A Rare Anatomical Variation of Upper Multiple Impacted Third Molar

Bhavesh Dhoke, Prashansa Gaikwad[1], Sidhanti Nyahatkar[2]

Department of Oral and Maxillofacial Surgery, ACPM Dental College and Hospital, Dhule, [2]VYWS Dental College and Hospital, Amravati, Maharashtra, [1]Department of Oral and Maxillofacial Surgery, Mahatma Gandhi Dental College, Jaipur, Rajasthan, India

Abstract

The third molar is the most commonly impacted tooth which is the cause of pain and discomfort in the second and third decade of life. Therefore, it is the commonly carried out minor surgical procedure which helps remove the cause of discomfort and pain. However, few cases may show no related signs and symptoms and such multiple impacted tooth is found accidently on radiographic findings. This can be removed to avoid discomfort or pain or any pathology in the subsequent period of time. In this case report, we discuss about the multiple impacted upper third molar in a patient, which showed a unique anatomical variation.

Keywords: Anatomical variation, impacted molar, third molar

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Introduction

Tooth impaction is a condition in which the tooth fails to erupt in its normal functional position.[1] It can be due to various causes such as systemic factors or local factors. Systemic factors include Gardner's syndrome, cleidocranial dysplasia, Down syndrome, and Noonan's syndrome.[1] These syndromes usually include multiple impacted teeth. Endocrinal disorders such as hypothyroidism and hypopituitarism can also be the reason for impaction.[2] The local cause is usually due to insufficient space to allow the complete eruption of the teeth. Tooth impaction is most commonly seen with permanent third molars as they are the last teeth to erupt in the oral cavity. Furthermore, it is believed that over decades and centuries, the size of the jaw is reducing.[3] Other local factors such as improper position of tooth germ, prolonged retention of deciduous teeth, arch length deficiency, and abnormal path of eruption due to localized pathologies such as tumors or cyst can also lead to impacted teeth.[4] The purpose of the case report is to discuss the case of the patient with impacted upper third molar with a rare anatomical variation with no history of any systemic illness or significant local factor.

Case Report

A 35-year-old female patient reported to our dental outpatient department with a history of pain in the upper right back region of the jaw for 1 month. The patient had undergone extraction with grossly decayed unrestorable 16 three years back. One year back, the missing tooth was restored with the fixed prosthetic bridge from 15 to 17 at a private clinic as the patient had difficulty in chewing. The patient complained of pain which was diffused, dull aching in nature, intermittent in duration, and pain was referred to the right temporal region. The pain got relieved during resting position and aggravated on functions such as chewing hard food and opening and closure of the mouth. The patient ignored it as the pain was mild in intensity. In the past week, the intensity increased to moderate and the patient reported at our clinic. Orthopantogram (OPG) was done which showed multiple impacted upper right third molar with very rare anatomical varition as shown in Figure 1. Three crowns with their

Address for correspondence: Dr. Bhavesh Dhoke, Department of Oral and Maxillofacial Surgery, ACPM Dental College and Hospital, Dhule, Maharashtra, India.
E-mail: drbhaveshd@gmail.com

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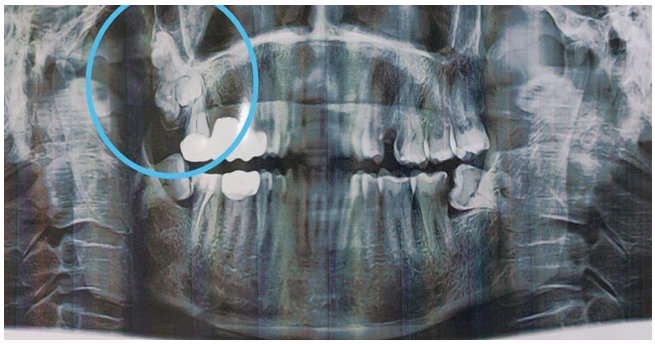

Figure 1: Three crowns with their respective roots fused at the trunk were noted. One of which was directed mesially, one distally, and the third crown was facing superiorly and distally with its root trunk inferiorly fusing with the other crowns. OPG showing multiple impacted right upper third molar. OPG: Orthopantogram

respective roots fused at the trunk were noted. One of which was directed mesially, one distally, and the third crown was facing superiorly and distally with its root trunk inferiorly fusing with the other crowns. Radiographically, the entire tooth was submerged within the bone and was advised for removal under local anesthesia.

The surgical extraction was planned with the upper right third molar. Written consent was taken to undergo the surgical procedure. After giving the right posterior superior alveolar and greater palatine nerve block, ward incision was given posterior to 17 with the help of blade number 15. The buccal mucoperiosteal flap was elevated and periosteum was stripped off with molt's periosteal elevator number 9 to expose the underlying bone. The tooth was completely impacted within the bone. After achieving adequate access to the overlying bone, with the help of round bur number 8, three stamps were made parallel to the long axis of the adjacent tooth. The stamp holes were made on the buccal aspect of the upper right third molar followed by joining the holes with the help of number 703 straight bur to expose the buccal aspect of the crown. This was carried out by simultaneous copious irrigation with saline. The access to two crowns was achieved which was further deepened with round bur in between the two crowns. Warwick James elevator was placed at this point, and with the distal twist, the distal crown was removed followed by the removal of the mesial crown. This gave improved access to the superiorly placed crown which required 2–3 mm of guttering for the application of forceps. Due to the limited space of instrumentation, the bayonet forceps was placed within the socket as apically as possible to remove the superior portion of the crown. The extraction of the upper right third molar was done in three sections as explained above.

The extraction socket was comparatively very large to the normal extraction socket due to the type of anatomical variation of the tooth. The sharp edges of the bone were trimmed of with a bone file. Copious irrigation was done with betadine and saline. Bleeding was arrested by the application of firm pressure with gauze and Abgel was placed within the socket which was thought to maintain the hemostasis and additionally provide framework for osteogenesis. The immediate complications were evaluated. The closure was done by approximating the buccal and the palatal flap and suturing with 3–0 silk. Three interrupted sutures were given. Injection dexamethasone 4 mg intravenous stat dose was given. The postoperative instructions were given to the patient, which strictly involved avoiding the application of heat at the site of surgery. The patient was instructed to consume a soft diet from the contralateral side. Application of ice packs can be done if swelling and pain are persistent. The 5 days antibiotic course was prescribed and the patient was recalled after 3 days, 7 days, 15 days, and 1 month after extraction. In the initial follow-up period, the patient had mild swelling and discomfort which reduced over in 7 days' period. Wound healing was satisfactory and suture removal was done after 7 days. On postoperative day 15, the patient had no discomfort and swelling clinically. After a few months of surgical procedure, radiograph of the upper right third molar region was taken, which showed the initiation of bone formation, as it showed the area of radiopacities.

Discussion

Third molars are the tooth with the greatest morphological variation. Genetics is said to play a huge role in it, but other environmental, systemic factors also play a role in this.[5] Although the discussed case does not give any history of impacted upper molars in the family. Diagnosis of the underlying cause of pain involves the sound knowledge of the eruption age of the teeth, the arch pattern of the patient which may increase the possibility of impaction due to reduced arch length discrepancy, occlusion of the patient, and general condition of the patient.[1] Furthermore, clinical diagnosis can be confirmed radiographically. This is important to understand the anatomy of the tooth, its difficulty index and the amount of bone removal required to remove the tooth with minimal trauma to surrounding hard and soft tissues.[6]

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given her consent for her images and other clinical information to be reported in the journal. The patient understands that her name and initials will not be published and due efforts will be made to conceal her identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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