

*MAKSİLLER SİNÜSE YER DEĞİŞTİRMİŞ ÜÇÜNCÜ MOLAR DIŞ: BİR OLGU SUNUMU

DISPLACEMENT OF MAXILLARY THIRD MOLAR INTO MAXILLARY SINUS: A CASE REPORT

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Özet

Bu raporda nadir bir vaka olan üst üçüncü molar dişin tek parça halinde maksiller sinüse yer değiştirmesi ve tedavisi anlatılmaktadır.

40 yaşındaki sağlıklı kadın hasta yanlışlıkla maksiller sinüs içine yer değiştirmiş olan maksiller sol üçüncü molar dişinin değerlendirilmesi için kliniğimize sevk edilmiş. Sol maksiller sinüs içerisinde lokalize edilen diş Caldwell-Luc operasyonu ile çıkarıldı.

Sürmüş veya gömülü üst molar dişlerin çekimi sırasında yanlışlıkla maksiller sinüse yer değiştirmesi iyi bilinen bir komplikasyondur. Bu komplikasyon genellikle yanlış çekim tekniği, yetersiz anatomik bilgi, cerrahi sırasındaki azalmış görüş ve üst üçüncü molar diş ile maksiller sinüs arasındaki yakın ilişki ile ilişkilidir.

Anahtar Kelimeler: Yer değiştirme, maksiller sinüs, maksiller üçüncü molar

Abstract

In this paper a rare case of displacement of an upper third molar into the maxillary sinus and its management are described.

Forty-years-old healthy female patient was referred to our clinic for the assessment of maxillary left third molar which was accidentally displaced into the maxillary sinus. The localization of the tooth was detected in the left maxillary sinus. The displaced tooth removed by a Caldwell-Luc operation under local anesthesia.

Accidental displacement of maxillary third molars into the maxillary sinus, is usually associated with an incorrect extraction technique, poor anatomic knowledge, decreased visibility during surgical removal or close relation between upper third molar and maxillary sinus.

Key words: Displacement, Maxillary sinus, Maxillary third molar

Introduction

The surgical removal of impacted maxillary third molars is a procedure routinely carried out by oral and maxillofacial surgeons, and it is usually associated with low rates of complications and morbidity (1). There are numerous complications of removing impacted teeth such as infection, fracture of the tuberosity, perforation of maxillary sinus, alveolar osteitis, dysesthesia, hemorrhage and anesthetic complications (2). Displacement of a tooth or a tooth fragment into important adjacent anatomic sites such as maxillary sinus,

infratemporal fossa and buccal space is frequently mentioned in oral and maxillofacial surgery textbooks, but rarely reported (3,4,5,). If the tooth is displaced into the maxillary sinus, retrieval is usually done by a Caldwell-Luc procedure at the same appointment (2). This case report describes location and removal of a left upper third molar into the maxillary sinus during an unsuccessful surgical procedure. Prevention of this complication and how to solve the problem are also discussed.

Case Report

Forty-years-old healthy female patient was referred to the Department of Oral and Maxillofacial Surgery, Faculty of Dentistry, Cukurova University for the assessment of maxillary left third molar which was accidentally displaced into the maxillary sinus. Patient's history revealed that one week earlier she had undergone an unsuccessful surgical procedure under local anesthesia performed by a general

*This study has been presented in "4. International Oral and Maxillofacial Surgery Society Congress, Antalya, Turkey, May 26-30, 2010"

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dental practitioner for removal of her impacted left maxillary third molar (Figure 1).



Figure 1. Panoramic radiograph before displacement

Intraoral examination showed an oroantral communication via the socket of left upper third molar. Radiological examination was carried out with panoramic radiography and cone beam computerized tomography. The localization of the tooth was detected in the left maxillary sinus (Figure 2,3).

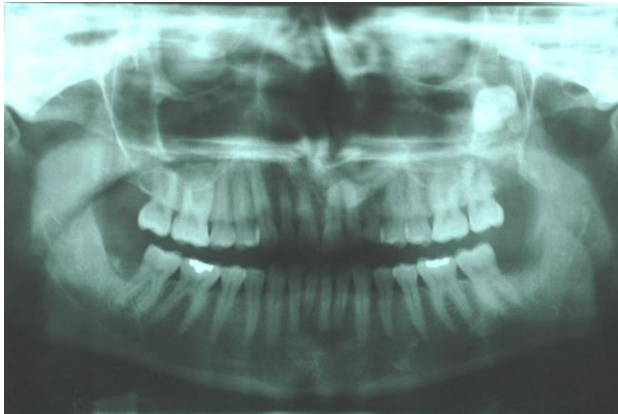


Figure 2. Panoramic radiograph after displacement

Surgical procedure was performed under local anesthesia (posterior superior alveolar nerve, greater palatine nerve, and buccal infiltration from the canine to the first molar). A vestibular incision was made from the canine to the first molar region, and a full-thickness mucoperiosteal flap was reflected to expose the canine fossa (Figure 4).



