Case Report
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An Inverted Impacted Mandibular Third Molar: A Rare Case Report and Literature Review

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Abstract

An inverted mandibular 3rd molar is rarely seen. The clinical and radiographic evaluation is necessary for the management of inverted teeth. This case report describes a rare case of inverted and impacted mandibular third molar which was surgically removed.

Keywords: Inverted Molar, Impacted Molar, Impaction, Third Molar

1. Introduction

An impacted tooth is defined as the one which is prevented from its normal path of eruption due to lack of space or obstruction in the eruptive pathway of the tooth. The most common impacted teeth are mandibular third molars but their presence in inverted position is rarely seen with only a very few cases reported in the literature. The most common site for inverted mandibular 3rd molar is in the ascending ramus[1].

The possible reason for the presence of 3rd molar at abnormal site is due to unusual proliferation of odontogenic epithelium before the development of tooth germ that cause the 3rd molars to deviate from their normal location.

This case report describes a rare case of inverted and impacted mandibular third molar which was surgically removed.

2. Case Report

A 40 year old male patient reported with the complaint of pain in right mandibular posterior region since 3 months. The pain was diffuse and radiated to premolar region. There was no relevant medical or family history.

On examination, the right mandibular 3rd molar was clinically not visible. There was no pain and tenderness in the adjacent teeth. There was slight tenderness present in the ascending ramus region on the lingual aspect. On radiological examination using Panoramic (Figure 1) and Cone Beam Computed Tomography (CBCT) (Figure 2), the right mandibular 3rd molar was found to be impacted in the ramus of the mandible. According to Winter's classification the 3rd molar was in inverted position. The tooth was placed close to the lingual cortex. The mesial cusp was in close proximity with the inferior alveolar neurovascular bundle.

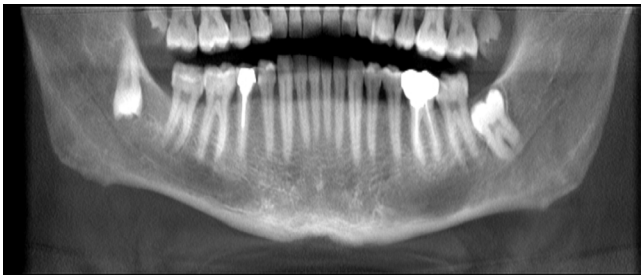


Figure1: Panoramic view.

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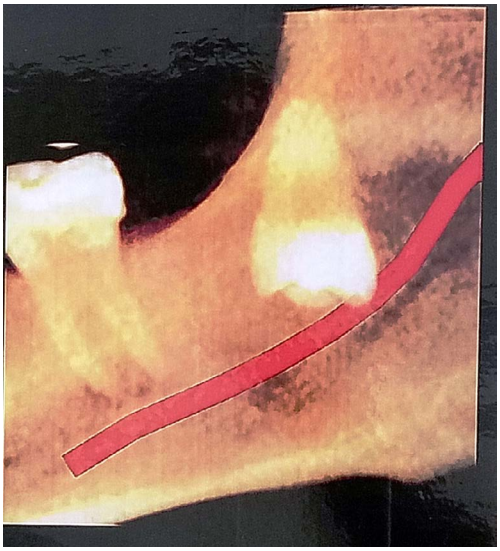


Figure 2: CT scan view.

The surgical removal of the impacted 3rd molar was planned under local anaesthesia. Incision was placed and a full thickness mucoperiosteal flap was raised on the lingual side. Thin lingual plate was removed and root was exposed. Vertical sectioning of the tooth was done and then removed from the socket (Figure 3). Thorough debridement of the region was done. After attaining complete hemostasis, closure was done with silk sutures. Postoperative antibiotics and anti-inflammatory drugs were given. Post-operative healing was uneventful.

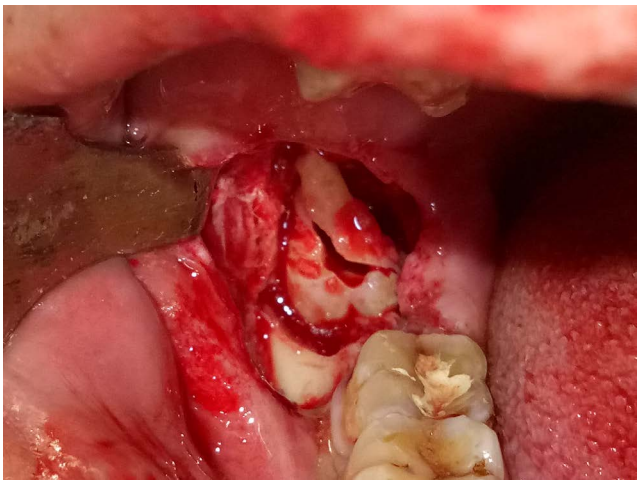


Figure 3: Clinical picture during procedure.

3. Discussion

Although the mandibular molars are the most commonly seen impacted teeth but only a few cases of inverted and impacted third molars have been reported in the literature[2–5]. However, inversions of other teeth have been reported, including the lower second premolar,[6] upper second premolar,[7] upper primary central incisors,[8] lower primary incisors,[9] and supernumerary tooth in anterior maxilla.[4]

The management of inverted teeth vary from case to case ranging from conservative management which includes regular follow up,[2,7] retransplantation into correct position, orthodontic repositioning and surgical removal. In our case the patient was having pain and tenderness in the region possibly due to the close proximity of the inverted 3rd molar to the inferior alveolar neurovascular bundle. Therefore, the surgical removal of the impacted 3rd molar was planned.

Radiographic imaging plays an important role in detecting the exact position of impacted teeth, to assess their relation to vital anatomic structures and to prevent their displacement into sinus, lingual pouch or infratemporal fossa during surgery. Hence, helps their removal with minimum surgical trauma.[10] In our case the lingual approach was planned based on the CBCT scan findings. The tooth was present in the ascending ramus close to the lingual cortex; hence the exposure was done through the lingual side. The crown was in close proximity to the neurovascular bundle, the elevation was done carefully to avoid injury.

The surgical intervention for the removal of inverted impacted 3rd molars is more complicated than other types of impactions because of the abnormal position of the crown that makes it greatly inaccessible and thus requires exhaustive bone removal. The possible drawback of removing such teeth includes - loss of excessive bone and nerve damage.[11,12] However, in our case the surgery was properly planned to avoid postoperative complications.

4. Conclusion

An inverted impacted 3rd molar is always a challenge both for the diagnosis as well as the surgical management. Proper clinical and radiological assessment should be carried out before planning and making decision to remove it to avoid postoperative sequelae.

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