

INVERTED AND IMPACTED MAXILLARY THIRD MOLAR REPORT OF TWO CASES

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INTRODUCTION

An impacted tooth is one, which is prevented from its normal path of eruption in the dental arch due to lack of space in the arch or obstruction in the eruptive pathway of the tooth (1). Other possible local causes of impaction include cyst, supernumerary or retained primary teeth in the line of eruption, odontoma, tumor, infection, trauma and anomalous conditions affecting the jaws and the teeth. In addition, systemic conditions might cause a generalized failure of teeth eruption (2). Some authors have even suggested that impacted third molars are developmental pathological medical anomaly characteristic of modern civilization (3). VARRELA compared the skulls of Finnish individuals who lived in the 15th and 16th centuries to those of the 20th century individuals and reported a lower frequency of angle class II malocclusion in the older generation (4).

Maxillary and mandibular third molars as well as the maxillary cuspids are the most frequently impacted teeth (5). The impaction of third molar has been classified according to the position in the jaws as mesioangular, distoangular, vertical or horizontal impactions.

Additionally, an impacted third molar may be deflected lingually or buccally in any of these impactions. At times an impacted third molar has its crown pointing downwards and the root apex pointing toward the alveolar crest. This inverted impaction has been called a complicated impaction (1). Few cases of inverted and impacted third molars have been reported in the literature (6, 7, 8, 9). Radiographic studies play a major role in detecting the position of these impacted teeth in relation to other anatomic structures. In addition, radiography facilitates their removal with minimum surgical trauma.

In this report, two cases of impacted and inverted maxillary third molars are presented and their conservative management described.

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First Case

A 30 year old female patient presented to the Dental School Clinics at King Saud University complaining of «missing mandibular and maxillary teeth». Clinical examination showed missing teeth in the maxillary and mandibular archs, multiple restoration, marginal gingivitis and carious teeth. Panoramic radiograph (Fig. 1) showed an impacted right maxillary third molar (18), in an inverted position with minimum radiolucency around the crown. The patient had a missing maxillary right second molar (17) for long time causing the distal drifting of the crown of the inverted tooth (18) with mesial displacement of the roots. The tooth showed close proximity to the right maxillary sinus and pterygoid plates.

Second case

A 41 year old male patient presented to the Dental School clinic at King Saud University complaining of «missing maxillary and mandibular teeth». Clinical examination showed multiple restorations, missing maxillary left and right first bicuspid and the third molars. In the mandible, left and right first molars were missing and the patient has generalized periodontal defects. The panoramic radiograph (Fig. 2) revealed inverted impaction of maxillary right third molar (18) and disto-angular impaction of maxillary left third molars (28). There was a generalized horizontal bone resorption of both archs.

CLINICAL MANAGEMENT

Both patients were informed of the presence of these impacted teeth and given the pros and cons of surgical removals versus leaving them in their protective positions. The two patients opted for non removal of the impacted and inverted teeth. However for the second case, the treatment planning included extraction of the maxillary left third molar. Prosthodontic treatment was started for both of them.

DISCUSSION

Third molars in both the mandible and maxilla may develop at a distance from their normal location because of unusual proliferation of odontogenic epithelium before development of tooth germ (7).

In the mandible, the most common location of such third molar is in the ascending ramus. In the maxilla the teeth may be displaced as far as the floor of the orbit.

Access to such displaced and inverted maxillary teeth can be a problem (6). The occasional need to remove these intact teeth is by sectioning which may lead to a greater amount of bone removal and surgical complications e.g. sinus communication, displacement of hard tissue fragment into the sinus, nose or the infratemporal fossa.

In the two cases presented here, bone removal could be minimized by first studying the exact position of the tooth. Secondly, radiolucency around the crown could facilitate surgical removal since the presence of such space would minimize the resistance that might be encountered in delivering the teeth. Removal of an

inverted tooth is more complicated than that of a simply impacted tooth because of the age of the patient and the deeper position of the inverted tooth (10). Furthermore, more healing would be deficient as indicated by different studies (11). Loss of bone would be a major disadvantage since these teeth are completely impacted in the bone.

Radiographically, since the largest circumference of the tooth (crown) is toward the sinus and the infratemporal fossa, one of the complications that could happen during surgery is the third molar displacement into these spaces. It is clear in the literature there are no exact treatment protocols for removing impacted third molars. The dentist must consider the risks and benefits of removal of impacted third molars and explain them thoroughly to the patient. There appears to be little justification for the extraction of pathology-free impacted third molars (12, 13, 14).

The risk factors associated with surgical removal of inverted impactions should be weighed carefully and communicated to the patient. Patient's compliance or whether to or not proceed must be obtained.

Figure 1 : Impacted and inverted maxillary right third molar.

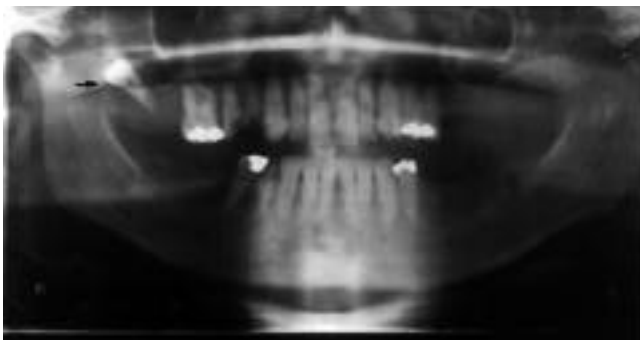
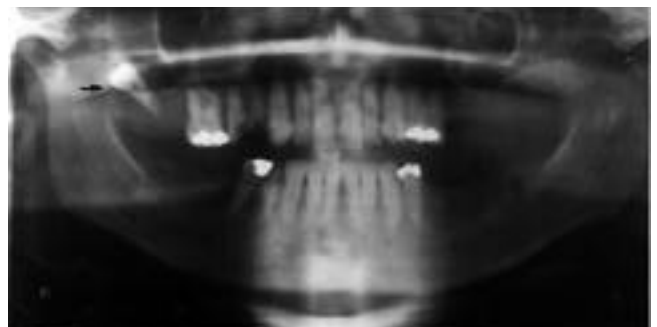


Figure 2 : Impacted and inverted maxillary right third molar and distoangular impaction of the maxillary left third molar.



ABSTRACT

Two cases of inverted and impacted third molars are described. They were conservatively managed without surgery. Complications that may arise from surgical removal of inverted and impacted teeth must be carefully considered beforehand. These should be weighed against the benefit of surgical removal.

The two cases are reported because impaction with inversion of a molar tooth is not common.

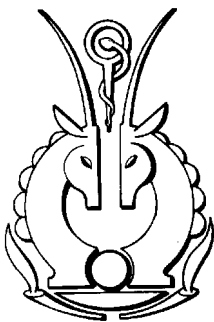
Inverted and impacted...

RESUME

Deux cas de 3èmes molaires incluses et inversées sont décrits. Elles ont été laissées en place sans intervention. Les complications qui pouvaient survenir lors de l'intervention chirurgicale de dents incluses et inversées ont soigneusement été considérées au préalable et après avoir pesé le pour et le contre, nous avons préféré surseoir à l'intervention. Ces cas de dents à la fois incluses et inversées sont tellement rares que nous avons tenu à les publier.

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