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KISSING MOLARS: REPORTS OF THREE CASES INVOLVING SUPERNUMERARY TOOTH, DENTIGEROUS CYST AND FIBRO-OSSEOUS LESION

Kissing Molarlar: Süpernümere Diş, Dentigeröz Kist ve Fibro-Osseöz Lezyon ile İlişkili Üç Vaka

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ABSTRACT

Objectives: The term “kissing molars” refers to a rare entity in which impacted mandibular second and third molars have contacting occlusal surfaces in a single follicular space and roots are pointed in opposite directions. The aim of this article is to describe three cases of mandibular kissing molars assessed through cone-beam computerized tomography and their management.

Materials and Methods: In one case the condition was associated with a supernumerary teeth. In the other case the kissing molars were associated with a dentigerous cyst, which disarticulated the two impacted teeth. The third case of kissing molars involved a fibro-osseous lesion in the anterior mandibular region.

Result: We are in the opinion that kissing molar cases should be further examined for other lesions of the jaws.

Keywords: Kissing Molars, Supernumerary Teeth, Dentigerous Cyst, Fibrooseous Lesion

ÖZ

Amaç: "Kissing molarlar" terimi, gömülü mandibuler ikinci ve üçüncü molar dişlerin, tek bir foliküler alan içerisinde oklüzal yüzeylerinin temas halinde olduğu ve köklerin ters yönlere doğru işaret ettiği nadir bir durumu tanımlamaktadır. Bu makalenin amacı konik ışınlı bilgisayarlı tomografi ile değerlendirilmiş üç ayrı kissing molar vakasını tanımlamak ve tedavilerini paylaşmaktır.

Materyal ve Metotlar: Vakaların biri süpernümere diş ile ilişkiliyken ikinci vaka iki dişin oklüzal yüzeylerinde ayrılmaya sebep olan bir dentigeröz kist ile ilişkiliydi. Üçüncü vakada ise mandibuler anterior bölgede bulunan bir fibro-osseoz lezyon mevcuttu. Sonuç: Kissing molar vakalarının çenelerde bulunabilecek diğer lezyonlar için de incelenmesi gerektiği fikrindeyiz.

Anahtar Kelimeler: Kissing molar, Süpernümere diş, Dentigeröz kist, Fibroosseöz lezyon

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INTRODUCTION

The extremely rare entity "kissing molars" (KM) was initially described by Van Hoof in 1973 as the existence of two mandibular impacted molars with contacting occlusal surfaces, surrounded by a single dental follicle and up to date very few cases have been reported in the literature.[1] Although knowledge about the etiopathogenesis, clinical features, diagnostic and therapeutic options are reported to be limited[1], KM has been linked to mucopolysaccharidoses (MPS), which results from a quantitative, or qualitative deficiency of lysosomal enzymes required to break down glycosaminoglycans.[2] KM has also been reported to be associated with hyperplastic dental follicles and dentigerous cysts in the jaws[2,3]. In this study we describe three cases of KM and their link to pathological lesions of the jaws and discuss the management. Due to the retrospective nature of this study, it was granted an exemption in writing by Ankara University Faculty of Dentistry, Ethics Committee.

MATERIALS AND METHODS

Case-1: A 38-year-old female patient admitted to our clinic for routine examination. During clinical examination an orthopantomograph was obtained and KM consisting of a third and forth molar in the left mandible were revealed. The occlusal surfaces of the two KM were in relation (Figure-1). Patient was informed about the condition and surgery was chosen as the treatment option. A cone-beam computerized tomography (CBCT) was obtained for further evaluation (Figure-1). Surgery was performed under general anesthesia, via transalveolar approach. Routine impacted third molar incision was used and bone was removed using a round bur. Crowns and roots of the impacted teeth were separated. Operation was completed uneventfully. Patient had no complaints of postoperative inferior alveolar nerve complications.

