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case report

FOUR IMPACTED FOURTH MOLARS IN A YOUNG PATIENT: A CASE REPORT

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Summary

The occurrence of supernumerary teeth is a relatively uncommon dental anomaly and it's rare for patients to have impacted fourth molars in all quadrant.

Aim of this work is to describe the presence of bilateral fourth molars in the maxilla and the mandible in a young male patient aged 22 years came to our hospital with acute pericoronal infection around unerupted third inferior molars. Routine radiographic examination revealed impacted inferior third molars but also unerupted bilateral upper and inferior fourth molars.

The acute infection was treated by local measures and the patient was subsequently admitted for removal of third and fourth impacted upper and lower molars under general anesthesia.

Key words: fourth molar, wisdom teeth, impacted tooth, oral surgery.

Introduction

Supernumerary teeth are additional teeth occurring in the dental arch in excess of the normal dental formulas for each quadrant (1).

They do not occur very frequently: values for their prevalence in the general population vary from 0,3% to 3.8% (3, 5).

Their prevalence is most common in the permanent dentition and they are most frequently found in the maxilla (1, 3, 5, 6, 15) and in males (7).

The etiology of supernumerary teeth has not been yet completely clarified and various theories have been suggested relating this anomaly such as hereditary disorders, horizontal proliferation of the dental lamina, and abnormal embryological formation. Environmental factors may also have a role (2).

The most frequent locations are the maxillary incisor (mesiodens) and the third molar areas (3).

Supernumerary teeth in the molar region are termed paramolars or fourth molars (distomolars) (10). Paramolars are rudimentary teeth situated lingually or buccally to the molar row.

Fourth molars or distomolars are situated distal to the third molars, they have a rudimentary shape and are usually seen as impacted teeth (4).

Fourth molars rarely erupt into oral cavity and thus are usually discovered through radiographs (11).

Early diagnosis, proper evaluation, and appropriate treatment of supernumerary teeth are essential (12).

Treatment can take two forms: removal of the supernumerary tooth (13) and in selected cases, maintenance of the tooth in the arch and frequent observation (14).

The decision as to wheter supernumerary teeth require treatment is based on their position and the likelihood of their causing any pathological changes or disruption to the dental arch (8).

Supernumerary molars should probably be extracted only when their presence is responsible for the failure of eruption or malalignment of permanent teeth (3) or when one of these complications occur: cystic lesions, subacute pericoronitis, gingival inflammation, periodontal abscesses, ameloblastomas, fistulae and root's absorbation (2).

They are managed much like an impacted third molar.

Extractions should be performed carefully by experienced oral surgeons to prevent damage to the dental follicle or reduction of the enamel epithelium at the roots of adjacent permanent teeth, wich may cause ankylosis or maleruption of these teeth.The surgeon must also be alert to all probable complications: damage to the inferior alveolar artery and nerve; jaw fracture; perforation of the pterygo-maxillay space, maxillary sinus or orbit (2).
In some cases it is preferable to remove the third molars only and postpone removal of the fourth, in the hope that the fourth molars will eventually move into a more favorable position (9).
The present study reported a rare case of a patient with four bilateral distomolars.

Case report

A 22 years old male came to our hospital with acute pericoronal infection around unerupted third inferior molars.
Clinical oral examination revealed a crowded malocclusion with no signs of caries but periodontal disease distal to the second inferior molars.
Routine radiographic examination revealed impacted inferior third molars but also unerupted bilateral upper and lower fourth molars (Fig.1).
The use of linear tomography radiographs has been useful for the planning tooth extraction procedures.
All the teeth were distomolars and had a rudimentary conical shape smaller than the existing molars.
The acute infection was treated by local measures and the patient was subsequently admitted to hospital for removal of all third and fourth impacted upper and lower molars. Surgery was carried out under a general anesthesia and local mepivacaine based anesthesia (1:100,000).
The avulsions were performed in the same time before in the mandibula and then in the upper jaw.
After having anaesthetised the region by blocking the inferior alveolar nerve, a mucoperiosteal flap was prepared in mandibula: a sulcular incision was made starting from the mesiobuccal edge of the second molar to its distal surface. A relieving incision was made in the mesial region without cutting the interdental papilla. A second revieling incision was made in the mandibular ramus, allowing for elevation of the flap, so that a good visibility was permitted.
Once raising the flap, a ostectomy was performed using a round bur with a low-speed handpiece and sterile saline irrigation. The fourth molar was immediately removed leading to a better view (Fig. 2).
The third molar was so removed (Fig. 3).
After curettage of the cavity (Fig. 4), the socket was rinsed with hydrogen peroxide; finally the flap was repositioned with 3.0 silk sutures.
After having anaesthetised the region and by blocking the superior alveolar nerve a mucoperiosteal flap was prepared in the upper jaw for each quadrant; after osteoctomy under massive irrigation the avulsion of the third and fourth molar was perfomed. Odontomy wasn't necessary. After curettage of the cavity, washes were done with hydrogen peroxide and hemostasis with 3.0 silk sutures.

