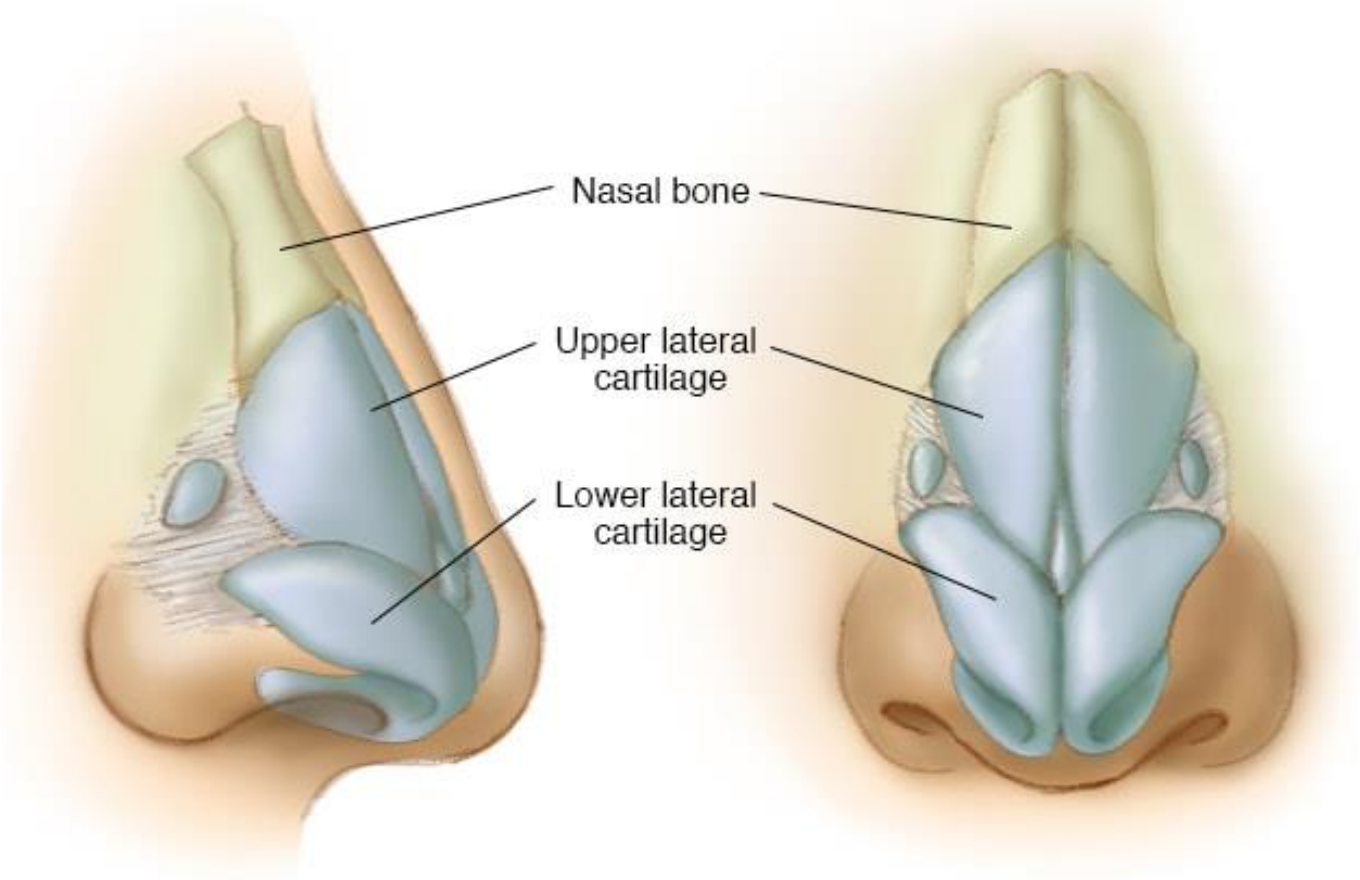
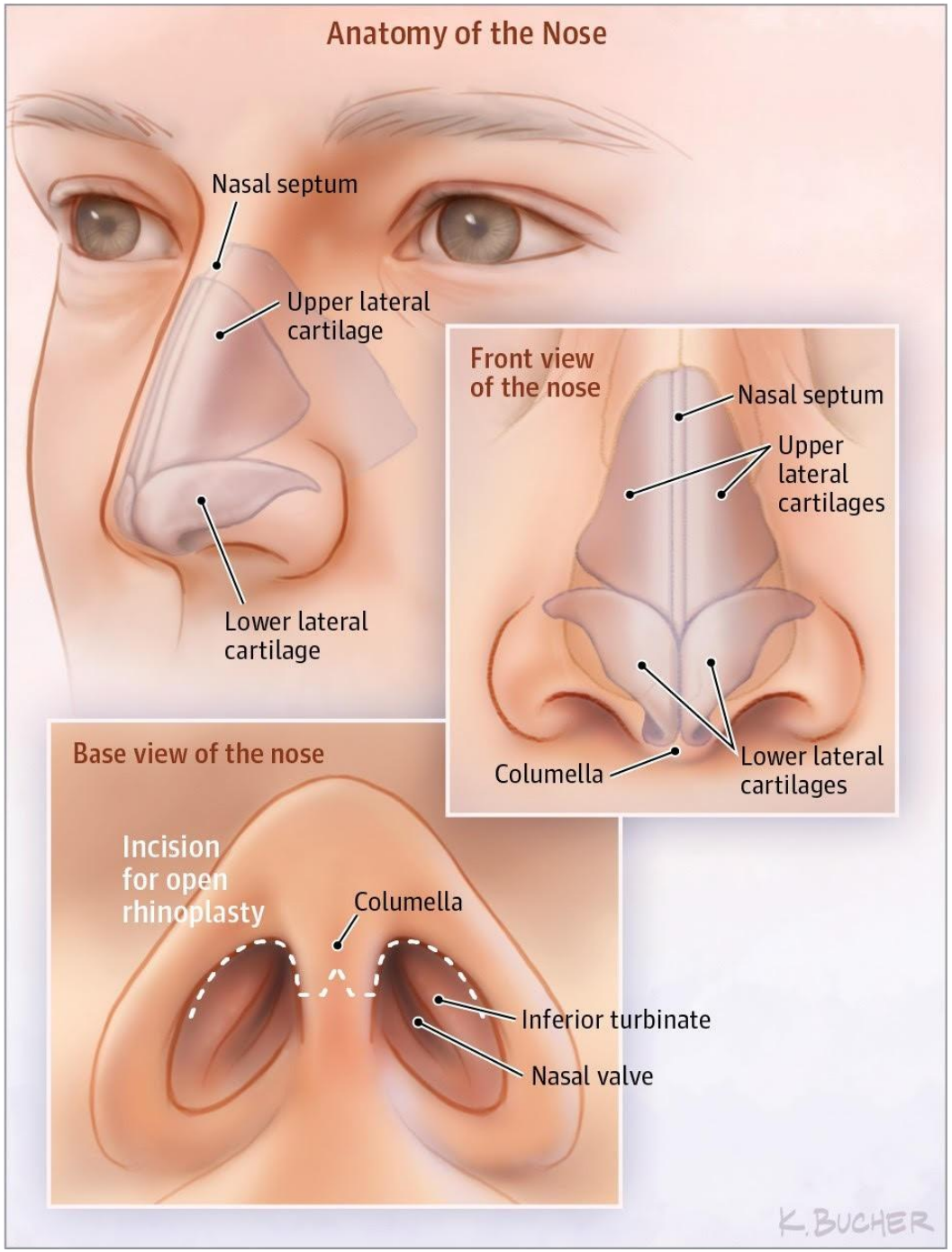
