

# Foreign Body of the Orbita – two interesting Cases

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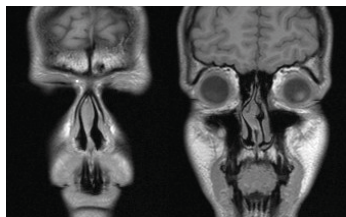
## Background:

Soft tissue injuries with traumatic penetrations of foreign bodies occur fairly often and also known to involve the orbital region. Most of the time the trauma pattern is known or self-explanatory. In those cases, primary surgical removal of the foreign body is administered after diagnostic confirmation. However, rare and exceptional cases occur where the patient history and conventional diagnostic methods are not effective. The following presents an example of an unambiguous case as well as an intricate one.

## Goals:

Penetrating foreign bodies in the ocular orbit are a common injury to the face. These foreign bodies stem from diverse organic and non-organic compositions and require individual trauma management.

The goal of this poster was to present two cases similar in trauma pattern but with very different compositions of the penetrating foreign objects. As well as the challenges presented to the clinicians by a variety of possible foreign bodies.



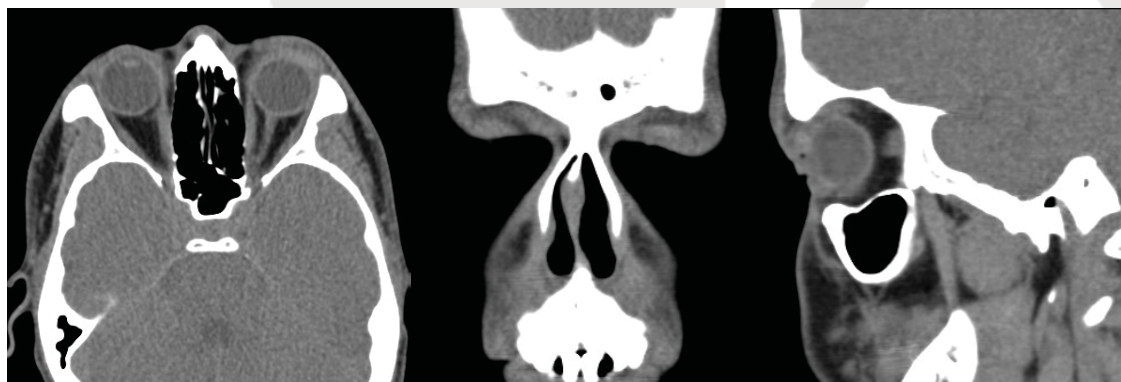
Patient 2 MRI

## Methods:

A 5-year-old boy (Patient 1) is brought to our clinic after stabbing himself with a pencil in his right periorbital region while playing. He presents himself with an one-sided eyeglass haemorrhage and a tear injury to his right upper eye lid. With low-dose CT the clinical suspicion is confirmed that a piece of the pencil remained within the orbita. During endotracheal anaesthesia the foreign body is extracted without complications.

A 22-year-old male patient (Patient 2) presents himself to our clinic with a swollen upper left eye lid and ptosis of the same eye. According to his patient history he only states that he woke up intoxicated in a forest.

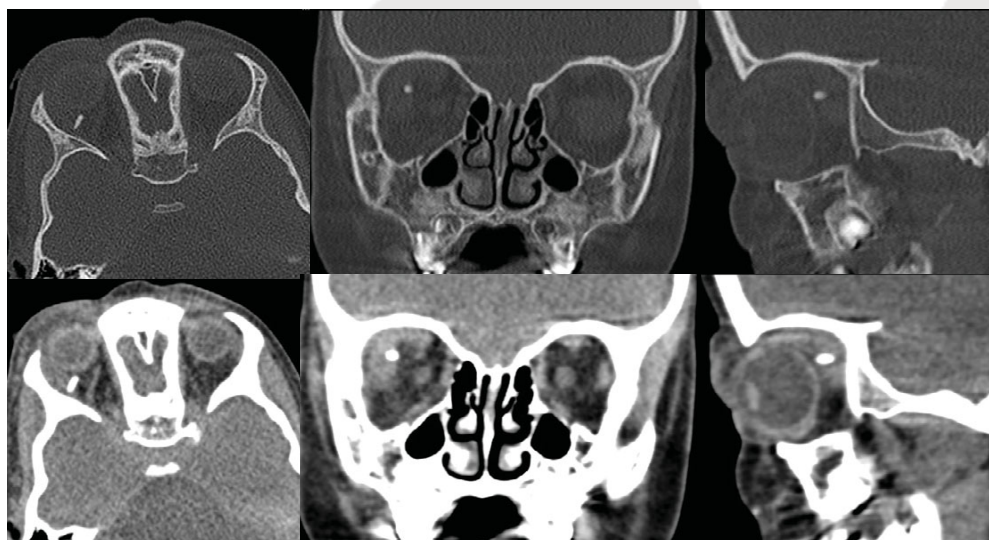
Since radiological diagnostics (first ultrasound examination, then CT, and finally a MRI) did not yield a specific cause and the clinical finding progressed steadily, surgical exploration was performed. During the exploration a small wooden branch was found. After surgical removal of the wooden foreign body the symptoms of the patient completely regressed.



Patient 2 CT scan

## Results:

An exact patient history is essential for the further direction of treatment but the patient history can not always be correctly evaluated. In these cases, we would suggest a CT scan for bone and soft tissue with contrast agent as primary imaging technique. If this diagnostic tool is not available patients should be referred to an institution with better equipment. Only when there is a specific suspicion for a foreign wooden body we would suggest an MRI in the first line. Additionally an ultrasound of the lid and orbit can be attempted but should be performed by an experienced examiner. Suspect facial wounds, specifically, should always be transferred to a specialized maxillofacial surgeon.



Patient 1 low-dose CT scan

## Conclusion:

After trauma with possible penetration of a foreign body radiological diagnostic procedures are not 100% accurate. In conventional-diagnostic cases which are unclear the surgical exploration is an established diagnostic procedure, that – if successful – yields positive therapeutic effects at the same time.