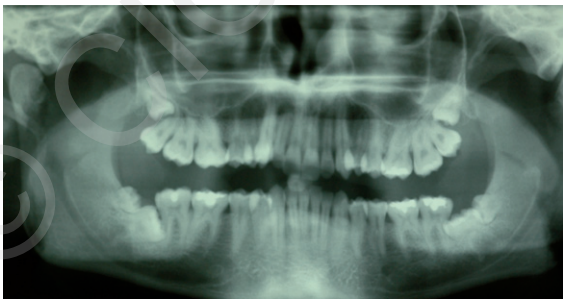

Figure 1
Routine radiographic examination revealed impacted upper and lower third molars but also unerupted bilateral upper and lower fourth molars.

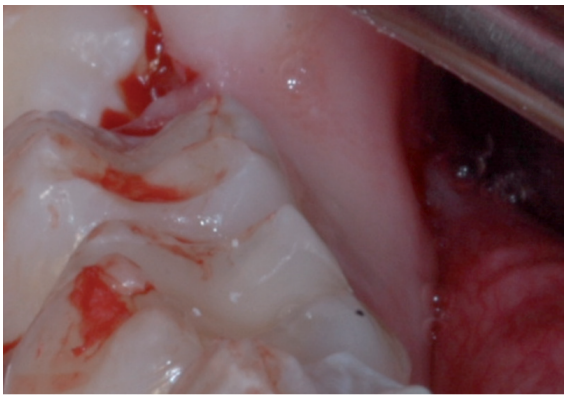

Figure 2
Intraoperative image immediately after the extraction of lower fourth molar.

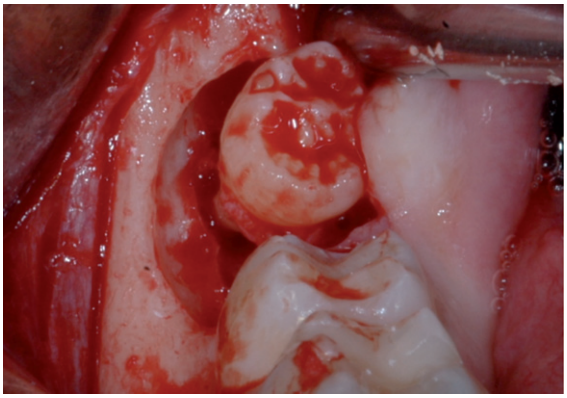

Figure 3
Extraction of the lower third molar.

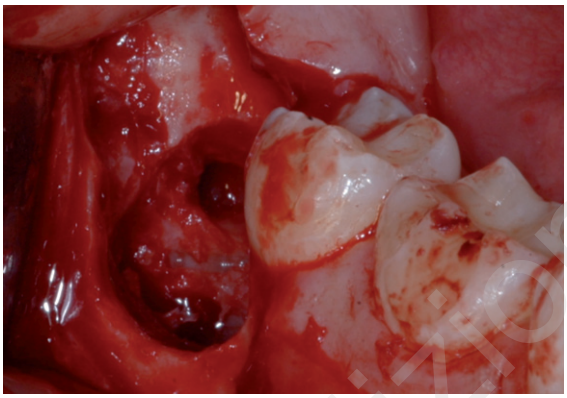

Figure 4
Curettage of the cavity.

As medication it was performed a local infiltration in the buccinator muscle of Dexosimetason (4 mg/2 ml), prescribed an antibiotic therapy of Amoxicillin for six days, an antiflogistic and analgesics therapy when needed and mouthwashes with clorhexidine 0.2% for 15 days.
After seven days sutures were removed.
The clinical checks done after surgery at 15 days, 1 month, 3 months and 6 months showed a postoperative course without complications.

Discussion

This paper describes the diagnosis and the treatment of a very rare case of presence of four fourth molars.
Early diagnosis, proper evaluation and appropriate treatment of supernumerary teeth are essential (12).
The treatment may be performed in two ways: surgical extraction or maintenance of the tooth and periodic monitoring at least once a year (4).
Early removal of supernumerary teeth is recommanded when they are causing problems: delayed eruption or non eruption of permanent teeth, displacement of the adjacent teeth with crowding, enhancing various types of malocclusion, subacute pericoronitis, gingival inflammation, periodontal abscesses, cystic lesions, absorption of the root (8, 2, 3).
In this case, it was decided to extract all third and fourth impacted upper and lower molars under a general anesthesia because the patient complained pain and swallow in retromolar region.
We preferred to approach the case in a single surgical procedure despite what is suggested by other authors, in order to avoid injury of anatomycal structures or displacement of the supernumerary element it' s common practice to extract only the third molar encouraging the migration of the fourth molars in a suitable position for avulsion (3, 4).
It's obvious that a treatment option must be decided upon, taking the advantages and disadvantages of each treatment into consideration.
In this patient the first surgical phase of the fourth molar extraction has been preferred because the fourth molars obstacle the third molar extraction in the lower jaw and because he needed an orthodonthic management. Otherwise, the extraction of upper fourth molars didn't present any risk of injury of anatomical structures or displacement. The extraction of all molars allowed to speed up surgical therapy and begin an orthodontic treatment as soon as possible.

Conclusion

This case report describes the diagnosis and treatment of a rare case of presence of four fourth molars, in a young patient presenting pain and swallow and needing orthodontic treatment.

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