Double Molar Impaction Removal: A Case Report of a Rare and Complex Surgical Procedure

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ABSTRACT

A significant amount of modern oral and maxillofacial surgery involves treating impacted third molars.Impacted both 2nd and 3rd molar is a rare case.A 26-year-old male presented with a 3-month history of pain and food lodgement in the right lower tooth region of the jaw. Radiographic examination revealed a partially impacted second molar and a deeply impacted third molar. Surgical removal of both molars was performed under local anaesthesia. The third molar was found to be closely associated with the inferior alveolar canal, requiring careful bone removal and crown sectioning for successful extraction. The patient made an uneventful recovery, and no postoperative complications were noted. This case report highlights the challenges and nuances of surgical removal of deeply impacted third molars.

INTRODUCTION

One of the most frequent operations that oral and maxillofacial surgeons do is the extraction of impacted third molars. In order to forecast the length of the procedure and the patient's appointment time, it is crucial to assess the extraction's difficulty in an outpatient clinic. Furthermore, postoperative problems are known to be linked to the extraction difficulties and the pattern of the impacted third molar.[1,2]

A frequent dental condition that can lead to pain, discomfort, and other issues is impacted third molars.[3] Third molar impaction can result from a number of causes, such as an irregular tooth position, obstruction by adjacent teeth, or a lack of room in the dental arch. Because they are so close to important structures like the inferior alveolar canal, surgically extracting deeply impacted third molars can be very difficult.

Pell and Gregory[5] and Winter[6] reported a classification system to predict the difficulty of an impacted third molar extraction. A recent difficulty index was recently proposed by Pederson[7] based on Winter's classification[6] and the Pell and Gregory classification.[5] These classifications can help the surgeons to asses the difficulty in removal of 3rd molar during procedure.

A rare example of a surgically successful removal of a profoundly impacted mandibular third molar with partially impacted second molar is presented in this case report. In order to ensure successful results, the case emphasizes the significance of meticulous preoperative planning, exact surgical technique, and postoperative management.

CASE REPORT

A 26 years old male patient attended the department of oral and maxillofacial surgery of Dr R Ahmed Dental college and hospital with complains of pain and food lodgement on the right posterior region lower jaw since last 3 months..Apart from the habit of tobacco smoking since last 5 years.Medical history was not significant.On clinical examination,intraorally the crown of a second molar partially impacted was present with no pericoronal soft changes. However there was tenderness on percussion over the said region.Patient was adviced for CBCT along with routine haemogram and serological investigation.

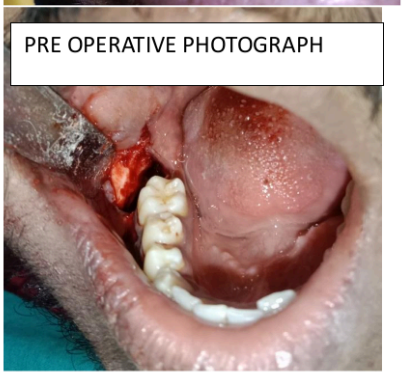
CBCT revealed the second molar overlying the third molar tooth,almost in a horizontal plane with close proximity of the underlying tooth to the inferior dental canal.

All the parameters of haematological and serological investigation were found to be within normal limit and surgical removal of both second and third molar under local anaesthesia.Mucoperiosteal flap was reflected following modified Wards incision.An adequate amount of bone removal was carried out following Moore and Gilbe collar bone technique.A point of application for straight warwick james elevator were created for removal of both.

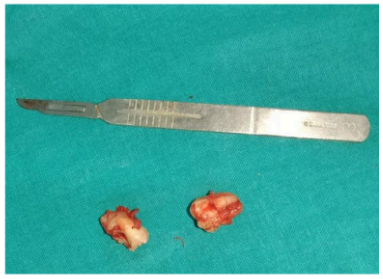
The second molar tooth was delivered following which the third molar was decapitated by a number 702 surgical fissure bur and removed.

Toileting of the wound along with haemostasis was achieved and suturing was done with 3-0 black silk.Poat operative wound healing was uneventful and suture were removed after 7 days.

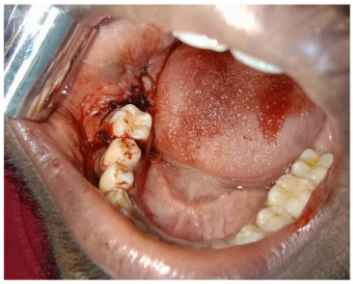
PRE OPERATIVE PHOTOGRAPH



AFTER REMOVAL OF BOTH THE MOLARS



2ND AND 3RD MOLAR



SUTURING DONE

AFTER REMOVAL OF SUTURES

CBCT

Discussion

Three primary reasons of eruption disturbances have been identified by Andreasen et al. Ectopic location, obstructions in the eruption path, and malfunctions in the eruption mechanism.Tooth eruption failure is linked to a number of local and systemic causes. Another etiologic component mentioned is heredity.. Malocclusion issues of the deciduous dentition, the arrangement of neighboring teeth, a lack of space in the dental arch, idiopathic variables, extra teeth, odontomas, or cysts are examples of local factors associated with the failure of eruption. Prior to starting treatment, it was regrettably difficult to acquire a conclusive differential diagnosis for these aberrant eruption patterns, either clinically or radiographically.[8]

