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Case Report

Displacement of a mandibular Third molar in the Pterygomandibular space - a case report

Meena M Vora [1], Punam N Nagargoje[2]

[1]*Professor, Department of oral and Maxillofacial surgery, YMT Dental college and hospital, Navi Mumbai, India*
[2]*Resident, Department of oral and Maxillofacial surgery, YMT Dental college and hospital, Navi Mumbai, India*

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ABSTRACT

Accidental displacement of an impacted lower third molar into the pterygomandibular space during extraction is a rare complication. The purpose of this article is to report the case of lower third molar displaced into the pterygomandibular space during an unsuccessful surgical intervention. A 24-year-old male patient presented with pain and trismus was referred to our clinic. The patient's history revealed that he had undergone an unsuccessful impacted third molar surgery. On radiological examination, panoramic radiograph showed that the tooth was displaced in the pterygomandibular space. Pain and trismus were controlled. Antibiotic and physiotherapy were started before the surgery and the displaced tooth was retrieved under general anaesthesia. The post-operative period was uneventful and the patient recovered without any sequel.

Introduction

Third molar extraction is the most common minor surgery performed by oral and maxillofacial surgeon. So it is crucial to be familiar with all potential complications associated with the third molar surgical extraction , as other surgeries, third molar surgery also has its attended risks and complications.

Complication rate in removal of impacted third molar range from 4.6% to 30.9% . Incidences of complications varies with the surgeons experience, patients age, type of impaction and various other factors. Although complications are bound to happen, to avoid the incidences of complications, careful diagnosis and pre-surgical planning is very important.

Case report

A 24 year old male patient was referred to our clinic with complaints of pain and trismus on left side. The patient's history revealed that he had undergone disimpaction procedure of left third molar 6 days before in a dental clinic. Further investigation showed that during this surgical procedure, the practitioner was suddenly realized that the tooth has disappeared in a surrounding space. Patient was informed the suspicion immediately and referred the patient for further management. Radiographic examination reveals that the

* *Corresponding author. Dr. Punam N Nagargoje,Resident, Department of oral and Maxillofacial surgery ,YMT Dental college and hospital, Navi Mumbai,India email: punam.nagargoje02@gmail.com*

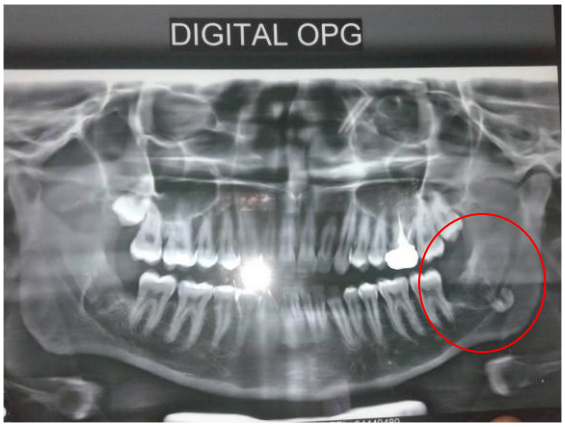

Figure 1: Pre-Operative OPG

tooth was displaced into the pterygomandibular space on left side (fig.1). Management options of either removal or retention of the displaced tooth were discussed with the patient. He opted in favour of retrieval of the tooth. Though the intraoral approach was planned, possibility of an extraoral approach if required was explained.

Under general anesthesia an incision was made over the left external oblique ridge and extended posteriorly from the second molar. Buccal and lingual mucoperiosteal flaps were reflected. Subperiosteal dissection was done along medial aspect of ramus in 3rd molar region to enter into the pterygomandibular space. Lingual nerve was isolated and protected.

Preoperative evaluation and clinical judgement helped to locate the tooth which was displaced quite inferiorly and posteriorly behind the posterior limit of mylohyoid muscle.

Tooth was retrived and hemostasis was achieved. Wound was closed in layers.

The patient was placed on a suitable medications. On post-operative examination, healing was uneventful and there were no evidences of any neurological damage, infection or trismus (fig.2).

