foreign bodies

PATHOLOGY

The foreign bodies found most commonly in the ear are, cotton wool, insects, beads, beans, paper, and small toys.

CLINICAL PICTURE

Foreign bodies in the external auditory meatus are most commonly seen in children who have inserted them into their own ears. Children may present asymptomatically, or with pain or a· discharge caused by otitis externa.

Adults are often seen with cotton wool or broken matchsticks which have been used to clean or scratch the ear canal.

MANAGEMENT OPTIONS

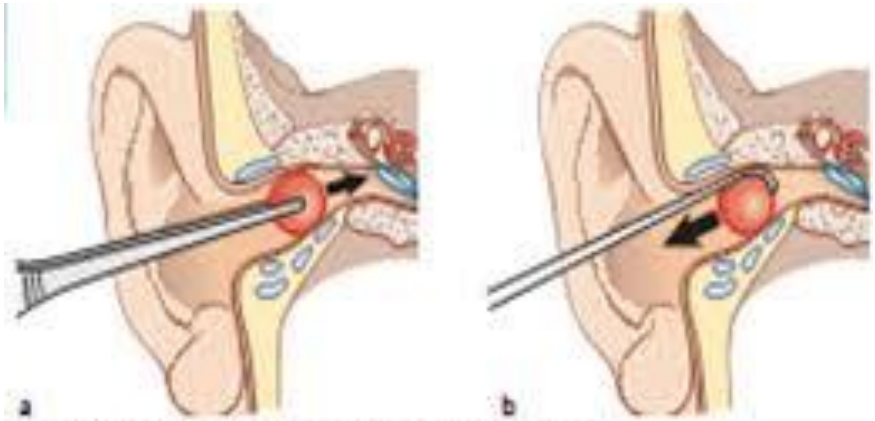
Removal can vary from being simple to being very .challenging and frustrating.

Remova of foreign bodies depend on :

