CASE REPORT

Surgical Removal of Impacted Third Molar Presented With Facial Cellulitis

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ABSTRACT

Background: Third molar surgery is one of the most common procedures performed in oral and maxillofacial surgery offices. Nevertheless, this procedure requires accurate planning and surgical skills. With surgical procedures in general, complications can always arise.

Case Presentation: A case of surgical removal of impacted third molar in a 28-year-old Malay male is discussed. Initial clinical and radiographic examination revealed that the tooth 48 was mesioangularly impacted with visible crown. The patient then underwent minor oral surgery with the help of local anesthesia whereby raising of a flap was needed. The tooth had to be removed urgently as it was already causing pain and facial cellulitis.

Conclusion: A successful holistic approach to managing the patient is the most vital aspect in treating the patient besides relieving the pain

KEY WORDS

minor oral surgery, facial cellulitis, impacted third molar

INTRODUCTION

The impaction of third molars is a very well-known phenomenon. To classify the level and depth of impaction of the third molars, a few classifications have been described such as the Pell and Gregory, Winter's classification (1926) and Killey and Kay's. However, the Pell and Gregory Classification has become the most used classification among others. In fact there are a few theories like Orthodontic theory, Phylogenic theory, and Mendelian theory that discuss on how the impaction happens. In the oral cavity, the third molar is often regarded as the extra tooth and the eruption of the third molar may lead to disturbances to the general oral health of the patient. Besides that, the reported reasons for third molar removal include the risk of impaction associated with caries, pericoronitis, and periodontal defects in the distal surface of second molars, odontogenic cysts, facial cellulitis and dental crowding. A prospective study showed that general dentists recommend extraction of third molars in 59% of patients, mainly to prevent future problems or because a third molar had an unfavorable orientation or was unlikely to erupt\(^1\).

CASE HISTORY

The patient was 28 year old Malay male came to Klinik Pergigian Padang (KPP), School of Dental Sciences, Universiti Sains Malaysia for the minor oral surgery for the removal of tooth 48 and as well as 38. Patient had facial swelling and cellulitis for about 9 days prior to coming to the dental clinic. Patient also had facial swelling at the lower region on right side of his face and experiences pain upon mouth opening. Upon clinical examination, tooth 48 was visible at the occlusal plane level but mesioangulated. It had caries on the occlusal surface. The tooth was non-tender to percussion but was tender on palpation. Upon inspection, no sinus tract or pus discharge noted at the gingival mucosa surrounding the tooth and as well as adjacent to it, but the buccal mucosa was swollen. Further investigation was done and an orthopantomogram radiograph was taken to assess the impaction level of both mandibular third molars. Radiographically, the tooth 48 is mesioangulated and based on Pell's And Gregory classification, it can be classified into Class I, Level A. The distal and mesial roots of the tooth are both curved which may complicate the extraction process later on. Besides that, periapical radiolucency can also be noted at that tooth. As for tooth 38, it has a large radiolucency at the occlusal surface reaching close to the pulp of the tooth (figure 1). After discussion, it was decided to remove the impacted 48 surgically under local anesthesia instead of tooth 38 as it is symptomatic and presented with facial cellulitis.

DISCUSSION

The most common angulation of impaction in the mandible was in vertical position (41.4%) followed by mesioangular impaction (33.3%) and the most common angulation of impaction in the maxilla was the vertical (67.4%) which was followed by 15.2% in distoangular impaction\(^2\). Development of mandibular third molars starts in the ramus of the
mandible at about the age of seven years\(^3\). The third molars are the last teeth to erupt in all races despite racial variations in the eruption sequence. Racial variation in facial growth, jaw and teeth size, nature of diet, extent of generalized tooth attrition, degree of use of masticatory apparatus and genetic inheritance are the crucial factors which determines the eruption pattern, impaction status and the incidence of agenesia of third molars\(^4\). In our case the patient is presented with facial cellulitis that is caused by the carious impacted 48, which is classified as of odontogenic origin. Facial cellulitis and deep infections of neck are dangerous because of their normal tendency to cause edema, distortion and obstruction of airway\(^5\). In the early stages of disease, patient may be managed with observation and antibiotics which the approach used by our dental team. As for advanced infection it would requires the surgical drainage and proper antibiotic therapy\(^6-10\). Infections in the mandible may perforate the outer cortical plate below the buccinators attachment and cause swelling of lower half of face\(^11\). It is important to recognize cellulitis in the earlier stages of disease, when it is easier to manage. In managing cellulitis it is important to locate and treat source of infection. In our case, the source of infection was the carious tooth 48. Thus, if was removed surgically so as to allow the facial cellulitis to resolve without any further worsening.

**CONCLUSION**

From the case it can be concluded that facial cellulitis due to odontogenic origin can be resolved by removing the source of infection. Besides that, as the third molar was impacted, a wholesome knowledge of both the disease and proper management of impacted third molars are needed to avoid any life threatening complications. A successful holistic approach to managing the patient is the most vital aspect in treating the patient besides relieving the pain.

**REFERENCES**