

OTITIS MEDIA (OM)

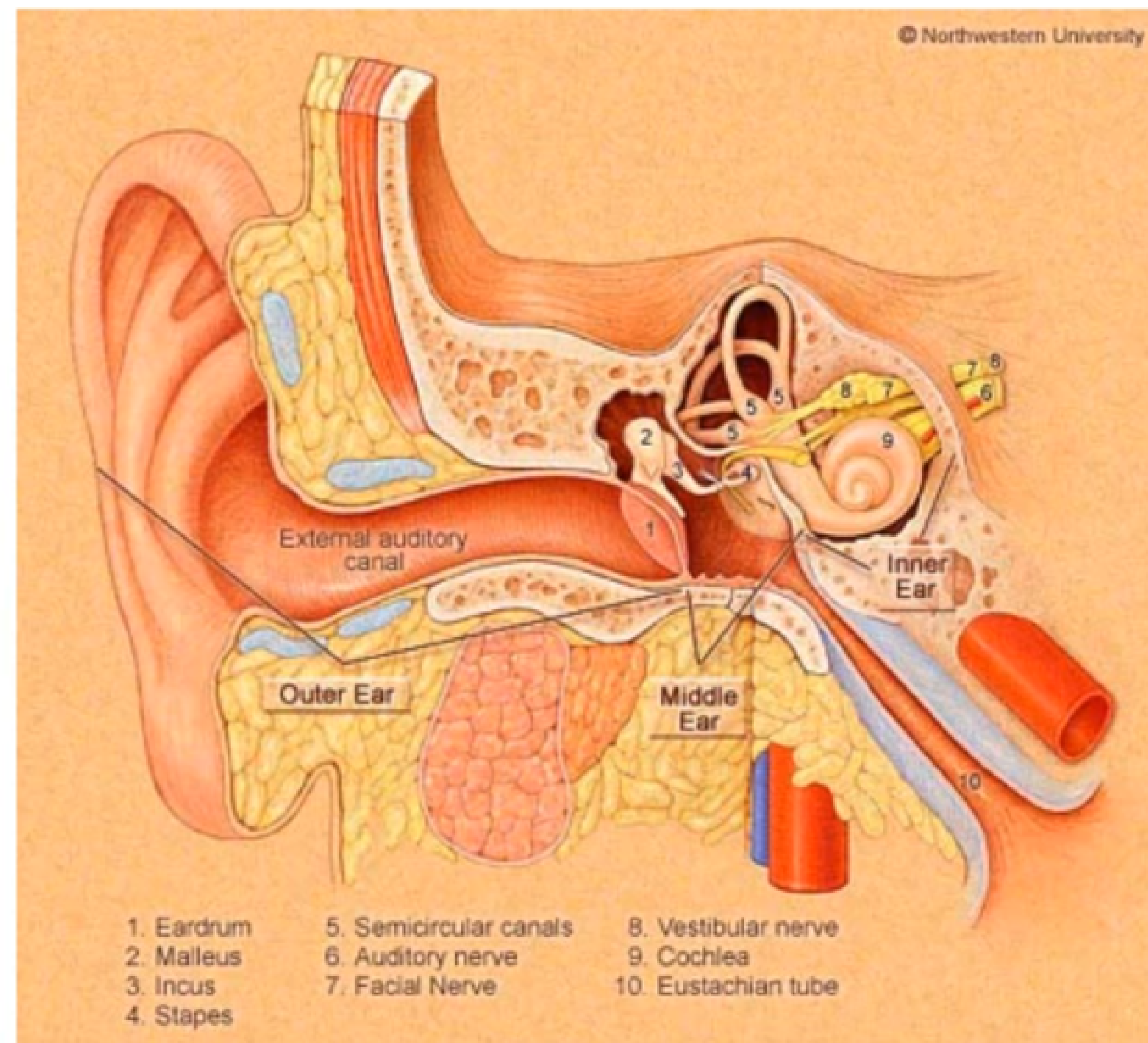
Dr.Laith Khasawneh

A. Professor / faculty of medicine

Hashemite University

Otitis media

- **Otitis media:** is inflammation of the middle ear, or a middle ear infection.



Otitis Media

- It is the most common disease of childhood, next to viral URTI.
- It is acute bacterial infection in 80% (1-6 years)
- The most frequent disease treated with antibiotics.
- Infectious & non inf. OM result in significant morbidity.

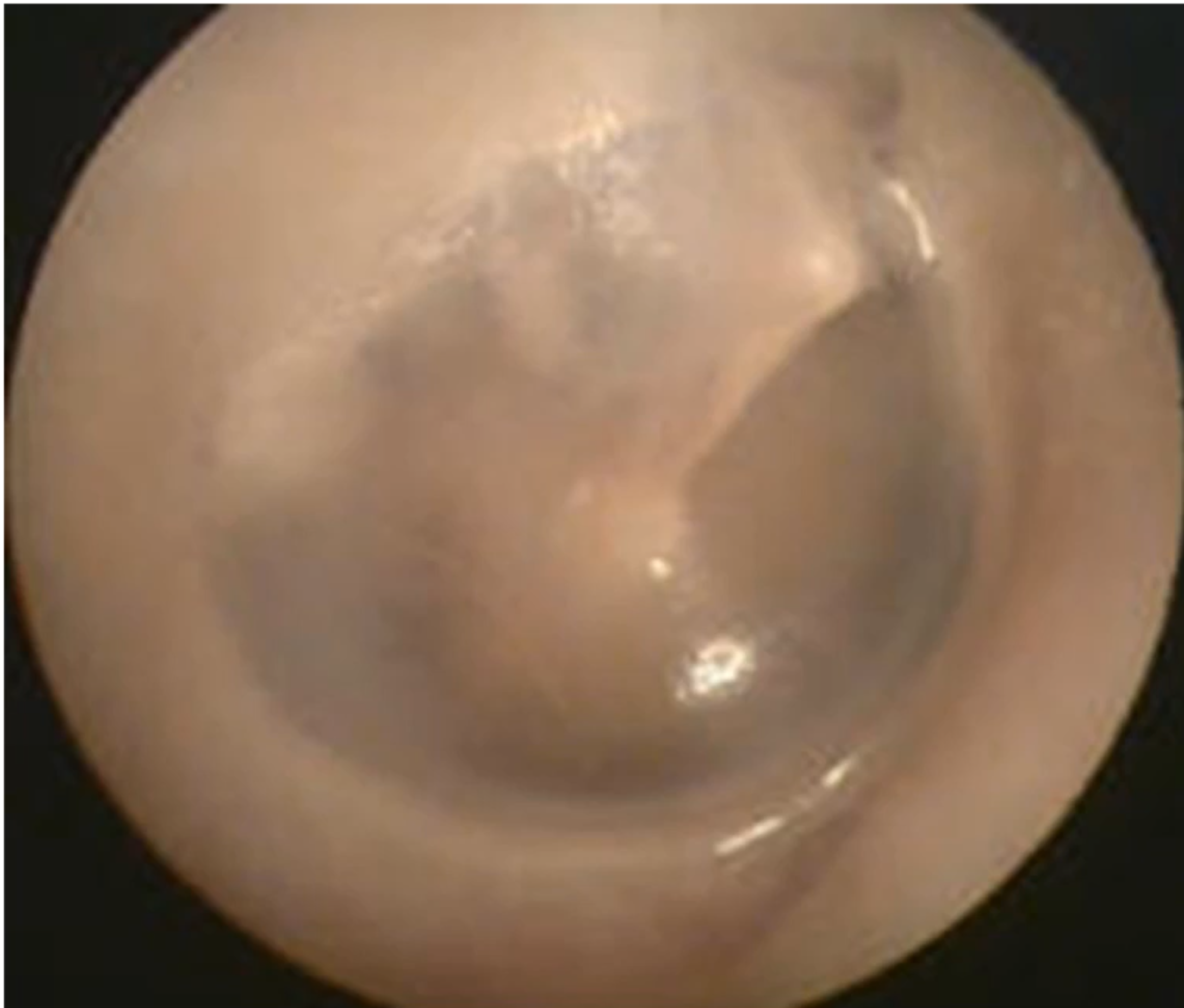
Otitis Media

1-Acute Otitis Media

- Acute bacterial infection with purulent exudate in ME.
- Characterized by : rapid sign and symptoms.

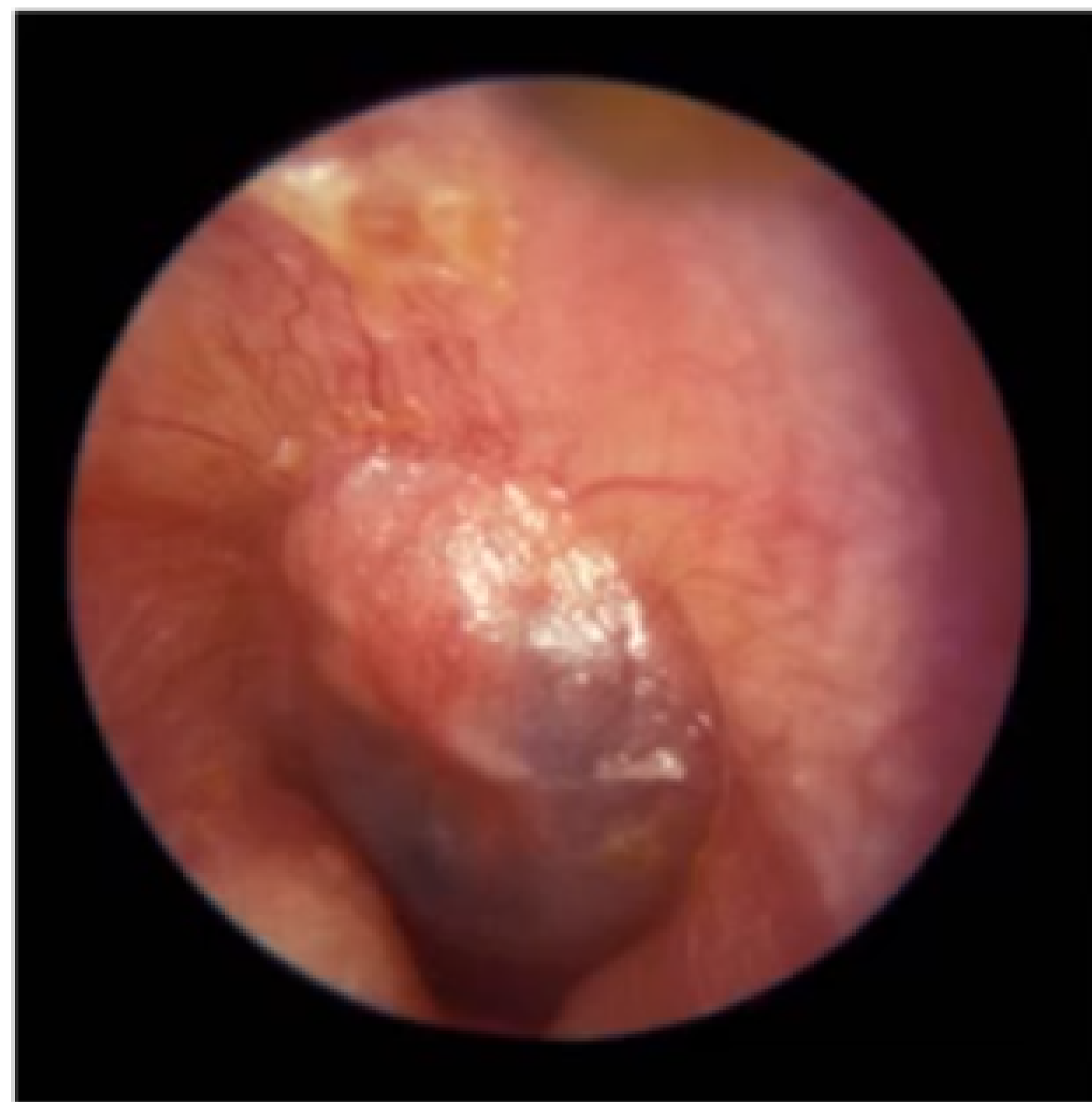
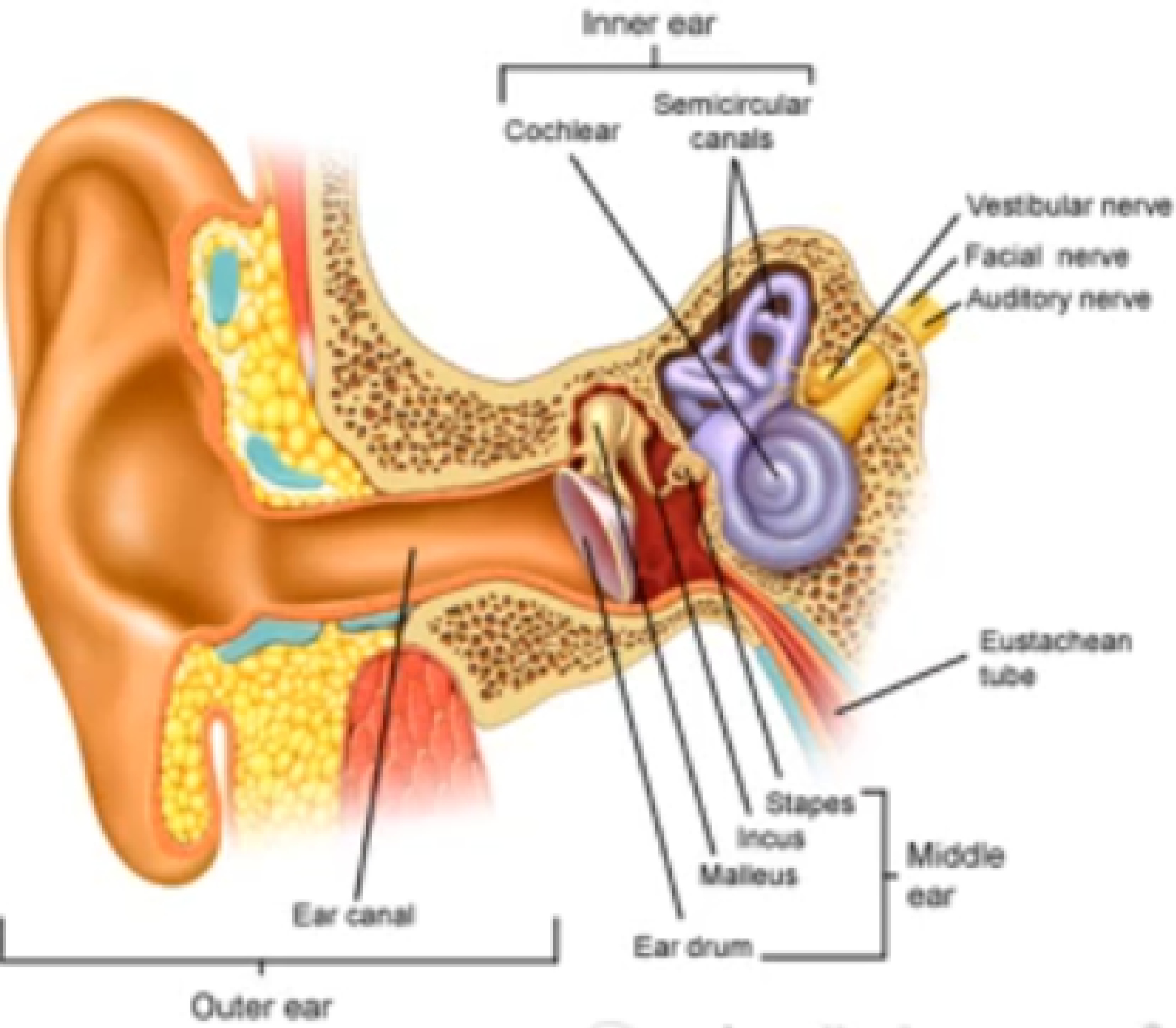
Otitis Media

- Incidence:
- 1-7 years of age with peak incidence in 1 year-old.
- **Finland study** (75 % of children under 10 y.at least 1 /OM)
- 6- 11 month-old 75.5% one attack OM.
- 30% of children below 5 y. had multiple OM.
- 4 time higher in winter than in summer.