1. the nature of the foreign body;
2. the precise location of the foreign body;
3. the patient.

The nature of the foreign body

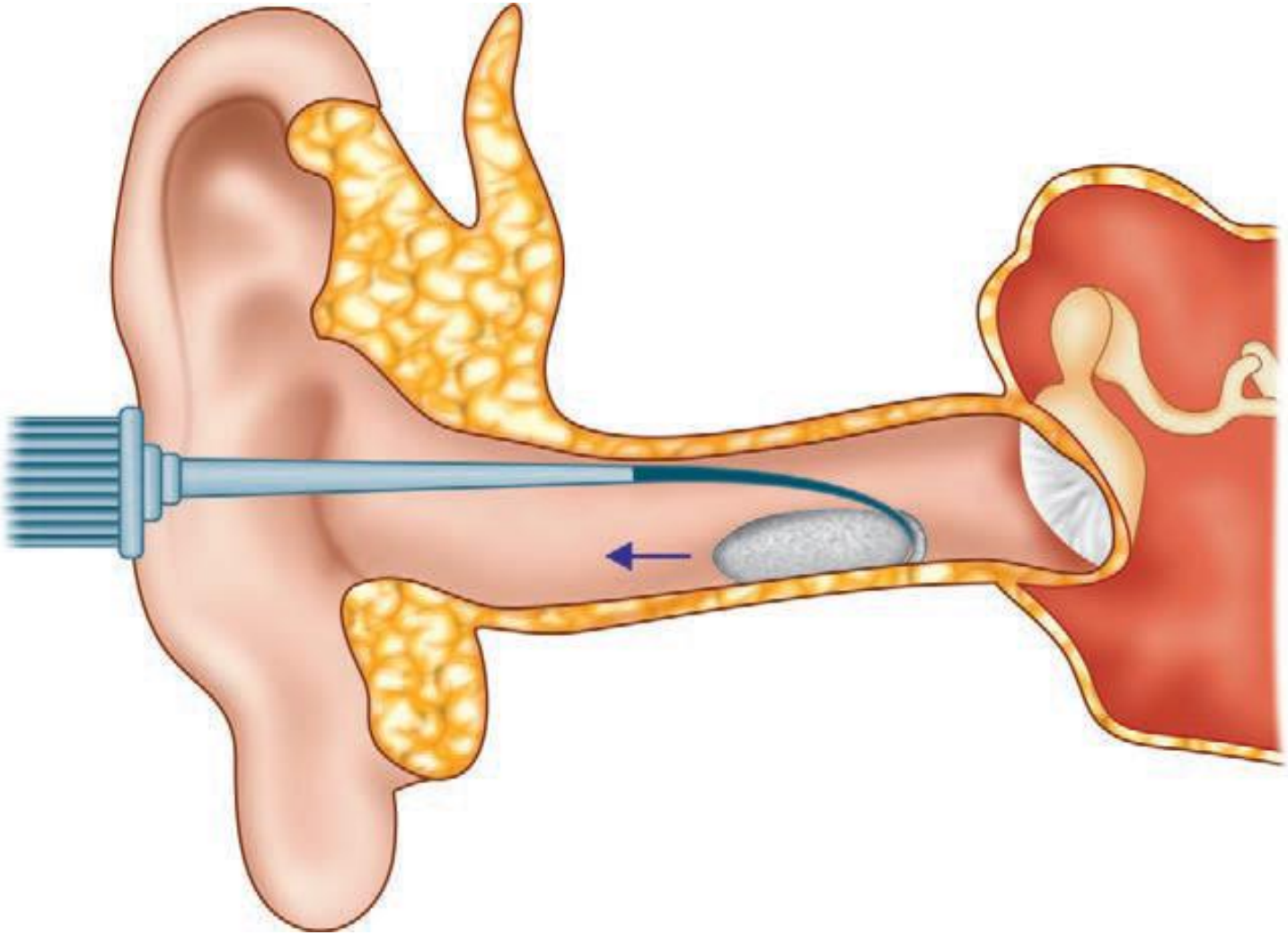
- **Living insects** should first be killed by instilling oil into the meatus to drown them before removal.
- **Irregular/soft graspable non-living objects** (dead insects, cotton wool, paper, small toys) may be removed with a pair of crocodile forceps.
- **Organic objects** (beans, etc.), which may absorb water, swell and cause pain, should not be syringed.
- **Button batteries** should not be syringed as they may leak on exposure to water. They should be removed urgently