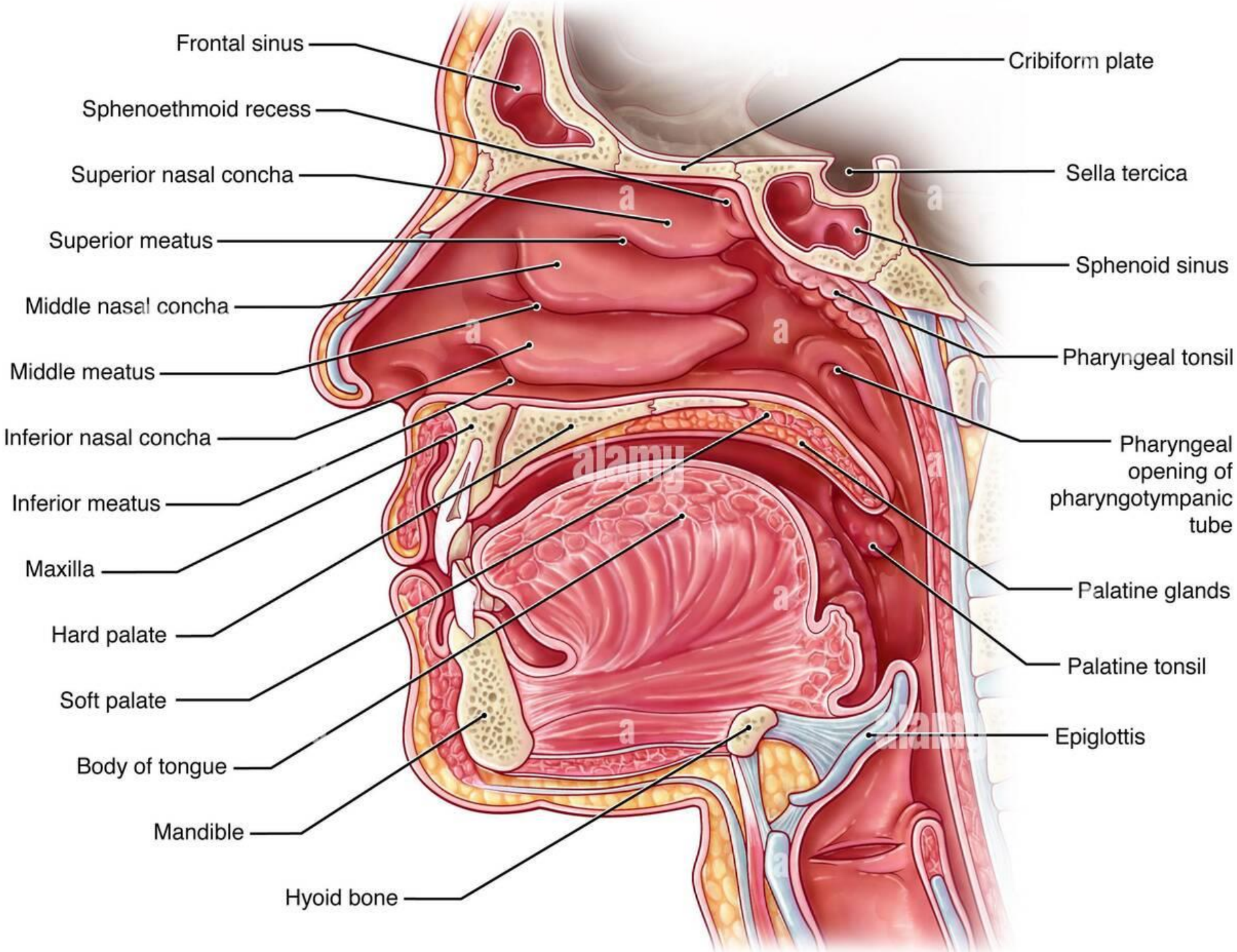
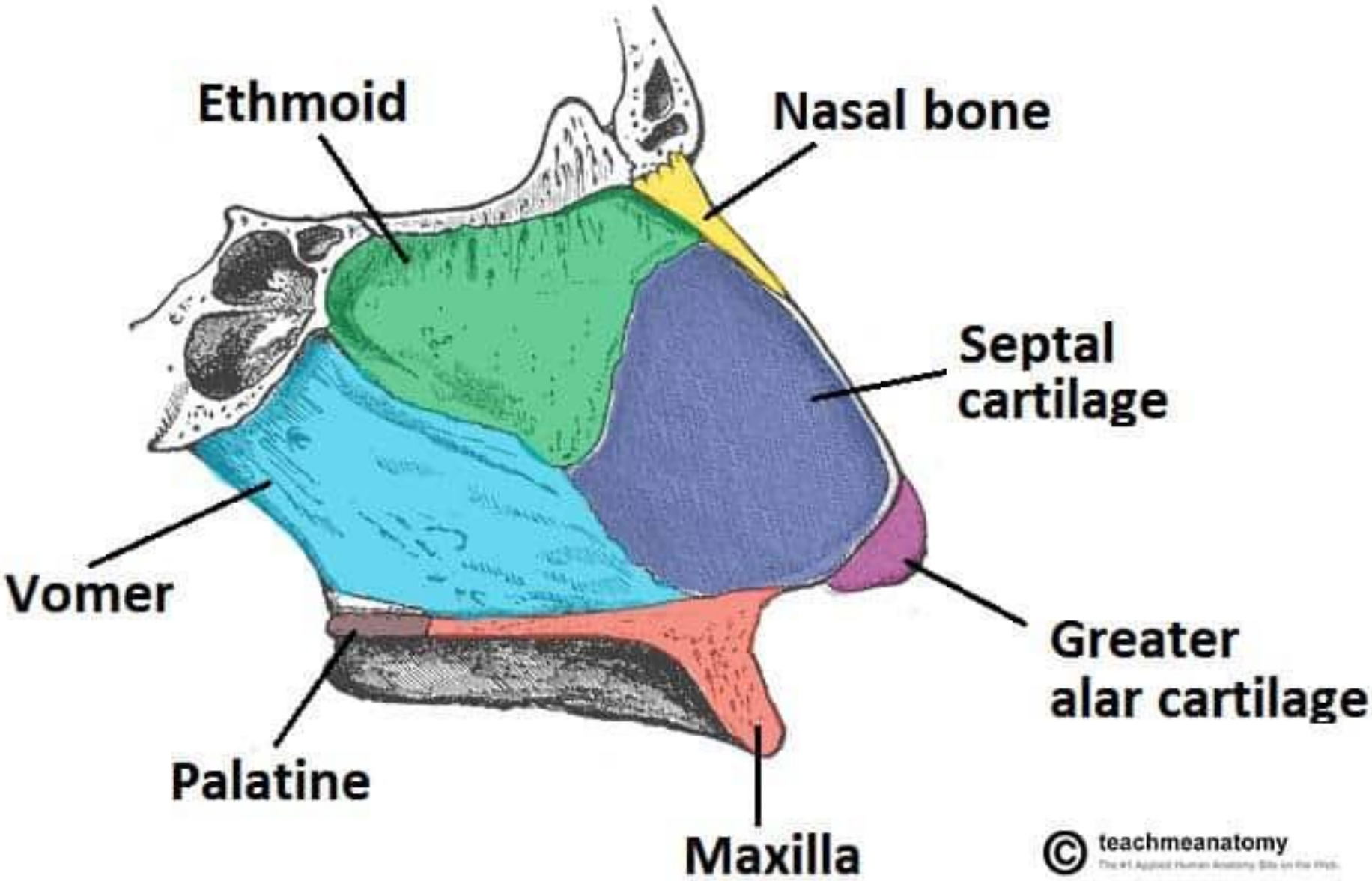
ENT Pictorial Review v2.0

