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INTRODUCTION

Foreign bodies in the para nasal sinuses are not common.¹ Maxillary sinus foreign bodies account for about 50% of the foreign bodies in the paranasal sinuses. They can be classified as either traumatic or iatrogenic.² Traumatic foreign bodies include air gun pellets, pieces of glass, stones, wood, while iatrogenic foreign bodies include whole teeth, roots of teeth, dental cement, pieces of broken forceps, impression paste, gutta percha, etc. The routes of entry are usually a) the lower eyelid, b) the lateral wall of the nose, c) the cheek, and d) the mouth. Occasionally the site of entry may be quite inconspicuous.³ We present a case of penetrating foreign body in the maxillary sinus and pterygopalatine fossa.

CASE REPORT

A 38-yr-old man, a watchmaker by occupation, came to the emergency medicine department with a history of having sustained an injury to his face at his workplace. He claimed that, the base of the wristwatch he was working on with a pick, bounced off the table at high speed toward his cheek.

On examination, an oblique lacerated wound, about 4cm in length, was seen on the left cheek just above the nasolabial fold and in line with the canine fossa. The external wound on the left cheek had been sutured at another hospital. Diagnostic nasal endoscopy and oral cavity examination were normal.

Paranasal sinus X-Ray revealed an oval radio opaque foreign body in the left maxillary sinus. Computerized Tomography scan of the sinuses showed the foreign body had penetrated the posterior wall of the left maxillary sinus and was partially lying in the pterygopalatine fossa.

Under general anesthesia a left sided Caldwell Luc approach was done. After removal of clots, a foreign body, a metallic
watch base was found to be impacted in the posterior wall of
the left maxillary sinus. Removal was difficult as the foreign
body was tightly impacted and was not easy to grasp with
regular surgical instruments due to its smooth circular edge.
Only repeated rocking movements and the use of leverage
around the edges finally allowed the foreign body to come
through into the sinus. Following removal, the hemorrhage
in the pterygopalatine fossa was controlled with pressure.
Intra nasal antrostomy was done and the sinus was packed
with a medicated ribbon gauze pack. The Caldwell Luc
incision was closed in layers. The postoperative period was
uneventful and patient was discharged after 2 days on
antibiotics. No post operative complications have been
observed with a follow up of 3 years.

DISCUSSION
The natural history of foreign bodies in the paranasal sinuses
is only anecdotal and is truly unknown.\(^4\) Introduction of
foreign bodies to the paranasal sinuses may occur through a
variety of traumatic or iatrogenic events.\(^2\) Foreign bodies in
the paranasal sinuses must be removed surgically, even
when they are asymptomatic.\(^5\) Mladina believes that metal
foreign bodies should always be removed from the paranasal
sinuses in order to prevent any theoretical or practical
possibility of the development of chronic irritation or even
malignant mucosal alteration.\(^6\) Reported sequelae include
chronic sinusitis, cutaneous fistula, rhinolith formation and
chronic pain.\(^4\) Metallic foreign bodies have been associated
with malignancies, and when the metal is lead there is an
increase risk of lead poisoning, particularly in children.\(^7\)

Orthopantomogram together with the Waters and lateral
skull views are useful imaging tools in diagnosing a foreign
body. Computed tomography is used to detect the presence
of foreign body, whereas MRI scanning may be necessary in
the detection of organic foreign bodies since MRI is superior
to CT in soft tissue imaging.\(^3,8\)

The classical surgical technique for removal of foreign
bodies in the maxillary sinus is the Caldwell-Luc procedure.\(^5\)
Open approaches are better suited in case of large foreign
bodies or when it is impacted as in our case. The endoscopic
transnasal approach has been successfully used for retrieval
of a variety of foreign bodies in the paranasal sinuses.\(^9\)
Reported advantage of the endoscopic approach, when
compared to Caldwell-Luc procedure includes decreased
morbidity, non invasiveness, decreased risk of injury to
tooth root and the ability to visualize the sinus.\(^4,5\) However,
depending on the nature and location of the foreign body
combined approach may be necessary for removal of all the
fragments.\(^2\)

CONCLUSION
Sinus foreign bodies are rare findings. When they are
discovered, even if asymptomatic, there is an indication for
their removal. Foreign bodies in the paranasal sinuses vary
in their size and location. Hence the surgeon must be
familiar with the different approaches for removing them.

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