

Case Report: Accidental Incision Injury with Embedded Hook-Shaped Needle Behind the Right Ear — Successful Surgical Removal

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Abstract: *Background: Accidental penetrating injuries involving metallic foreign bodies in the craniofacial region are rare and clinically challenging due to the proximity of vital neurovascular structures.*

Case Description: A 63-year-old male presented to the emergency department following the accidental penetration and embedding of a large, hook-shaped needle in the right retro auricular region. Initial clinical assessment was followed by radiographic and computed tomography (CT) imaging to localize the object. A multidisciplinary approach involving emergency medicine and otorhinolaryngology (ENT) led to the successful surgical extraction of the foreign body under general anaesthesia.

Conclusion: The patient's recovery was uneventful, with discharge within 24 hours. This case underscores the necessity of rapid radiological localization and early surgical intervention by a specialist to mitigate the risk of long-term morbidity..

Keywords: Foreign body; Needle injury; Retro auricular; ENT surgery; Emergency management; Penetrating trauma.

I. INTRODUCTION

Penetrating injuries caused by sharp metallic objects in the vicinity of the skull base and ear require urgent triage. The complex anatomy of the retro auricular area—housing the facial nerve, mastoid process, and major vascular channels—makes "blind" removal attempts hazardous. Appropriate imaging is the cornerstone of management to determine the trajectory, depth, and relationship of the foreign body to surrounding tissues. This report outlines the successful multidisciplinary management of a unique hook-shaped needle injury.

Case Presentation

A 63-year-old male, **Mr. Arunachalam**, presented to the **Emergency Department at Apollo Hospitals, Karur**, on **27.02.2026**, with complaints of accidental incision and embedding of a **long, hook-shaped needle** behind the **right ear**.

Initial Assessment

The patient was evaluated by **Dr. Rahul, Emergency Physician**.

Vital signs were stable, and no active bleeding or neurologic deficits were noted.

Local examination revealed a penetrating metallic object in the retro-auricular region.

Upon presentation, the patient was hemodynamically stable. Physical examination revealed the entry point of a metallic object in the right retro auricular space. There were no focal neurological deficits, signs of facial nerve palsy, or active haemorrhage



Investigations

To determine the exact location and depth of penetration:

X-ray of the skull region was performed.

CT scan was conducted for precise localization and to evaluate surrounding structures.

Imaging confirmed the presence of a hook-shaped metallic foreign body without involvement of major vessels or deeper cranial structures.

Diagnostic Imaging

To define the surgical anatomy, the following were performed:

Plain Radiography (Skull): Confirmed a radio-opaque, hook-shaped metallic object.

Computed Tomography (CT) Scan: Provided three-dimensional localization, confirming the object was superficial to the deep fascia and had not breached the mastoid cortex or major vascular structures.

Specialist Consultation & Surgical Decision

Imaging findings were reviewed by **Dr. Sridhar K., ENT Surgeon**.

Based on the characteristics of the foreign body and its position, the decision was made for **immediate surgical removal under anaesthesia** to prevent potential complications.

Surgical Management

Following consultation with the Otorhinolaryngology (ENT) team, the patient was scheduled for emergency exploration. Under general anaesthesia, a controlled incision was made to expose the needle. The hook-shaped geometry required careful retrograde manipulation to avoid further tissue trauma during extraction. The foreign body was removed in its entirety, and the wound was irrigated and closed primarily.

Outcome

Postoperative course was uneventful.

The patient was observed for 24 hours.

Discharged on 28.02.2026, stable and symptom-free.

Discussion

Foreign body penetration in the retro-auricular region is clinically significant due to the proximity of the facial nerve, mastoid air cells, and major vessels. Early imaging is essential to understand the trajectory and avoid blind removal attempts.

This case demonstrates:

Importance of rapid assessment in accidental penetrating injuries.

Role of radiological evaluation (X-ray + CT) for safe surgical planning.

Timely ENT surgical intervention preventing infection, hematoma, or nerve damage.

Efficient multidisciplinary coordination, which contributed to a smooth recovery.

Such cases, although rare, emphasize the need for clear clinical protocols in emergency departments for managing embedded metallic foreign bodies.

Conclusion

Prompt imaging, specialist involvement, and timely operative intervention are crucial in managing penetrating needle injuries near the ear. The excellent postoperative outcome in this case reinforces the effectiveness of structured emergency and surgical management.



Patient Consent

Written informed consent for publication of clinical details was obtained from the patient (include this statement as required by journal guidelines).

References

Author AB, Author CD. Title of related article. *Journal Name*. Year; Volume(Issue): Pages.

Author EF, Author GH. Foreign body injuries near the ear: clinical considerations. *Journal Name*. Year; Volume(Issue): Pages

FEW GLIMPSES OF IMAGES AND VEDIOS :





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POST DISCHARGE FEEDBACK FROM PATIENT AND PATIENT FAMILY ATTENDERS:

Patient Feedback

Patient Name: Mr. Arunachalam

Age: 63 years

Date of Admission: 27.02.2026

Date of Discharge: 28.02.2026

Hospital: Apollo Hospitals, Karur

Feedback:

“I am extremely satisfied with the care I received at Apollo Hospitals, Karur. From the moment I arrived at the Emergency Department, the staff attended to me quickly and professionally. The doctors explained my condition clearly and made me feel safe. The surgery went smoothly, and I had no pain or discomfort afterward. I thank the entire medical team for their excellent treatment and kind approach.”



Overall Experience: Excellent

Patient Attender Feedback

Feedback:

“The hospital staff were very supportive throughout the treatment. We were informed clearly about the procedure and the condition of the patient. The doctors and nurses responded quickly and took very good care of him. The environment was clean and well-managed. We are grateful for the timely intervention and successful recovery.”

Overall Experience: Very Good

