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Case Report

Foreign Body of the Middle Ear: Case Report and Review of Literature

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Abstract

The presence of a foreign body in the middle ear is a rare clinical situation. They represent 1% of otologic disorders and less than 0.4% of all consultations in emergency services [1, 2]. This accident is a real emergency which sometimes threatens the vital prognosis. It poses two problems concerning its location and its extraction. We report the clinical case of a patient followed for chronic otitis media who accidentally introduced a metallic foreign body into his right middle ear.

Keywords: Foreign body - the middle ear.

CASE REPORT

This is a young patient, 18 YEARS OLD, followed and treated for simple chronic otitis media since childhood. The patient presented for consultation with minimal right otorrhagia that stopped spontaneously and intense right otalgia. The questioning clarified that the patient accidentally entered a metallic foreign body in the form of a smooth round 5 mm in diameter and magnet 2 mm in thickness.

Clinical examination objectified the presence of superficial lesions of the right external auditory meatus caused by multiple attempts at self-extraction of the foreign body, and the presence of a large subtotal perforation of both eardrums. Preliminary tone audiometry confirmed and quantified conductive hearing loss.

Radiological exploration showed the presence of a foreign body of a metallic nature in the right intra-petrosus measuring 05/06 mm opposite the eustachian tube, interposing between the temporal-mandibular joint and the intra-petrous segment of the internal carotid [Fig 2, 2].

The patient underwent a exploration of the tympanic cavity under general anesthesia Under an operating microscope and with the aid of an oto-endoscope, the careful extraction of the foreign body was carried out followed by myringoplasty through the temporal fascia.

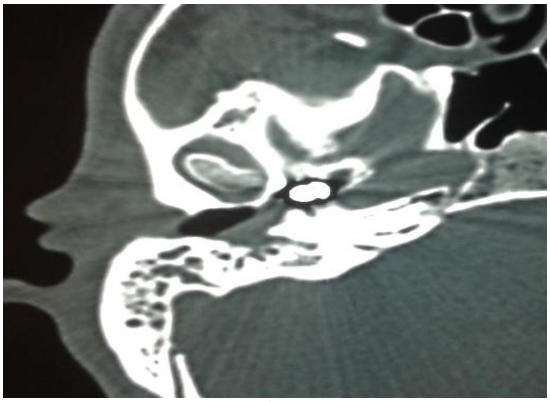

Fig-1: Axial section of right ear rock scanner

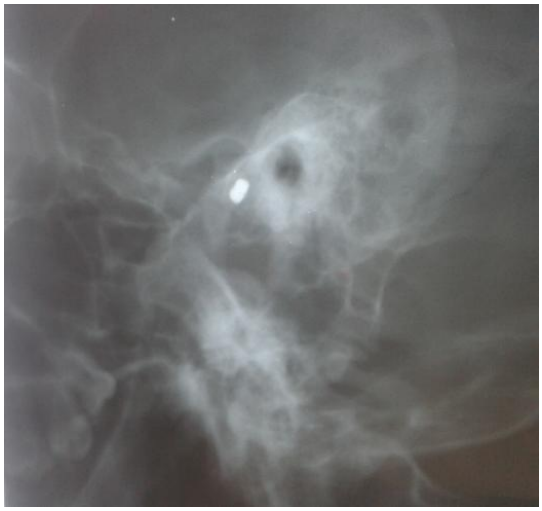

Fig-2: Standard Radio: Profile skull incidence

Comment

A foreign object is something that is in the body but does not belong to it; its presence in the middle ear remains a rare reason for consultation and is of particular interest to young children aged 2 to 15 [2]. The first observation of a neglected metallic middle ear in over 20 years was reported in 1883 by Lucius Holland [4].

The clinical picture differs depending on the nature of the foreign body, which can be organic or metallic, its appearance and size as well as its infectious potential.

The most frequent reason for consultation is recurrent and chronic unilateral otorrhea despite a well-conducted antibiotic-based treatment, associated with severe otalgia, and hearing loss of varying degrees depending on the age of clinical signs.

In the acute post-traumatic phase we can witness transient hemorrhages and at a late stage the clinical picture can be revealed by signs of infectious, vestibular or neurological complications.

The meticulous examination makes it possible to specify the circumstances of the incident and the related to the beginning of the symptomatology, the clinical exploration generally finds a tympanic perforation caused by the foreign body or through which the foreign body passes into the body of the ear-drum.

The functional exploration makes it possible to quantify and objective a possible hearing loss and the computed tomography of the rocks with the axial and coronal blow makes it possible to confirm the presence of the foreign body especially of metallic type [Fig 2, 2], to specify its seat and the risk that presents on the other anatomical structures of the ear, as well as planning the surgical exploration.

Treatment is urgently required once the diagnosis is confirmed. The surgical procedure will be a simple extraction with the help of a forceps for foreign bodies not enclosing at the level of the tympanic cavity and its relation to the ossicles. Local anesthesia or sedation in the child can be used.

The exploration of the body is essential for cases of late discovery, complicated or whose location poses a risk for the noble elements of the middle ear, namely the facial nerve, ossicular chains, with a vascular structure such as our patient.

The procedure is performed under general anesthesia under an operating microscope and sometimes requires the use of otoendoscopes and special clamps and hooks. The first and generally posterior approach is the case in our patient followed by myringoplasty via the temporal fascia.

The delays of the management expose to several complications and according to the literature Panosian and Dutcher reported a case of damage to the facial nerve by a metallic foreign body penetrating in a welder [5, 2]

Likewise, another case of facial paralysis with hearing loss was presented by Scéne and Vinding due to a foreign body of the middle ear [5].

In our patient, the surgical intervention made it possible to treat chronic otitis media, extraction of the foreign body and avoid the progression to complications.

CONCLUSION

The neglect of an intra-tympanic foreign body is the source of several complications that can threaten the functional and even vital prognosis, surgical management should be reserved for the well-trained team to avoid any iatrogenic complications.

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