

IMPACTED WAX

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EAR WAX

- *Wax* is composed of secretion of sebaceous glands, ceruminous glands, hair, desquamated epithelial debris , keratin, dirt
- Sebaceous and ceruminous glands open into space of hair follicle
- Sebaceous glands provide fluid rich in fatty acids while secretion of ceruminous gland is rich in lipid and pigment granules

Wax

WET WAX

- Light or dark brown and sticky
- High concentration of lipid (around 50%) and pigment granules
- Found in Caucasians and Africans



DRY WAX

- Grey or tan and brittle
- Contains around 20% lipid
- Found in Asians and Native Americans



FUNCTIONS OF EAR WAX

- **CLEANING**
- **LUBRICATION**
- **ANTI BACTERIAL AND ANTIFUNGAL ROLES**

Symptoms caused by impacted wax

1. Sense of blocked ear

2. Discomfort or pain in ear

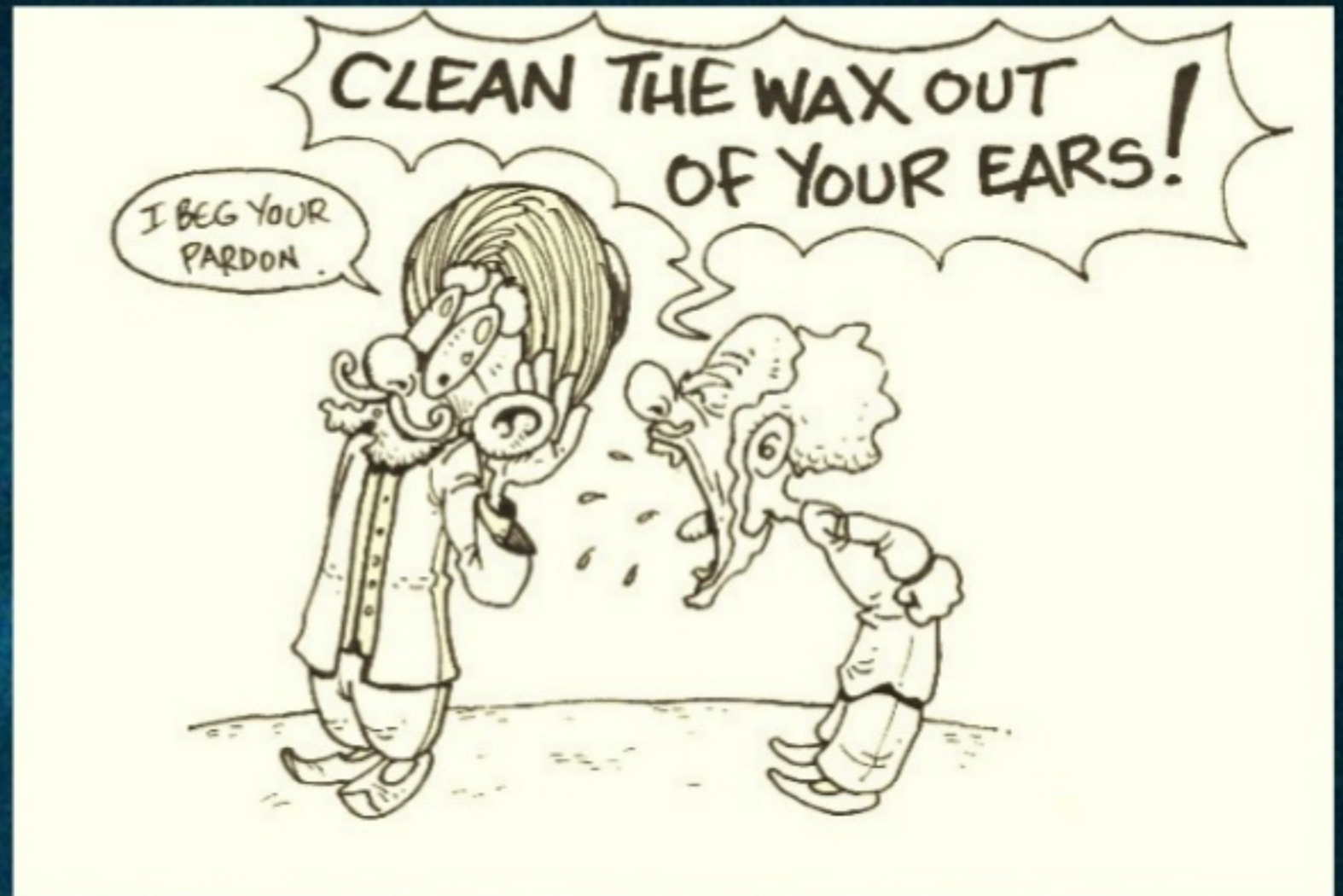
-Patient seldom complains pain unless the wax is pressing on the drum

