

UNUSUAL CASE OF FOREIGN BODY IN THE MAXILLARY SINUS

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ABSTRACT

INTRODUCTION: The penetration of foreign bodies in the maxillary sinuses is a relatively common pathology. It is observed in a number of traumas and dental procedures. The specificity of this type of etiology is that the penetration of the foreign bodies into the sinuses is combined, to a different degree, with damage to the soft tissues and the bones of the jaws, or a dental procedure.

AIM: The aim of this article is to present an unusual case of a foreign body in the maxillary sinuses.

CONCLUSION: During high-risk procedures, the clinicians need to check thoroughly for any residual foreign bodies in the maxillary sinus.

Keywords: *foreign bodies, maxillary sinus*

INTRODUCTION

The penetration of foreign bodies in the maxillary sinuses is a relatively common pathology. It is observed in a number of traumas – traffic accidents, gunshot wounds, domestic and industrial accidents (1). The specificity of this type of etiology is that the penetration of the foreign bodies into the sinuses is combined, to a different degree, with a damage to the soft tissues and the jaw bones (5).

In a number of dental procedures there are described cases of iatrogenic penetration of foreign bodies in the maxillary sinuses. The endodontic treatment of maxillary molars and premolars with roots penetrating the oral cavity hides a risk of penetration of root-filling material in the paranasal sinus. There are also cases of fragmented endodontic instruments in the maxillary sinus (7).

Penetration of tooth fragments in the sinus during extraction of maxillary premolars and wisdom teeth is observed relatively often (4).

Sometimes oral implantology requires augmentation procedures of the alveolar bone, where part of the sinus is augmented and used for positioning of dental implants. This intimate proximity of the implants to the sinuses determines the possibility of penetration of the whole or part of the implant into the sinus (4). The foreign bodies may also enter the sinus if an oroantral fistula is formed (6).

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AIM

The aim of this article is to present an unusual case of a foreign body in the maxillary sinuses.

CASE DESCRIPTION

A 17-year-old girl referred to oral surgery specialists with pain in the zygomatic area.

Anamnesis:

The patient complains from pain in the maxilla and the left cheekbone, which is constant and has started about a month ago. The general practitioner has treated the symptoms without effect.

Status:

No pathologies in the extraoral status were found during the examination. The nasal cavities are not obstructed and there is no exudation. The dentition is intact, all teeth are vital. There are no pathologies in the neurological status. The 28th tooth is missing. In this respect the patient reported past odontectomy of impacted maxillary third molar at the side of the pain.

Clinical tests:

Radiographic examination was prescribed: frontal and side-view x-ray of the skull and CT of the head. They showed strangely looking foreign body with metallic density in the left maxillary sinus (Fig. 1).



Fig. 1. X-ray of the skull

The patient was referred for operative treatment in the Clinic of Maxillofacial Surgery at the St. George University Hospital in Plovdiv.

Therapy

Following discussion, we decided to revise the maxillary sinus. Micro-communication was found in the area of the left maxillary tuber. The communication was expanded and the sinus was uncovered. There was catarrhal inflammation of the mucosa. A fragment from metallic instrument, which had broken off during the odontectomy, was found and removed. Curettage of the mucosa was not necessary. The sinus was closed with a vestibular flap. The postoperative period was uneventful and the pain subsided.

DISCUSSION

In the literature, as well as in the clinical practice, there are cases of asymptomatic foreign bodies in the maxillary sinuses (6). This probably depends on the type of the foreign body, on the way it has penetrated the sinus, as well as on the local and general features of the human body. In other cases the patients develop chronic and acute sinusitis with the respective symptoms requiring immediate removal of the foreign body.

According to the literature, more than 60% of the foreign bodies in the maxillary sinuses are iatrogenic, resulting from dental procedures (3,4). There are numerous dental procedures which are performed in contact with sinuses. Once in the sinus, the foreign body causes catarrhal inflammation of the mucosa, which over different periods of time results in clinical symptoms. Therefore, when a foreign body is found in the sinus, it must be removed in the most atraumatic way possible. In this particular case, the broken instrument was overlooked.

CONCLUSION

During high-risk procedures, the clinicians need to check thoroughly for any residual foreign bodies in the maxillary sinus.

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