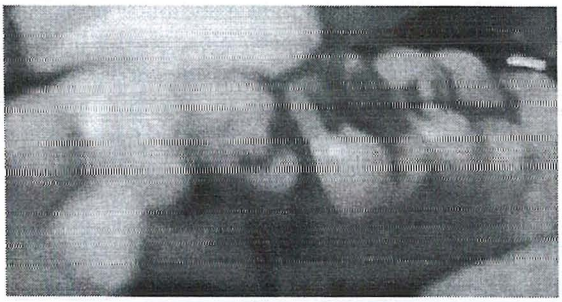


Figure -1 Pre Operative

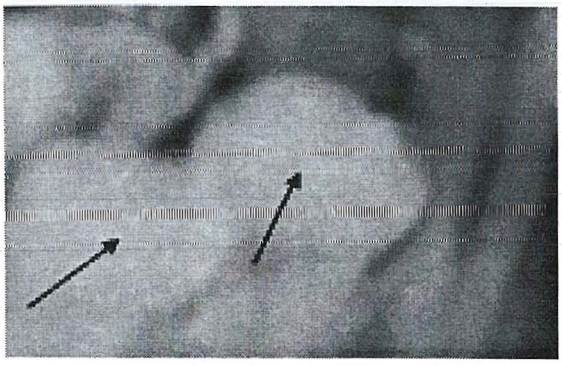


Figure -2 IOPA X-ray

Pain recurred again 15 days back which was continuous, moderate in nature, associated with swell-

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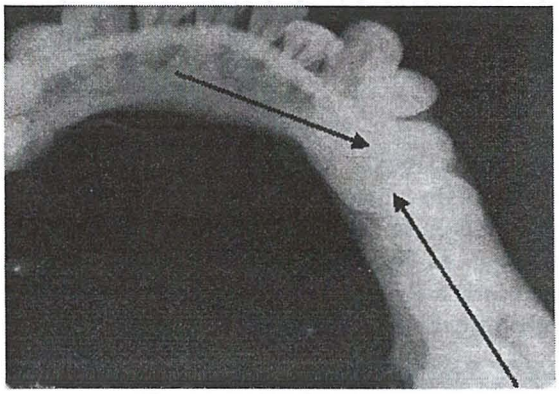


Figure -3 (Occlusal Xray)

ing. Patient was concerned for the swelling, had difficulty in mastication and maintaining oral hygiene.

On general and medical examinations all the reports were found normal. Intra oral examinations revealed swelling in the right mandibular premolar region on the lingual aspect, close to the lingual cortex. Swelling was covered with mucosa which was inflamed and ulcerated. Swelling was approximately 1X1 cm in size, tender and bony hard on palpation. No teeth were visible in the oral cavity as they were impacted.

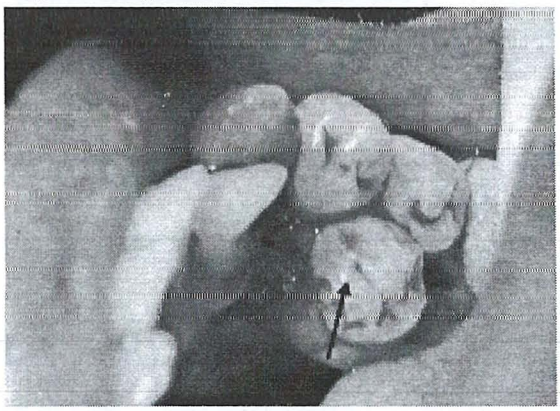


Figure -4 After surgical exposure

IOPA and Occlusal X rays were taken. IOPA X ray showed two premolar shaped supernumerary teeth very close to usual mandibular premolars .There was no root resorption of any of the adjacent teeth. No pathology was found associated with this

