

MANDIBULAR THIRD MOLAR RETAINED AND FUSED WITH A SUPERNUMERARY FOURTH MOLAR: A CASE REPORT

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ABSTRACT:

The fusion between molars is a rare anomaly in the permanent dentition, so a literature review was performed in order to understand the present clinical case where a dental fusion between symptomatic retained third molar and a fourth molar is described. Where after clinical evaluation and radiographic study of fused molar extraction is performed

Key words: Dental fusion, Third molar, Fourth molar, Surgery.

INTRODUCTION:

Dental abnormalities may be the result of many factors, including genetic and environmental. Although genetic defects have a higher incidence, etiologic events in the pre and postnatal periods can cause abnormalities of volume, number, shape, position and union [1-7].

In protrude anomalies supernumerary number, defined as the existence of a greater number of teeth in relation to the normal dental formula [1,2,4,5].

Regarding etiology, different theories have been proposed: hyperactivity of embryonic epithelial cells, dichotomy of the tooth germ, proliferation of remnants of the dental lamina, abnormal local reaction traumatic episode and finally, a combination of genetic and environmental factors [1,2,3], having a

prevalence ranging from 0.3 % to 3.8 %^{2,3} at 1 to 2 % in the permanent dentition [4] and in the temporal dentition percentage is 0.35% at 0,6 % [5,6].

Supernumerary teeth may have normal morphology or may be rudimentary in shape and smaller [1]. Males being the most affected [1,2,3,4,6] and more frequent in the maxilla [2,5,6].

Called paramolars or fourth molars (distomolars) in the molar region. Paramolars are rudimentary teeth situated lingually or buccally to the molar row; and fourth molars or distomolars are situated distal to the third molars, they have a rudimentary shape and are usually seen as impacted teeth [2,4,5]. And represent 15 to 26 % of all supernumerary teeth [3].

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Anomalies by union the teeth have given many names: fusion, gemination, double tooth, concrescence, twinning, etc. [7].

The Fusion is defined as the union of two tooth germs during development corresponding to normal parts and continue erupting fused together [7,8,10], and gemination is attempted division of a single tooth germ. The differential diagnosis between fusion and gemination is difficult when the union involves a normal tooth and a supernumerary [7,10]. But considering that in one gemination root canal is shown, while in root canals Fusion are separated [9].

In the Fusion, depending on the stage of development of the teeth, the union may be complete or incomplete and may occur between a normal tooth and a supernumerary tooth such as a mesiodens or paramolar [9,10]; The teeth in the arch decrease of number, since two germs bind two different teeth during development, however the gemination results in an apparent increase in the number of teeth. However, when the tooth joins is a supernumerary tooth number does not decrease despite being a merger [8,9].

Fusion and gemination of molars is rare in the permanent dentition [8,9,10]. The most frequent in the maxillary anterior region fusion and is very rare to occur in the posterior mandible [9,10]. Its prevalence is about 0.5% in primary teeth, 0.1% in the permanent dentition and 0.02 % in both dentitions [9].

The etiology is unknown dental fusion. It has been suggested that the pressure of

the adjacent tooth buds and the contact may occur before calcification fusion, also heredity or racial differences may predispose to fusion [9,10].

In this case report a rare case of fusion between symptomatic third molar and a supernumerary fourth molar is described, performing a successful surgery to relieve the discomfort of the patient.

CASE DETAIL:

Presented in the office an female patient of 26 year old have suffered from manifesting repeated episodes of pain in the lower left side, calming ingesting analgesics; but now the pain no longer give. Clinical evaluation performed to this the presence of the semi-retained pza. 38 observed with a wide cavity mesio-occlusal and at its distal side thereof a supernumerary tooth (fourth molar) (Figure 1) is seen.

A panoramic radiograph (Figure. 2) is performed and the piece 38 is observed in mesially angled position, fused to the fourth molar, each with its independent roots. The fourth molar has a conical shape and smaller than the piece 38; while the carious lesion both evidenced in the piece 38 as in the piece 37. Another point to consider is the apparent commitment of the root tips with the mandibular canal, which could cause some kind of nerve damage during surgery (Figure 3).

After clinical and radiographic evaluation proceeds to the surgical removal of the third and fourth molar under local anesthesia; a triangular flap to total

thickness is made up half of the buccal surface of the piece 37. The procedure to do an osteotomy in the buccal plate allowing us to dislocate the fused molars of integrity and be able to remove without causing any damage to the mandibular canal (Figure 4 and 5). Finally black silk suture 4.0 and given post-operative instructions to the patient (Figure 6).

The patient returns 10 days for removal of the stitches and control, without showing any discomfort or loss of feeling in the operated area.