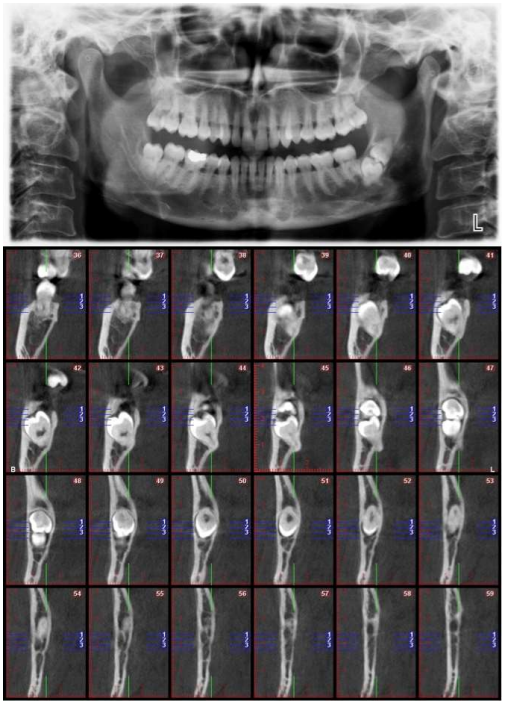

Figure 1. Orthopantomograph and CBCT of the patient revealing kissing molars.

Case-2: A 27-year-old male patient admitted to our clinic with complaint of pain and swelling in the left mandibular molar region. An orthopantomograph was obtained and KM associated with a radiolucent and well-defined lesion was observed (Figure-2). The occlusal surfaces of the KM were reasonably separated. Patient was informed and fine needle biopsy was obtained. Histopathological evaluation of the material revealed a dentigerous cyst. Patient's approval was received for surgery and a CBCT was obtained before surgery for further evaluation (Figure-2). Surgery was performed under general anesthesia, via transalveolar approach. Routine impacted

third molar incision was used and bone was removed using a round bur. Crowns and roots of the impacted teeth were separated. Cyst was enucleated using dental currettes. Operation was completed uneventfully. Patient had no complaints of postoperative inferior alveolar nerve complications. The excisional biopsy material was examined histopathologically and the initial diagnosis of dentigerous cyst was confirmed.

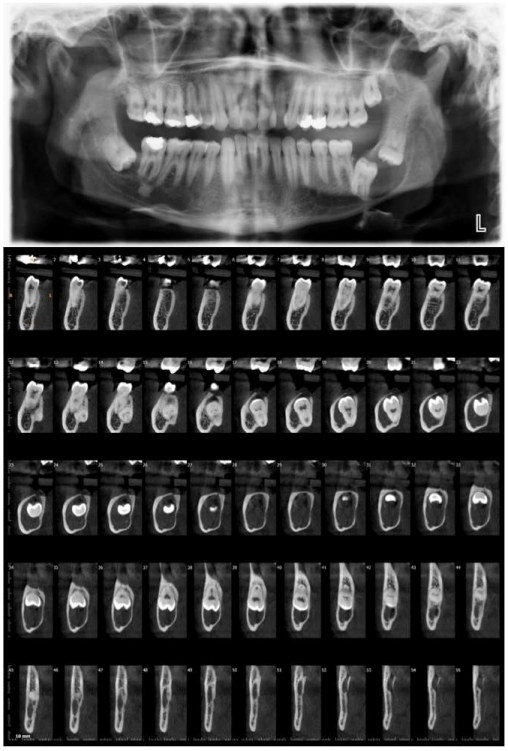

Figure 2. Orthopantomograph and CBCT of the patient revealing kissing molars and dentigerous cyst.

Case-3: A 22-year-old female patient admitted to our clinic for routine examination. Although patient had no history of extraction, right mandibular second and third molars were absent. An orthopantomograph was obtained and the KM in the right mandible were revealed (Figure-3). A lesion in the right canine-incisor area was also observed. A CBCT examination was made and the KM (Figure-3) and the lesion in the anterior mandible (Figure-4) were further examined before surgery.