Attempts to remove a foreign body with simple forceps (a) may displace the foreign body more deeply, and it may perforate the tympanic membrane, causing dislocation of the ossicles and injury to the facial canal.

The foreign body can be removed easily without danger to the patient using a hook, under otoscopic or microscopic guidance (b).


Alligator
Forceps
LEARN MORE



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• **Inorganic round/smooth non-graspable** (beads).
Smooth, firm, rounded objects, such as beads or toy gun pellets, are difficult to grasp and can easily be wedged deeper into the meatus. Syringing is safe and is often successful, but may fail with tightly impacted foreign bodies..
These objects are best removed using microscopic vision and a blunt ear hook, or by syringing in the uncooperative patient. It is useful to look carefully for a space between the foreign body and the canal wall, which can be used for the introduction of water (as in syringing) or the wax hook.

Location of the foreign body

The easier access, wider diameter, elastic nature and lesser sensitivity of the lateral canal make the removal of laterallying foreign bodies easier. Space between the foreign body and the canal wall allows access for water or an instrument through for removaL Firmly.

impacted foreign bodies medial to the isthmus, particularly when failed removal attempts have caused trauma and swelling of the canal skin, may require surgical removaL A post -auricular approach and widening of the canal by bone drilling is advised

Ear wax

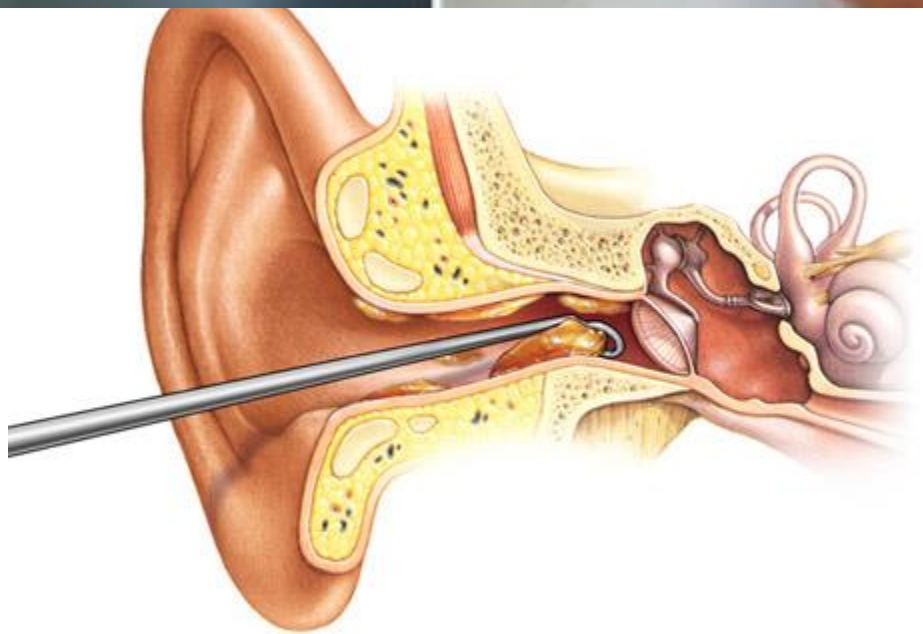
Anatomy and physiology

Sebaceous and ceruminous (modified sweat glands) glands open into the space of the hair follicle. Secretion of both these glands mixes with the desquamated epithelial cells and keratin and form wax.

This lubricates the ear canal and entraps the foreign material that enters into the canal.

Usually a small amount of wax is formed which dries up and is expelled from the meatus by movements of the jaw.

Excessive wax secreted by the glands is deposited as a plug in the outer EAC.



components of ear wax

The ear wax is made up of the following components:

- Sebaceous gland's secretion, which is rich in fatty acids
- Ceruminous gland's secretion, which is rich in lipids and pigment granules
- Hairs
- Desquamated epithelial debris and keratin, which are shed from the TM and bony meatus
- Dirt

factors facilitating ear wax problem

Following are the factors, which facilitate wax problem:

- Narrow and tortuous ear canal, stiff hair and exostosis facilitate retention of wax, which may dry up and form a hard impacted mass.
- Excessive secretion of wax and dusty occupations result in increased amount of wax.
- Self-cleaning of ear wax may push wax into the deeper bony EAC.

clinical features

- *Hearing loss or sense of blocked ear*: Sudden hearing loss may occur when water enters into the EAC (wax swells up) while bathing or swimming.
- *Tinnitus and giddiness* due to impaction of wax against the TM.

Reflex cough can result from the stimulation of auricular branch of vagus nerve.

- *Wax granuloma*: The impacted wax ulcerates the meatal skin and results in granuloma formation.

treatment

- It consists of removal of wax by either syringing or other ear instruments.
- *Wax softening agents*: Hard impacted mass usually needs prior softening with any of the following wax softening agents.

1-Five percent sodaium bicarb in equal parts of glycerin and water

2-Hydrogen peroxide
3- Liquid paraffin
4-Olive oil
Removal: Instrumental manipulation should always be done by skilled hands preferably under ear microscopy. Cerumen hook, scoop or Jobson-Horne probe are usually employed.

EAR syringing

Aural Syringe: This metal syringe consists of a cylinder with a well fitting piston and a nozzle (Fig

method

Patient is seated comfortably and the diseased ear faces towards the doctor. A towel is placed on the shoulder. Patient's head is slightly tilted toward the shoulder. A kidney tray is held snugly well below the ear to collect the return fluid. Boiled tap water cooled to body temperature (or normal saline) is used.

The auricle is pulled upwards and backwards while the direction of the stream of ear syringe is towards the posterosuperior wall of the meatus. Pressure of water that builds up deeper to the wax expels the wax out..

In cases of impacted wax, some space is created between the wax and the meatal wall so that stream of water passes through that. Otherwise wax would be pushed deeper. After the procedure,ear canal and tympanic membrane are dried with cotton

cautions

1-Too much force of the syringing can rupture the TM and lead to intense pain and dizziness and fainting.

2- Past history of ear discharge or an existing perforation must be asked before syringing.

3- A quiescent otitis media can get reactivated after syringing.

4-history of DM