Normal Ear Drum

Pathogenesis



Stage of Tubal Occlusion

Pre-Suppuration

Eustachian Tube obstruction

Middle ear air absorption

Engorgement of middle ear cleft lining

Acute inflammation of Middle ear cleft

Hyperemia of Tympanic membrane

Serous exudation

Bulging Tympanic Membrane

Adenoid hypertrophy
immature ET Tube
Nasopharyngeal Ca
Ciliary dysfunction

Cleft palate

a- tensor tympani muscle

b- levator palati muscle

c- tensor palati muscle

d- Salpingopharyngeus muscle

Pathogenesis



Middle ear contamination
Stage of
Suppuration

Stage of
resolution

Exudation
becomes purulent

Further congestion
and bulging of
tympanic membrane

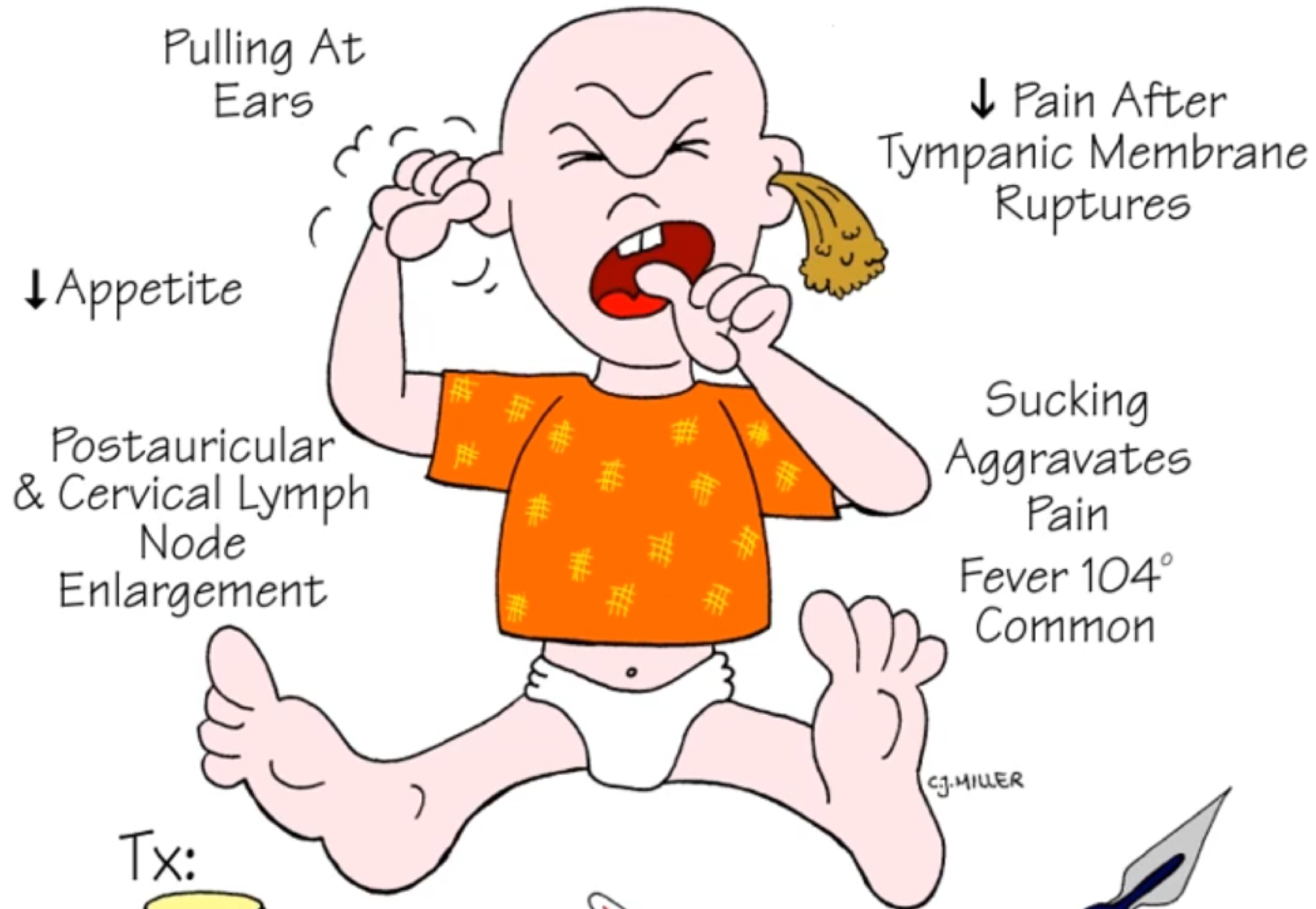
Tympanic
membrane may
rupture

Discharge of pus

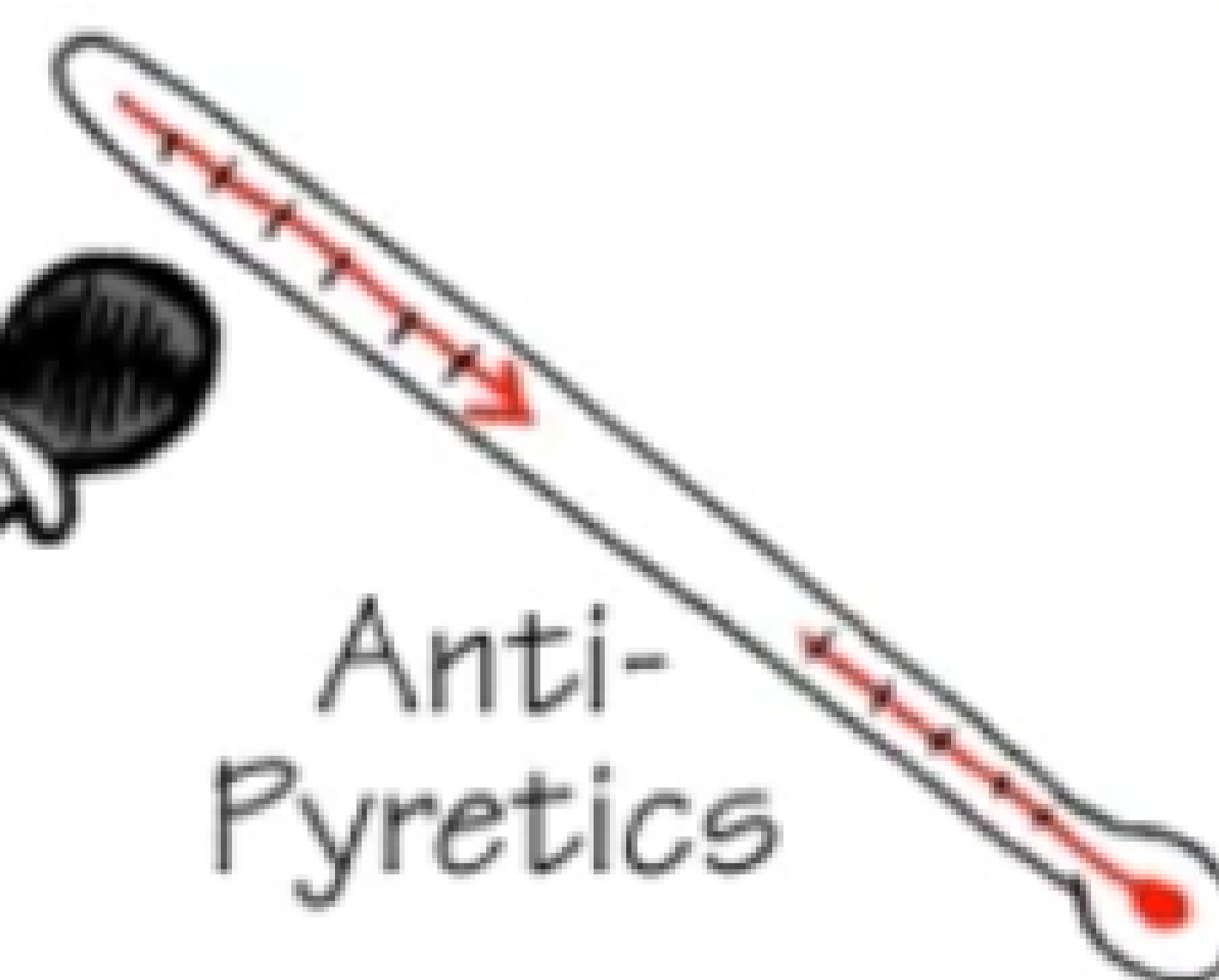
Usually resolves
with treatment

Middle ear returns
to normal

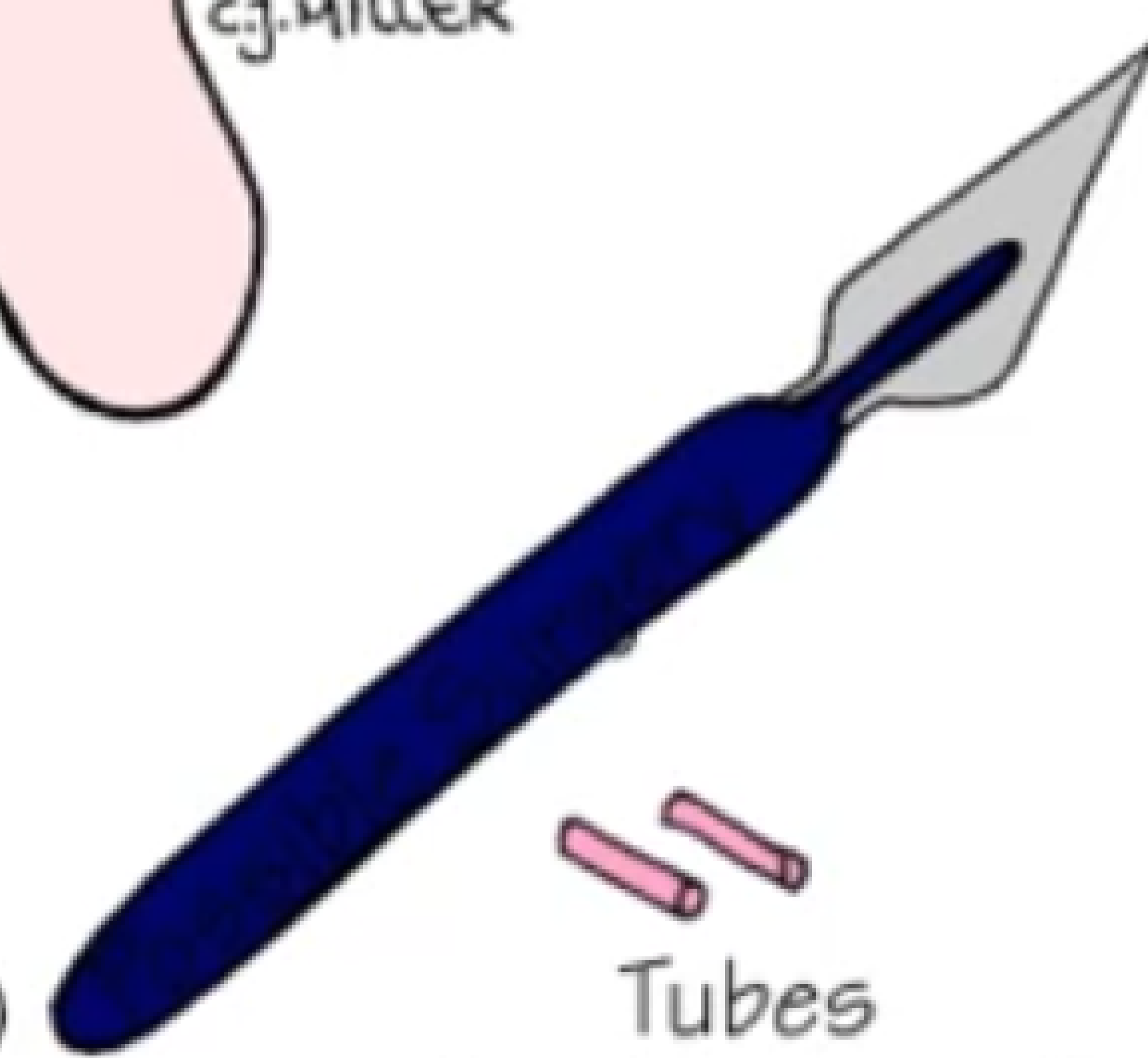
OTITIS MEDIA



Tx:



Anti-Pyretics



Tubes (Myringotomy)

OTITIS MEDIA

Presentation:

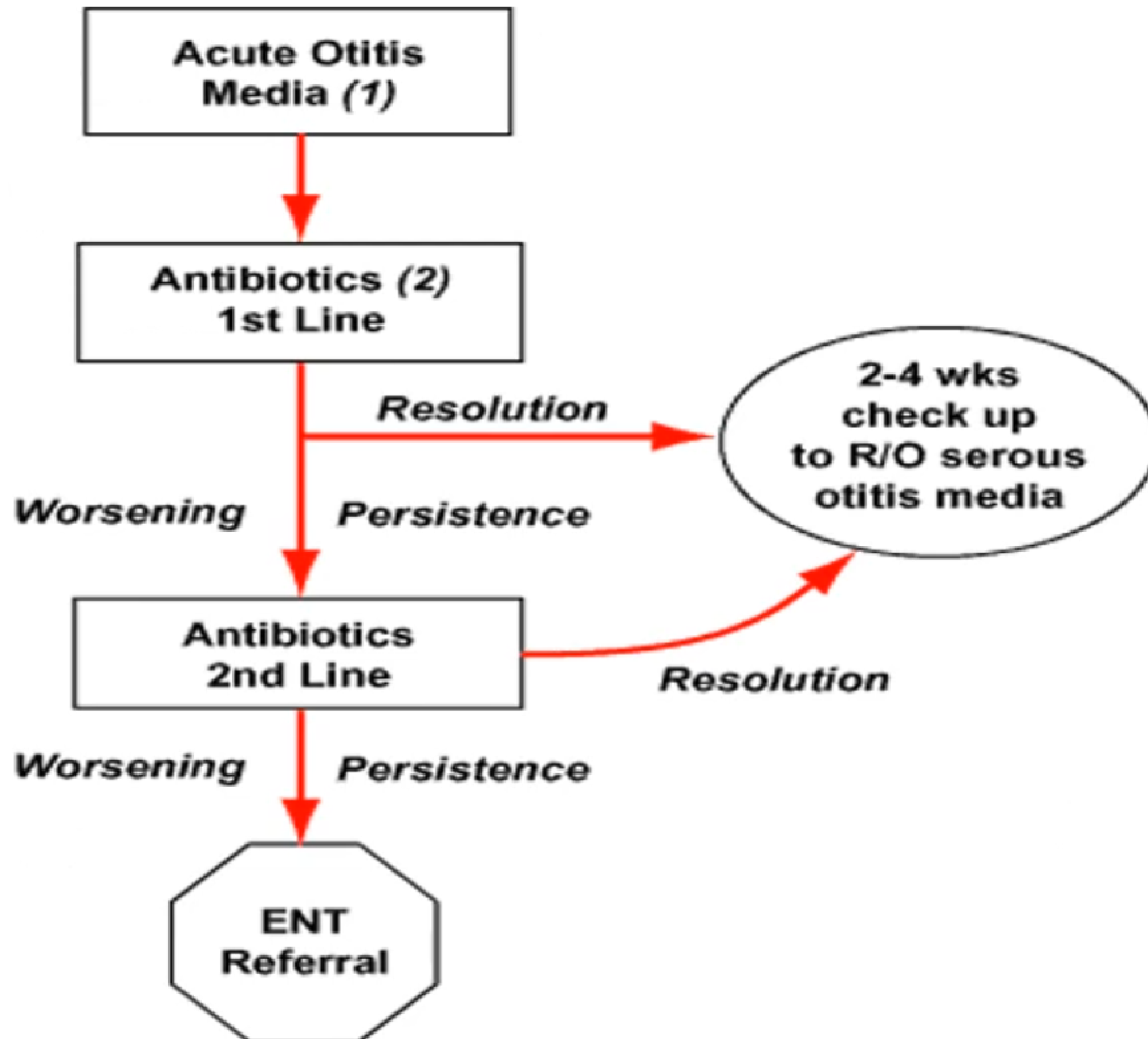
- Acute onset of otalgia **(T)**.
- Fever
- Sleeplessness
- Irritability
- Pulling of the ear by the child
- Some degree of hearing loss
- Ear discharge.
- Tinnitus.
- Ear fullness.
- Dizziness.

OTITIS MEDIA

<i>Streptococcus pneumonia</i>	25%
<i>Hemophilus influenzae</i>	25%
<i>Morexilla catarrhalis</i>	20%
<i>Streptococcus pyogenes</i> (Grp. A)	2%
<i>Staphylococcus aureus</i>	1%
Others	20%
Mixed infections	5%
No growth	Remainder

OTITIS MEDIA

Treatment



OTITIS MEDIA

- acute recurrent otitis media
- At least 3 or more episodes of otitis media in 6 months or more than 4 episodes in 12 months with complete resolution between every attack

2- OTITIS MEDIA WITH EFFUSION



Most common disease treated by pediatricians

Myringotomy & tube insertion is the most common surgery in children.

OTITIS MEDIA WITH EFFUSION

- Chronic , asymptomatic.
- 20 to 35% no history of AOM.
- Fluid in the ME could be:



serous

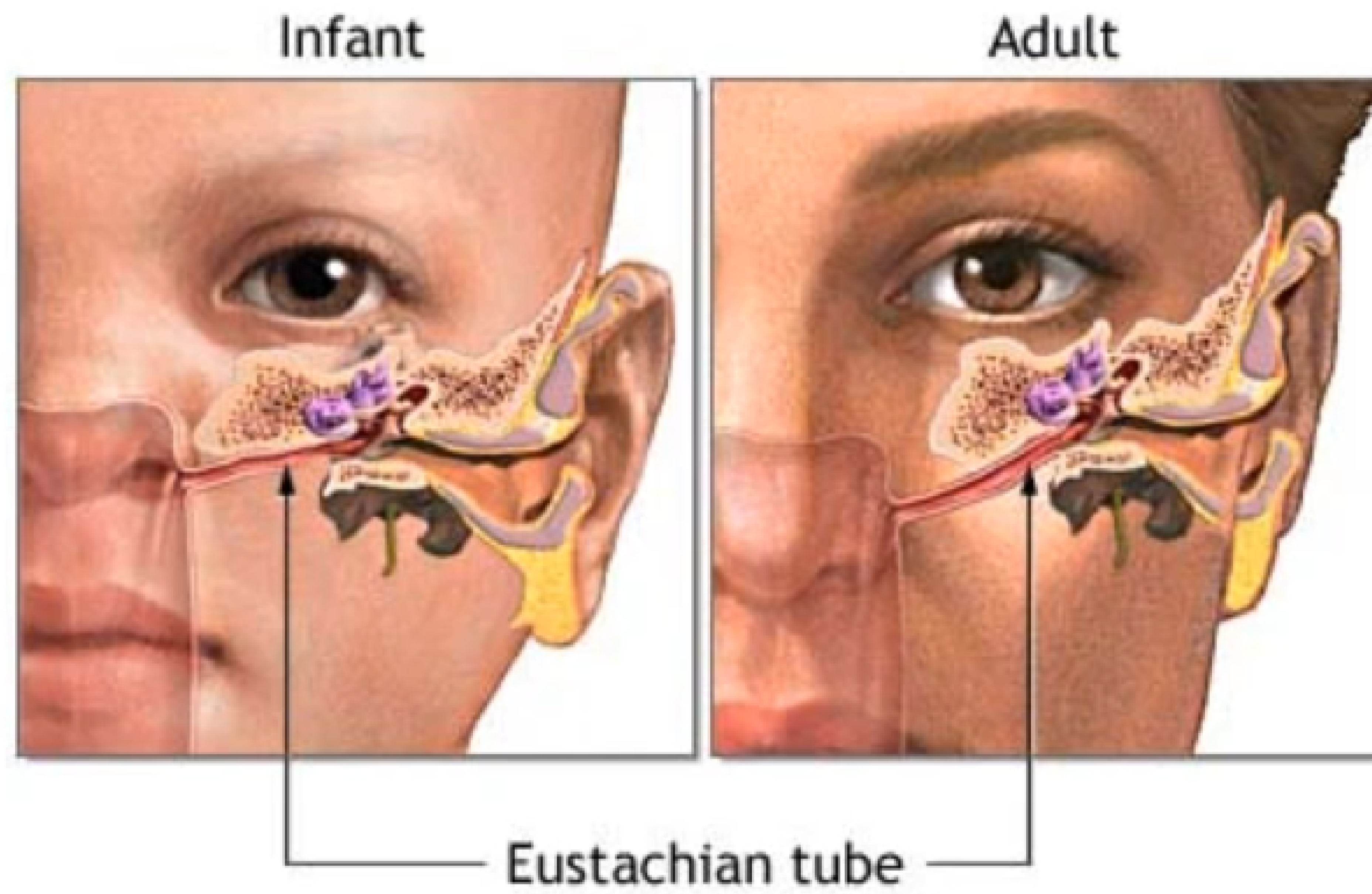
mucoid (glue ear)

