

WowCase report**Fourth Molars - Bilateral Impaction-A Case Report**

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Abstract: Supernumerary teeth might cause dental abnormalities such as delayed eruption or impaction of permanent teeth, malposition of supernumerary teeth or displacement of adjacent teeth. The fourth molar is a kind of supernumerary tooth. They have been classified as a type of paramolar or distomolar tooth. This paper reports a case of a patient of age 45yrs visiting to our clinic for surgical removal of his extra teeth. Clinical aspects, evolution, genetics and the trend to produce new set of teeth from stem cells are discussed here.

Keywords: Bilateral; Molars; Supernumerary; Jaws; Cleidocranialdyplasia; Gardner's Syndrome.

Introduction

Teeth in excess of the normal number are referred to as "supernumerary teeth." They may be single, multiple, unilateral or bilateral erupted or unerupted and in one or both jaws. The majority of supernumerary teeth are considered to develop as a result of horizontal proliferation or a hyperactivity of the permanent or deciduous dental lamina.¹ Multiple supernumerary teeth are usually associated with conditions such as cleft lip and palate or syndrome like Cleidocranialdyplasia and Gardener's Syndrome.

Etiology of development of supernumerary teeth is not clear. 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 hyperactivity of dental lamina.² Supernumerary teeth can have normal morphology and are referred to as "supplementary teeth". On the other hand, supernumerary teeth may be rudimentary in shape and smaller in size. The cases having normal morphology are more frequently seen among the distomolars found in the mandible.³

The supernumerary teeth can cause problems for 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.⁴

The fourth molar is a kind of supernumerary tooth. From a few case reports, they resided unilaterally or bilaterally in both jaws.⁷⁹ Morphology and size can be similar to a normal tooth. They have been classified as a type of paramolar or distomolar tooth.⁵ Here we present a case report of patient visiting to our clinic for surgical removal of his paramolars. We also review on the aspects of clinical, evolution, genetics, and the trend to produce new set of teeth from stem cells.

Case Report

A male patient aged 45yrs reported to our clinic with complaint of pain in the mandibular 3rd molar region. On examination he had pericoronal inflammation, pain while chewing, and partially impacted 3rd molar. He had no history of any relevant medical conditions of significance. Orthopantomogram showed impacted 3rd and 4th molars (Fig.1) (Mesioangular). Both the teeth were removed under local anesthesia first by making space distal to the third molar and then teasing the 4th molar to the anterior space & then removing it. Post-operative follow up to two months revealed satisfactory healing with no untoward complications.

Discussion

Clinical and radiographic identification of all the teeth is very important for good treatment planning. It may be difficult to formulate an ideal treatment plan for all cases with supernumerary teeth. But an effort can

definitely be made⁴.The prevalence of supernumerary molars is reported as 1% by Stafne⁶, as 2% by Luten and as 1.9% by Backmann.



Fig. 1 Orthopantomogram showing B/L Impacted Fourth Molars



Fig.2a. One year post-operative radiograph Showing healed socket area of fourth molar



Fig. 2b. One year post-operative Photograph Showing healed fourth molar regions

It is reported in the literature that fourth, fifth, sixth, and seventh molars were seen. However, fourth molars are seen much more frequently. Stafne⁶ reports most of the upper fourth molars are blunt, multicuspid, and much smaller than the third molars. Although the literature indicates that maxillary supernumerary molars are not uncommon in

adults, supernumerary molars in mandibles are rare.^{7,8} Furthermore, supernumerary molars are extremely rare in young patients, especially in the mandible.⁹

Many hypotheses concerning the cause of supernumerary teeth have been suggested, but their occurrence has not yet been fully clarified. It has been suggested that supernumerary teeth result from atavism or reversion. Aberrations during embryological formation may cause supernumerary teeth formation and it is believed that supernumerary teeth arise from local, independently conditioned hyperactivity of dental lamina or remnants of dental lamina.²

It is also possible that supernumerary teeth may result from division of a developing tooth bud (dichotomy); there are a number of factors that might split a normal tooth germ and give rise to the development of multiple individual teeth.¹⁰ Heredity is an important factor in the occurrence of supernumerary teeth. Supernumerary teeth occasionally occur within the same family. Supernumerary teeth can have normal morphology and are referred to as “supplementary teeth.” On the other hand, supernumerary teeth may be rudimentary in shape and smaller in size.³

Tochichara⁹ reported that the more frequent supernumerary molars are the maxillary fourth molars. Fourth molars beside molar area are called *paramolar* teeth; more specifically, those that erupt distally to the third molar are called *distomolar*. Stafne⁶ reported that approximately 90% of all supernumerary teeth in his study occurred in the maxilla and that half of these were found in the anterior region (incisors). Those in the molar region accounted for 38.9% of supernumerary teeth, but the mandibular supernumerary molars were rare, (only 2% of his sample).

Although several cases of mandibular supernumerary molars have been previously reported, most were located in the distal end of the dentition (fourth “molars” or “distomolars”). Most of the distomolars found in the mandible were morphologically normal.

Fourth molars are more common in blacks than in white populations.²

Supernumerary molars are found more frequently in the maxilla than in the mandible. Grimanis reported supernumerary molars are found with a percentage of 79% in the maxilla. Menardia et al. stated this percentage is 86.8%, Spauge (20) 91%, while Stafne (6) reported it as 88.9%. Casetta claims the incidence of supernumerary molars among all supernumerary teeth found in the maxilla is 75%.³

Supernumerary teeth might cause dental abnormalities such as delayed eruption or impaction of permanent teeth, malposition of supernumerary teeth or displacement of adjacent teeth. Such eruption disturbances can be prevented by early diagnosis and appropriate treatment. To determine an appropriate treatment plan for supernumerary teeth, it is important to evaluate their exact position and the moment at which the teeth might cause various disturbances. In the present case the supernumerary tooth.²

Conclusion: Fourth molars may appear normal or abnormal in shape and size. Surgical removal is offered to treat their symptomatic condition or for other required dental treatment. In the context of excess tooth can be formed in the jaws, human tooth bioengineering is closely underway for replacement of lost dentition.⁵The occurrence of fourth molar in the mandibular arch is an uncommon phenomenon, often undetected in routine dental examinations, particularly when situated distally to the second molar.

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