

Otitis Media with effusion

- It's defined as the presence of fluid (**non purulent**) in the middle ear → mucoid or serous
- The leading cause of hearing loss in children with peak incidence of **2-5** years of age

→ Risk factors :

Children , Family history, Day care, Adenoidal hypertrophy , Cystic fibrosis, Bottle feeding, Allergies & Exposure to tobacco smoke, Cleft palate (chronic OME), Low socioeconomic status.

→ Causes :

- Caused by anything that leads to → **overproduction of mucus** or **impaired clearance of mucus** or **both**

- 1) infx (viral & bacterial) → inflammatory **edema** of the mucosa → obstruct the E. tube.
→ Temporary **paralysis of cilia** by bacterial exotoxins → impedes the clearance of an effusion.
 - 2) Eustachian tube dysfunction
 - 3) Recurrent URTI
 - 4) Nasopharyngeal obstruction / or by CA mainly in adult >> **Unilateral**
 - 5) Allergy
 - 6) Barotrauma (diving)
- **tubal obstruction** → **decrease in the intratympanic pressure** → **transduction of fluids from the vasculature** → **OME**

Functions of the ET

- 1) Protection of the middle ear from nasopharyngeal secretions.
- 2) Clearance of secretions of the middle ear
- 3) Pressure equilibration between the external and middle ears.

→ Symptoms :

- Asymptomatic or symptomatic (MC symptom is hearing loss)
- blocked feeling in the ear.
- younger children have delayed speech development or behavioral problems.
- + their Mother may notice that her child tends to do traction to his auricle.

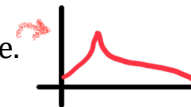
→ Examination Findings :

Otoscopy → Yellow discoloration in tympanic membrane, Dull TM , Horizontal Handle of Malleus
Fluid line and air bubbling



→ Diagnosis :

- Tympanogram. ▶ type B curve, with absent stapedial reflex.
▶ ET dysfunction + no fluid accumulation ▶ type c curve.
- Audiogram ▶ Conductive hearing loss with a maximum OF 10-30 db



→ Treatment :

- 90% resolve spontaneously without any medical intervention.

OME → **Risk factors modifications** → **Medical treatment** → **Surgical treatment**

1. Avoiding secondhand smoke
2. Breastfeeding , avoid bottle
3. Avoiding daycare centers
4. Avoiding exposure to affected ones
5. Avoiding known allergens
6. Chewing gum

1. Antimicrobial agents
2. Steroids
3. Antihistamines, **?** decongestants, mucolytics.

- Clearly effective → **myringotomy** with or without **tube insertion**, **adenoidectomy**
- if > 3 months , impaired hearing (> 40db)
→ insert a tube !!

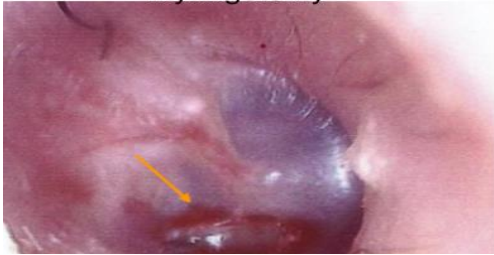
- Refer to otolaryngologist when When you're concerned about **persistent conductive hearing loss**, signs of **language development delay**, disease is **recurrent**.

→ Late complications :

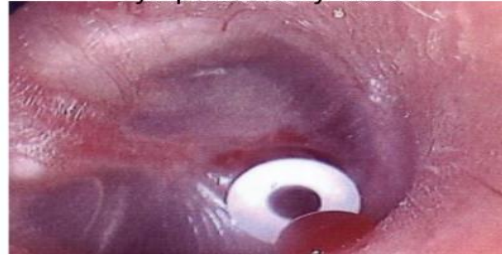
1. Persistent otorrhea (most common)
2. Tympanosclerosis
3. Persistent perforation

- Myringotomy ▶ surgical procedure, to relieve pressure caused by excessive buildup of fluid, or to drain pus
- ▶ For moderate to severe hearing loss.
 - ▶ Advantages:
 - ✓ improvement of hearing
 - ✓ duration of middle ear effusion (MEE) ↓
 - ✓ time to recurrence ↓
 - ✓ less need for repeated procedures.

Myringotomy



Tympanostomy Tube



Shepard Grommet



Soileau Tytan®
Titanium Ventilation Tubes



Spoon Bobbins



Goode T-Tubes®

✓ ✓ → Stay for longer time



Armstrong Beveled
Grommets, Modified



Paparella-Type Vent Tubes



Triune Tubes



All tubes are designed to permit ventilation of the middle ear and mastoid system. Typically, the tubes self-extrude 9-12 months after placement.