Figure 3. 3D cone-beam computerized tomographic image of the displaced tooth

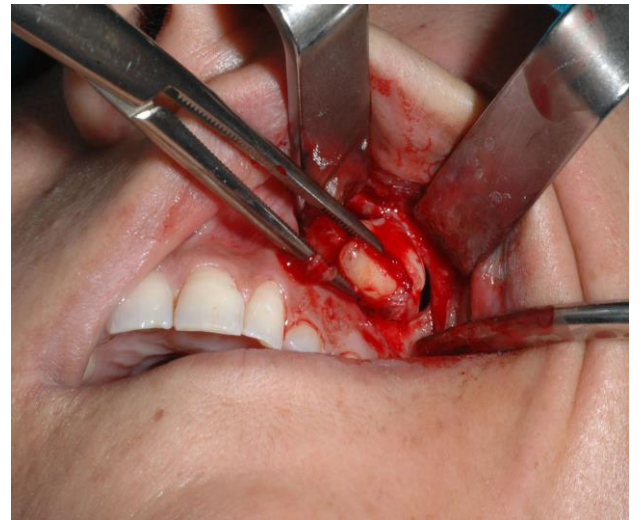


Figure 4. Removal of the tooth by Caldwell-Luc procedure

A bone window ~10 mm in diameter was made distal to the apex of the canine and above the apices of the premolars by 5 mm. Postoperatively, Amoxicillin 1000mg, naproxen 550mg, cetirizine 5mg, pseudoephedrine 125mg, % 0,12 chlorhexidine mouth rinse twice a day were prescribed for a week. The postoperative course was uneventful and the patient was asymptomatic in the 3 month period of follow-up.

Discussion

Accidental displacement of maxillary third molars into the maxillary sinus,

infratemporal fossa or buccal space is a well known complication associated with removal of erupted or impacted upper molars (6). This complication is usually associated with an incorrect extraction technique, poor anatomic knowledge, decreased visibility during surgical removal or close relation between upper third molar and maxillary sinus (1,4). Superiorly positioned maxillary third molars may have only thin layer of bone anteriorly separating them from the maxillary sinus. Dislodgement of an entire tooth into the maxillary sinus involves almost exclusively the third molars (3). The third molar displacement into the maxillary sinus is a rare event than into the infratemporal fossa (6). A Pubmed review shows 11 case reports related with displacement of maxillary third molars (Table 1).

No	Author and Publication Year	Displacement Location
1	Oberman ¹¹ et al 1986	2 into maxillary sinus 1 into infratemporal fossa
2	Patel et ¹⁰ al 1994	1 into infratemporal fossa
3	Durmus ³ et al 2004	1 into maxillary sinus
4	Sverzut ⁵ et al 2005	1 into maxillary sinus
5	Dimitrakopoulos ⁹ et al 2007	1 into infratemporal fossa
6	Gomez-Olivera ¹ et al 2010	1 into infratemporal fossa
7	Kocaelli ⁶ et al 2011	1 into buccal space
8	Selvi ⁴ et al 2011	1 into infratemporal fossa
9	Huang ⁷ et al 2011	1 into maxillary sinus
10	Iwai ¹² et al 2012	1 into maxillary sinus
11	Ozer ¹³ et al 2013	1 into pterygopalatine fossa

Table 1. Literature review for displacement of maxillary third molars

Removal from maxillary sinus is necessary to prevent infective complications. Displaced teeth into the maxillary sinus may be removed by a Caldwell-Luc operation (3). Removing the dislodged teeth from infratemporal fossa is a more difficult procedure. Difficulty of surgical access to the infratemporal fossa is related to the structures running through it (4). Furthermore; a Caldwell-Luc procedure has less numbers of complications (7).

Diagnosis of displacement into the maxillary sinus is usually simple due to the presence of oroantral communication (3). Radiographic examination is indicated to locate the displaced tooth. Occlusal, lateral, occipitontal and panoramic radiographs can be used, although CT-scan is the powerful and useful technique, because it provides an exact location, as well as a lower dose of irradiation (8). In our case, we used cone beam computerized tomography for radiographical examination. We localized the tooth at the posterior wall of the left maxillary sinus.

Prevention of impacted maxillary third molar displacement into the maxillary sinus predominates over removal and is achieved by adequate flap design and correct extraction technique during surgical extraction (9). It is recommended that a surgical procedure be accomplished instead of using elevators when the movement of the tooth in an unfavorable direction is recognized (10). In conclusion; clinical/radiological examinations and perioperative attention is important to prevent this complication.

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