mucopurulent

Serous Otitis Media



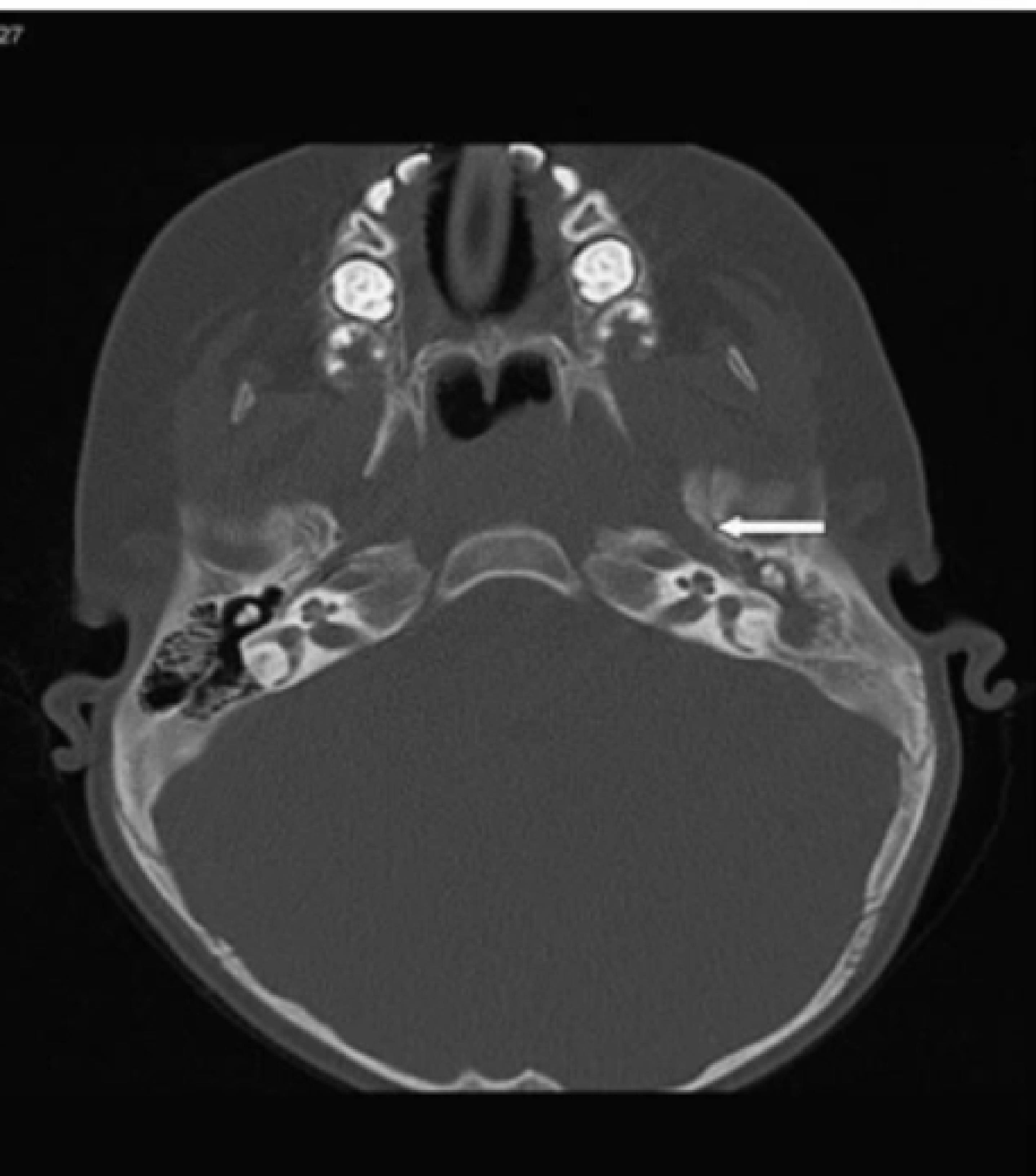
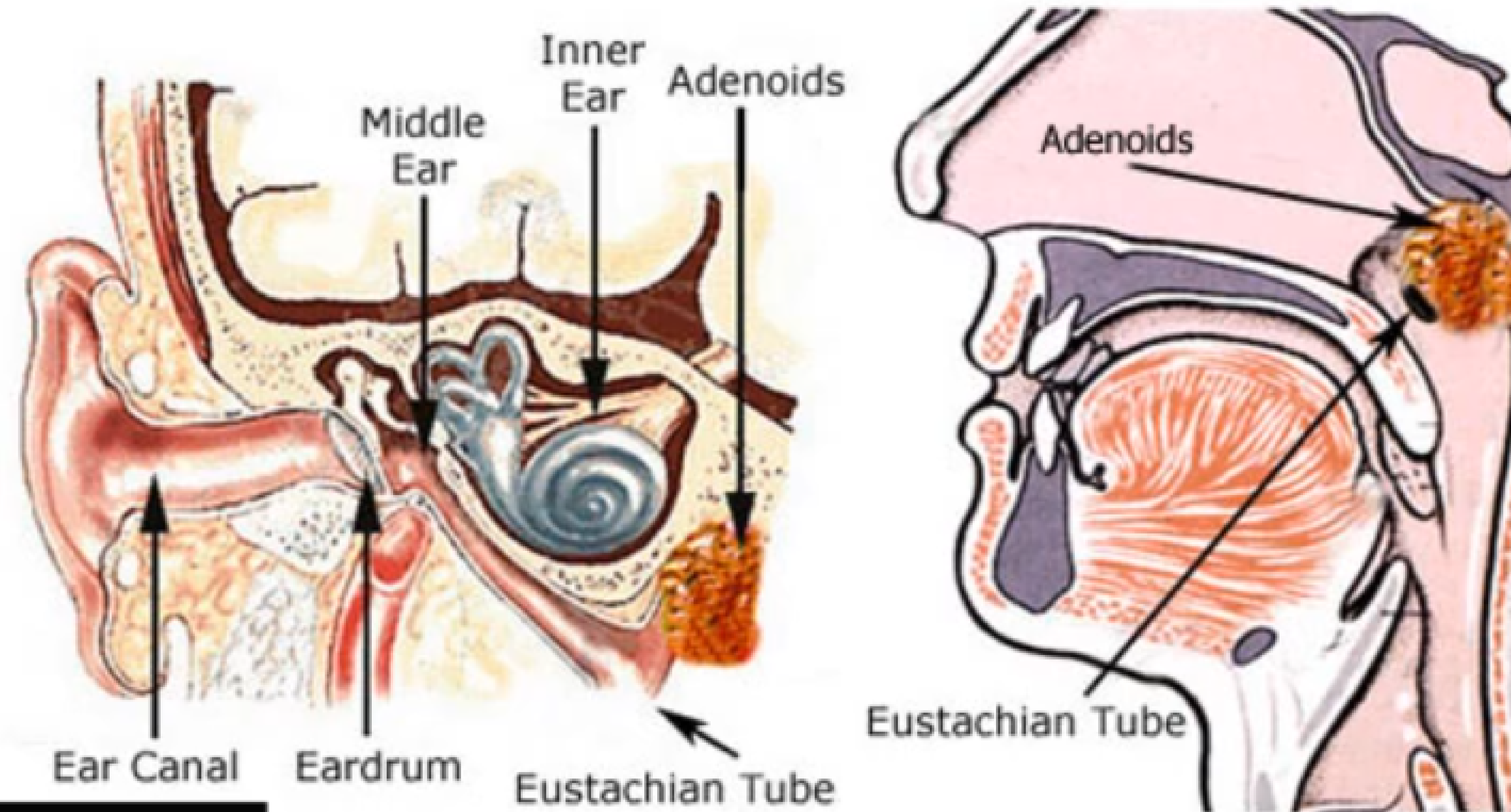
OTITIS MEDIA



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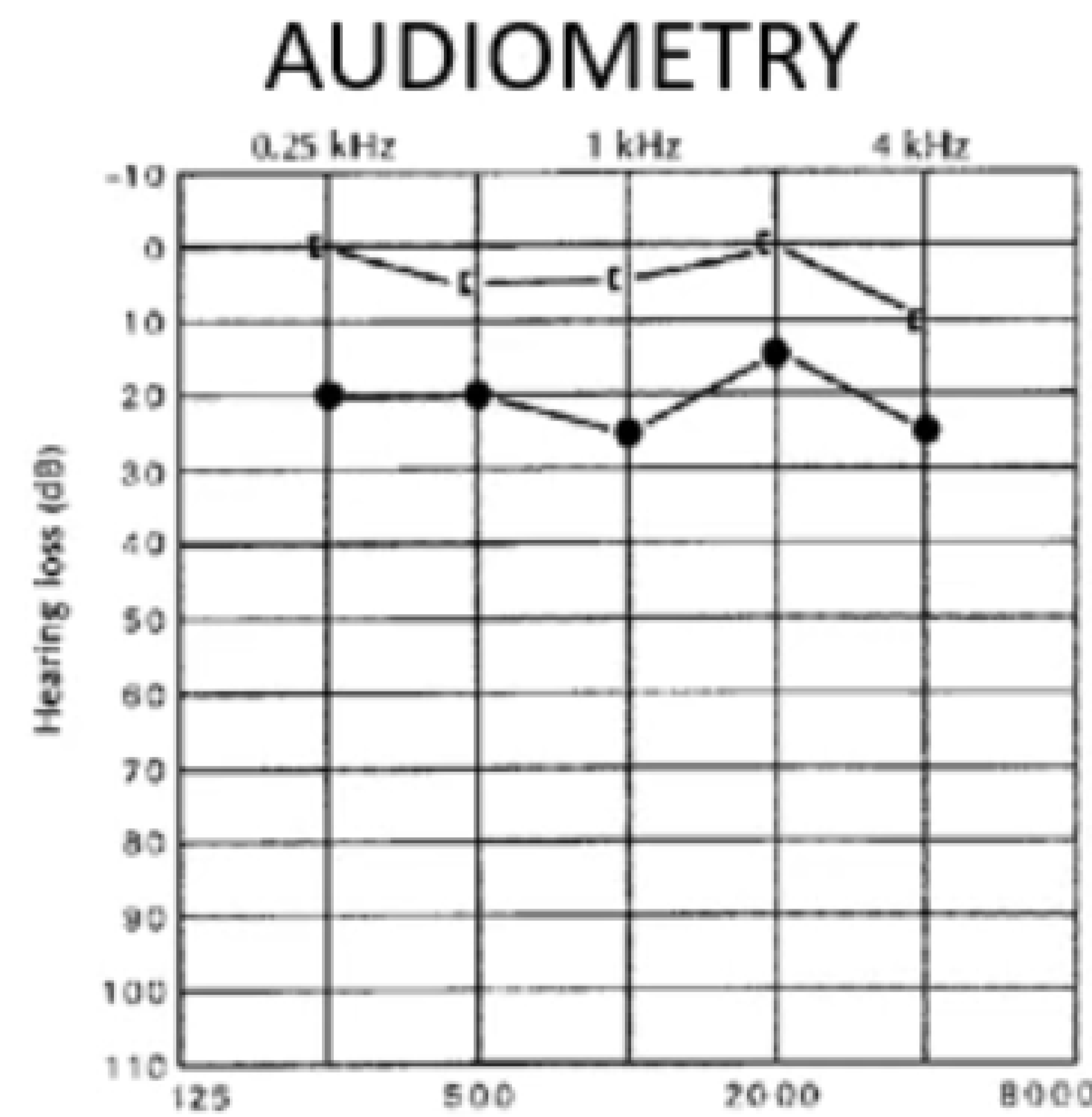
OTITIS MEDIA WITH EFFUSION





