Annales Africaines de Médecine
Cas Clinique

Paralysie faciale périphérique droite iatrogène consécutive aux manœuvres inappropriées d'extraction d'un corps étranger de l'oreille chez une patiente de 17 ans : une situation clinique évitable

Iatrogenic right peripheral facial palsy following inappropriate ear foreign body extraction maneuvers in a 17-year-old female : a preventable clinical case

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Résumé
Le corps étranger (CE) dans le conduit auditif externe (CAE) de l'oreille est fréquemment rencontré. Il constitue une urgence vitale selon la nature ou l'atteinte de l'organe concerné en Oto-rhino-laryngologie (ORL) nécessitant une bonne prise en charge. Cette dernière doit se faire par une main experte au risque d'entrainer des complications. Nous présentons une patiente de 17 ans ayant consulté pour otalgie et paralysie faciale périphérique droite post manœuvres d'extraction d'un CE de l'oreille droite. Il s'agissait d'une poussette d'une boucle d'oreille incrustée dans la caisse du tympan après plusieurs tentatives d'extraction dudit CE sans succès, dans différentes structures de santé de Kinshasa. Alors qu'il était initialement situé dans le CAE droit, le CE a été objectivé dans la cavité tympanique droite, à l'aide du scanner du rocher. La prise en charge a consisté, en l'extraction du CE de la cavité tympanique par l'abord rétro-auriculaire, suivie de séances de Kinésithérapie et un traitement ophtalmologique, pour la paralysie faciale périphérique.

Mots-clés : corps étranger, oreille, paralysie faciale périphérique, manœuvres d'extraction inappropriée
Reçu le 17 avril 2025
Accepté le 19 juillet 2025

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Summary
Foreign bodies (FB) in the external auditory canal (EAC) of the ear are a common occurrence. Depending on the nature or extent of damage to the affected Ear Nose Throat organ, FB can constitute a life-threatening emergency requiring appropriate treatment. This treatment must be expertly performed to prevent a risk of complications. We present a 17-year-old female patient who consulted for ear pain and right peripheral facial paralysis following attempts to remove a FB from her right ear. The FB was an earring stud embedded in the tympanic cavity after several unsuccessful attempts to remove it at various healthcare facilities in Kinshasa. Although the FB was initially located in the right EAC, it was identified in the right tympanic cavity using a petrous bone scan. Treatment consisted of extracting the FB from the tympanic cavity via a retroauricular approach, followed by physical therapy sessions and ophthalmological treatment for peripheral facial paralysis.

Keywords: foreign body, ear, peripheral facial paralysis, inappropriate extraction maneuvers

Received: April 17th, 2025
Accepted: July 19th, 2025
https://dx.doi.org/10.4314/aamed.v19i1.20

Introduction

FB is a common occurrence in ENT specialty. It constitutes a vital emergency depending on the nature or damage to the concerned organ, requiring proper management. The most reported serious complications are tympanic perforations and

middle ear entrapment (1). Removal of a FB from the external auditory canal (EAC) requires expertise. Many authors found that

management of FB by non-ENT personnel significantly associate with anatomical or functional complications and emphasized that all cases should be managed by otolaryngologists (2) (3). Success of management of FB depends on the co-operation of the patient, the type of instruments used and the experience and skills of the physician.

Hereby, we present iatrogenic complications following the management of an embedded FB in the tympanic cavity from an initial location in the EAC.

Clinical Case Description

This was a 17-year-old female patient who had consulted the ENT Department of the General Military Hospital of the Colonel Tshatshi Camp in Kinshasa in 2023 for right otalgia and deviation of the mouth to the left (Figure 1).

Figure 1. Photo of the patient with peripheral right facial paralysis. Note that the dressing on her right temporal region.

The history of her affection went back 5 days to our consultation and was marked by right otalgia and deviation of mouth to the left. It all started with an accidental introduction of a stroller earring into the right EAC by her younger brother (aged 4) while the patient was sleeping on the sofa. Then, there were several attempts to extract the FB, the first was at home by her parent; the second in a health center and the third in a medical center under general anesthesia before prescription of antibiotics (Amoxyclav®, Ofloque®) and an analgesic (Meftal forte®).

The persistence of the above-mentioned symptomatology had motivated her consultation at the General Military Hospital Colonel Tshatshi.

In addition, she had reported hearing loss and tinnitus in her right ear dating back 4 days.

The patient was lucid, showing a painful look, with vital signs in the norms, right lagophthalmos, erasure of the nasolabial fold and deviation of the mouth to the left. On otoscopic examination, bloody secretions were found and removed by aspiration to expose the edematous and lacerated EAC even though the membrane of the eardrum was difficult to visualize.

The CT scan of the temporal bone had revealed a FB embedded in the tympanic cavity (Figure 2).