Arjona-Amo et al(2016) in his case series extraction of kissing molar suggested of OPG and computed tomography scan which shows the position of molars and the position of canal.The however adopted a bayonet incision and performing ostectomy with turbine and fissure bur.[9]

Arjona-Amo et al have published 4 cases of kissing molars.they used a No. 8 tungsten carbide bur on a hand piece to execute an ostectomy. Using turbine and fissure burs, they completed all required tooth sections (removing the crown from the root in both molars) . The tissue flap was replaced in its original position after the big socket was thoroughly cleansed with saline solution and sutured with 4/0 polypropylene monofilament sutures.[9]

Scott proposed that the growing tooth gets "buried" in the expanding jaw if the tooth follicle's connection is harmed, for instance by an infection or trauma.[10]

In his discussion of first permanent molar impactions, Dixon (1959) claimed that early stoppage of the tooth's eruptive pathway by impaction against the second deciduous molar seemed to be the source of a persistent impaction. He said that the first permanent molar fails to erupt again enough to prevent impaction by the second premolar and second permanent molar after the loss of the second deciduous molar.[10]

In 1991, Robinson initially used the term "kissing molars" to describe a patient who had both touching occlusal surfaces of the permanent mandibular second and third molars. The same year, Nakamura et al. reported four cases of patients with mucopolysaccharidosis (MPS) and associated conditions, three of whom had multiple molar tooth 'rosetting'.Despite the fact that each of these patients had a proper MPS investigation, Nakamura came to the conclusion that rosetting might be a unique aspect of the illness.[11]

The follicular space in this case described here was not increased, despite the fact that the lower right second and third molars were situated within it, with their roots diverging and their crowns closely apposed. Furthermore, this was an isolated incident. Since this radiological anomaly was a single feature, the likelihood of MPS was not taken into account in this patient.[11]

Boffano et al(2009) in his article,kissing molar extractions are difficult, and in patients who are asymptomatic, careful observation without surgery is advised. It was decided to surgically remove our patient's third and fourth right mandibular teeth.In order to properly plan the extraction of the impacted third molars, preoperative evaluation of surgical complexity is essential. Assessing

the different factors that could affect the extraction was crucial. These factors included the tooth's relationship to the ramus, its proximity to the mandibular canal, its relative depth, the angulation and form of the root, the number of roots, and the absence of periodontal membrane gap. In order to minimize the amount of bone that had to be removed due to the placement of the two impacted teeth, they have decided to section both the third and fourth molars.Care was taken to avoid causing an iatrogenic mandibular fracture or harming the inferior alveolar nerve.[12]

Mucopolysaccharidoses have been linked to multiple molar rosetting. In circumstances that are unknown, this association should be taken into account in order to do additional research.Kissing molars are a very uncommon occurrence. Regretfully, it is challenging to suggest clinical process procedures due to the rarity of this clinical finding.[12]

The surgical removal of impacted third molars is a common procedure in oral and maxillofacial surgery. However, deeply impacted third molars, such as the one presented in this case report, pose a significant challenge due to their proximity to vital structures like the inferior alveolar canal.The use of CBCT imaging in this case was crucial in assessing the position of the impacted tooth and its relationship with the inferior alveolar canal. This information enabled the surgeon to plan the surgical approach carefully and minimize the risk of nerve damage.The surgical technique employed in this case, including crown sectioning and careful bone removal, facilitated the safe and effective removal of the impacted tooth. The use of a curved Warwick James elevator was particularly useful in engaging the curved root of the third molar.Postoperative recovery was uneventful, and the patient did not experience any significant complications. This highlights the importance of careful surgical technique and postoperative management in minimizing the risk of complications.The surgical removal of deeply impacted third molars requires careful preoperative planning, precise surgical technique, and postoperative management. This case report demonstrates the successful management of a challenging case and highlights the importance of individualized treatment planning to optimize patient outcomes.

Conclusion

In this case study, a profoundly impacted mandibular third molar that was tightly related to the inferior alveolar canal was successfully surgically removed. In order to achieve excellent results, the case emphasizes the significance of meticulous preoperative planning, exact surgical technique, and postoperative management. The impacted tooth was safely and successfully removed with the help of crown sectioning and cautious bone removal. This case study highlights the necessity of customized treatment planning to maximize patient outcomes and adds to the body of knowledge already available on the surgical management of impacted third molars.

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