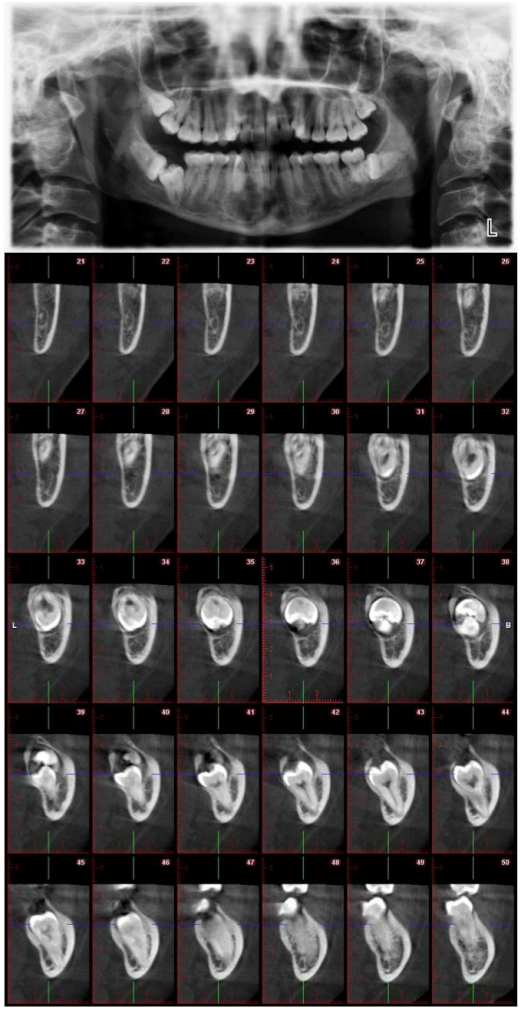

Figure 3. Orthopantomograph and CBCT of the patient revealing kissing molars and fibro-osseous lesion.

Patient was informed about the conditions and surgery was chosen as the treatment option for the KM and biopsy was planned for the lesion in the anterior mandible. Surgery was performed under general anesthesia, via transalveolar approach. Routine impacted third molar incision was used for the KM and bone was removed using a round bur. Crowns and roots of the

impacted teeth were separated. Operation was completed uneventfully. In order to obtain biopsy material a semilunar incision was used. A round window, which dental currettes can enter, was prepared with a very small round bur and the window was taken as biopsy material. Bone chips were obtained from inside the window with dental currettes. Materials were sent to biopsy. Patient had no complaints of postoperative inferior alveolar nerve complications. The incisional biopsy material was examined histopathologically and diagnosed as a fibro-osseous lesion.

Figure 4. CBCT examination of the fibro-osseous lesion.

DISCUSSION

In 1973, Van Hoof gave a description of a rare condition "kissing molars", which are permanent molars with their occlusal surfaces contacting each other in a single follicular space, with roots pointing in opposite directions.[1] Although factors influencing tooth impaction is not yet fully understood, it has been hypothesized that, resorption of bone can result in bone loss along mesial root of the impacted third molar and cause movement and tipping, also presence of a fourth molar can be a predisposing factor.[4] KM is also observed to occur in patients diagnosed with MPS and related disorders.[5]

Maintenance of KM can be associated to complications such as decreased mandibular bone tissue and increased risk of mandibular fracture, root resorption of adjacent teeth, pericoronitis, local pain and cystic changes.[6] Gonzalez-Perez *et al.*[1] conducted a MEDLINE search based on the topic KM, and came across twenty-two cases of KM which symptoms and associated signs were evaluated. In six patients dentigerous cysts were present and confirmed histopathologically. One patient had symptoms of pericoronitis. The most frequent signs and symptoms were pain and swelling on the ipsilateral side of the mandible or TMJ. Five asymptomatic KM cases were reported. None of the reports involved a fibro-osseous lesion or any other lesions in the related jaw.

In literature removal of lower impacted teeth is associated with significant postoperative morbidity including alveolitis, jaw fracture and sensorineural impairment of the inferior alveolar nerve, displacement of the tooth or tooth root into the adjacent anatomical spaces and localized osteomyelitis.[5, 7] Gülses *et al.*[8] reported 9 cases treated surgically in which 3 of the patients had mild paraesthesia of the lower lip after surgery. The condition resolved 3-6 months after surgery. None of the stated

complications were observed in our cases.

RESULTS

Presence of KM can be associated with pathologies such as hyperplastic dental follicles and dentigerous cysts. We are in the opinion that jaws involving KM can be further examined for lesions of the jaws such as in our case fibro-osseous lesions.

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