Rhinology

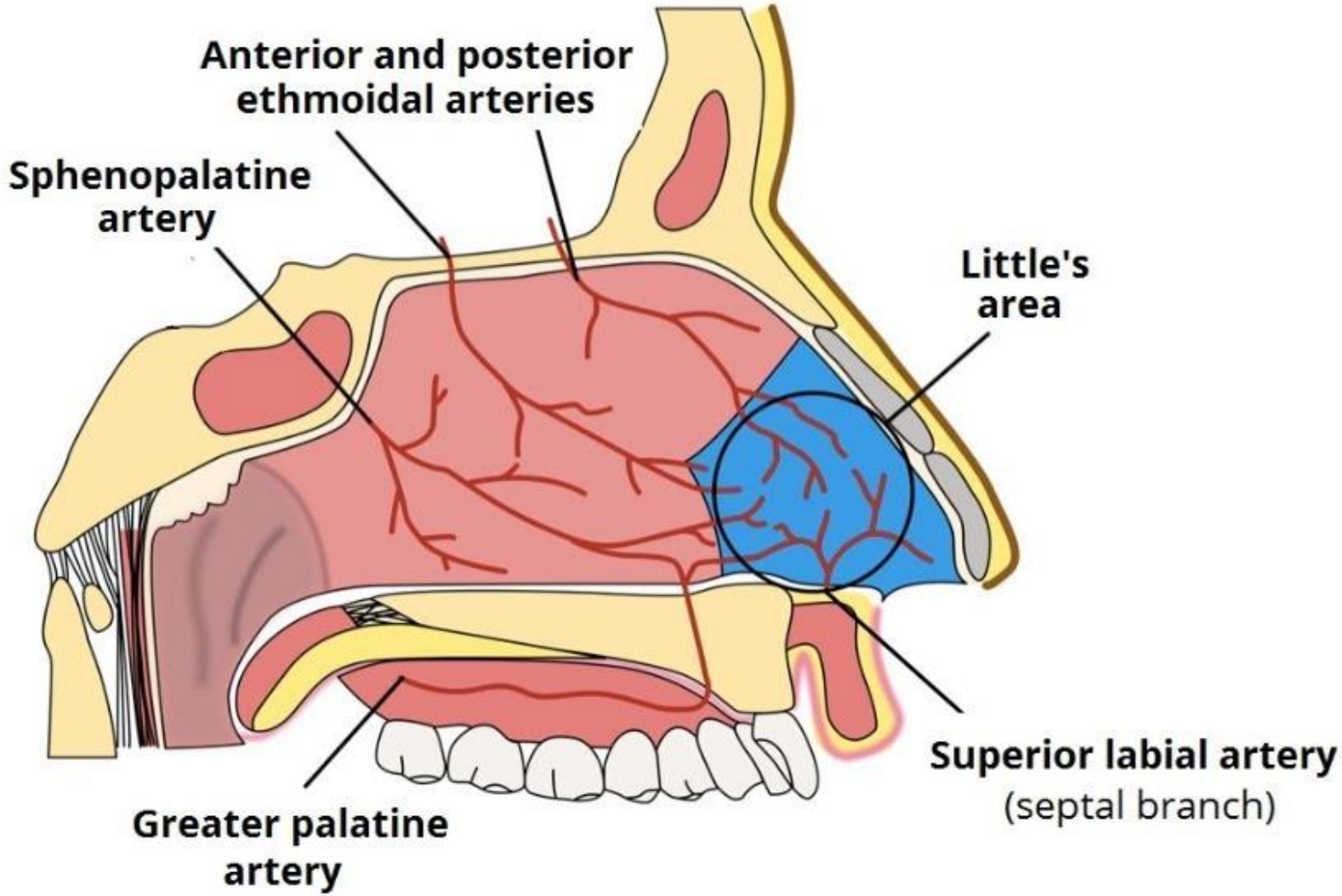


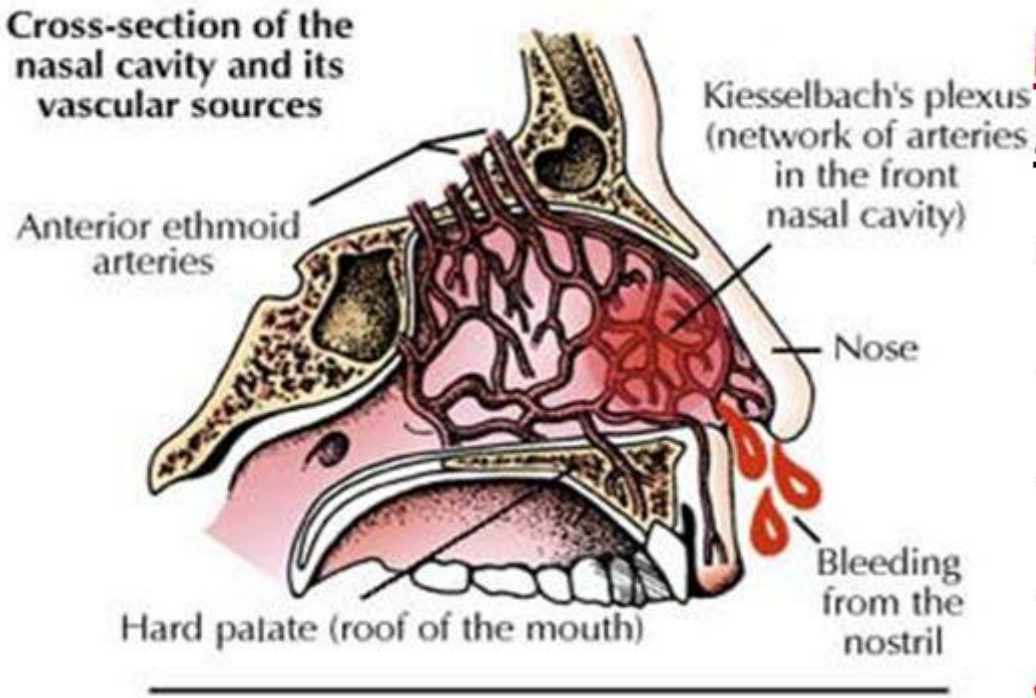


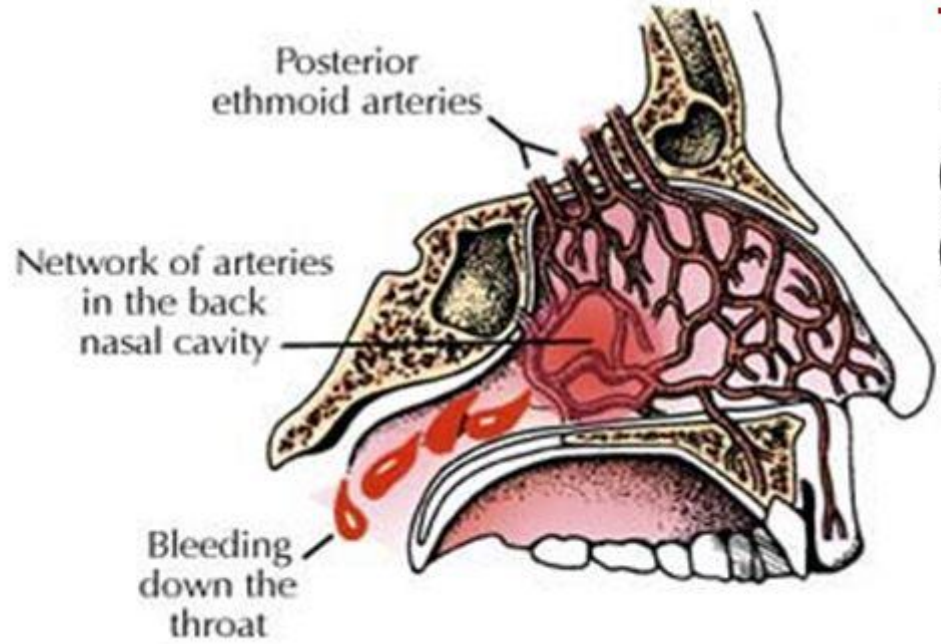

Frontal sinus
Sphenoethmoid recess
Superior nasal concha
Superior meatus
Middle nasal concha
Middle meatus
Inferior nasal concha
Inferior meatus
Maxilla
Hard palate
Soft palate
Body of tongue
Mandible
Hyoid bone
Cribiform plate
Sella tercica
Sphenoid sinus
Pharyngeal tonsil
Pharyngeal opening of pharyngotympanic tube
Palatine glands
Palatine tonsil
Epiglottis


Ethmoid
Nasal bone
Septal cartilage
Vomer
Greater alar cartilage
Palatine
Maxilla
© teachmeanatomy

Little's Area
(Kiesselbach's plexus)







Kiesselbach's Plexus/Little's Area:

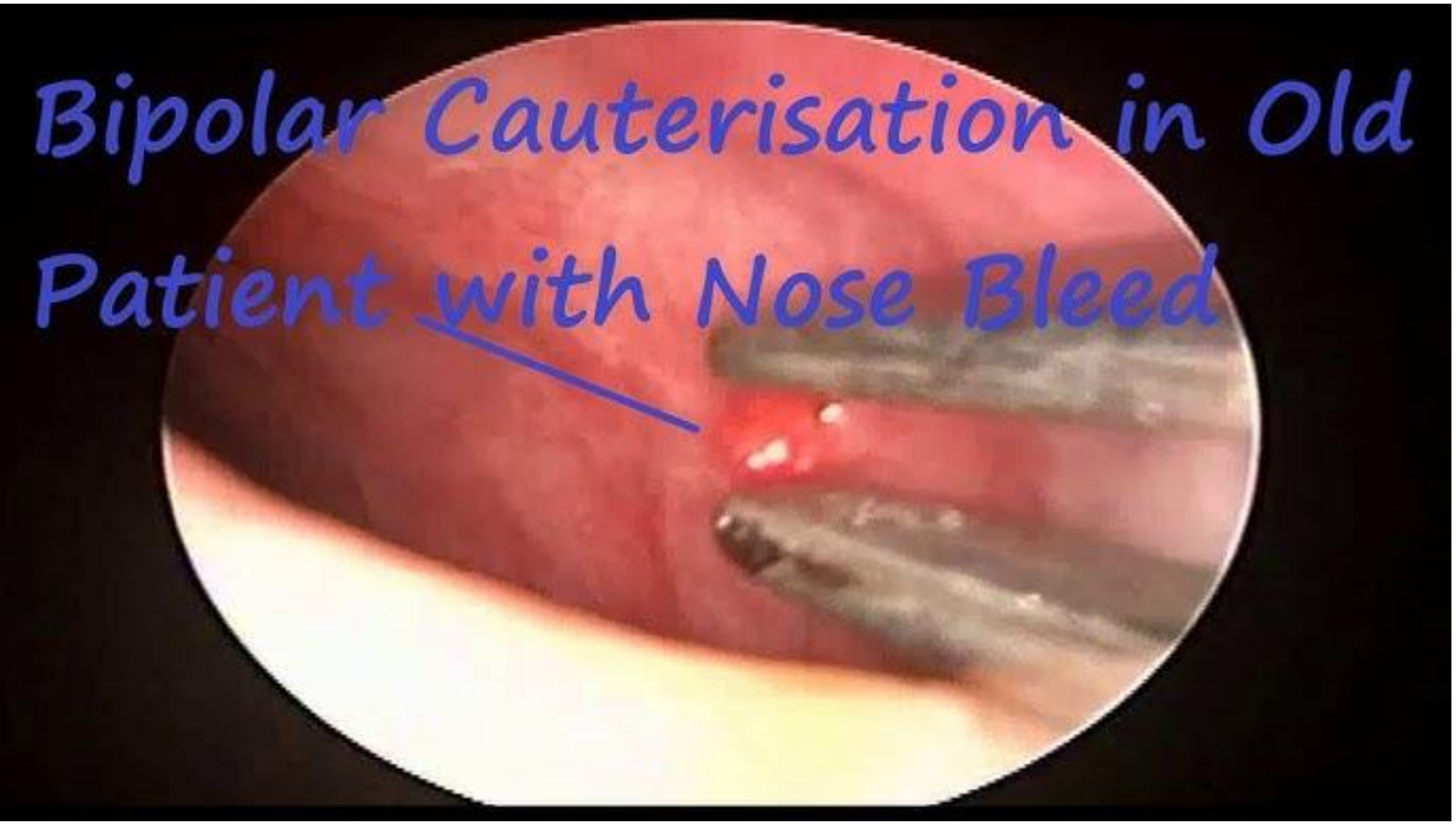
- Anterior Ethmoid (ICA)
- Superior Labial A (Facial)
- Sphenopalatine A (IMAX)
- Greater Palatine (IMAX)

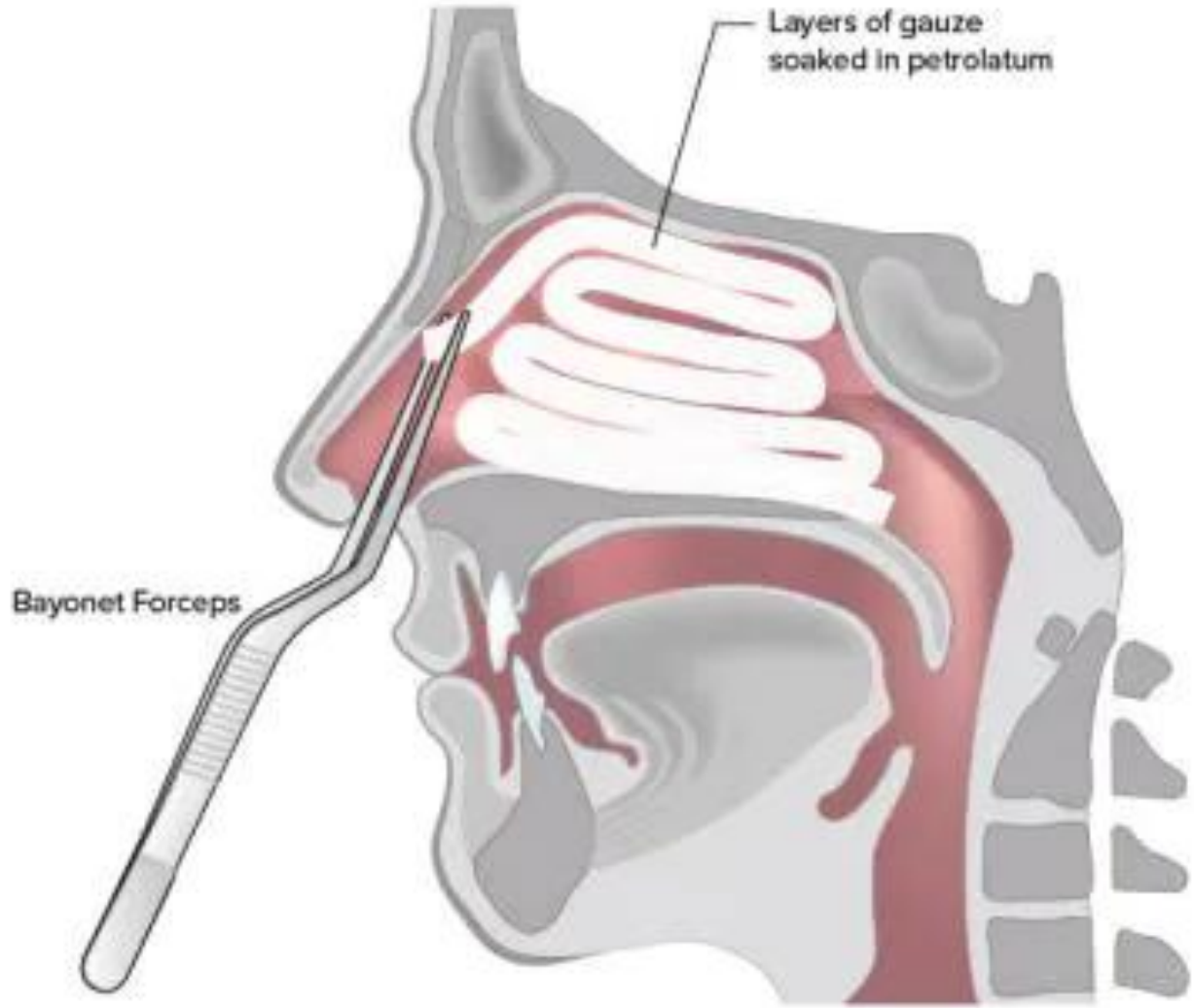
Woodruff's Plexus:

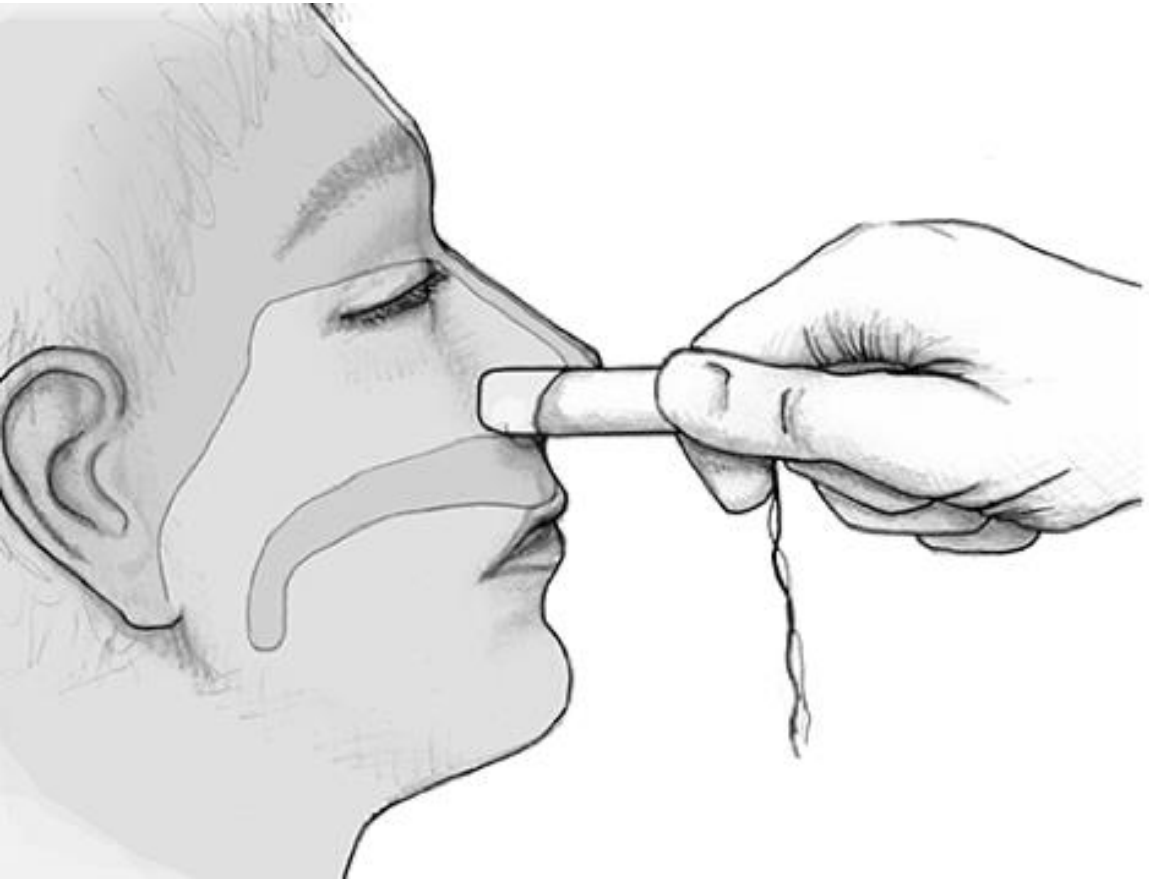
- Sphenopalatine A (Pharyngeal & Post. Nasal branches) (IMAX)
- Posterior ethmoid (ICA)

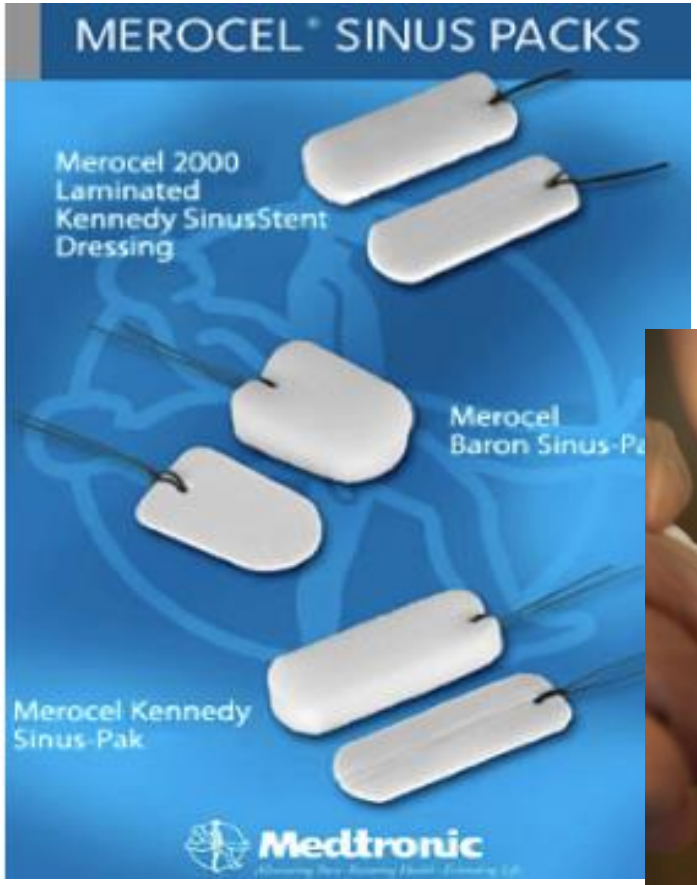

pplicator 6"
rate 25%
WITHOUT A PRESCRIPTION
Bray
Healthcare

Figure 3b - 3d - Endoscopic picture of the right nasal cavity showing a bleeding vessel from the right nasal septum, application of silver nitrate stick to seal the burst vessel and appearance of the right nasal septum after silver nitrate cautery.