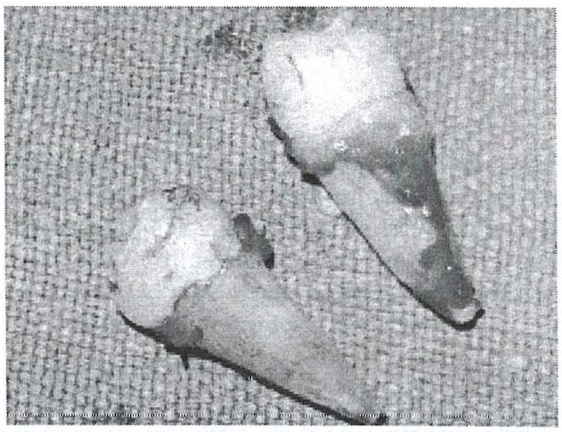


Figure -5 Extracted supernumerary premolars

teeth. Haematological tests were carried out and they were all within normal limits. Surgical extraction was planned as these teeth were impacted . Figure-2, Figure-3

Under all aseptic conditions, pterigomandibular nerve block was administered, .mucoperiosteal flap was raised, and the teeth were exposed. Two supernumerary teeth were visible in well upright position. Figure-4. No guttering was required. Both these teeth were elevated out one by one. The teeth were very much morphologically similar to each other and to the usual mandibular premolars. Figure-5. The surgical site was sutured up & closed. Figure -6

Patient tolerated the surgical procedure well. He was recalled in forty eight hours for post operative

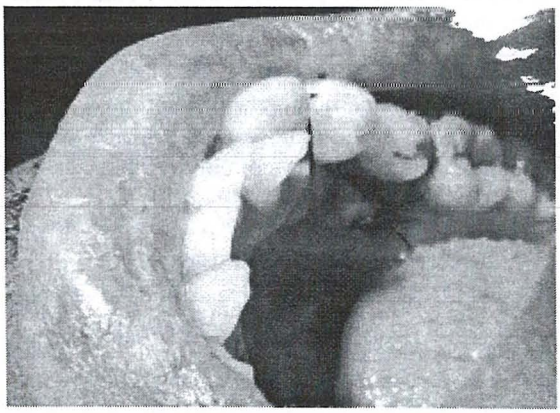


Figure -6 Post Operative Site

check up. No complications were found. After a week Sutures were removed. Patient was kept for six months follow up. No complaints were reported by the patient during this period.

DISCUSSION

Teeth found in excess of normal dental formula are defined as supernumerary teeth (7). If such teeth closely resemble the adjacent teeth they are supplemental .If they have some abnormal shape and size, they are rudimentary. Incidence of supernumerary teeth reported is 1 in every 110 children as per few studies. Prevalence of supernumerary teeth vary between 1 to 3 % in different cases.

Aitchison (1950) states that supernumerary teeth occur most frequently in the microdont black races. Additional teeth of both the deciduous and permanent dentitions are reported though comparatively rarely. Munroe(1952) ; Townend (1953) reported these may be of normal shape and resemble an adjoining tooth or they may be conical or tuberculate in shape (8).

Supernumerary teeth develop from a tooth bud arising from the dental lamina that is present near to the permanent tooth bud or possibly from splitting of a permanent tooth bud itself to form a supernumerary tooth (9). The other hyperactivity theory states, supernumerary teeth are formed as a result of independent conditional hyper activity of the dental lamina.

Various theories have been advanced to explain the presence of additional teeth. They have been attributed to excessive growth of the dental lamina as a result of which an additional tooth germ is given off from the prolongation of the lamina (10).

In the case of there being an additional deciduous and permanent teeth, it is probably due to the exuberant growth of the dental lamina giving off a separate prolongation to from the two additional teeth. (Diagram- 1,2,3) Additional teeth have some times been regarded as an atavistic tendency for the typical mammalian dentition is

3413	3143
3413	3143

This is now rarely found in the various species but is present amongst others in the pig, horse & insectivore. Thus in man & many mammals, some of the teeth have been lost.

I. Diagram 1 of tooth succession in man and mammals generally (diphyodont creatures). II. Diagram of tooth succession in polyphyodont creatures. III. Diagram (hypothetical) of deciduous and permanent mammalian dentitions.