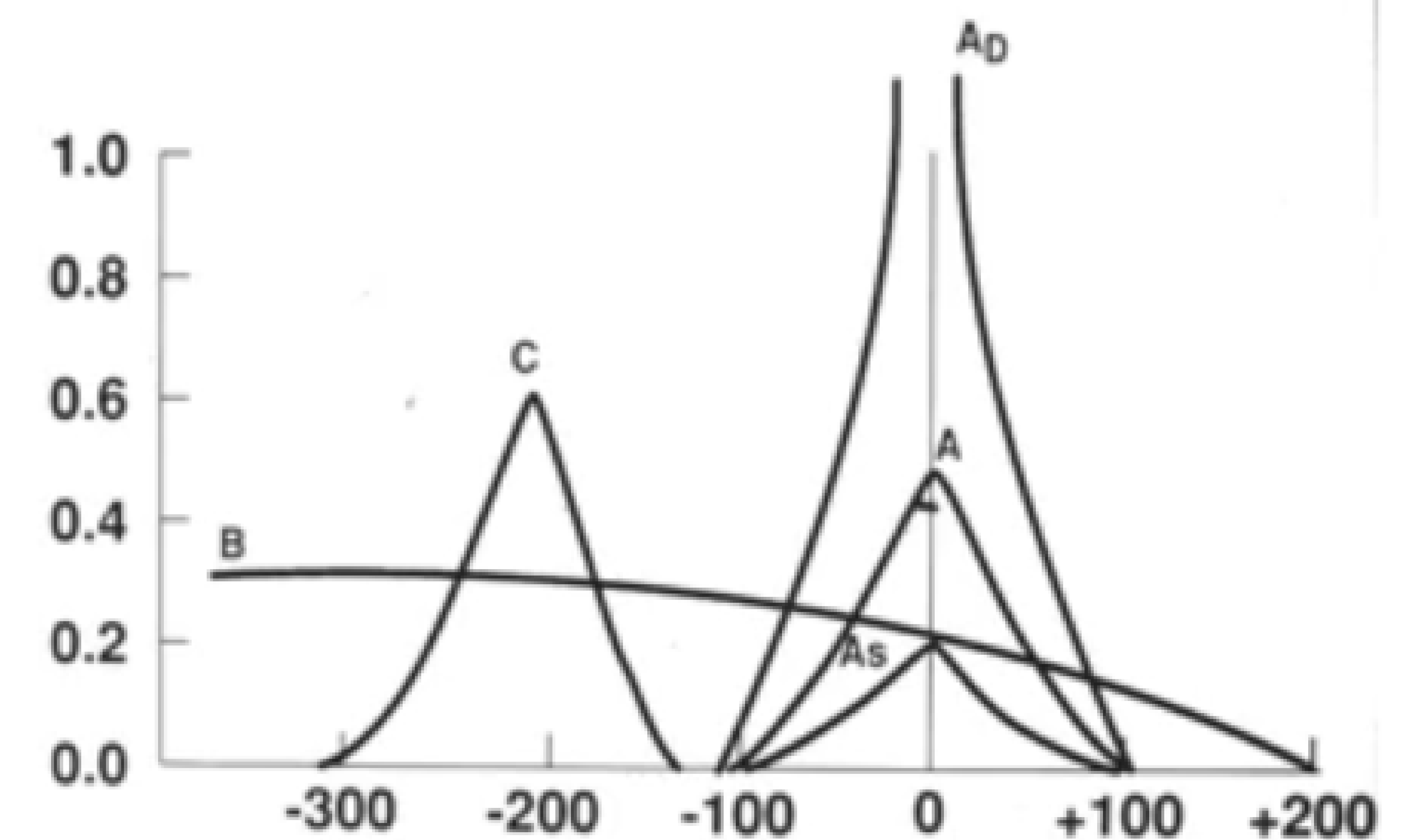
OTITIS MEDIA WITH EFFUSION

- Diagnosis



PLAY AUDIOMETRY

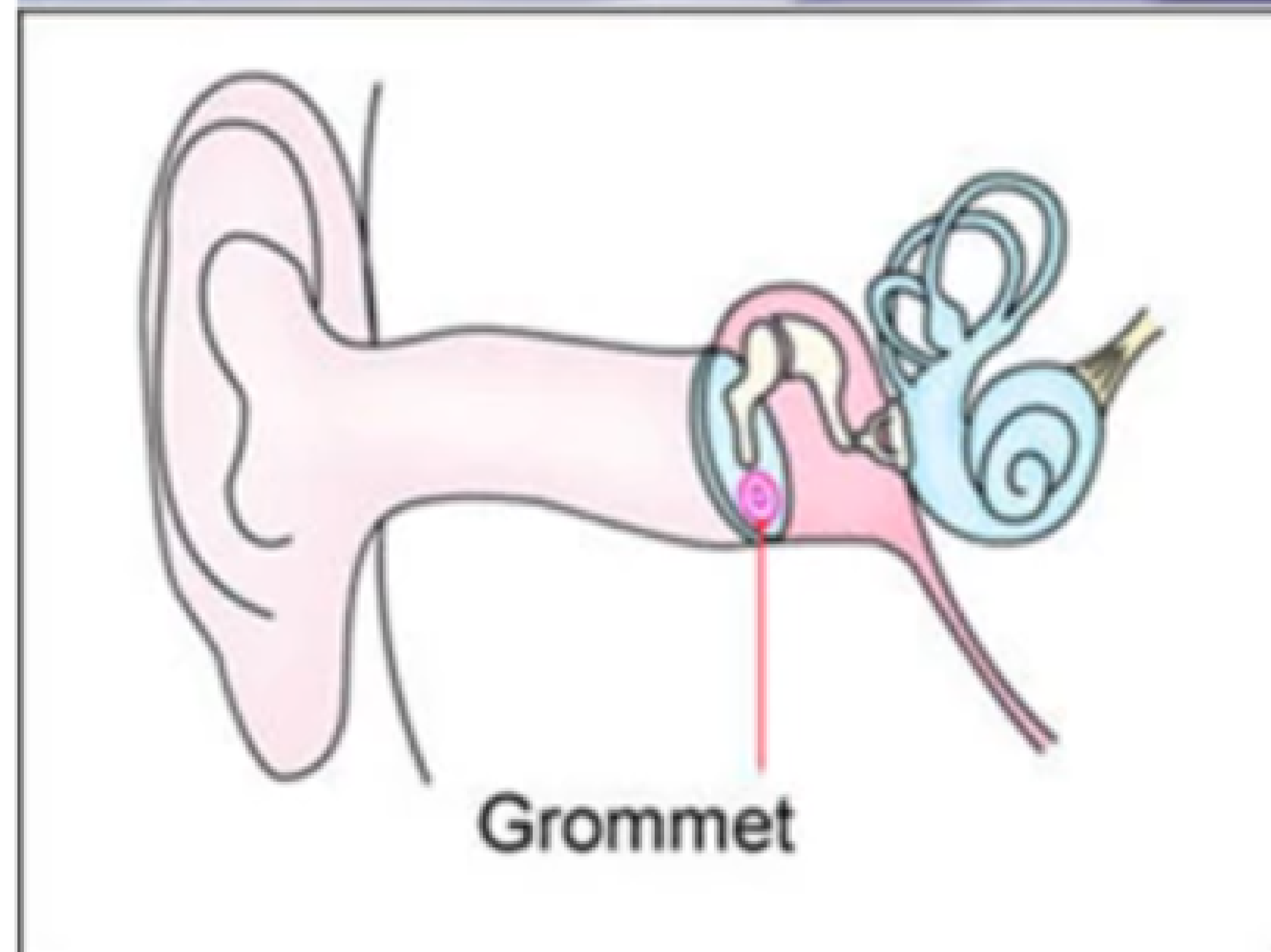
TYMPANOMETRY



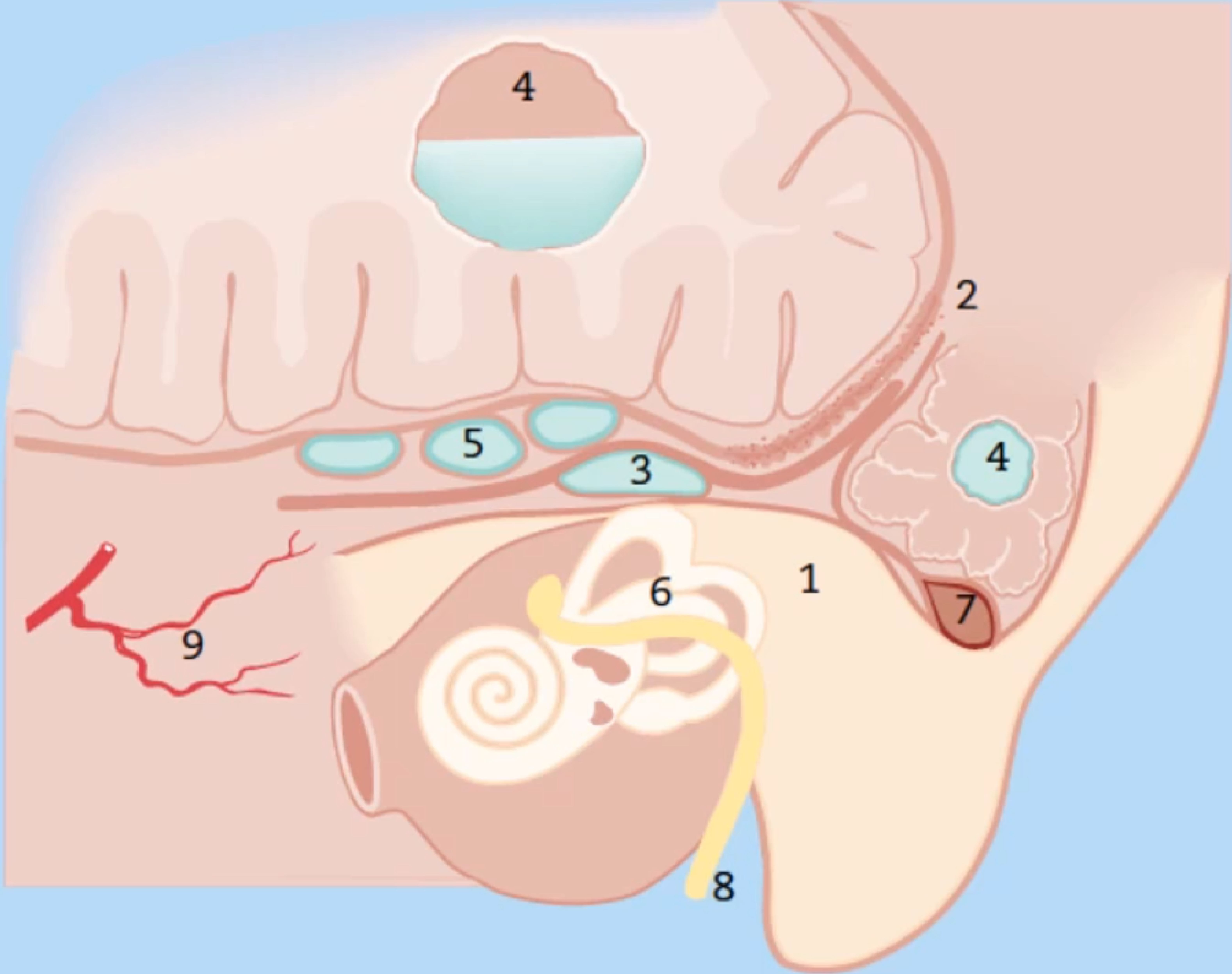
OTITIS MEDIA WITH EFFUSION

Treatment

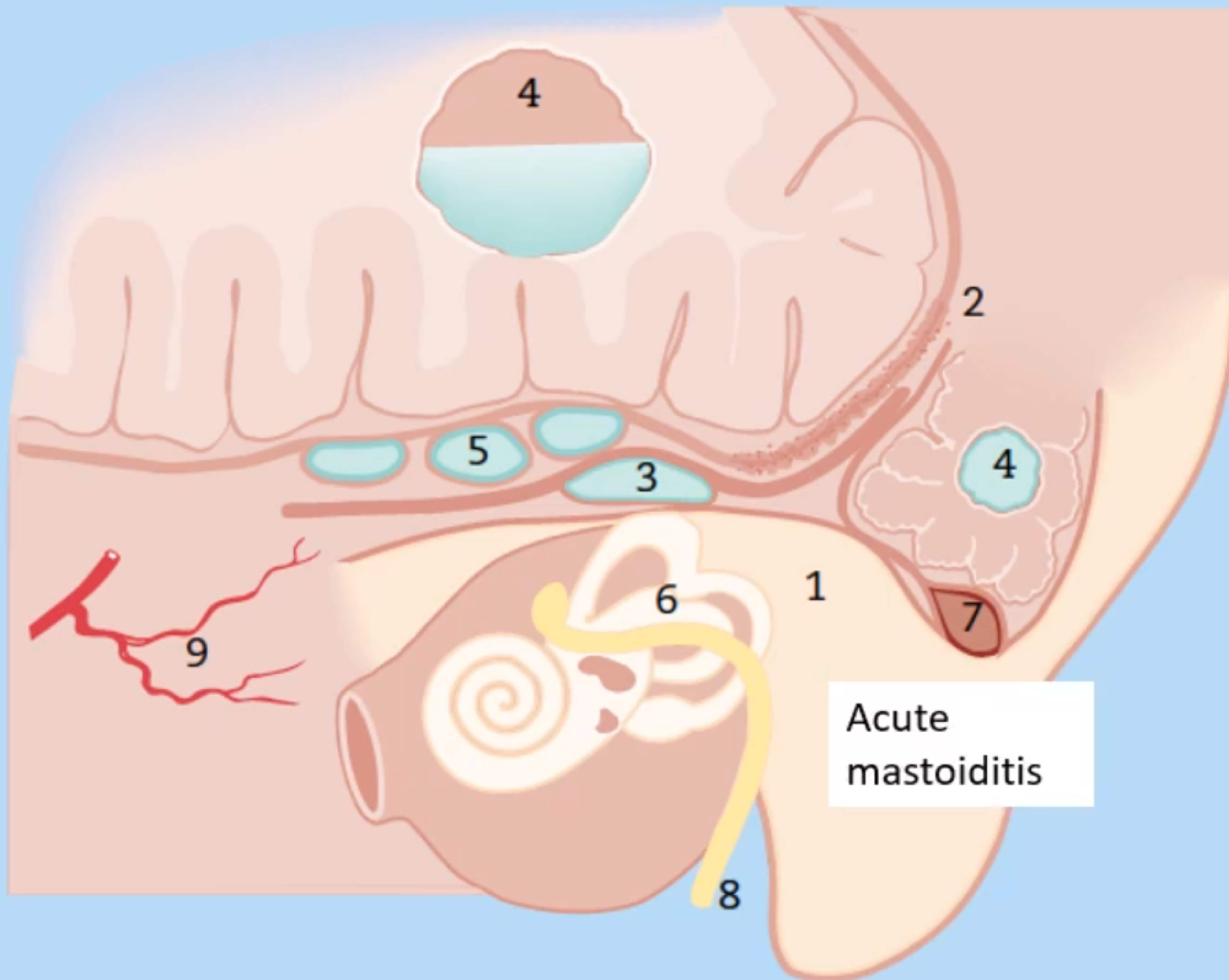
- Adeno – Tonsellectomy & Myringotomy tube insertion (T&A & TUBES)