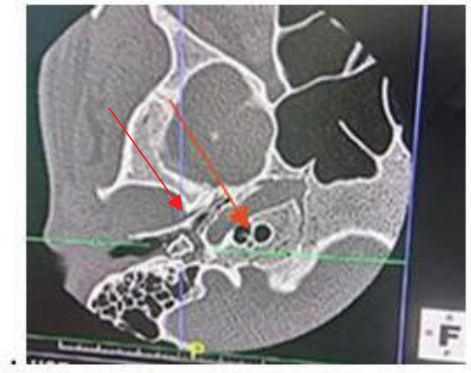

Figure 2. Arrow in red points to the intratympanic FB on an axial section of the rock scanner

We thought of an iatrogenic FB embedded in the right tympanic cavity, complicated by a right peripheral facial paralysis. The

extraction of this FB was performed under general anesthesia using a surgical approach consisting in a retro auricular arciform incision of 4-5 cm from the temporoauricular sulcus to the mastoid apex. This incision resulted in the elevation of a musculocutaneous flap, thus allowing access to the tympanic cavity and removal of the FB.

Figure 3. Foreign object (earring stroller) measuring 0.4 x 0.7 cm and extracted from the tympanic cavity.

In accordance with current legislation on medical ethics, informed consent was obtained from the patient including her biological parents after providing them with clear explanations on the interest for publishing the present clinical case.

Discussion

FB of the ENT sphere occur mainly in children during the age of discovery and prehension. The auricular location varies according to the authors from 14 to 68 % of cases (4). Most of the complications of ear FB reported are not serious. They are wounds of the external acoustic meatus or otorrhagia resulting from multiple extraction attempts, rarely requiring treatment. The most reported serious complications are tympanic perforations, entrapment in the middle and labyrinthitis, which are rare. The present case involved a 17-year-old female patient with peripheral facial paralysis as post removal complication, carrying a FB in the ENT sphere, precisely located in the right tympanic cavity from which it was extracted under general anesthesia following several unsuccessful extraction attempts. Yakoro *et al* have studied patients with ear FB seeking treatment in the clinic of Hospital Universiti Sains Malaysia (HUSM) from January 2010 to December 2010 Specifically, the clinical presentation, type of FB and management outcome were analyzed from records of 72 patients of their study. The majority of patients were male (61.1%) and children below 10 years old (59.8%) (5). As for the location, FB of the middle ear are extremely rare, representing 1% of ENT pathologies (6**)**. Few case reports of FB in the middle ear have been published, such as Patorn *et al* reported a metallic FB metallic to child had 6 year-old in his external auditory canal, that FB was remove via post auricular approach (7**)**, Skandour *et al*. spoke of a FB in the middle ear that was revealed by persistent otorrhea in Morocco (8**)**. As in the present case, a FB may be seen through the perforated tympanic membrane**.** Imaging studies are helpful in evaluating the nature and location of a FB in the middle ear (9**).** Which was the case for the patient in the present study. As for the therapeutic approach for a FB embedded in the tympanic cavity, some have used the retroauricular approach for extraction of the FB as in the present case. Other have extracted FB by different routes such as via the EAC (10). Yakoro *et al.* have found that 95% of FB were removed under clinic setting with only three (4.2%) cases requiring general anaesthesia as the present case (6). Moreover, post-removal complications were noted in only one patient (1.4%) by Yakoro *et al.* **(**6). In the present study, complications were mostly preoperative, due to unsuccessful attempts to extract the FB while it was located in the EAC.

Conclusion

Intratympanic FB remain a rare pathology in our environment. Although benign in most cases, the extraction of a FB from the ear nevertheless involves many pitfalls, requiring Post-operatively, the patient was put on corticosteroid therapy, systemic and local antibiotic therapy associated with ear hygiene. In addition, physiotherapy and eye care were offered while considering a tympanoplasty in the right ear (Figure 3).

sufficiently trained medical expertise with an adequate technical platform. Untimely and inappropriate handling of a FB can aggravate the lesions, hence the importance of proper referral for better management.

Conflict of interest

The authors declared no competing interest.

Contribution for authors

EMM: operated patient and conducted the literature review and wrote the draft of article
PMM: operated patient
ATK: maked the temporal scan for patient
JGS: operated patient and reviewed the draft of article
RNM: supervised and reviewed the draft of article. All authors approved the final, revised version of the manuscript of article.

Acknowledgements

The authors thank the patient of the present case report as well as Prof. Pius Kabututu, Dr Samuel Kanda and Dr François Mbuyu for their valuable contribution.

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Comment citer cet article : Mbambu E, Mbaya P, Kalonji A, Matanda RZ, Sokolo J. Paralysie faciale périphérique droite iatrogène consécutive aux manœuvres inappropriées d'extraction d'un corps étranger de l'oreille chez une patiente de 17 ans : une évitable observation clinique. *Ann. Afr Med.* 2025; **19** (1): e6776-e6779. https://dx.doi.org/10.4314/aamed.v19i1.20