A. Ectodermic tissue, B. True tooth-band, C. Deciduous tooth germ, D. Permanent tooth germ. E. Pre-deciduous rudiment, F. Post permanent rudiment, G, H., J., K. Successional tooth germs., L. Continuously growing end of tooth-band,

Another explanation of additional teeth is that the tooth germ of normal series has undergone dichotomy. If the division is equal the result is super-

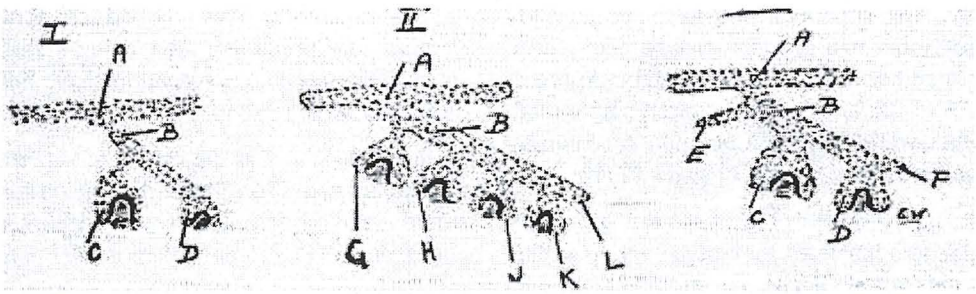


Diagram – 1 *Diagram – 2* *Diagram – 3*

numerary which resembles its neighbor. If the dichotomy is unequal the additional tooth is malformed and usually conical.

Third possibility of origin of malformed teeth is that they are derived from clumps of epithelium that remain after the breaking up of the tooth band and become activated to tooth formation.

Also numerous hereditary syndromes have been associated with the presence of supernumerary teeth as Gardners syndrome, cleidocranial dysostosis, ectodermal dysplasia etc. Other condition commonly associated with an increased prevalence of supernumerary teeth is in cleft lip and palate cases. Autosomal dominant trait has also been suggested.

Supernumerary teeth have been reported to occur in 0.2 to 0.8% of Caucasians in the primary dentition and 1.5 to 3% in permanent dentition in the same population. There is a male : female ratio of 2 :1. In some cases supernumerary teeth may also be an odontome (11).

These teeth are just an additional entity to the normal series of dentition and are seen in any of the quadrants of the jaws. Eruption of these supernumerary teeth is variable and dependent on the degree of space available. Depending on location of these supernumerary teeth, several terms have been used to describe them. A supernumerary teeth in the maxillary anterior region is termed a mesiodens while an accessory fourth molar is termed a disto molar or a distodens.

Supernumerary teeth are found unilaterally or even bilaterally. Also supernumerary teeth are generally found singly but two or more supernumerary teeth existing together are found very rarely. Approximately 76 to 86 % of cases reported single tooth hyperdontia, while those with 2 or more supernumeraries together represent only 12 to 23 % (12).

Cases like this one presented here, are rarely seen where two impacted supernumerary premolars are found in aberrant position in addition to the normal dental formula. In this presented case, patient had various symtoms for which surgical intervention was required.

COMPLICATIONS

Various complications are found associated with supernumerary teeth. Few can be attributed to their mere presence itself in the jaws. While others like dentigerous cyst formation with these supernumerary teeth and root resorption of usual dentition teeth have also been reported. Dentigerous cysts associated with supernumerary teeth are rare and occur in 5 to 6 % of all cases (13). Bodin, Julin have reported that only 2 % of supernumerary teeth exhibited any pathological changes and also indicated that these teeth if other wise asymtomatic, should be left untreated.

Most of the problems associated with these supernumerary teeth are due to their potential to interfere with normal occlusion development. They cause a) crowding, b) delayed eruption of adjacent teeth , c) impaction of permanent teeth, d) abnormal eruption sequence, e) difficulty in maintaining oral hygiene , f) difficulty in mastication. g) Caries and periodontal problems of the adjacent teeth. Last but not the least, their presence may get cosmetically objectionable.

During surgical procedures various other complications like damage to adjacent teeth, damage to vital structures and hemorrhage etc also have been reported. These complications can be avoided by taking utmost care while performing the surgery.

RECURRENCE

Several authors have reported recurrence of supernumerary premolars after being surgically extracted. No possible explanations have been given as to why these teeth may have recurred (14).

It is possible that the crypts of supernumerary pre molars could have been present earlier not detected in radiographs. It is hypothesized, recurrence could also be due to portion of a follicle reactivating, giving rise to a supernumerary tooth.

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CONCLUSION

Supernumerary teeth present themselves in various morphologies, varied locations in upper and lower jaw.

In such clinical situations, the clinician concerned should plan out the treatment accordingly, to the best of knowledge, judgment and expertise.

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