

Ear Foreign Body Extraction

Isyraq Althaf Junidar Mantika

Faculty of Medicine, University of Mataram, Indonesia

Althafjunidar2@gmail.com

Article Information

Submitted: 20

December 2021

Accepted: 31 December
2021

Online Publish: 20

January 2022

Abstract

Introduction: Ear foreign body removal is a common procedure performed in the emergency department that can happen to anyone, both children and adults. **Methods:** The method used in writing this literature review is a literature review. Article writing consists of several sources originating from journals and related agency guidelines. Source searches were conducted on online portals for journal publications such as Medscape, Research gate and the National Center for Biotechnology Information/NCBI (ncbi.nlm.nih.gov), with the keyword used being “ear foreign body”. **Result and Discussion:** Various kinds of foreign objects have been reported to have entered the ear canal including insects, beads, paper and so on. Foreign body removal techniques consist of manual instrumental, irrigation, and suctioning. **Conclusions:** Removal of foreign bodies should not be performed if the patient is suspected of having a perforation of the tympanic membrane. Removal of a foreign body from the ear canal depends on the type of foreign body present in the ear canal.

Keywords: Ear Foreign Body Extraction; Technique; Contraindications; Preparation;

Introduction

Ear foreign body removal is a common procedure performed in the emergency department. This case usually occurs more often in children who are more than 9 months old, where children are in a state of developing the ability to grip them (Kwong & Provataris, 2016). Apart from children, adults can also find foreign bodies in the external ear canal such as insects. Various types of foreign objects that can enter the ear, some of which are often reported are beads, paper, tissue, and popcorn seeds, stones, cotton buds, erasers, insects, seeds, matches, and so on (Lotterman). & Sohal, 2021; (Olajide, Ologe, and Arigbede 2011). Patients who come with foreign objects in the ear will feel several complaints such as full or blocked ears, ringing in the ears, ear pain, discharge from the ears that sometimes smells, and hearing loss (Kemenkes RI, 2014).

The process of removing foreign bodies in the ear consists of several techniques, namely irrigation, suction, instrumental, or a combination of the three. The technique that will be chosen in the removal process depends on the location, shape, and composition or material of the foreign object (Chuen and Othman 2019).

Method

The method used in writing this is a literature review. Article writing consists of several sources from journals and related agency guidelines. Source searches were carried out on online portals for journal publications such as Medscape, Researchgate, and the National Center for Biotechnology Information/ NCBI (ncbi.nlm.nih.gov), with the keyword, used being "ear foreign body".

Discussion

a. Definition

Ear foreign body removal is a procedure performed to remove a foreign object in the ear canal that causes several complaints (Kwong & Provataris, 2016).

b. Indication

1. The presence of foreign bodies in the external auditory canal
2. Patients were cooperative
3. The equipment used is appropriate and adequate (Letterman & Sohal, 2021).

c. Contraindication

1. Tympanic membrane perforation
2. Uncooperative patients
3. Equipment inappropriate and inadequate
(Lotterman & Sohal, 2021)

d. Preparation

1. Patient Preparation

Prior to the removal of the foreign body, the patient will be examined for injuries to the ear canal or perforation of the tympanic membrane. After the patient is confirmed that there is no perforation in the tympanic membrane, then the patient will be positioned sitting or lying down with the affected ear directed at the examiner (Lotterman & Sohal, 2021).

2. tools preparation

The equipment used in the extraction of an ear foreign body depends on the shape of the foreign body and the location of the foreign body in the ear. Commonly used equipment for extraction of ear foreign bodies are:

- a. Otoscope
- b. Headlamp
- c. Alligator forceps
- d. Bayonet forceps
- e. Balloon catheter
- f. Needle
- g. 20cc syringe
- h. Angiocatheter
- i. Bent
- j. suction catheter
- k. Magnets, for metal foreign objects

e. Technique

Before carrying out the process of removing a foreign object, the examiner previously performed a physical examination with a headlamp, flashlight, or otoscope and ensured that there was a foreign object in the ear (Lotterman & Sohal, 2021). The technique chosen for removal depends on the type and composition of the foreign body. Irrigation is not recommended for organic material that can swell and enlarge in the ear canal. Insects or some objects that have the potential to become brittle or break into small pieces are recommended for suction or suction rather than removal using forceps (Kwong & Provataris, 2016). Here are some types of foreign objects and how to make those appointments:

- ✓ Insects: you should be killed first and then the oil is done using suction or suction
- ✓ Irregular objects: removal using alligator forceps
- ✓ Organic objects/vegetables: do not irrigate but do inhalation or suction
- ✓ Tombol baterai : jangan diirigasi tetapi lakukan pengangkatan menggunakan forsep alligator
- ✓ Benda bu Button batteries: do not irrigate but did appointment using alligator forceps
- ✓ Round, hard, and smooth objects: can be irrigated (Chuen and Othman 2019).

✓

Instrumental manuals

- ✓ Position the patient comfortably
- ✓ Perform a brief examination using an otoscope by observing the location and depth of the foreign body
- ✓ Gently insert the alligator forceps or bayonet forceps into the ear canal
- ✓ Continue to slowly advance the forceps until it reaches the location of the foreign body
- ✓ Then slowly remove the foreign object that sticks using forceps
- ✓ Check for perforation, foreign bodies left or trauma to the patient's ear (Kwong & Provataris, 2016)

Irrigation

- ✓ Insert angio catheter with a 20 cc syringe
- ✓ Position the patient comfortably
- ✓ Place bent to collect fluid or foreign objects that come out of the ear canal
- ✓ Insert the tip of the flexible angio catheter into the ear canal
- ✓ Slowly, inject irrigation fluid (water or normal saline) into the ear until the foreign body sticks out of the ear canal
- ✓ Perform a re-examination to make sure the foreign body is completely out or complications occur in the ear (Kwong & Provataris, 2016)

Suction

- ✓ Position the patient comfortably
- ✓ Check the location of foreign bodies using an otoscope
- ✓ Gently insert the suction catheter until it touches the adhering foreign body
- ✓ Gently pull the suction catheter with the foreign object attached to the suction catheter out of the ear canal
- ✓ Recheck whether there are still foreign bodies left or there are complications in the ear canal (Kwong & Provataris, 2016)

Conclusion

Removal of foreign bodies is the most common procedure performed in the emergency department. Starting from children - children to adults reported having experienced a foreign object in the ear. Various kinds of foreign objects have been reported to have entered the ear canal including insects, beads, paper, and so on. Removal of foreign bodies should not be performed if the patient is suspected of having a perforation of the tympanic membrane. Removal of a foreign body from the ear canal depends on the type of foreign body present in the ear canal. Foreign body removal techniques consist of manual instrumental, irrigation, and suctioning.

References

Chuen, Chew Shiun, and Nik Adilah Nik Othman. 2019. "Ear Foreign Body in Paediatric Patients: Methods of Removal and When to Refer." *Bangladesh Journal of Medical Science* 18(2): 423–26.

Kemenkes RI. (2014). Panduan Praktik Klinis Bagi Dokter di Fasilitas Pelayanan Primer Edisi II. Mentri Kesehatan Republik Indonesia, 150.

Kwong, A. O.-K., & Provataris, J. M. (2016). Ear Foreign Body Removal. *Atlas of Emergency Medicine Procedures*, 335–338. https://doi.org/10.1007/978-1-4939-2507-0_57

Lotterman, S., & Sohal, M. (2021). Ear Foreign Body Removal. *Atlas of Emergency Medicine Procedures*, 335–338. https://doi.org/10.1007/978-1-4939-2507-0_57

Olajide, Teye G, Foluwasayo E Ologe, and Oluwabukola O Arigbede. 2011. "Management of Foreign Bodies in the Ear: A Retrospective Review of 123 Cases in Nigeria." *Ear, Nose & Throat Journal*: 0145561320920510.

Copyright holder:

Isyraq Althaf Junidar Mantika (2022)

First publication right:

KESANS: International Journal Health and Science