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Unilateral case of class 3 kissing molars: A case report

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Abstract

The term "kissing molars" was first used by Van Hoof in 1973 for teeth which have occlusal surfaces in close approximation to each other contained in a single follicular space and roots pointing in opposite directions. This is a case of a 18 year old female patient who presented with complaints of left mandibular molar pain since last 1 year. Patient was treated by surgical extraction of kissing molars and post-operative period was uneventful.

Keywords: approximation, surgical extraction, mandibular

Introduction

Impacted teeth are the ones that fail to erupt in the dental arch in their respective anatomical position beyond the chronological age. Physiological barrier or ectopic position might be the reason for the same ^[1]. Supernumerary teeth are those which are additionally found apart from normal dentition and their prevalence is 0.3 to 0.8% in the primary dentition and 0.5 to 3.8% in the permanent dentition. Distomolar is a type of supernumerary tooth which is present distal to third molar. More commonly it is smaller and conical in shape ^[2]. Kissing molars is a rare condition of impacted teeth in which their occlusal surfaces face each other while roots face opposite direction as if teeth are kissing each other ^[3].

Case of Kissing Molars was first documented by Van Hoof in 1973 in a 31-year-old man. Most cases of kissing molars are found in mandible that too on the right side and are mostly unilateral. Only 32 cases of Kissing molars have been reported since 1973 [4]. Currently only 15 cases of bilateral Kissing molars are reported and the most common teeth involved are second and third molars [3]. In 2012, a Radiologic classification was proposed by Gulses et at, based on teeth that are involved, class 1 involves lower first and lower second molar, class 2 involves lower second and lower third molar, class 3 involves lower third and lower fourth molar [3]

Nedjat-Shokouhi *et al.* and Menditti *et al.* suggested the term "true" and the "pseudo"-kissing molar kissing molars. True kissing molars are isolated cases and can further be divided into class 1,2,3, based on whether or not cystic dilation of dental follicle is present. Pseudo kissing molars are associated with syndromes and teeth may not have close approximation of occlusal surfaces. Wen *et al.* in 2022 classified kissing molars based on direction of the impacted teeth. Vertically positioned teeth are Class 1, slightly tilted are class 2 and horizontal impactions are class 3 ^[5].

In the present case report, we discuss the incidental finding of true kissing molar involving third molar and a distomolar that can be radiologically classified as class 3 and based on angulation of teeth it is class 2.

Case report

An 18-year-old female patient reported to the department of Oral and maxillofacial surgery with a chief complaint of pain in lower left back teeth region since last 1 year. Pain was initially dull and intermittent in nature that aggravated on chewing hard food items and relieved on analgesic medications. From last 2 months pain had become constant and severe. On extraoral examination, face was bilaterally symmetrical and intraorally there was localized pain in the region of 38. Cervical Lymph nodes were non palpable and non-tender.

No relevant medical history, drug history or personal history was reported by the patient and she was not under any medication. An Orthopantomogram scan was done in which the distoangular impacted mandibular left third molar could be appreciated with its occlusal surface confronting to the distomolar and roots of distomolar facing in opposite direction (fig 1). A diagnosis of kissing molars class 3 based on radiologic classification and class 2 based on angulation was made. Blood investigations were done and no underlying medical problem or risk condition was found. Hence patient was planned for removal of kissing molars under local anesthesia.



Fig 1: Orthopantomogram revealing kissing molars on left side mandible

Treatment

Proper patient consent was taken followed by painting and draping in an aseptic manner. Regional anesthesia was given and Inferior alveolar, lingual and long buccal nerves were blocked. Wards incision was given and a full thickness mucoperiosteal flap was elevated revealing apposition of the occlusal surfaces of kissing Molars (fig 2).

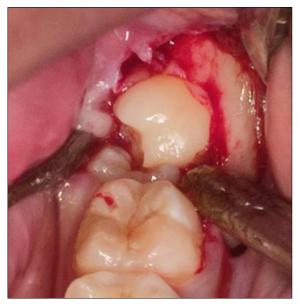


Fig 2: Kissing molars exposed after ward's incision

The Crown of disto molar was sectioned and it was extracted first, following which third molar was removed (fig 3). Wound toileting was done and thorough curettage removed follicular tissue. 3,0 BBS suture was used for the closure of the surgical wound. A post operative RVG was done to ensure complete removal of kissing molars. No signs of infection

were observed after the surgical procedure, nor were any signs of inferior alveolar nerve anesthesia or dysesthesia identified. After one week patient was recalled for review and suture removal.



Fig 3: Specimen of kissing molar repositioned after extraction

Discussion

Impacted third molars are widely reported but occurrence of kissing molars or rosetting molars is a unique condition and not extensively discussed in literature. Kissing molars are mostly found in males within age group of 13-58 years and their incidence being 0.06% ^[6].

The first documentation is by Van Hoof in a mentally retarted patient wherein kissing molars were found bilaterally. Next in 1991, Robinson and colleagues documented another case in a young female with bilateral inclusion ^[7]. The etiology of kissing molars is unknown, but it is postulated that this condition might be associated with pathological condition or development disorders of jaw like ankyloses ^[8]. When Follicular space associated with impacted second or third molar expands, the resorption of surrounding bone occurs, leading to bone loss along the medial aspect of third or fourth molar. This results in the occlusal surfaces of two teeth coming in close contact with each other. Development conditions such as mucopolysaccharidoses and cleidocranial dysplasia are also associated with occurrence of kissing molar. But our patient was systemically healthy.

Diagnosis is based on clinical findings and radiological tests mostly orthopantomogram. OPG not only helps in diagnosis but also anticipating possible complications such as pathological fracture or injury to inferior alveolar nerve or association of any pathology such as dentigerous cyst. For complicated cases like proximity to neurovascular bundle advanced forms of technology like CT should be advised to carefully plan the surgery.

Treatment plan is based on condition of affected teeth and location. In type A cases, lower tooth can be considered for orthodontic alignment after removal of upper impacted tooth. In case they cannot be retained, immediate surgical removal should be done. Also, depth of impaction plays a vital role. The more deeply kissing molars are embedded, more bone needs to be removed also presence of cyst further weakens the bone and hence chances of consequent fracture of mandible increases. Therefore, if radiograph shows dilated shadow around the impacted kissing molars, it should be distinguished from dilated follicle or pathology like cyst or ameloblastoma and multidisciplinary approach should be rendered [9].

Some clinicians prescribe post operative steroids after

surgical removal of kissing molars to reduce post operative swelling, and trismus and hence increased patient comfort. As with any other surgery certain complications can be encountered after surgical removal of kissing molars. Fracture of mandible, damage to lingual nerve (0.2- 2%), inferior alveolar nerve (0.5-5%), dry socket, osteomyelitis or Temporomandibular joint disorders [6] are some of them.

Conclusion

Although kissing molars are rare entity but awareness towards diagnosis and treatment plan is pertinent. Early treatment will not only avoid complications like pathological changes but also prevent subsequent bone fracture due to weakening of mandible.

Statement and Declarations

Consent to publish: Additional informed consent was obtained from the participant for whom identifying information is included in this article.

Consent to participate: Informed consent was obtained from the participant included in the study.

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Competing interest: The authors have no relevant financial or non-financial interests to disclose.

Ethics approval: Approval was obtained from the ethics committee of Swami Vivekanand Subharti University. The procedure used in the study adhere to the tenets of the Declaration of Helsinki.

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