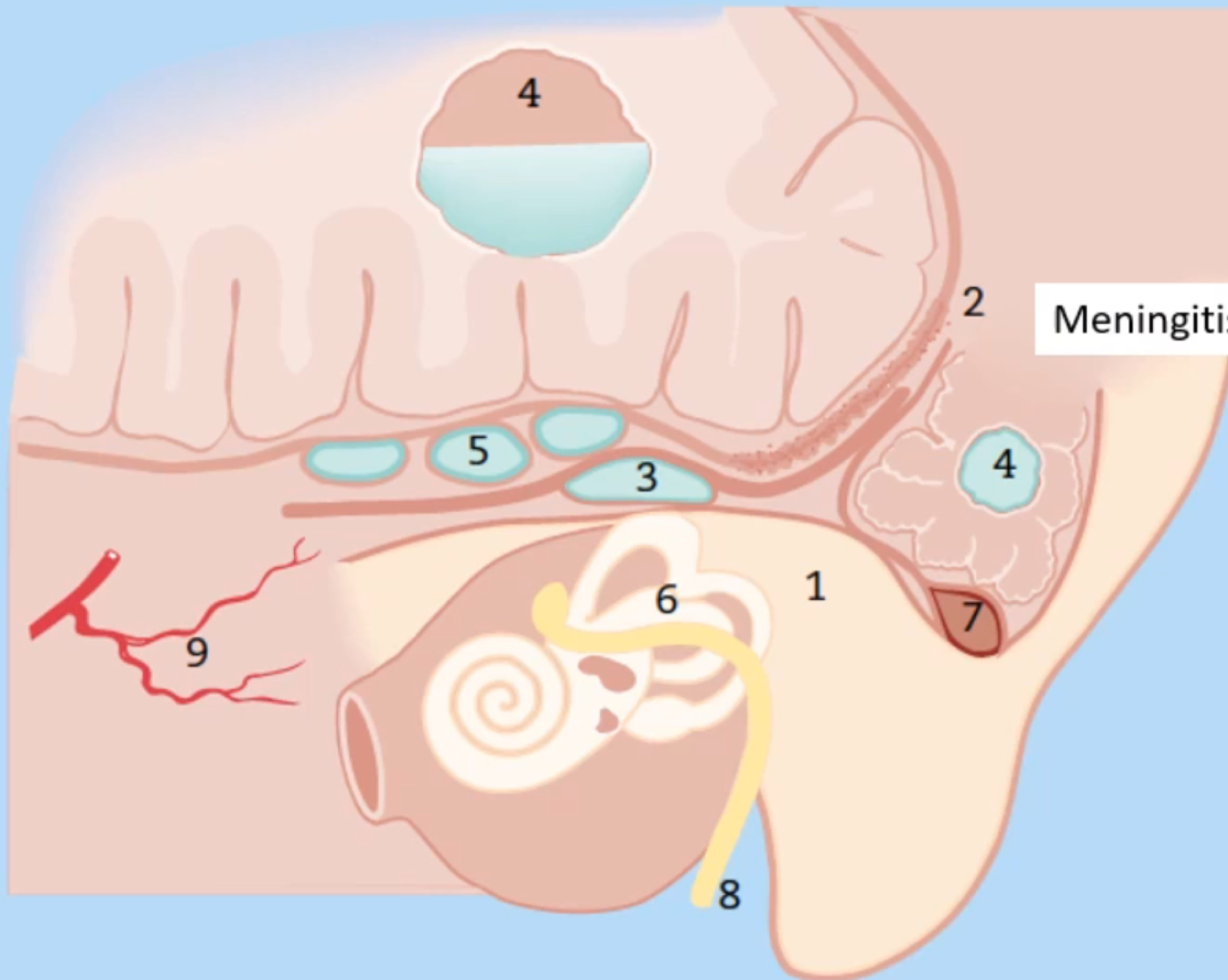
Complication



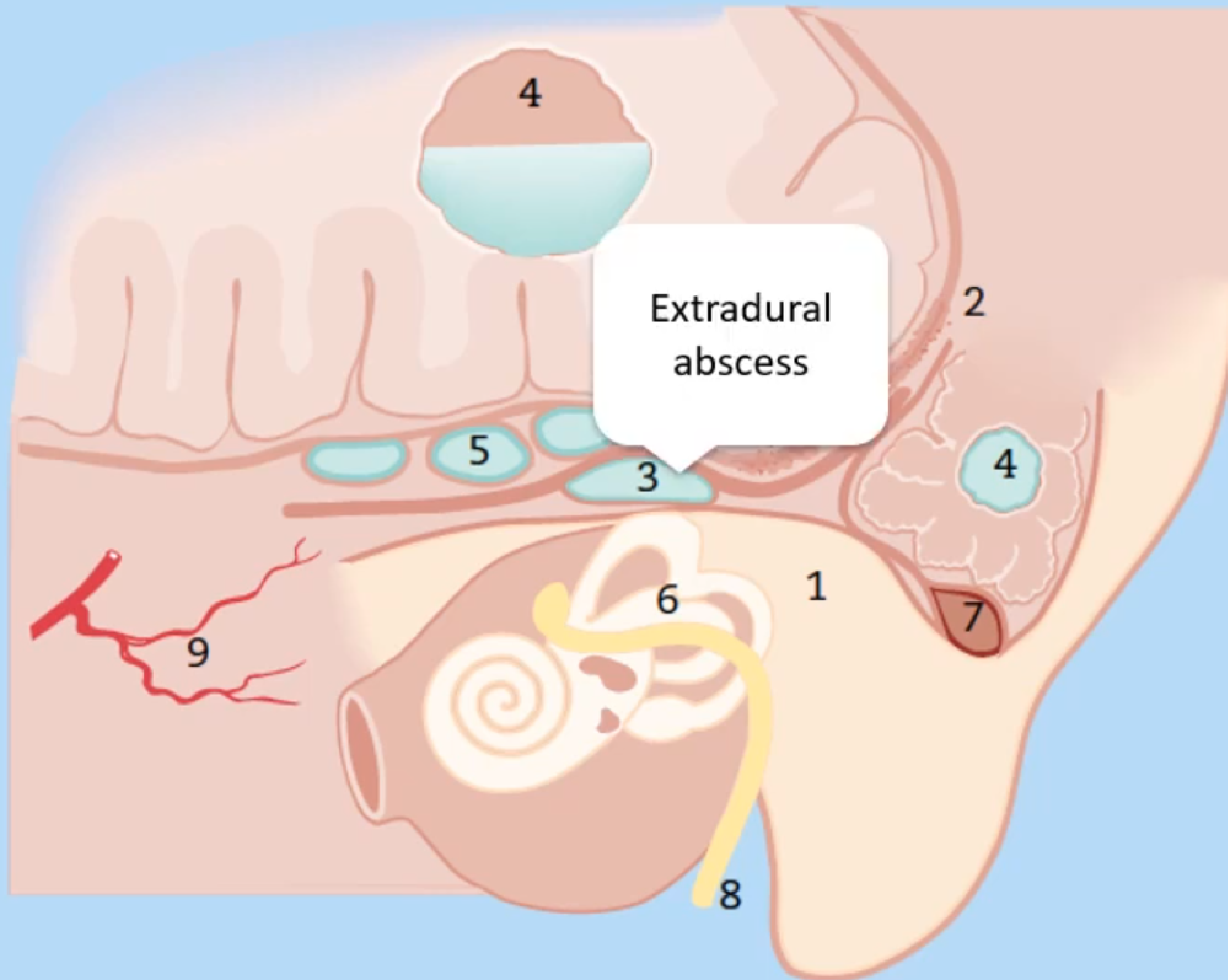
Complication



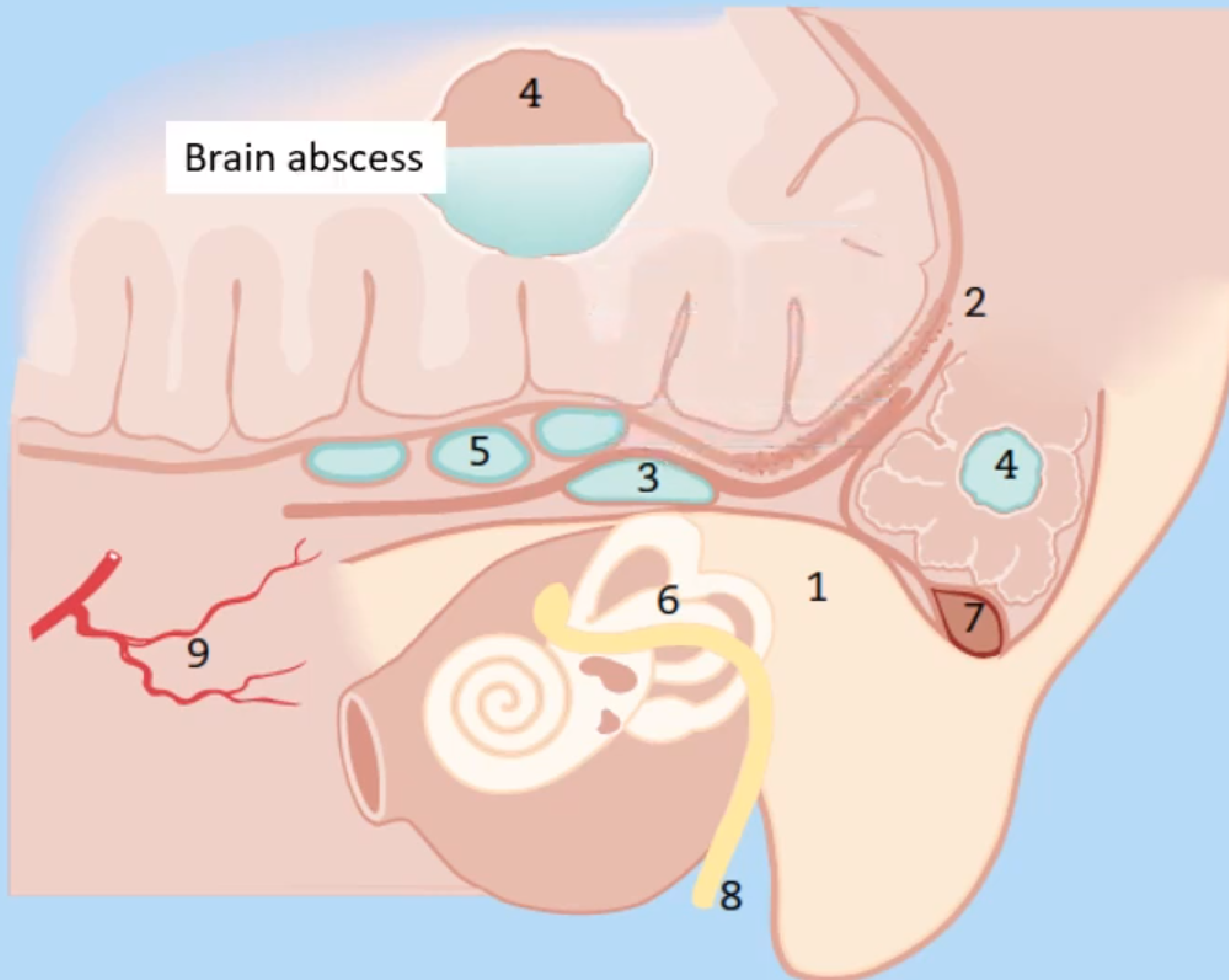
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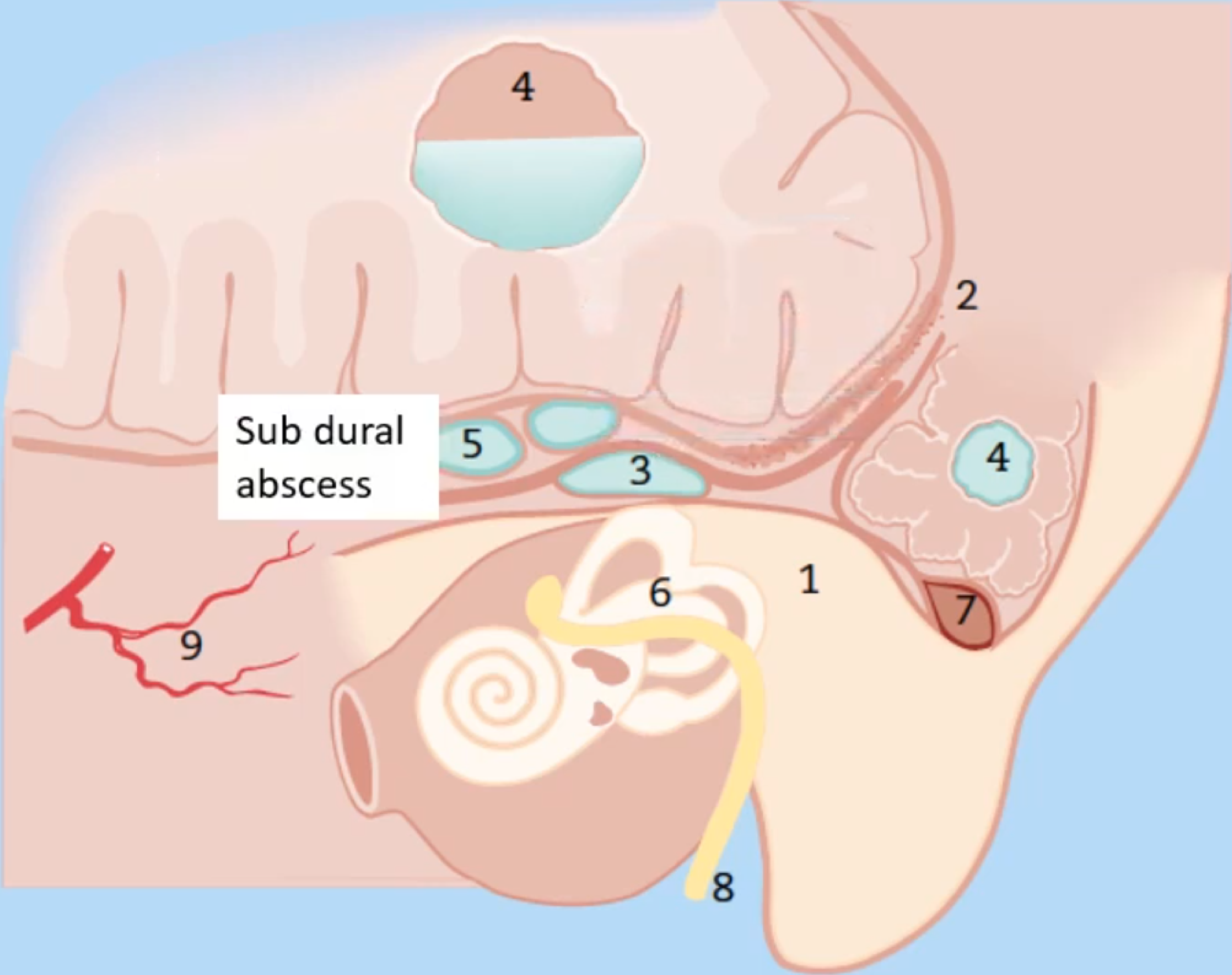
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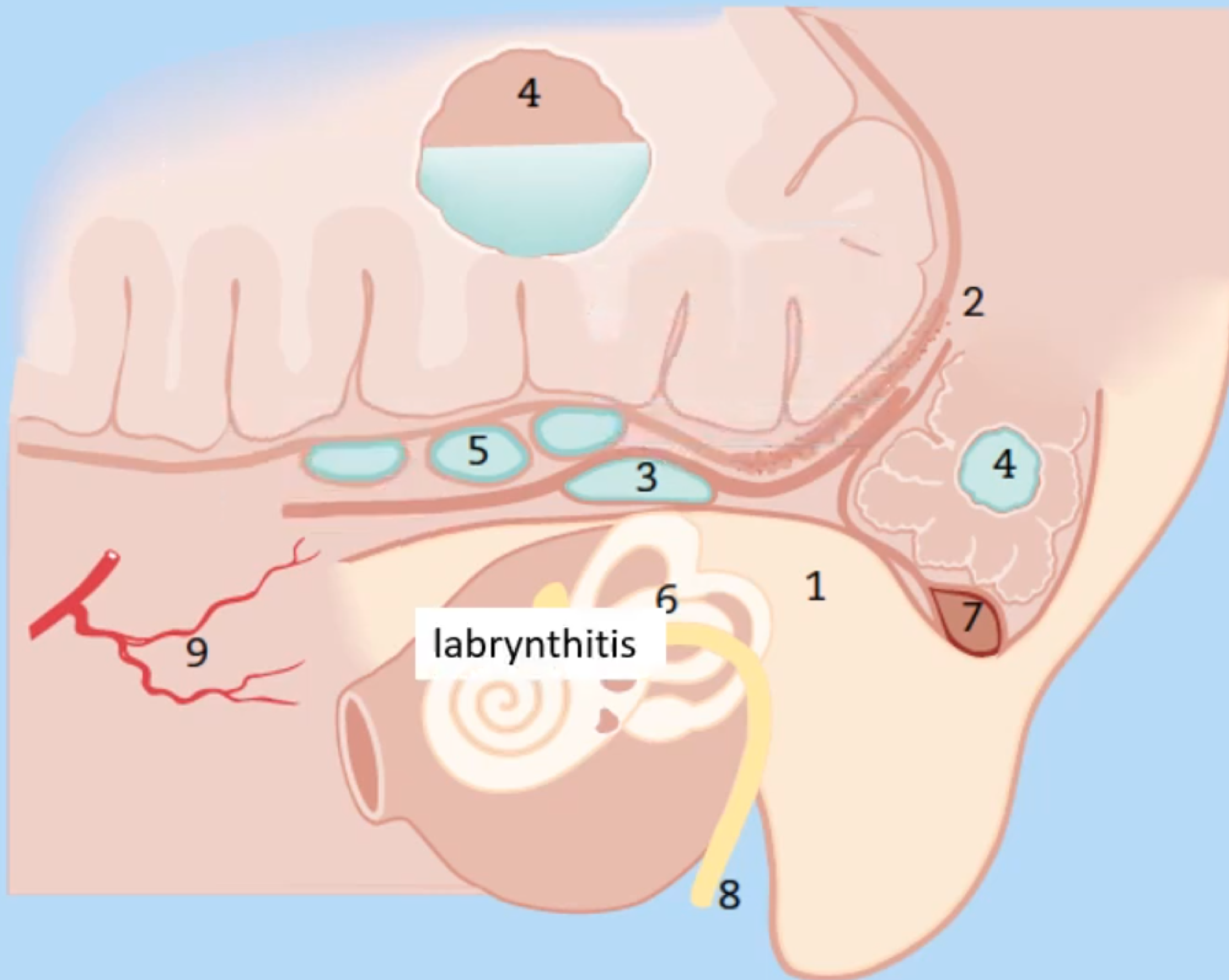
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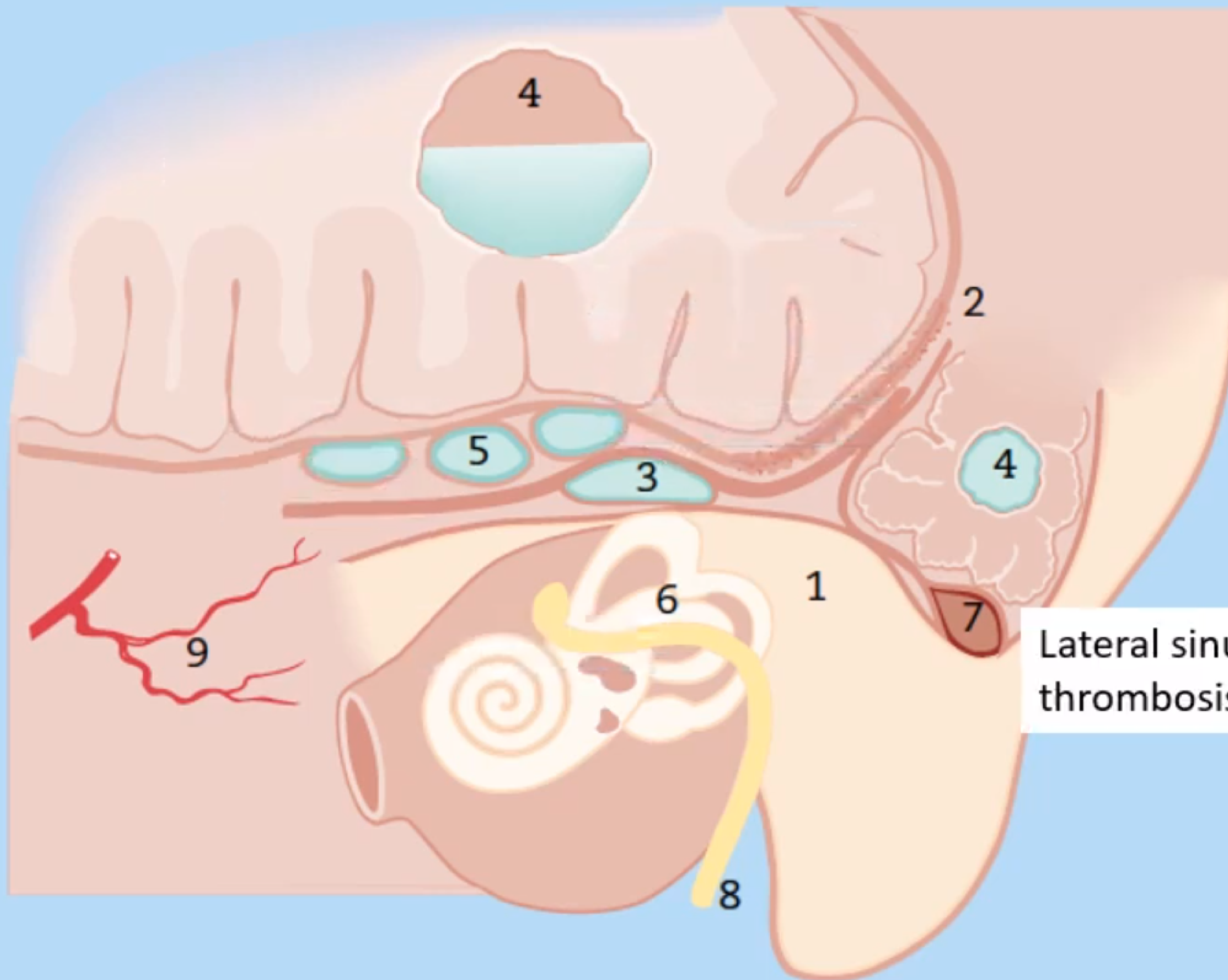
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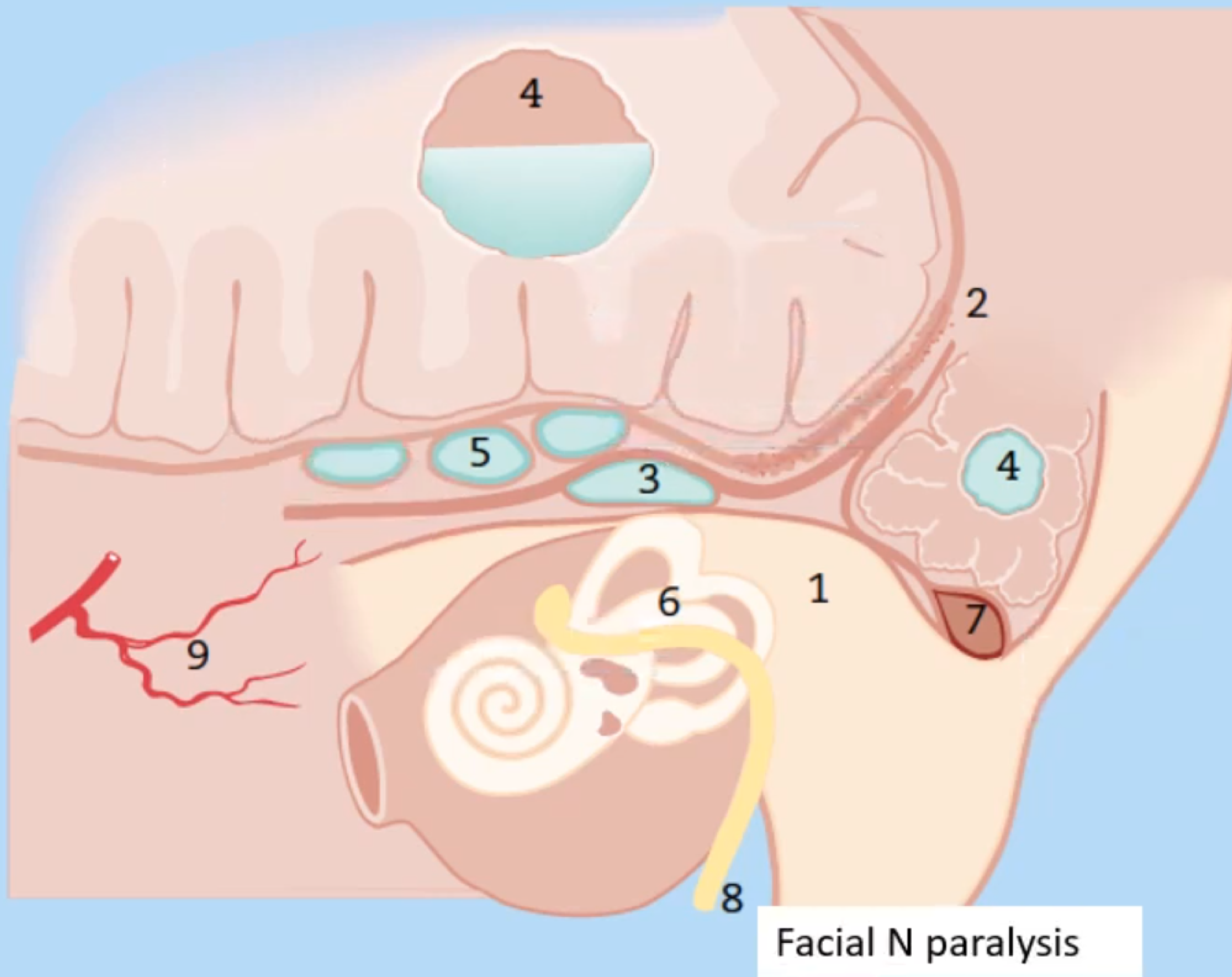
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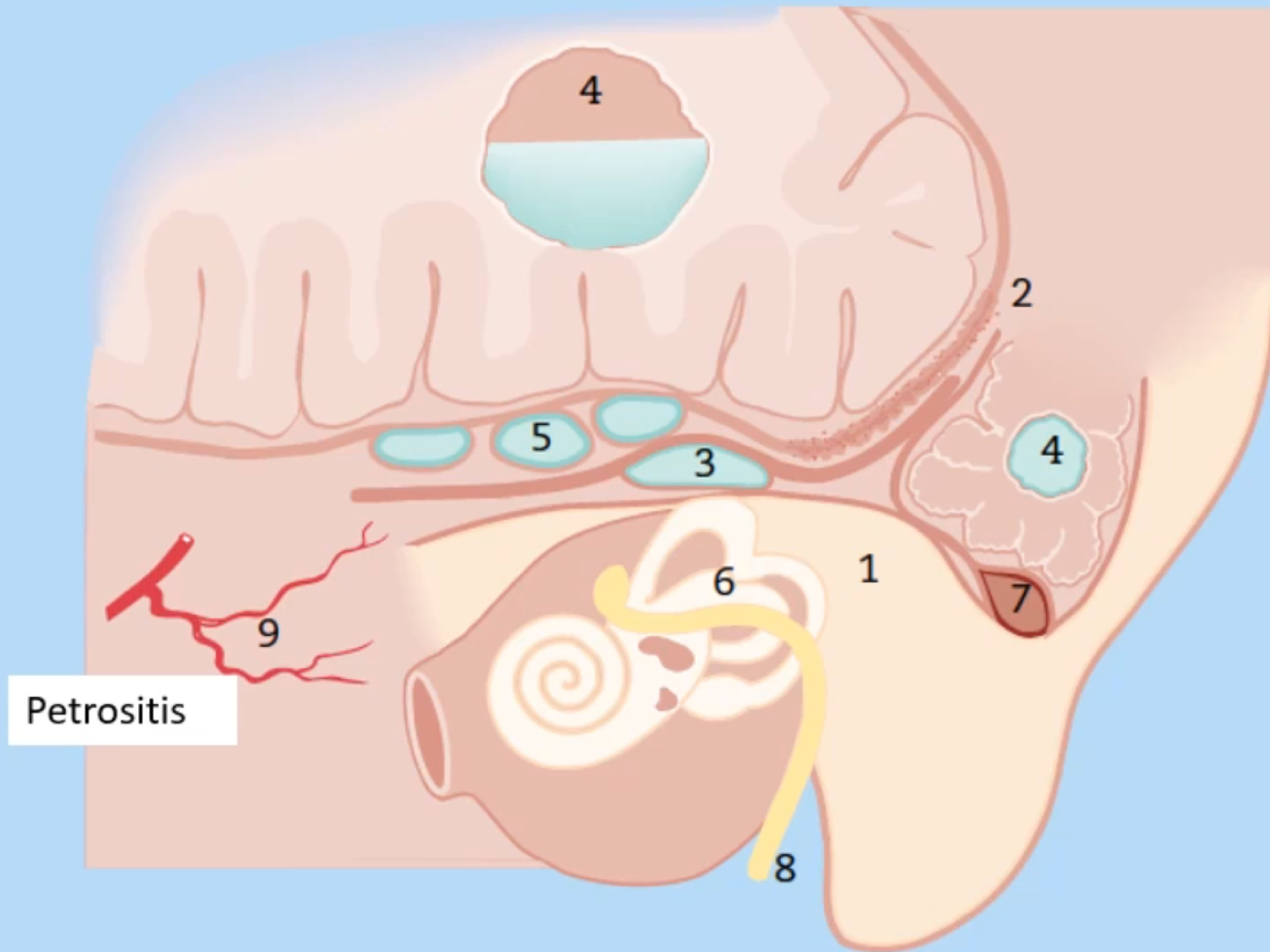
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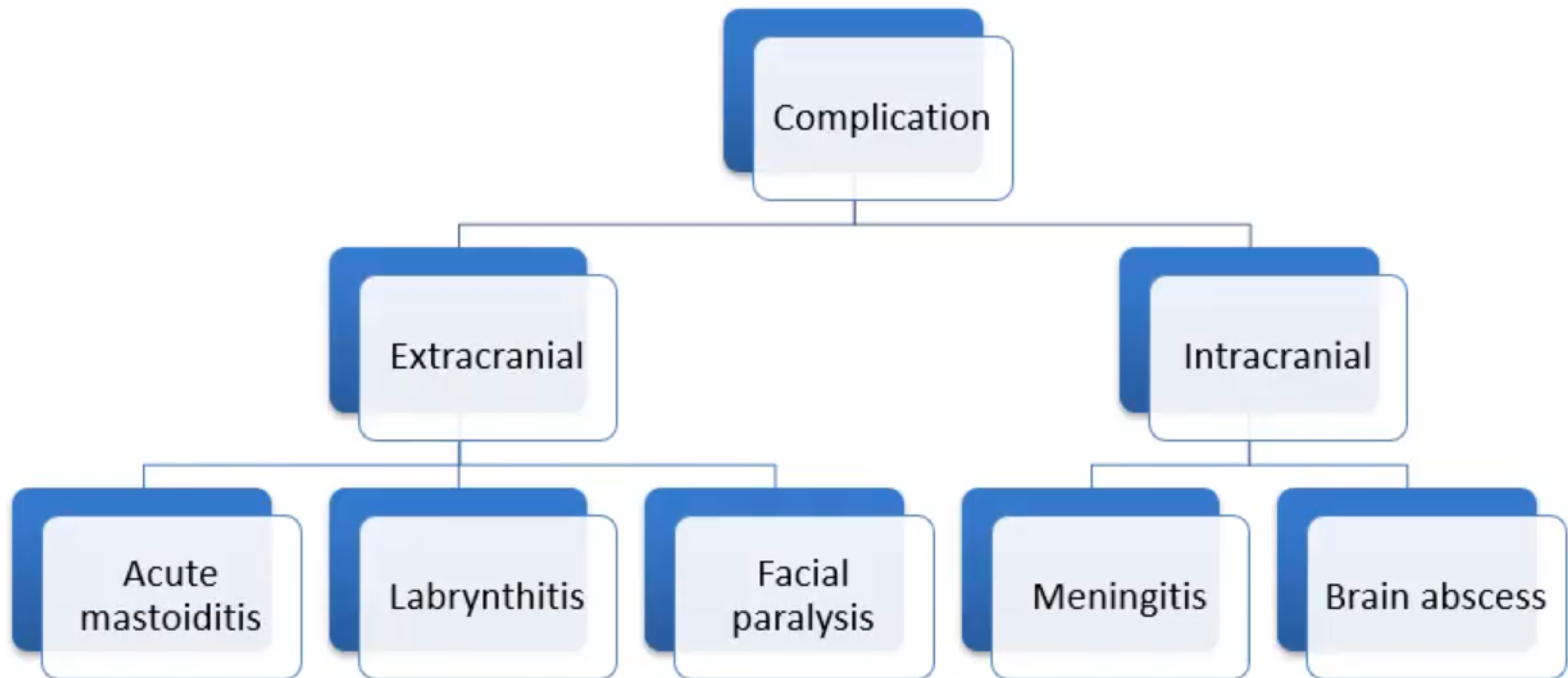