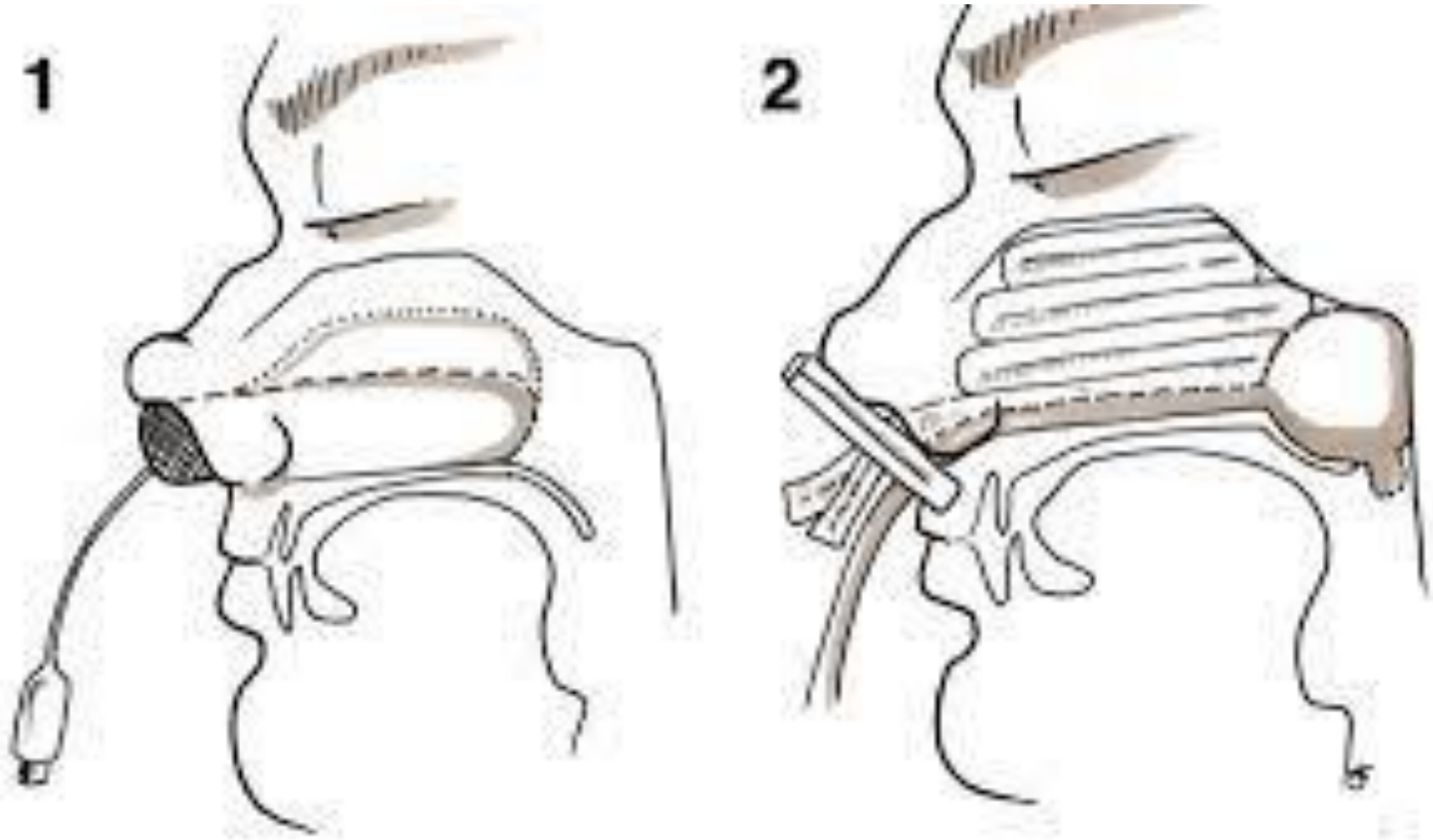

Bipolar Cauterisation in Old
Patient with Nose Bleed

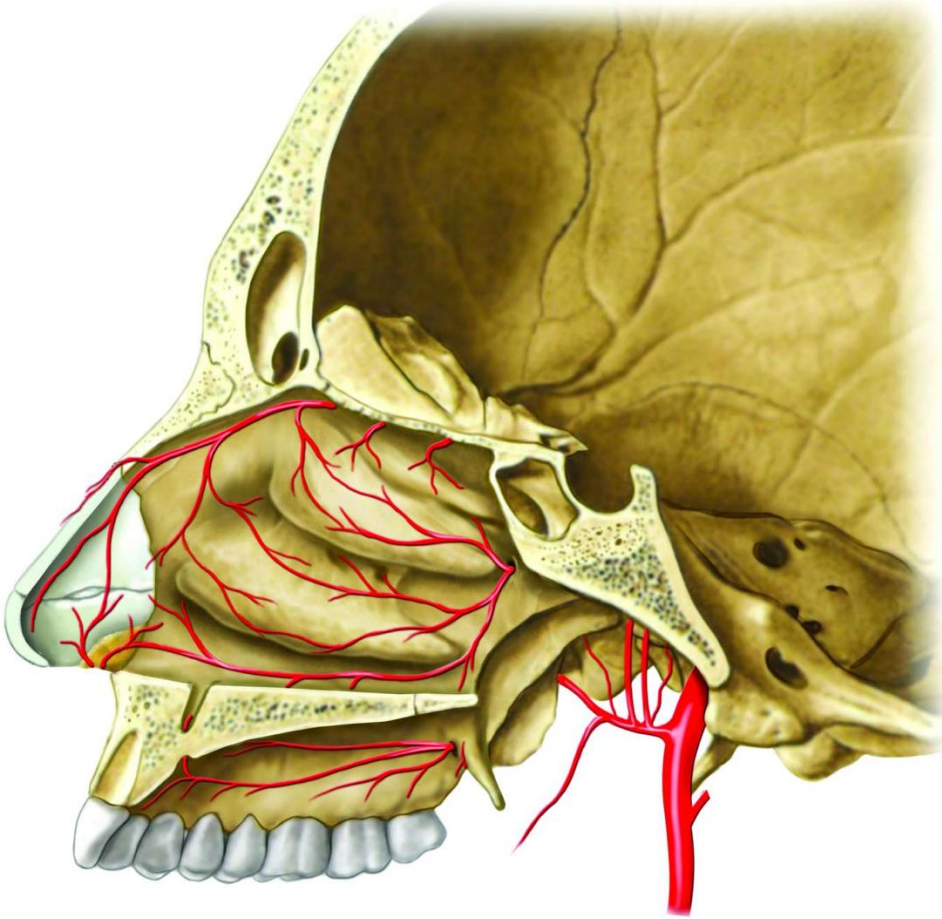

Layers of gauze
soaked in petrolatum
Bayonet Forceps

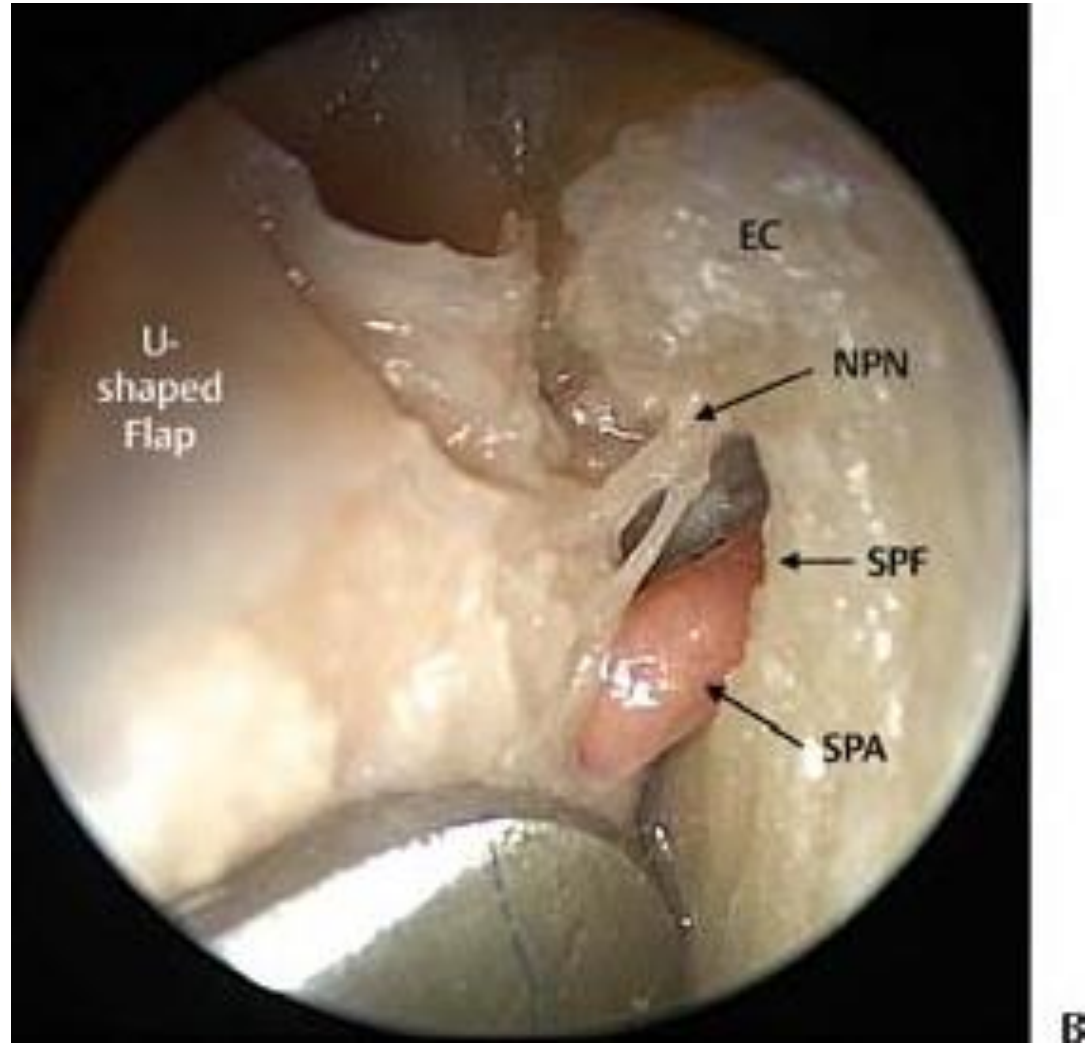



MEROCEL® SINUS PACKS
Merocel 2000
Laminated
Kennedy SinusStent
Dressing
Merocel
Baron Sinus-Pa
Merocel Kennedy
Sinus-Pak
Medtronic


