



# Foreign Body of the Infratemporal Fossa: A Case Report

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## Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

## Article Information

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## Case Study

## ABSTRACT

Face trauma caused by firearms is dangerous because of the potential damage to vascular nervous structures, particularly when the seat is parotid and infra-temporal.

We report the case of a child victim of an accidental firearm shot with a point of impact at the level of the right infra-temporal fossa.

The clinical examination had objectified the point of entry of the foreign body at the level of the right parotid region associated with trismus. The scanner showed a foreign body located in the deep areas of the face without vascular or cerebral damage. Extraction was performed under general anaesthesia by trans parotid route without complications or sequelae.

The presence of a metallic foreign body in the deep spaces of the face requires a clinical and radiological examination in order to plan its safe extraction.

**Keywords:** Foreign body; infra temporale fossa; facial trauma.

## 1. INTRODUCTION

Foreign bodies from the infratemporal fossa are extremely rare. We report the case of a foreign body of metallic origin located in the right infratemporal fossa. The aero-digestive tract is the commonest site involved in foreign body

lodgment in head and neck region, and topics dealing with this entity could be traced in standard texts of otorhinolaryngology and head and neck surgeries; however the lodgment of foreign-body in an area like infratemporal fossa is quite rare and only few cases have been reported in the literature so far [1,2].

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## 2. CASE PRESENTATION

This is a 12-year-old patient, with no particular history, victim of a gunshot with points of impact in the right parotid region, admitted to our department for treatment. Clinical examination found a patient conscious hemodynamically and respiratory stable, with an entrance orifice in the right parotid region, associated with mild trismus, without motor or sensory disorders of the face. Cervicofacial CT showed the presence of a foreign body in the right infratemporal fossa of metallic density. The patient was admitted to the operating theatre where she had the bullet removed transparotidally and after identification of the facial nerve. The patient also received tetanus vaccination, prophylactic antibiotics and analgesia. The post-operative follow-up was uncharacteristic.

## 3. DISCUSSION

Penetrating cervico-facial trauma caused by a foreign body is dangerous and should be treated urgently because of the potentially exposed

vascular-nervous elements [3]. A foreign body in the parotid region is particularly exposed to the risk of facial nerve damage [4]. When it is found deeper, especially in the chewing area, there is a significant risk of vascular (internal maxillary artery) and nerve (mandibular nerve, maxillary nerve, vicia, etc.). The location at the infratemporal fossa is rare and dangerous. At the level of the chewing space, the foreign body may splice the masseter and lateral pterygoid muscles responsible for a trismus. Indeed, the trismus may be secondary either to a fracture of the mandible or the zygomatic arch, or, as in our case, to a loosening of the chewing muscles by the foreign body [5]. For the evaluation of a metallic foreign body lodged in the deep spaces of the face, computed tomography with contrast agent injection is the gold standard. This would make it possible to assess its depth, its size, its path, its contours and its relationship with the adjacent noble structures [3]. Rapid extraction of the foreign body should be preferred [4]. Indeed, the latter exposes above all to a risk of infection justifying the use of antibiotic therapy and antitetanus prophylaxis [3].



Fig. 1. Scan image showing the foreign body



Fig. 2. Showing the first trans parotid way



**Fig. 3. Showing the foreign body after extraction**



**Fig. 4. Post operatory**

#### **4. CONCLUSION**

Foreign bodies from the infratemporal fossa are rare, their extraction should only take place after a complete clinical and radiological examination of the lesions in order to evaluate the elements on the path and the type of the injured object.

#### **CONSENT**

As per international standard or university standard, patients' written consent has been collected and preserved by the author(s).

#### **ETHICAL APPROVAL**

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

#### **COMPETING INTERESTS**

Authors have declared that no competing interests exist.

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