DISCUSSION:

Gay et al. (1999) have reported a low prevalence between 0.13% and 0.6% for the fourth molars ^[1] and these rarely erupt, being discovered through X-rays ^[2]. Unlike the present clinical case, where the fourth molar was open process of eruption.

The fusion of the mandibular permanent teeth is a relatively rare dental anomaly. Being more common in the deciduous dentition, particularly in the region previous ^[7,8,9], in this report a fusion of a supernumerary shown in the permanent dentition and mandibular posterior area, very rare case to find.

This can occur at the level of enamel; cement; enamel and cement; enamel, cementum and dentin or may even involve all extracts tooth involving the dental pulp. Generally usually comes fused supernumerary tooth germ to which it is attached. In this case the ratio of the binding is evident in the absence or bone septum between the two seeds ^[7]. In the

extracted anatomical part and radiographic examination shows that 2 molars are separated to along its surface, except the apical third, where an intimate union remains.

Clinical problems associated with the fusion include abnormal tooth form and the lack of space that eventually leads to periodontal disease ^[9,10]. The rarity of this entity, with its complex characteristics often difficult treatment ^[9], so that the extraction must be done carefully to avoid damaging the roots of the adjacent permanent teeth. The surgeon must also be aware of all possible complications: Damage to the inferior alveolar artery and nerve, mandibular fracture; drilling pterygomaxillary space, maxillary sinus or floor of orbit ^[2].

In the radiographic study shown an apparent compromise of the apex of the molar fused to the mandibular canal, which consider reason to avoid producing any neural damage to the patient.

In this case it was decided to remove the fused molars because they were causing discomfort to the patient and the decay that had originated in the distal aspect of the piece 37. Without being present no immediate post-operative discomfort or mediate.

CONCLUSION:

Fusion is a rare case in permanent posterior teeth, and even if it occurs between a normal and a supernumerary molar. As a literature reviews in order to make a proper diagnosis and treatment

plan is made; and avoid confusing this case with another anomaly union.

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FIGURES:



Figure 1: Clinical view of piece 38 and fourth molar.



Figure 2: Panoramic radiography.



Figure 3: Presence of piece 38 and fourth molar mesially angled independent. Root apex in apparent contact with the mandibular canal

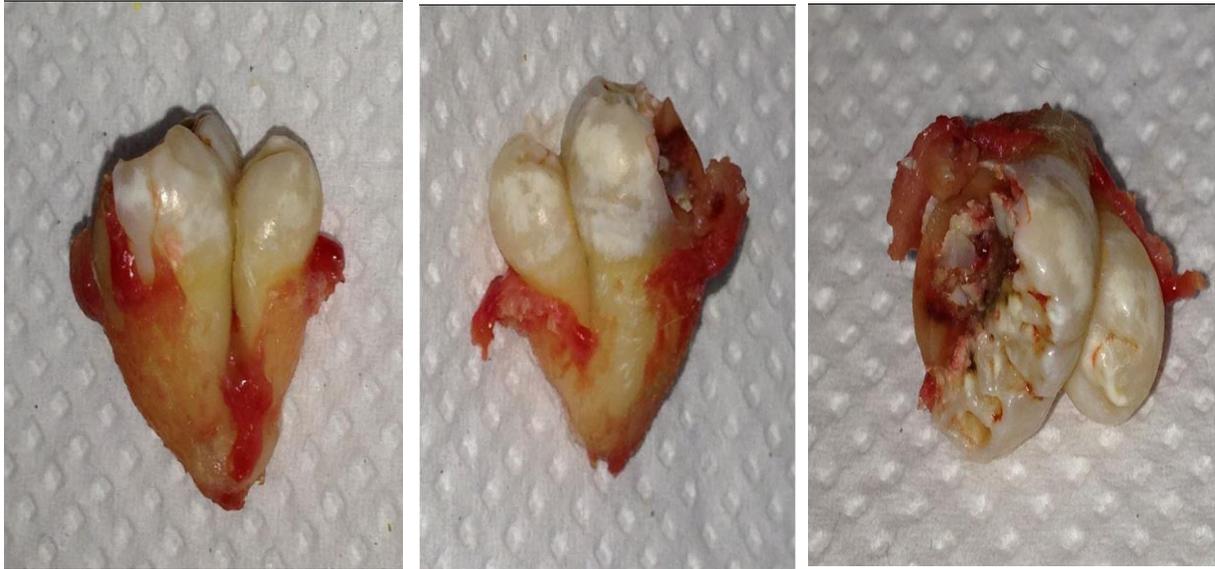


Figure 4: Image of fused molars (view: buccal, lingual and occlusal)



Figure 5: Immediate post-operative clinical view.