



Case Report

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Case Report of Impacted Bilateral Mandibular Fourth Molar

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Abstract

Supernumerary teeth is rare dental anomaly in maxilla and mandible can be classified by shape and by the position in the jaw. It might cause complications such as caries, periodontal disease and delay or impaction of permanent teeth, malposition or displacement of adjacent teeth.

This article presents 21 years old female patient medically fit come to the dental clinic complain from pain in the lower right quadrant. Upon clinical examination and orthopantomogram it showed a rare case of bilateral impacted of mandibular 3rd and 4th molars (distomolars) without any associated syndrome and discuss the management of such a case and explication to the patient.

Introduction

Supernumerary teeth is rare dental anomaly in maxilla and mandible can be classified by shape and by the position in the jaw. It might cause complication such caries, dental disease and delay or impaction of permanent teeth.

Supernumerary tooth or hyperdontia, is not as common as hypodontia: the prevalence in primary dentition 0.2% to 0.8% and in the permanent dentition, 0.5% to 5.3%, with geographic variation (1).

The fourth molar is a kind of supernumerary tooth they have been classified as a type of para molar or distomolar tooth (2). They 8-10 times more frequently in the maxilla than in the mandible (3-5) they appear more frequently in men than in woman with a ratio 2:1 respectively. There are theories suggest that with "dental lamina hyperactivity theory" to be the most accepted theory fourth molars or distomolars usually are impacted and in this way cause impaction of third molar. They can be associated with complications or stay asymptomatic. (6)

Case Presentation

21 year old female patient medically fit come to the dental clinic complaining from pain in the lower right quadrant upon clinical examination and orthopantomogram. It showed bilateral

impacted of mandibular 4th and 3rd molars multiple caries teeth, remaining root and incomplete root canal treatment. According to her mother said her sister has also Impaction fourth molars. Caries control, root canal treatment, extraction of remaining root was done.

Regarding the supernumerary teeth inferior alveolar block local anesthesia was given , modified triangular flap was done , surgical extraction of 4th and 3rd molar, suturing with 4-0 vicryl suture, antibiotic and analgesic prescribed.

Diagram: OPG



The OPG shows a rare case of bilateral impacted mandibular 4th molar also shows impacted 3rd molar, incomplete root canal treatment, remaining roots and multiple caries teeth.

Discussion

Supernumerary teeth (ST) or hyperdontia can be defined as any teeth in excess of the usual configuration of the normal number of deciduous or permanent teeth (7). Its more in permanent dentition compared to primary dentition their prevalence range between 0.1% to 5.3% in permanent dentition and 0.2 to 0.8% in primary dentition (1,8,9,10,11,12,14,15). Supernumerary teeth occur more often in males than females and the reported ratio is almost 2-3:1 respectively (4,10,13,14,15,16). Could be due to the association of ST with the autosomal recessive gene, which has greater penetration in males (17). They 8-10 times more frequently in the maxilla than in the mandible (18,19,20,21), in the maxillary anterior and molar regions (22).

Supernumerary teeth may occur singly, multiply, unilaterally or bilaterally and in one or both jaws. (23)

Supernumerary teeth are classified into two types: supplemental normal size and shape, and rudimentary teeth are of smaller size and abnormal shape, including conical, tuberculate, molariform and odontomas (7,16,24).

Supernumerary teeth in molar area are classified as paramolars or distomolars based on location. They occur frequently in maxilla, but only rarely in the mandible (25,26,27).

A distomolar (dens distomolar) is a supernumerary tooth that is located distally to a wisdom tooth (27,28,29). Paramolar is a supernumerary molar situated buccally or palatally/lingually to one of the molars (3,12,28,30,31). Stafne (3) 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 (incisives). Those in the molar region accounted for 38.9% of supernumerary teeth, but the mandibular supernumerary molars were rare.

A mesiodens, is the most frequent supernumerary tooth present in the maxillary central incisor region (32). The most frequent locations are the maxillary incisor (mesiodens) and the third molar areas (19).

The etiology of supernumerary teeth has not been yet completely clarified (1) and various theories have been suggested relating this anomaly (5, 6,33) such as atavism (8), tooth germ dichotomy (5,34,38), hyperactivity of the dental lamina (13,36,37) and heredity-genetic and environmental factors (5,9). 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 (35). The local factors such as inflammatory processes, scarring, pressure and injuries may be the causes of dental lamina hyperfunction (39-43).

Heredity is an important factor in the occurrence of supernumerary teeth. Supernumerary teeth occasionally occur within the same family (44,45). Like in our case to our knowledge, the

occurrence of multiple supernumerary teeth without any other associated disease or syndrome is rare in individuals (46).

Multiple supernumerary teeth, which are generally impacted (47,48), are characteristically seen in cleidocranial dysplasia, cleft lip and palate, Down syndrome and Familial adenomatous polyposis, including Gardner syndrome.

Ehlers-Danlos syndrome, Nance-Horan syndrome, Fabry disease, Ellis-Van Creveld syndrome, richo-Rhino-Phalangeal syndrome & Robinow syndrome. (1,48-55)

Complications associated with the presence of fourth molars (6): Delayed eruption or non-eruption of third molars (14), Displacement of supernumerary tooth itself with lingual, palatal or parietal direction. Moreover they can migrate into the sinus or stay close to sinus floor (56), Occlusal problems, Displacement of permanent teeth (crowding, rotation), Subacute pericoronitis, periodontal abscess, fistulas and odontomas (57), Resorption of third molars' root (58), Cystic formation with prevalence that ranges from 2 to 9%.

The treatment may be performed in two ways: surgical extraction or maintenance of the tooth and periodic monitoring at least once a year (59). The prognosis will be better if we diagnosed and treat the supernumerary teeth early. (60).



Figure 1



Figure 2

Conclusion

Early diagnosis and appropriate treatment of supernumerary teeth will give good prognosis either surgical or periodic follow up at least once a year. In our case we used surgical approach for removal of supernumerary 4th molar.

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