entsho.com


1
2

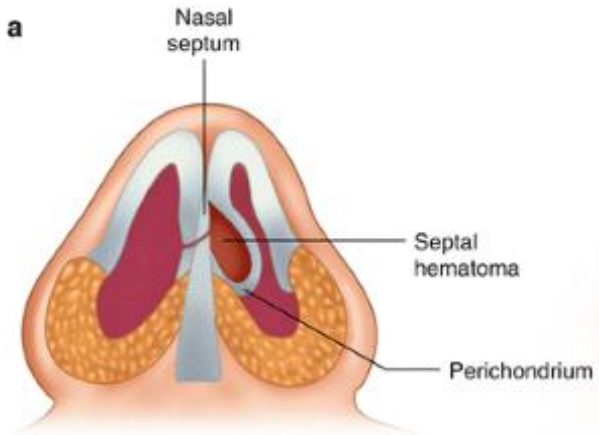


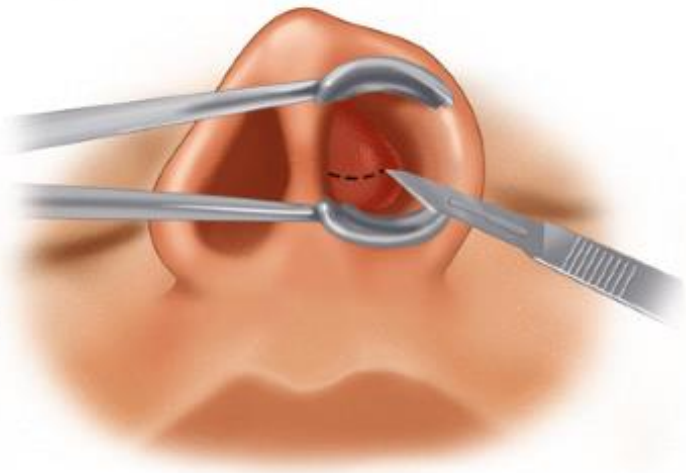


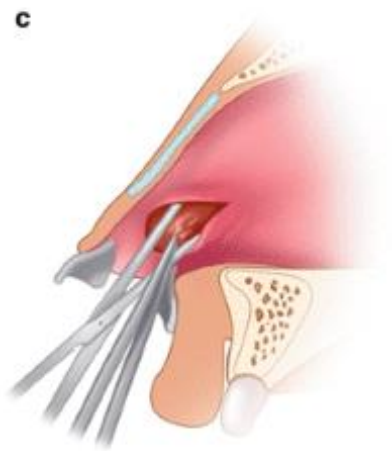
B

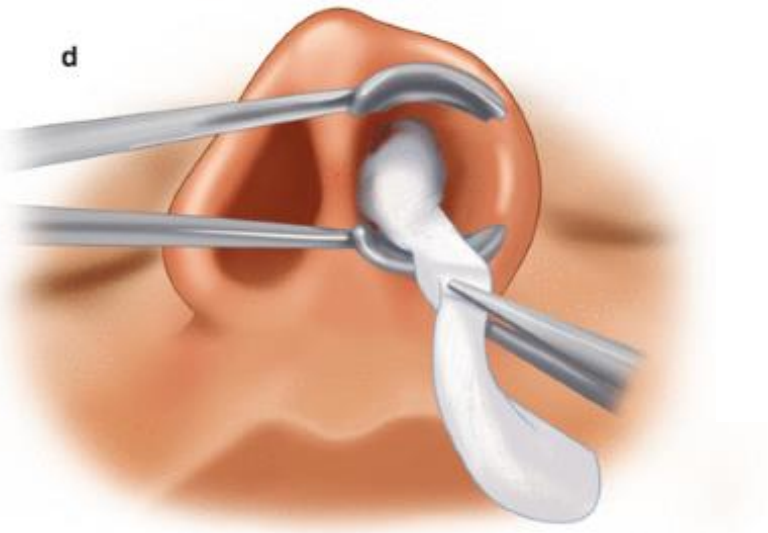
Broken Nose

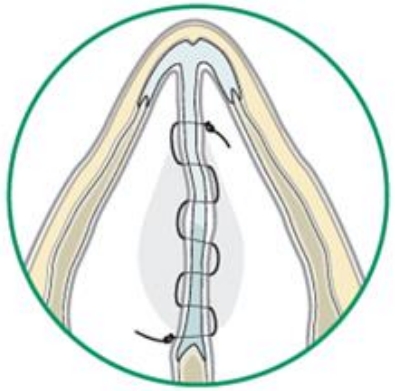
Fractured Nasal Bones Before & After Repair

