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# Corpus Alienum in Orofacial Region: A Diagnostic Challenge

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## ABSTRACT

In this case report we are presenting an unusual case of foreign body embedment in the oro-facial soft tissue. Our patient is a male adult and presented with history of restricted mouth opening, fever and painful facial swelling in the cheek. Plain radiographs of the maxillo-facial region was not diagnostic hence an ultrasonography was performed and a wooden foreign body which resembled a broken needle was noticed. Ultrasound guided surgical exploration was performed for the retrieval of the foreign body. Prompt diagnosis and early surgical exploration under USG guidance to retrieve such foreign bodies will greatly minimise the morbidity associated with it. This paper highlights the need for clinicians to elicit detailed history, however irrelevant, in arriving at a proper diagnosis, which in turn will influence the diagnosis and extend of surgical exploration.

**KEY WORDS:** foreign body, orafacial, trismus, ultrasonography

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## INTRODUCTION:

Penetrating foreign bodies in the Maxillo-Facial region are usually not missed in diagnosis<sup>[1]</sup>. Foreign body (Latin: corpus alienum) is defined as any microscopic or macroscopic external object which gets introduced into the human body, may be due to some accidental injury or any iatrogenic procedure<sup>[2,3]</sup>. These foreign bodies can be inert or irritating<sup>[2]</sup> and are made up of metal, wood, plastic or glass<sup>[4]</sup>. Usually metallic foreign bodies are often inert and may cause no irritation or damage for many years to the surrounding structures but if these foreign bodies irritate, they may develop inflammatory reactions<sup>[5]</sup>, and damage adjacent structures. Hence their diagnosis, identification, location and surgical removal from the tissue are often necessary.

## CASE REPORT:

A male patient aged 55 years reported with complaint of swelling and tenderness on left side of cheek since 10 days (Figure 1). Initially, patient did not reveal any significant history prompting radiological

investigations. Palpation revealed firm swelling and examination revealed a swelling pointing towards anterior border of masseter and suspected healed punctum. Palpation revealed firm diffused swelling with sharp lacerating pain on pressing on the suspected punctum. A provisional diagnosis of an abscess or sebaceous cyst was arrived at. Intraoral examination and OPG revealed no dental source of infection.

An USG study was ordered to evaluate sebaceous cyst/ Intra muscular lesion. USG revealed (Figure 2) a 2 cm needle like object with lumen within the masseter muscle which was initially suspected as broken needle.

On further enquiry with the patient, he revealed history of fall 6 months earlier on an Acacia bush, where he sustained the prick injury on a thorn, which he claimed to have removed and the pain subsided in few days. Based on the history and USG findings; a diagnosis of wooden foreign body was arrived at. Initial exploratory surgery could not locate the foreign body as the foreign body was entrapped well within the muscle, thereby the patient was shifted to ultrasound room and the foreign body was retrieved (Figure 3) by ultrasonography guided exploratory procedure. Patient was administered adequate anti-inflammatory and analgesics therapy and the recovery was uneventful.

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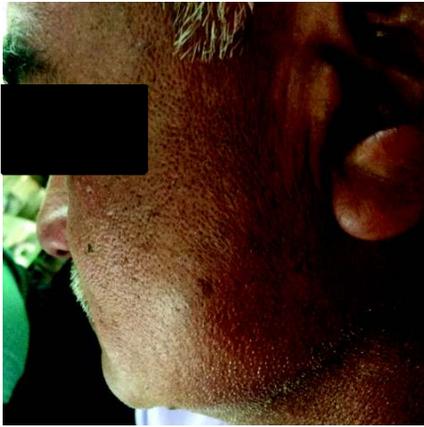


Figure 1 : Swelling and tenderness on left side of cheek

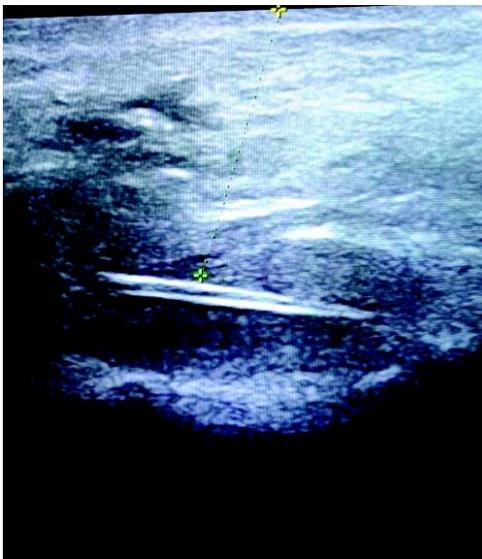


Figure 2: HRSG left parotid gland shows a well defined linear hyperechoic foreign body.



Figure 3: Thorn of Acacia bush retrieved surgically.

## DISCUSSION:

Corpus alienum or commonly called foreign body is an external object of any shape and size made up of metal, plastic, wood or glass<sup>[4]</sup>. It can occur in any age with different etiology. The effect of foreign body may differ as per its content and age. Young children usually put objects into their mouth, ears or nose<sup>[2]</sup>. The emergency of the condition depends on the things they swallow. A coin, usually causes a pressure in tissue and is not a medical emergency but small button, batteries, if ingested, can cause release of hydroxide ions and cause burn and hence becomes a medical emergency to treat<sup>[2]</sup>. In adulthood, the nature of etiology differs as main cause of foreign body is due to fall, road traffic accident, air gun injury etc. Iatrogenic injuries such as broken needle, sutures, drain and gauze are accidentally left over which over a period of time may become source of infection. Though he had history of fall in the bush six months earlier, he thought it was irrelevant and not did inform us. He presented with a classical case of buccal space infection. Hence a provisional diagnosis of sebaceous cyst or buccal space infection was arrived. We conducted radiographic examination but the source of infection remained untraceable. Hence we performed a USG study of left parotid region to rule out cyst, intra muscular lesion or lesion of parotid gland. HRSG revealed a well defined linear hyperechoic body of length 2.3 cm to 3 cm in muscle plane of left cheek region, antero-posterior to left parotid gland. Since the USG report revealed a linear hyperechoic object with a centre area of liener hypo echoicity, the dilemma was how has a needle penetrated there and how it was missed in the conventional radiograph. Hence, differential diagnosis of foreign body like glass, plastic as well as wooden structure must be kept in mind as these things are not diagnosed by routine conventional radiographs. The oro-facial soft tissue spaces are anatomic spaces filled with loose connective tissue and<sup>[2,3]</sup> are bounded by bones and muscles<sup>[7]</sup>. Any foreign body in thin spaces either lie dormant for years or can produce chronic inflammatory reaction and need to be localized and surgically removed<sup>[4,5]</sup>. In case of foreign body of wooden or plastic origin, USG must be performed prior to manipulation to know the precise location so that the vital structures around it can be preserved. In our patient the wooden spike was present near branches of facial nerve, parotid duct, facial artery and veins. The surgical removal of foreign body can be attempted both under local or general anaesthesia, depend upon its location, medical condition and severity of infection. In our case, as we

located spike in masseter muscles, hence surgical exploration was done under local anaesthesia and none of important anatomical structures were injured.

### CONCLUSION:

In our view, a detailed case history, early diagnosis by proper investigations and surgical retrieval are key to prevent complications. Accurate localization of foreign body and knowledge of important structures like nerves, vessels, glands or ducts is necessary to prevent uneventful postoperative recovery.

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