3. Tinnitus

- Results from impaction of wax against tympanic membrane



4. Impairment of hearing



5. Reflex cough

- Occurs sometimes due to stimulation of auricular branch of vagus

Treatment of impacted wax

- CERUMENOLYSIS
- SYRINGING
- INSTRUMENTAL MANUPULATION

CERUMENOLYSIS

- It is usually necessary to soften wax before its removal. This process is referred to as cerumenolysis, and is achieved using a solution known as a cerumenolytic agent which is introduced into the ear canal
- Patient should lie with the affected ear uppermost for 5-10 minutes after the drops have been introduced into the ear canal. Repeated digital pressure on the tragus encourages movement of the drops and wax dispersal
- The most common home-remedy for this purpose is olive oil. Other commercially available and common cerumenolytics include:

Ceruminolytics

Oil based	Water based	Non-water non-oil based
Olive oil	Sodium bicarbonate (5-10%)	Carbamide peroxide
Almond oil	Hydrogen peroxide (3%)	Glycerol combination preparations
Peanut oil	Acetic acid (1-3%)	2% paradichlorobenzene
	Docusate sodium	

SYRINGING

- Irrigation or "syringing" is a standard method of wax removal
- **Indications for syringing:**
 1. Removal of wax
 2. Dried fungal debris
 3. Epithelial debris
 4. Blunt foreign bodies

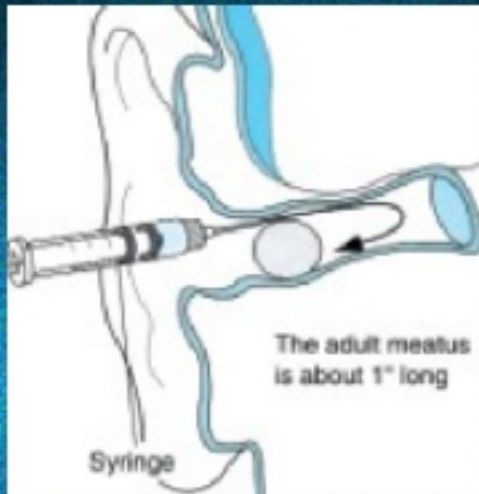


- **CONTRAINDICATIONS FOR SYRINGING**

1. Acute inflammatory conditions of the external or middle ear
2. Discharge from the ear
3. Perforation of the tympanic membrane
4. Previous ear surgeries
5. Impacted hygroscopic foreign bodies
6. Sharp foreign bodies



Technique of ear syringing



Ear irrigation



Ear irrigation syringe



How ear syringing done?

- Patient is seated with the ear to be syringed towards the examiner
- A kidney tray placed over the shoulder of the patient
- The syringe is held in the right hand. Normal saline, distilled water or normal water can be used after boiling and cooling at 37° which is the normal body temperature. Water has to be cooled to body temperature to prevent labyrinthine stimulation (*Caloric effect*)

- Pinna is pulled upward and backward in adults and downwards and backwards in younger children to straighten external ear canal
- Stream of water is directed towards the postero-superior wall of the meatus. The pressure of the water builds up deeper to the wax and expels the wax out
- The ear is made dry with a cotton swab after the procedure. At the end of this procedure, the ear canal, and tympanic membrane must be inspected and dried up with a cotton pledget.

- Complications of syringing can be:
 1. Trauma to external canal or tympanic membrane
 2. Giddiness usually temporary
 3. In the rare instances when there is a perforation, irrigation may force water and wax into the middle ear, causing a nidus for infection
 4. Vaso-vagal shock

INSTRUMENTAL MANUPULATION

- Should be done by skilled hands
- Cerumen hook, Jobson-Horne probe or crocodile forcep
- The instrument is passed alongside and deep to the wax and drawn carefully outwards, removing the wax deposit

Formby cerumen hook and scoop



Crocodile forcep



Jobson Horne's forbe



Otomicroscopic wax removal