Complication



Complication

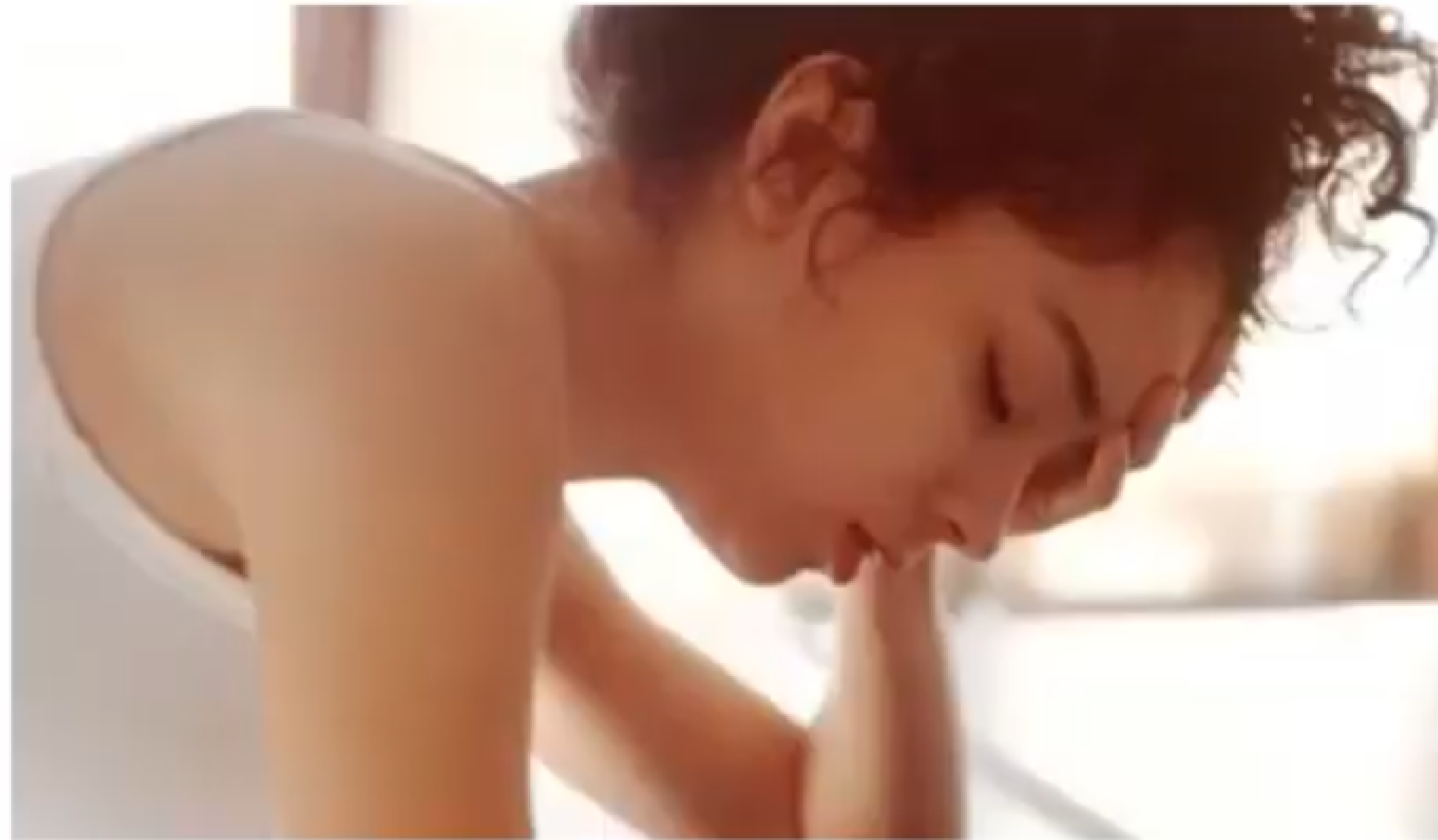




Acute mastoiditis



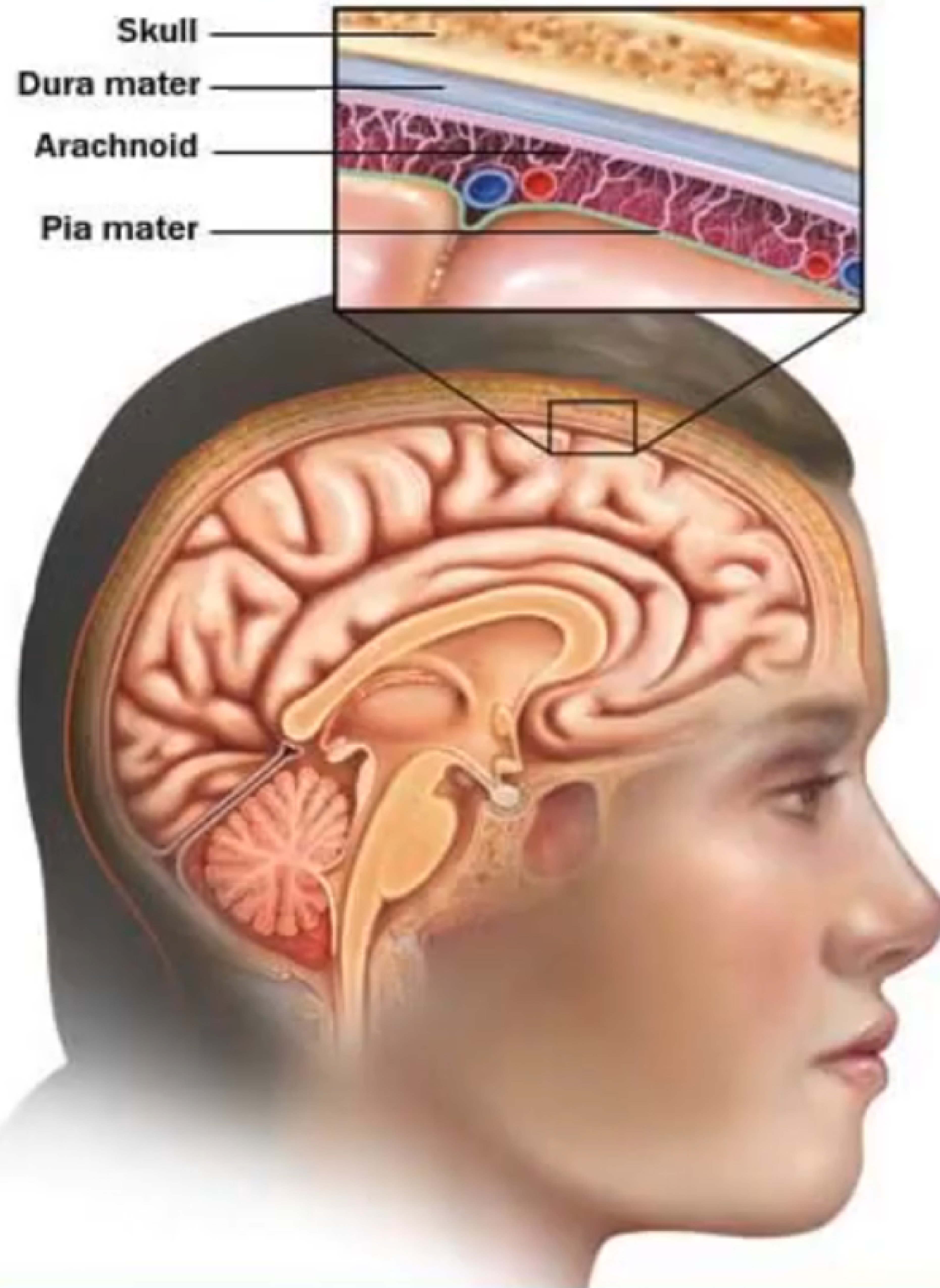
Labrynthitis



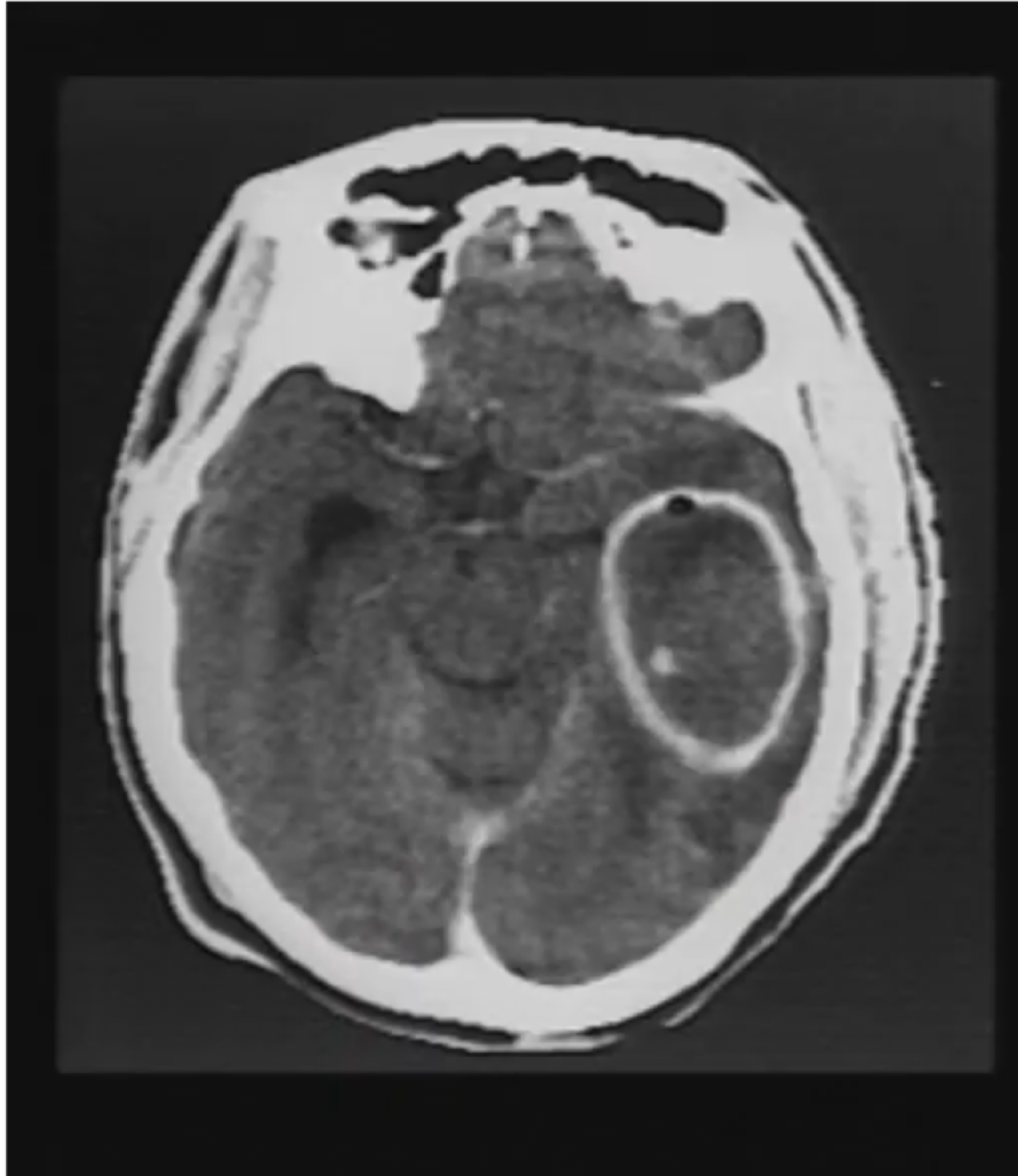
Facial nerve paralysis



Meningitis



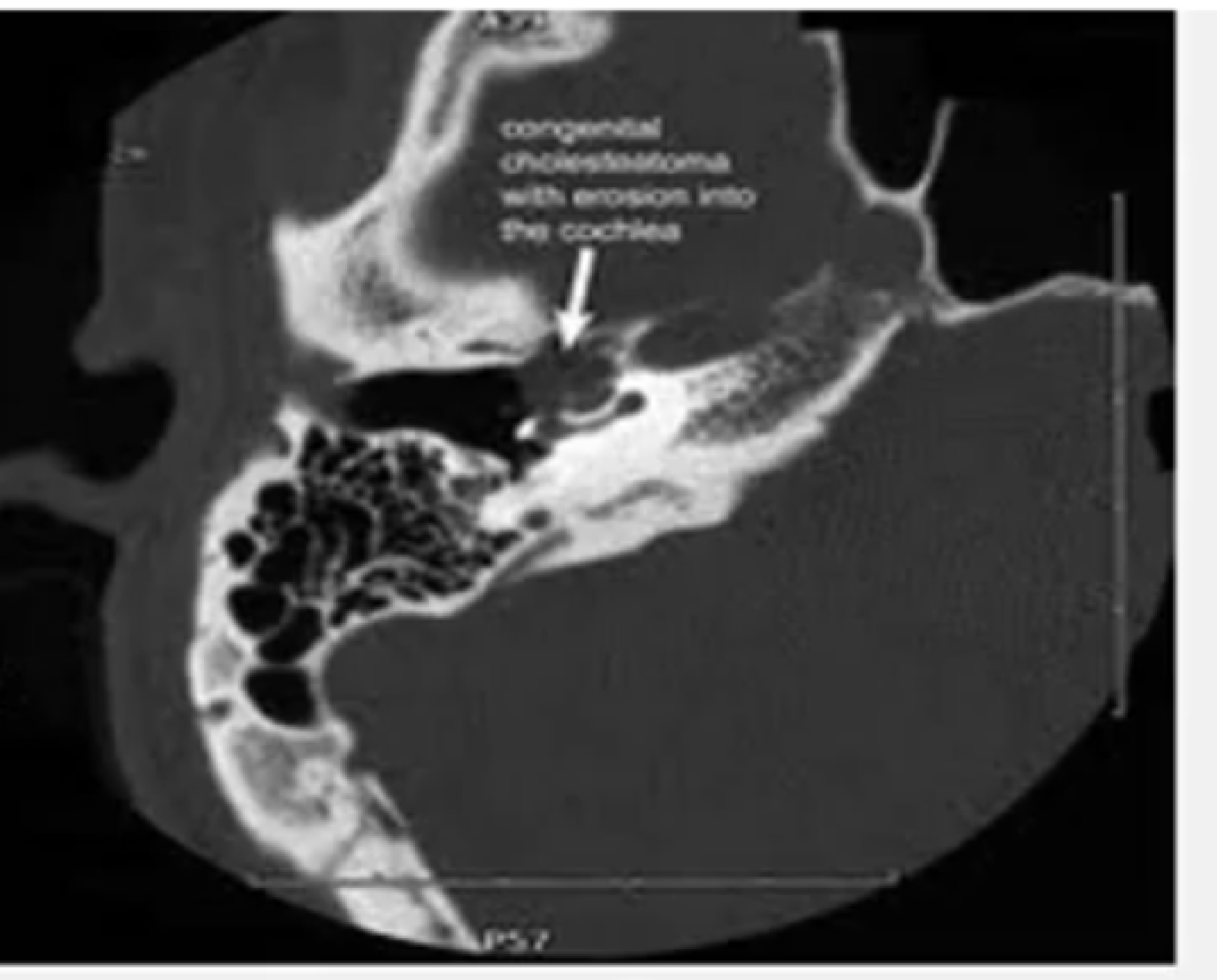
Brain abscess

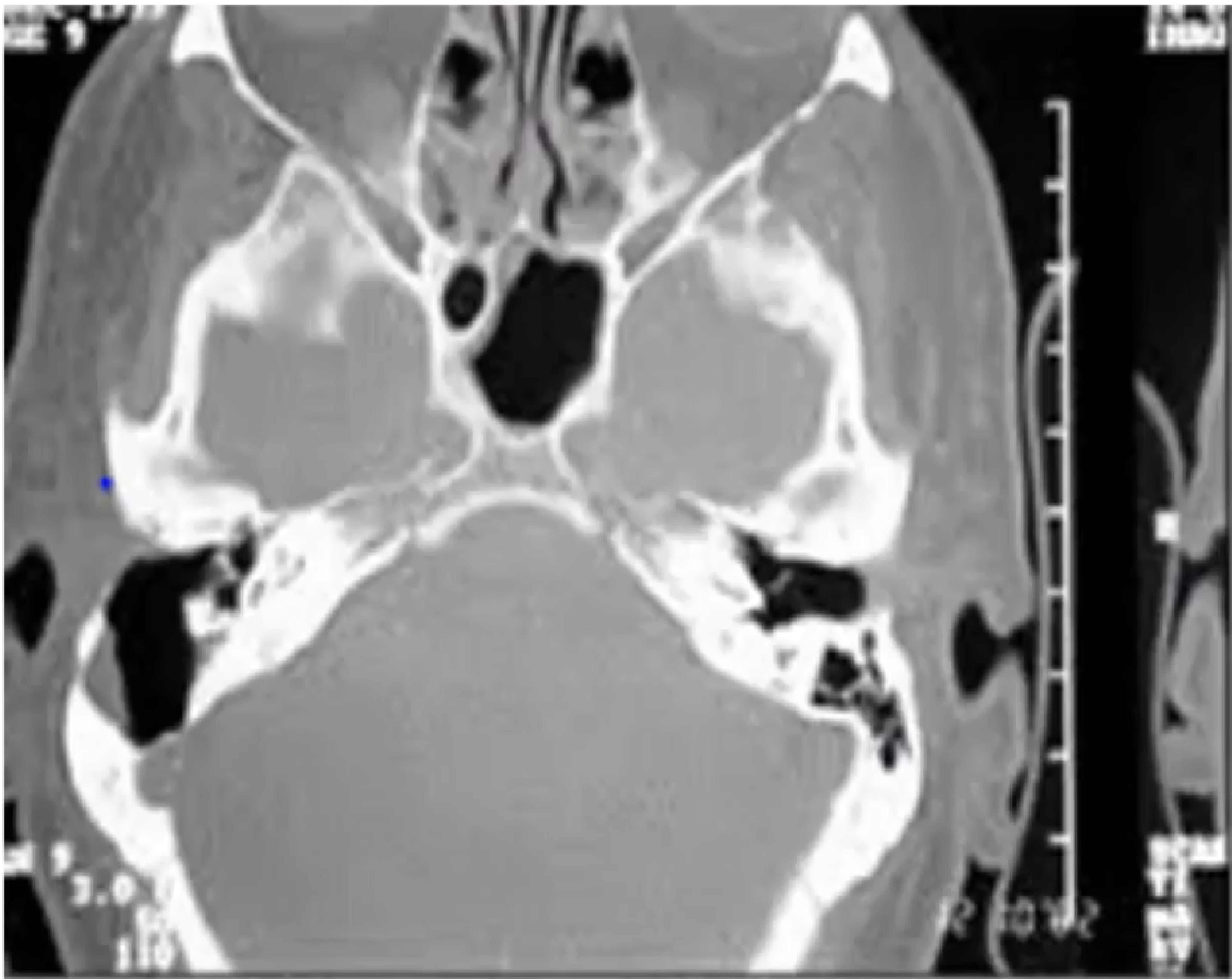


OTITIS MEDIA

- COMPLICATION

2ndry cholesteatoma



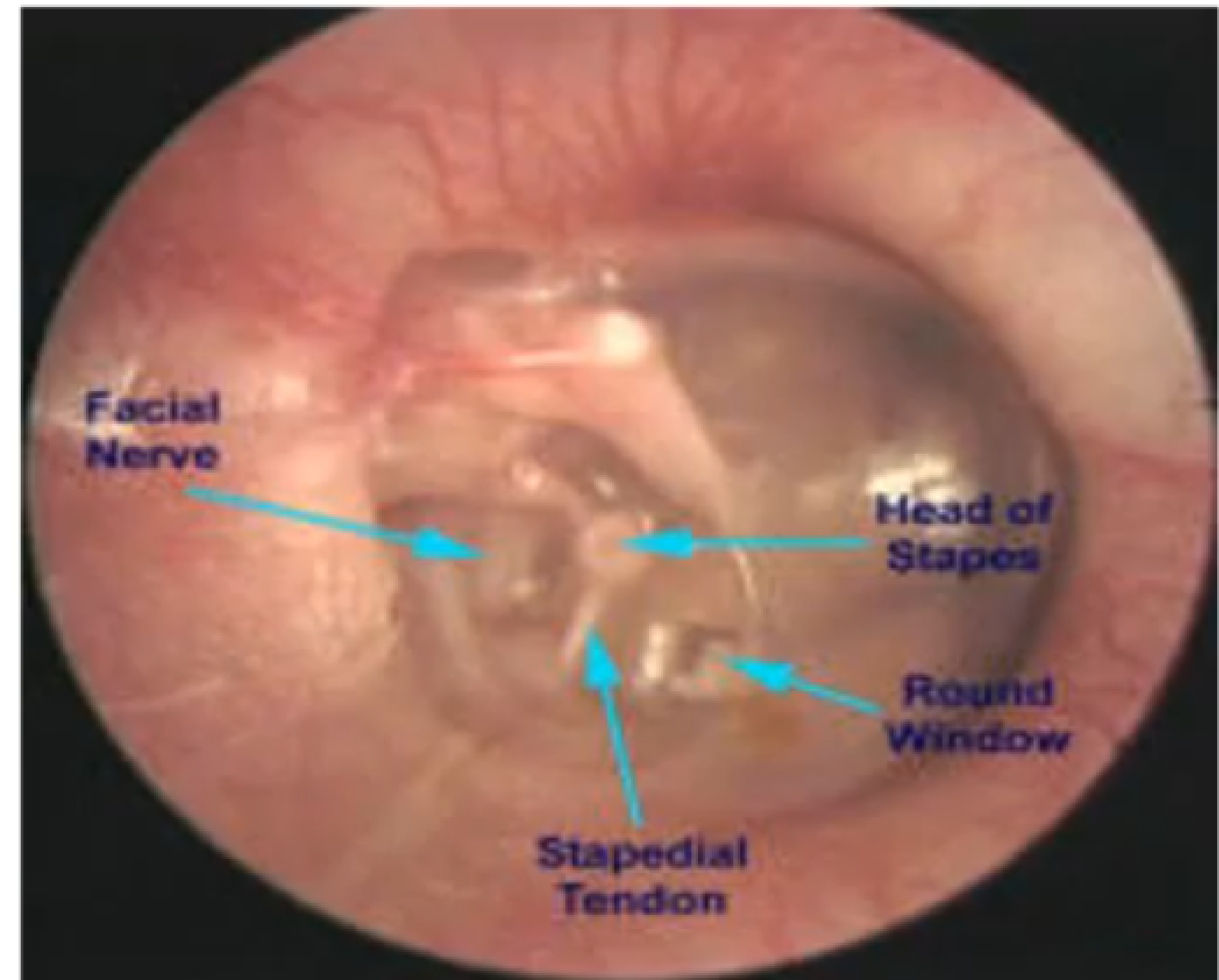


Post op mastiod cavity

Tympanosclerosis



Retraction of The Eardrum

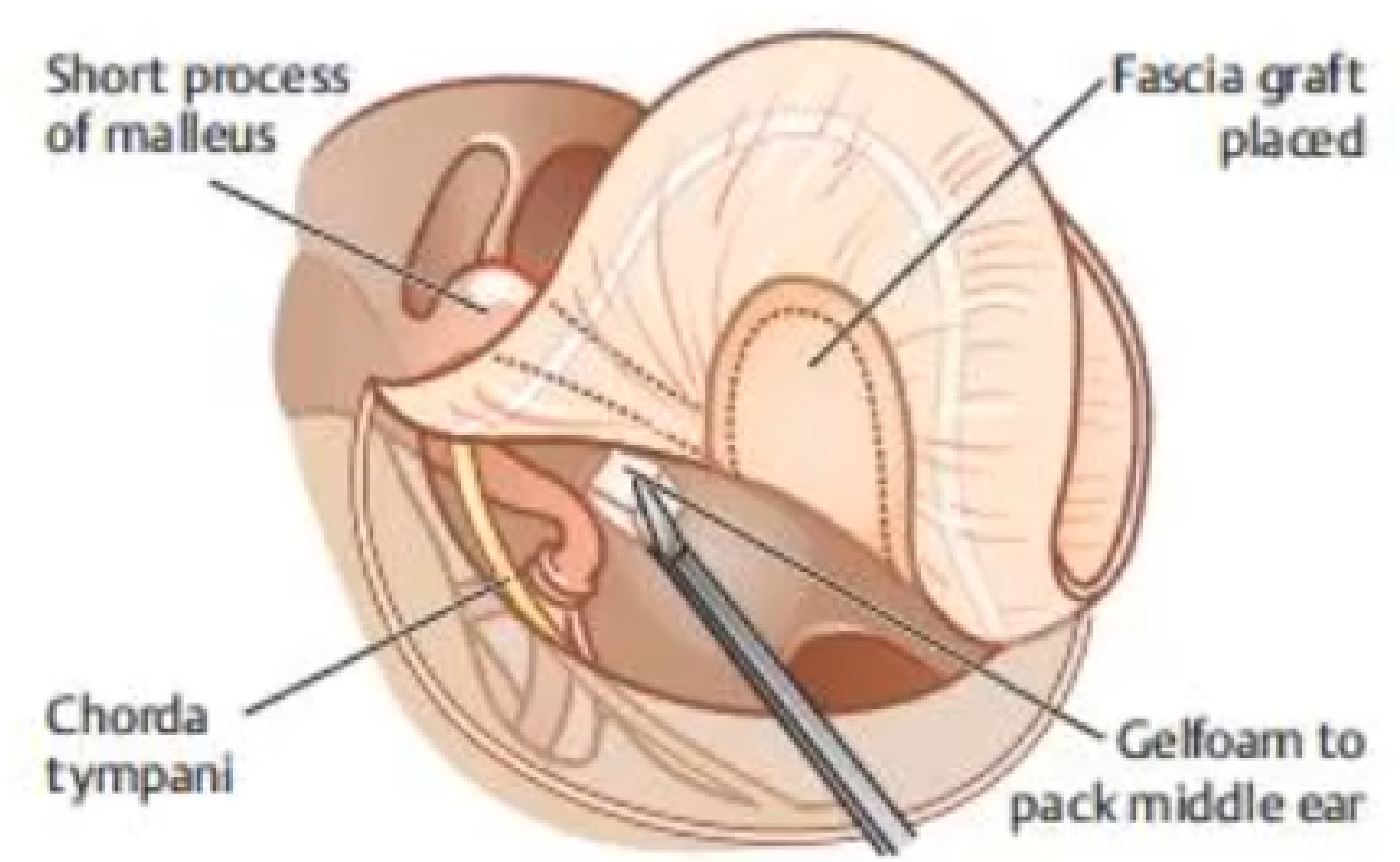
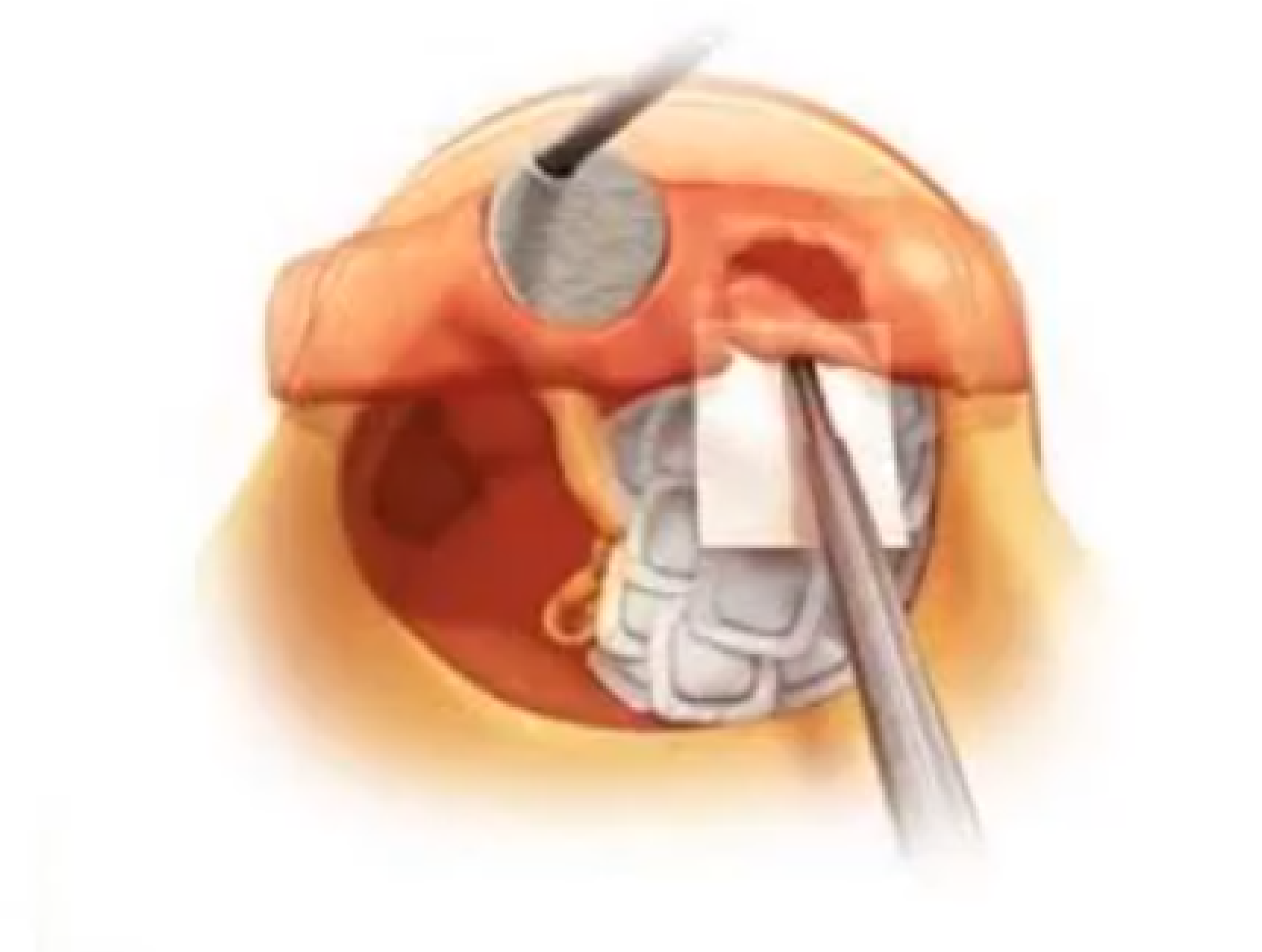
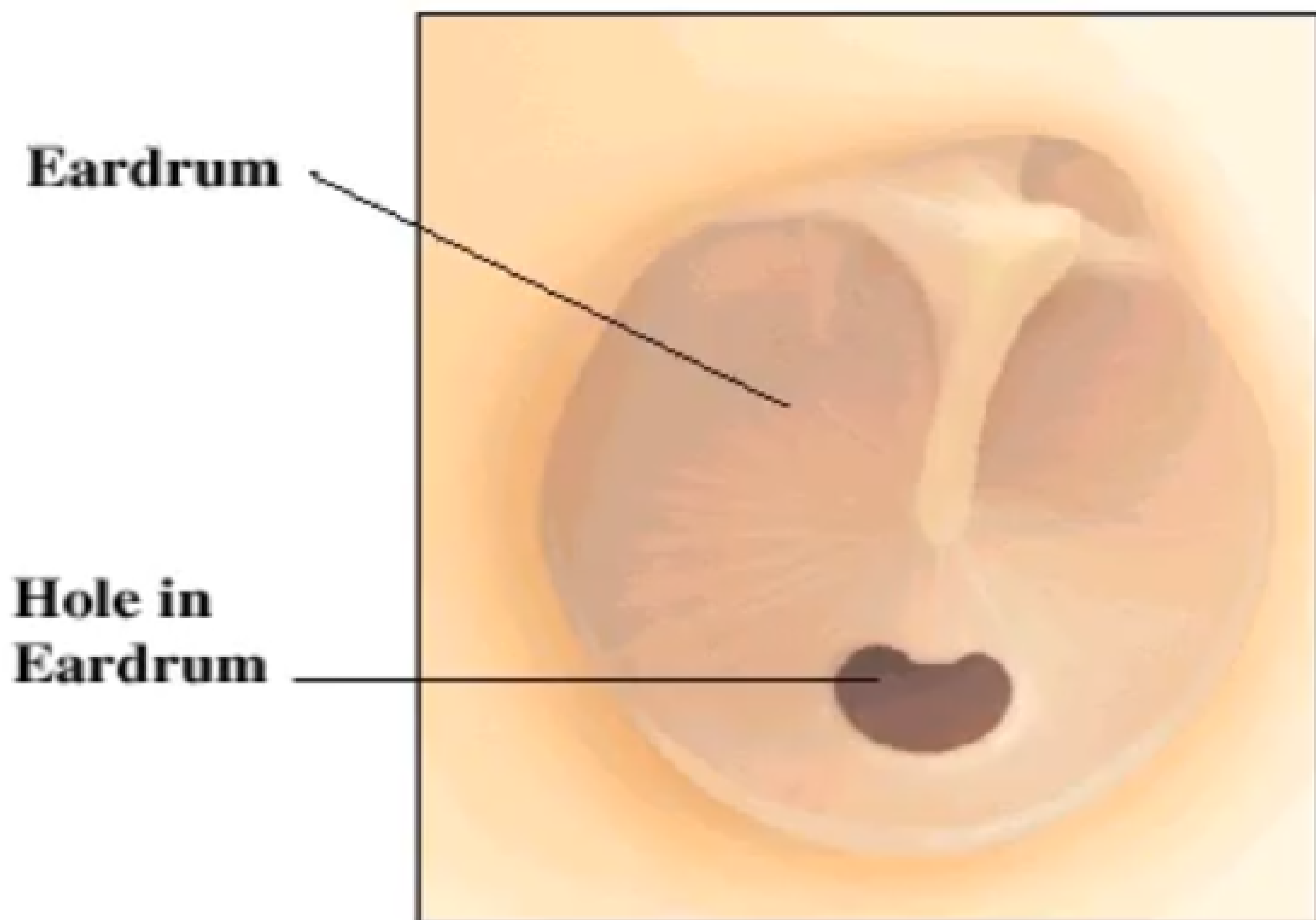


Retraction Pocket Formation

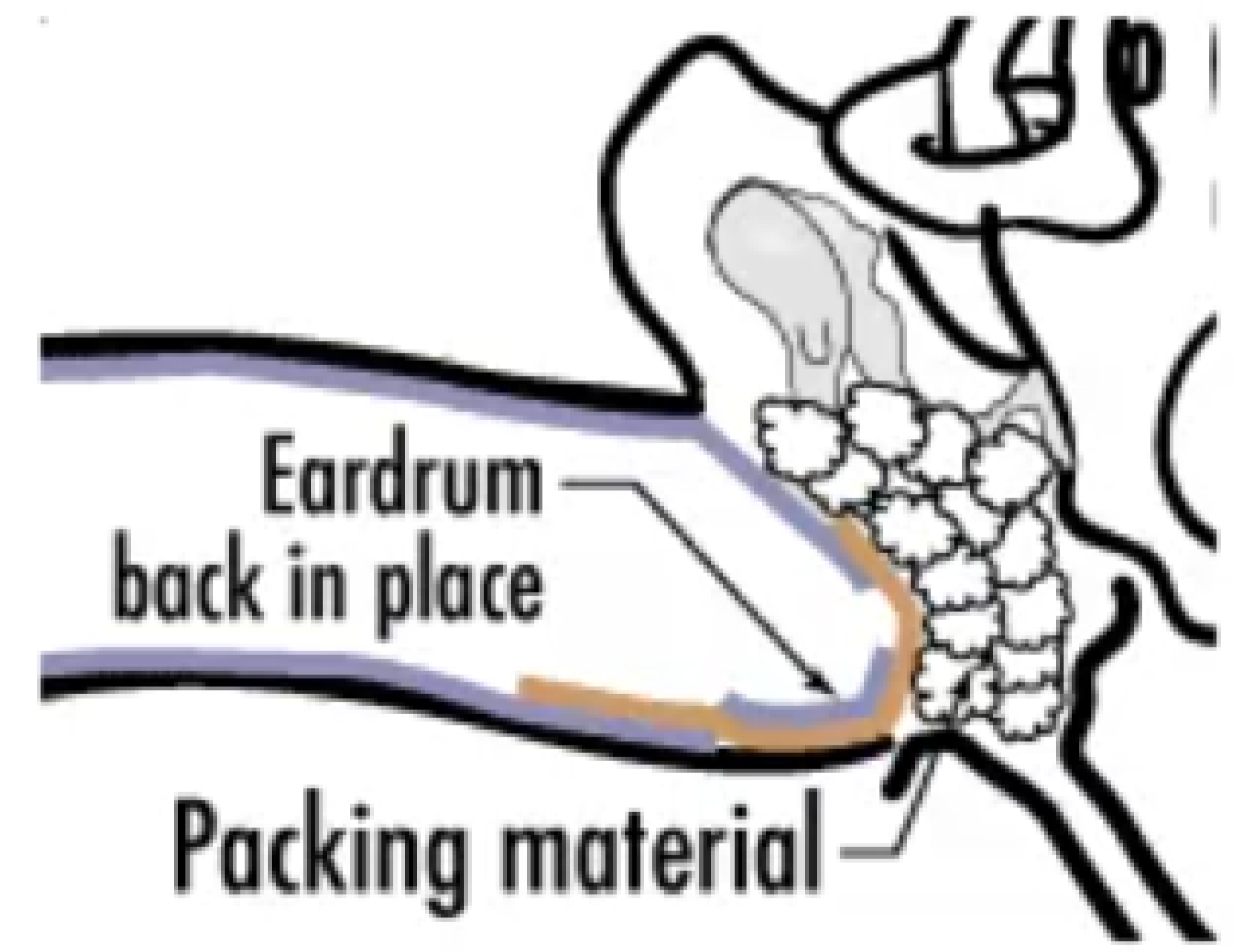




Tympanic membrane perforation
Tympanoplasty (video)



E. Placing the fascia graft in an underlay fashion.



TYMPANOPLASTY

Chronic Otitis Media

- ▶ **Persistent disease, Severe destruction**
- ▶ **It is characterized by:**
 - **Deafness**
 - **Ear discharge**
 - **T.m. perforation**

TYPES OF C.S.O.M.

- Tubo tympanic s.o.m. Safe
- Attico antral Unsafe

Chronic Otitis Media

- Causes:
 - 1 Late treatment of acute otitis media.
 - 2 Inadequate or inappropriate antibiotic therapy.
 - 3 Upper airway sepsis.
 - 4 Lowered resistance, e.g. malnutrition, anaemia, immunological impairment.
 - 5 Particularly virulent infection, e.g. measles.

ATTICO ANTRAL C.S.O.M.