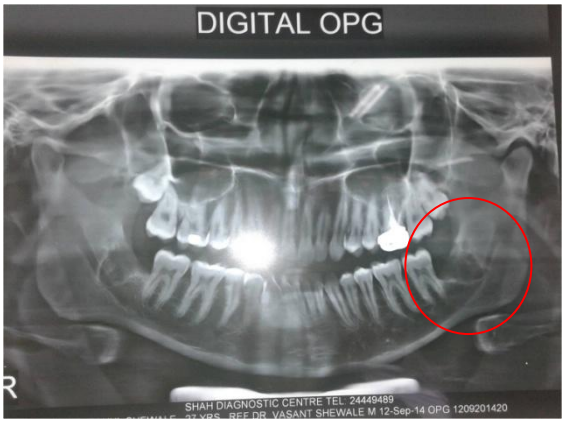

Figure 2: Post Operative OPG

Disscusion

This paper describes the management of an uncommon incidence of displacement of a tooth into the pterygomandibular space.

The pterygomandibular space is bound superiorly by the inferior head of the lateral pterygoid muscle, laterally by the medial aspect of the ramus of the mandible and anteriorly it is continuous with the recess formed by the lateral pterygoid and temporalis muscles. It is bound medially and posteriorly by the interpterygoid fascia[1]

The posterior limit of mylohoid muscle plays important role as displaced impacted tooth may descend down into submandibular space. In such situation Extraoral approach would be eminent.

Anatomical defects such as weak lingual plate and tooth placed too lingualy has more incidences of displacement. As well as factors like excessive undue forces and mishandling of the tooth during elevation carries risk of displacement of impacted tooth.

A displaced tooth may remain asymptomatic for long period however possibility of infection and patients anxiety has to be taken seriously into account. According to Aznar-Arasa et al. [4], these symptoms are closely related to the size of displaced tooth/root fragment particularly when it exceeds 5 mm.

Various conventional radiographic views can be taken to visualize a displaced tooth from the socket. A routine orthopantomograph provides the useful information as shown in this case. However, conventional radiographic techniques may not be adequate to precisely locate the displaced tooth in the adjacent soft tissues. Advanced imaging techniques, such as; CT or Cone-beam CT scanning, are often required to acertain exact location of displaced tooth and its relation to the adjacent soft tissue.

Attempt to carry out procedure under local anesthesia should be discouraged as patients gag reflexes may interfere an outcome of the procedure. Though couple of approaches have been suggested in the literature, in this case intra-oral approach was preferred due to the postero-inferior localization of the displaced tooth. Surgical technique includes meticulous dissection, protection of vital structures and haemostasis.

Extraction of third molars should always be performed with proper visual access to the extraction site [4]. When there is a risk that the tooth/root fragments maybe displaced, applying finger pressure over the lingual periosteum can prevent their displacement into adjacent anatomical spaces.

Retention of foreign bodies, such as tooth, in tissue spaces could run the risk of possible infection. Whereas, surgical retrieval could sometimes result in complications such as nerve damage and even further displacement into deeper tissues. These possible outcomes should be taken into consideration when making a decision about the management of a displaced tooth into an adjacent tissue or anatomical space.

Reference

1. Barker BCW, Davies PL. The applied anatomy of the pterygomandibular space. Br J Oral Surg 1972;10:43-55.

2.Pasqualini D, Erniani F, Coscia D, Pomatto E,Mela F. Third molar extraction. Current trends. *Minerva Stomatologica*. 2002; **51**: 411-424.

3.Brauer HU. Unusual complications associated with third molar surgery: a systematic review. *Quintessence International*. 2009; **40**: 565-572.

4.Aznar-Arasa L, Figueiredo R, Gay-Escoda C. Iatrogenic displacement of lower third molar roots into the sublingual space: report of 6 cases. *International Journal of Oral and Maxillofacial Surgery*. 2012; **70**: e107-e115.

5.De Biase A, Guerra F, Giordano G, Salucci S, Solidani M. Surgical removal of a left lower third molar root after iatrogenic displacement in soft tissue. Case report. *Minerva Stomatologica*. 2005; **54**: 389-393.

6.Tumuluri V, Punnia-Moorthy A. Displacement of a mandibular third molar root fragment into the pterygomandibular space. *Australian Dental Journal*. 2002; **47**: 68-71.

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