- Cholesteatoma

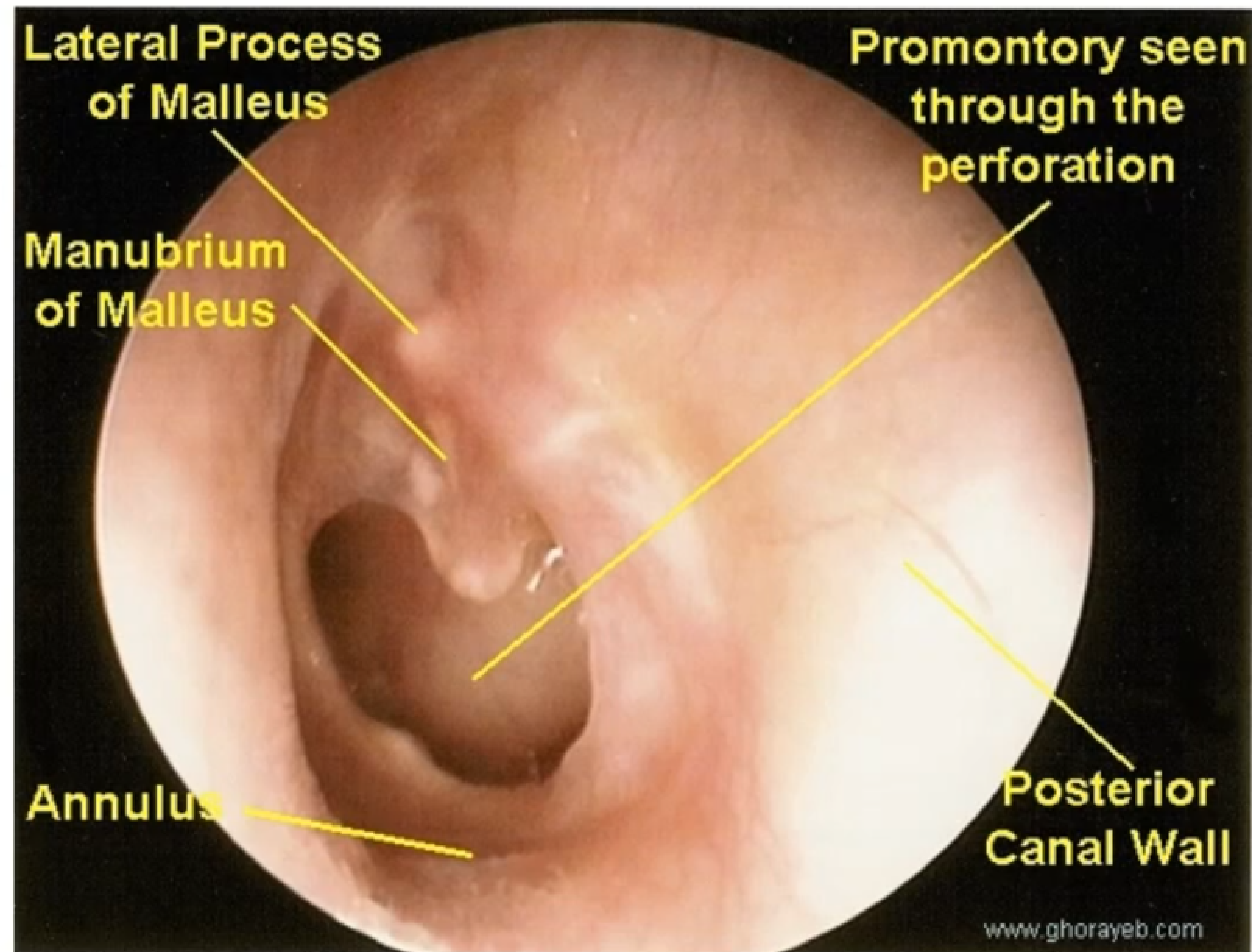
Keratinizing Squamous Epithelium.

A small sac

May involve whole middle ear cleft

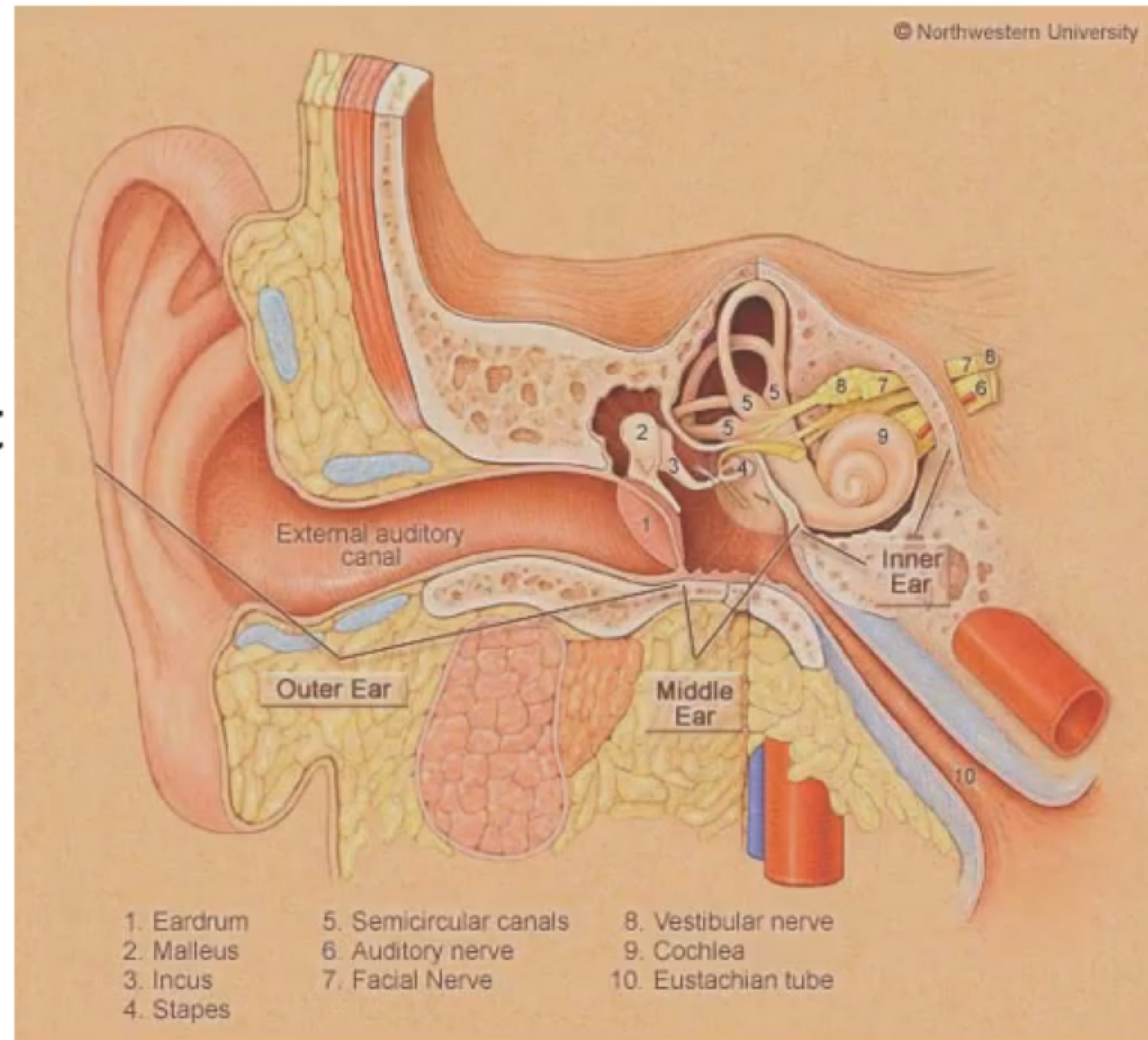
TUBO TYMPANIC C.S.O.M

- Deafness
- Discharge
- Central perforation



TUBO TYMPANIC C.S.O.M

- Patency of Eustachian tube
- Nidus of infection in U.R.T.I.
- Immune status of patient
- Aerobic and Anaerobic



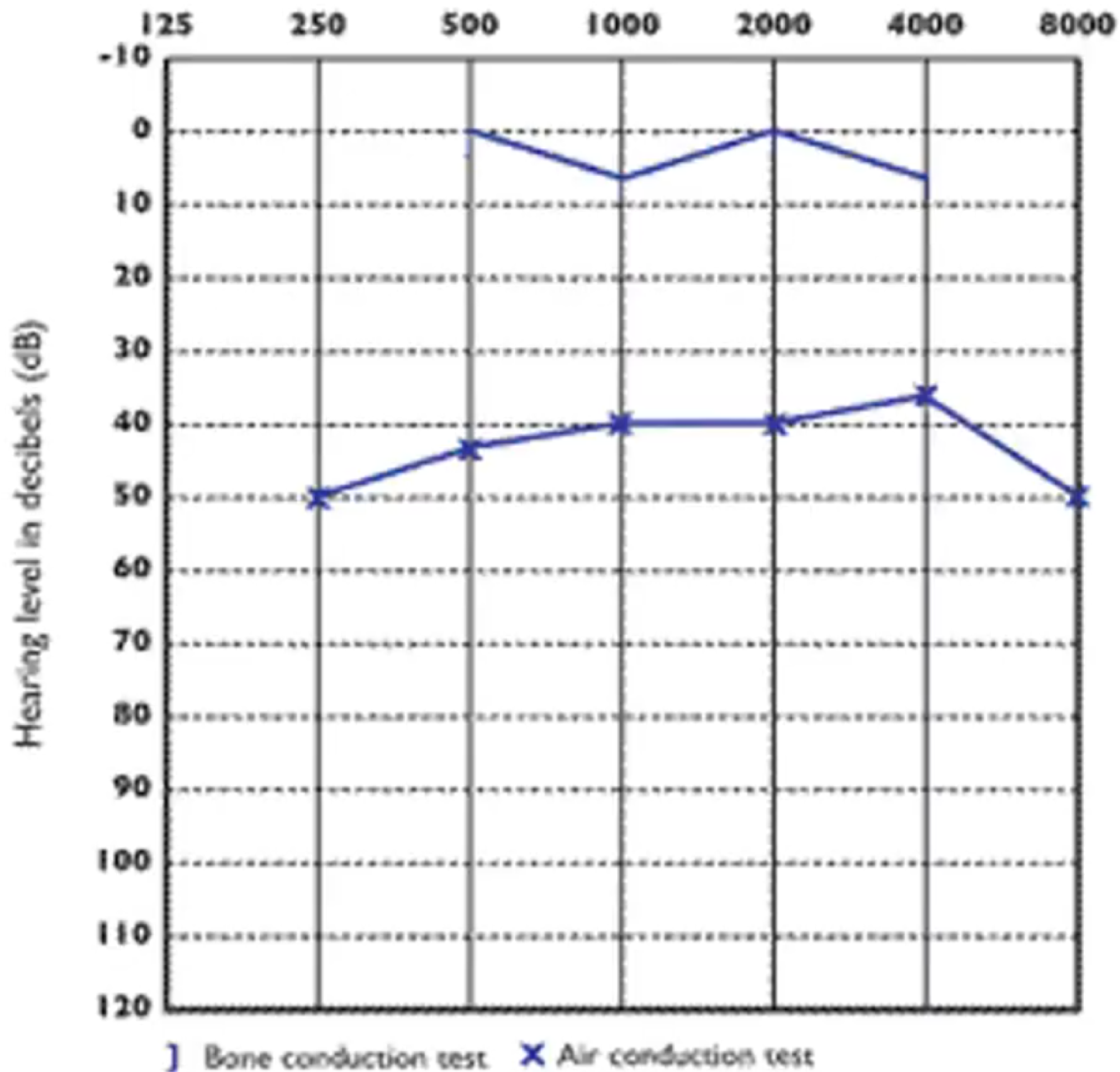
TYPES OF TUBO TYMPANIC C.S.O.M.

- Active Tubo Tympanic C.S.O.M.
- Inactive Tubo Tympanic C.S.O.M.

Audiological assessment

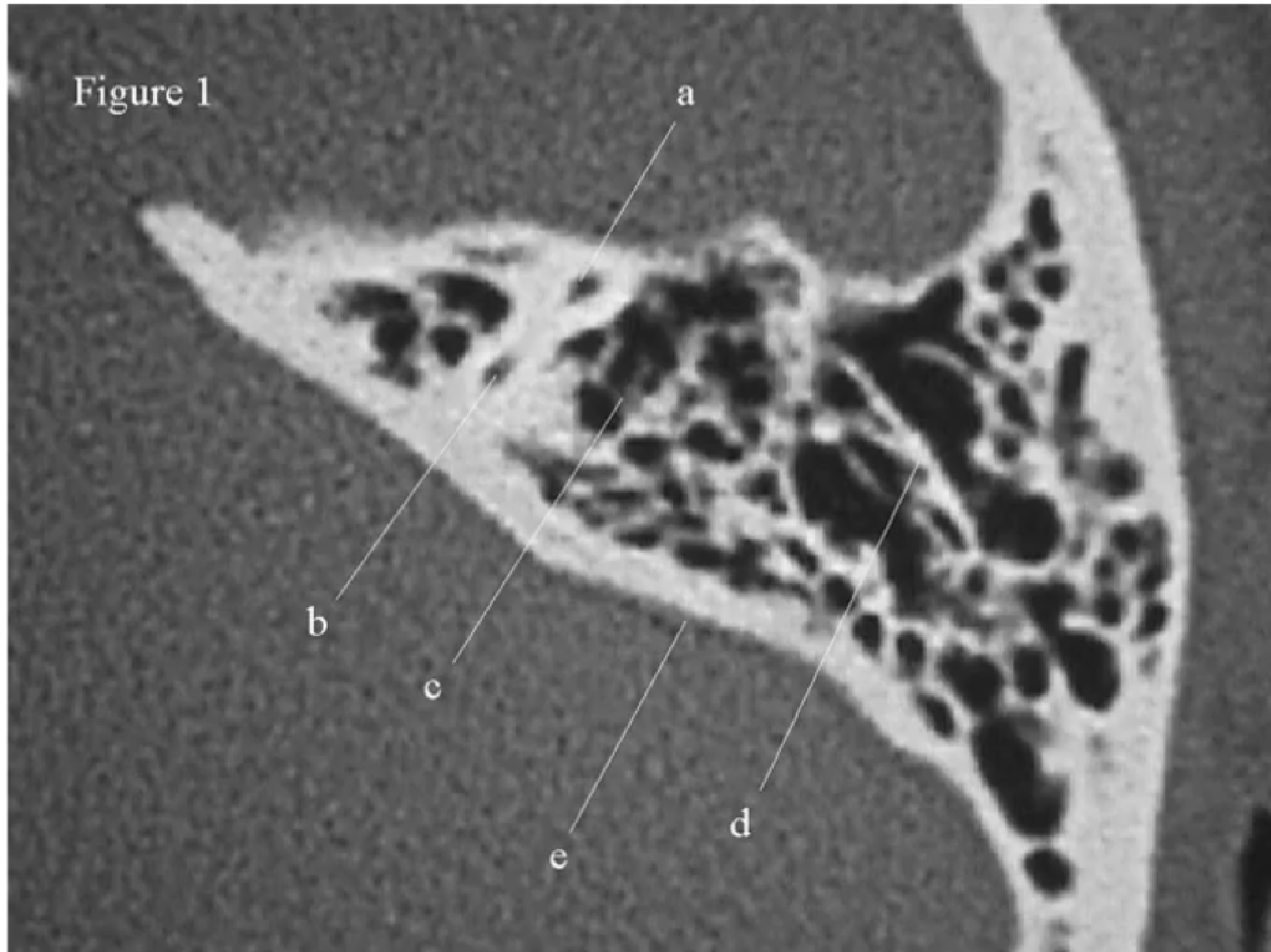
- Voice test
- Tuning fork test Rinne, Webers , A.B.C.
- Pure tone audiogram

Frequency in Hertz (Hz)



RADIOLOGICAL ASSESSMENT

- CT-scan temporal bone



26-SEP-95
10:38:54
DA1:118
SCAN 12

FRONT

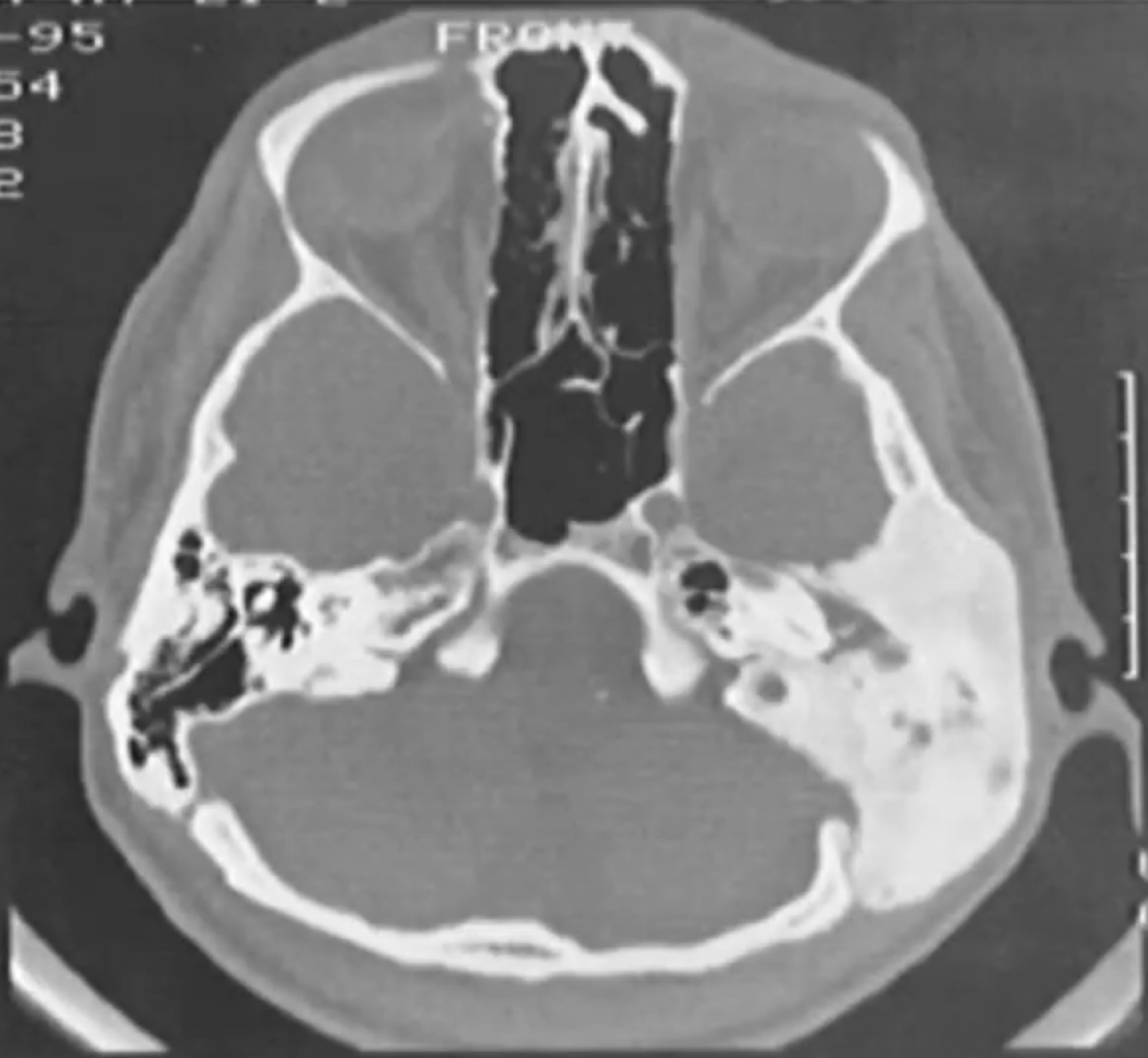
1H15
H/SP

LEFT

5 CM

TI 5
KV 125
AS .28
SL 2
GT -19
TP 141

W 1800
C 300



treatment

- Aural toilet
 - a. Cotton buds
 - b. Suction and cleaning
- Antibiotics
 - a. Topical antibiotics
 - b. Systemic antibiotics

Surgical treatment

- Precipitating disease
 - a. Adenoid
 - b. DNS
 - c. Nasal polyps
- Aural polypectomy
- Functional reconstruction tympanoplasty