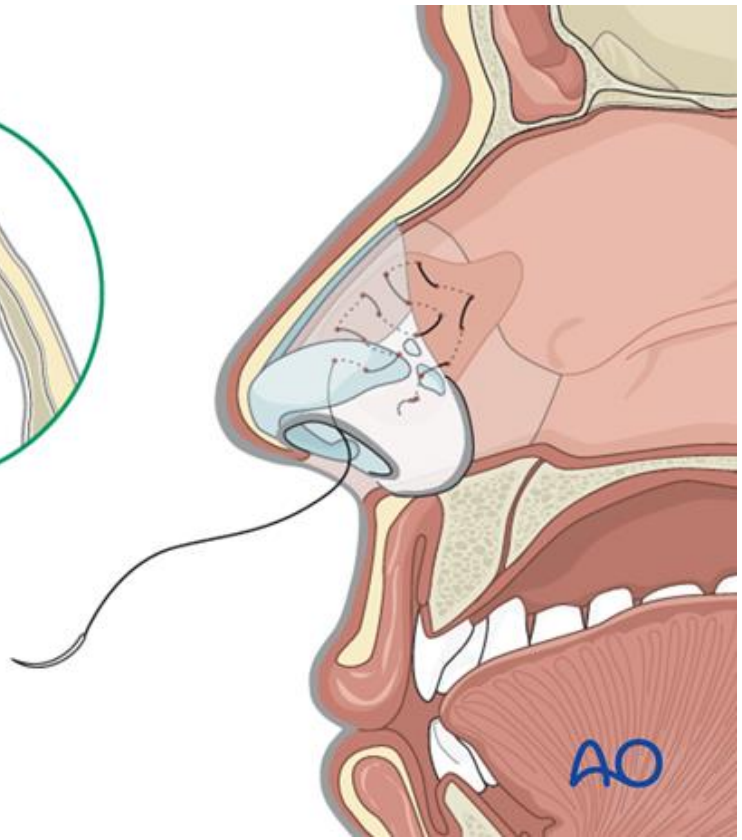

a
Nasal septum
Septal hematoma
Perichondrium

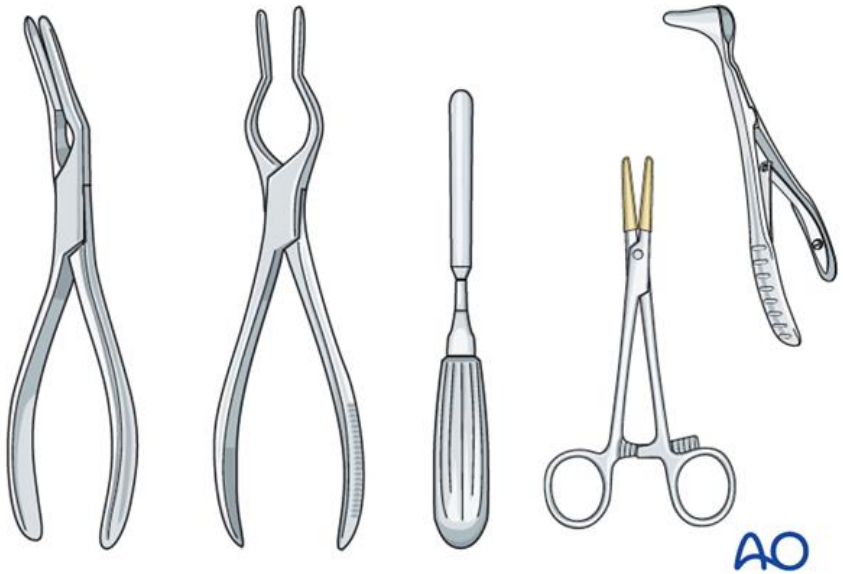

b

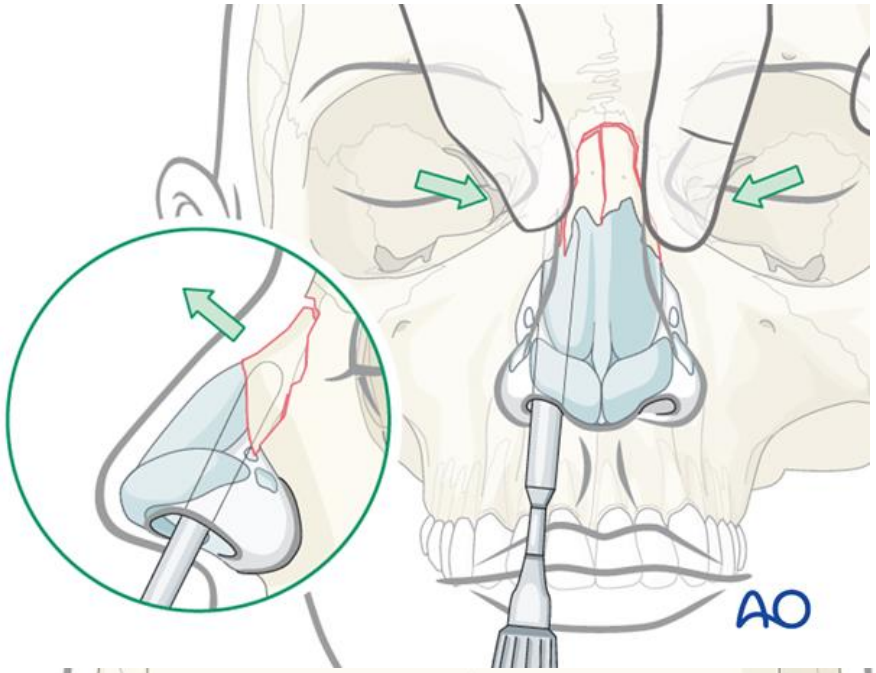

c

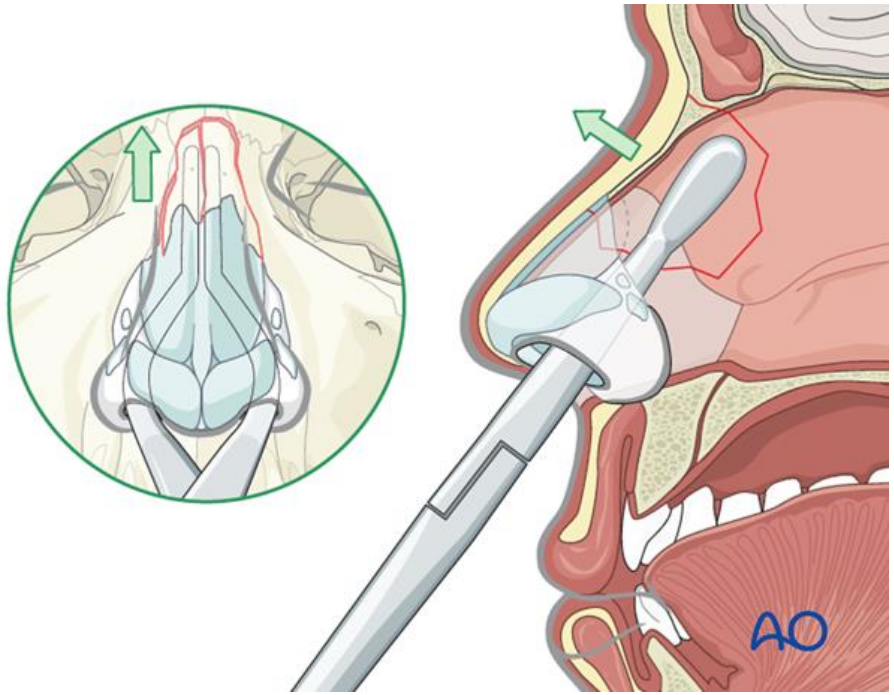

d




AO


AO


AO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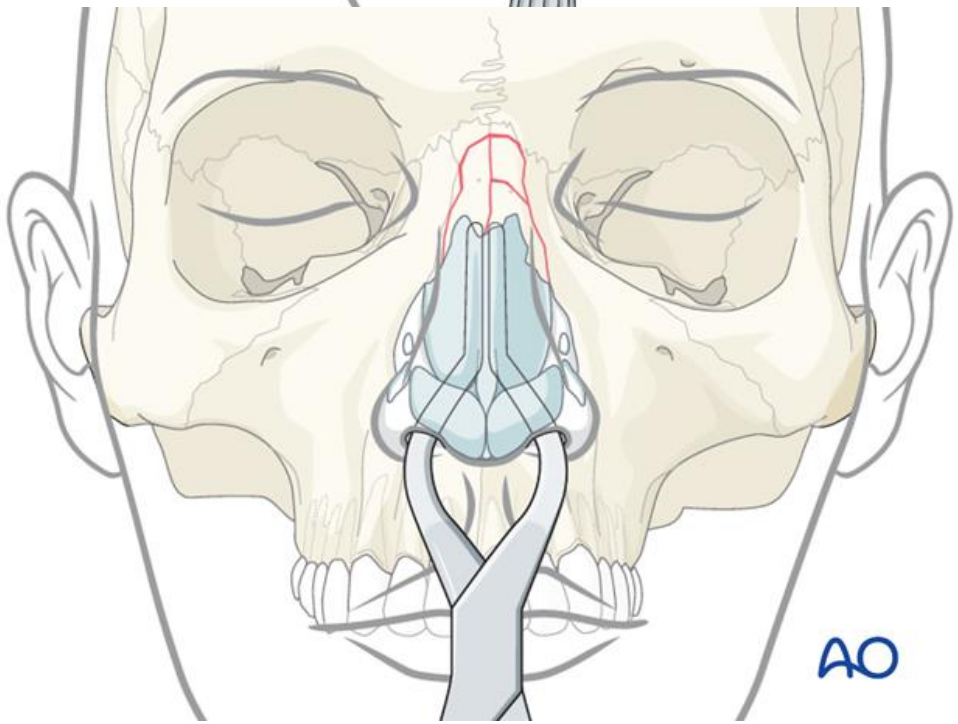
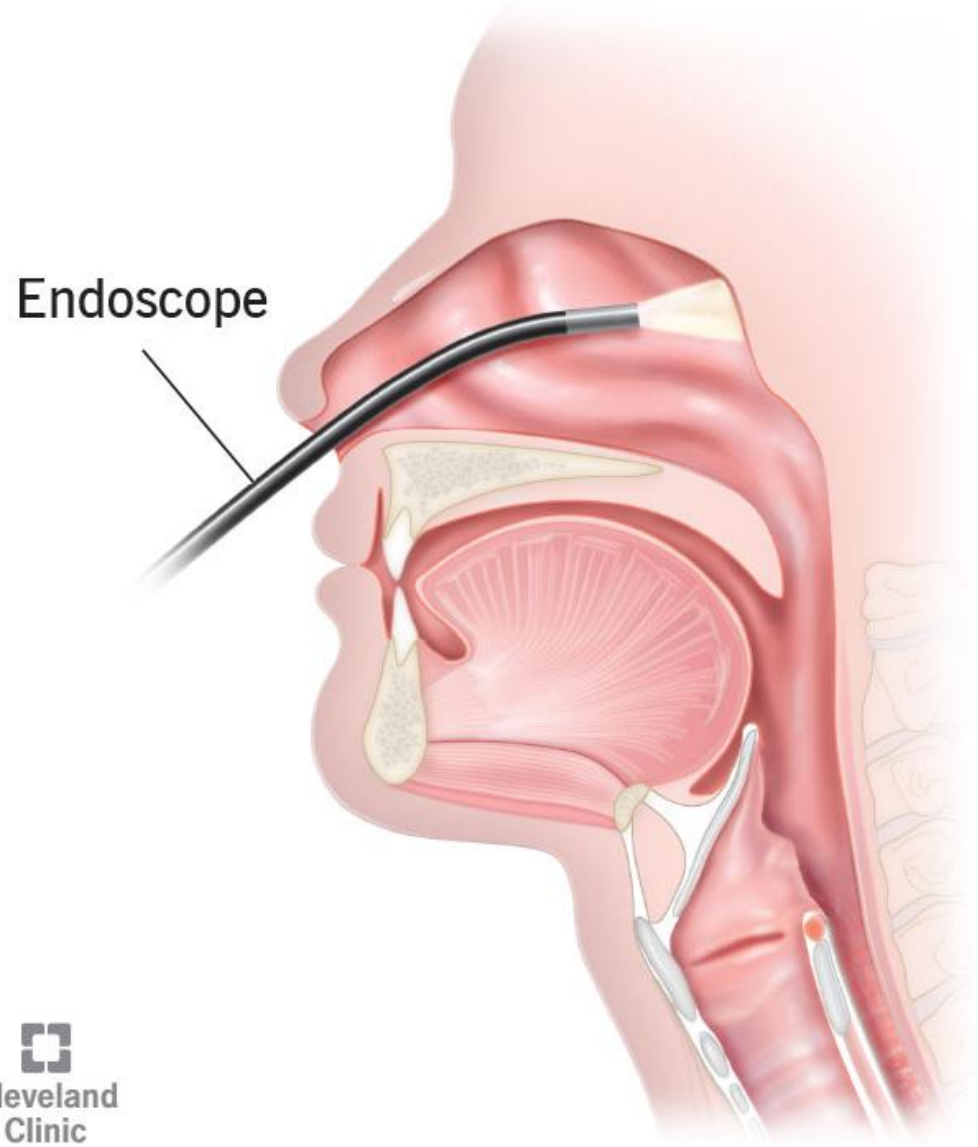
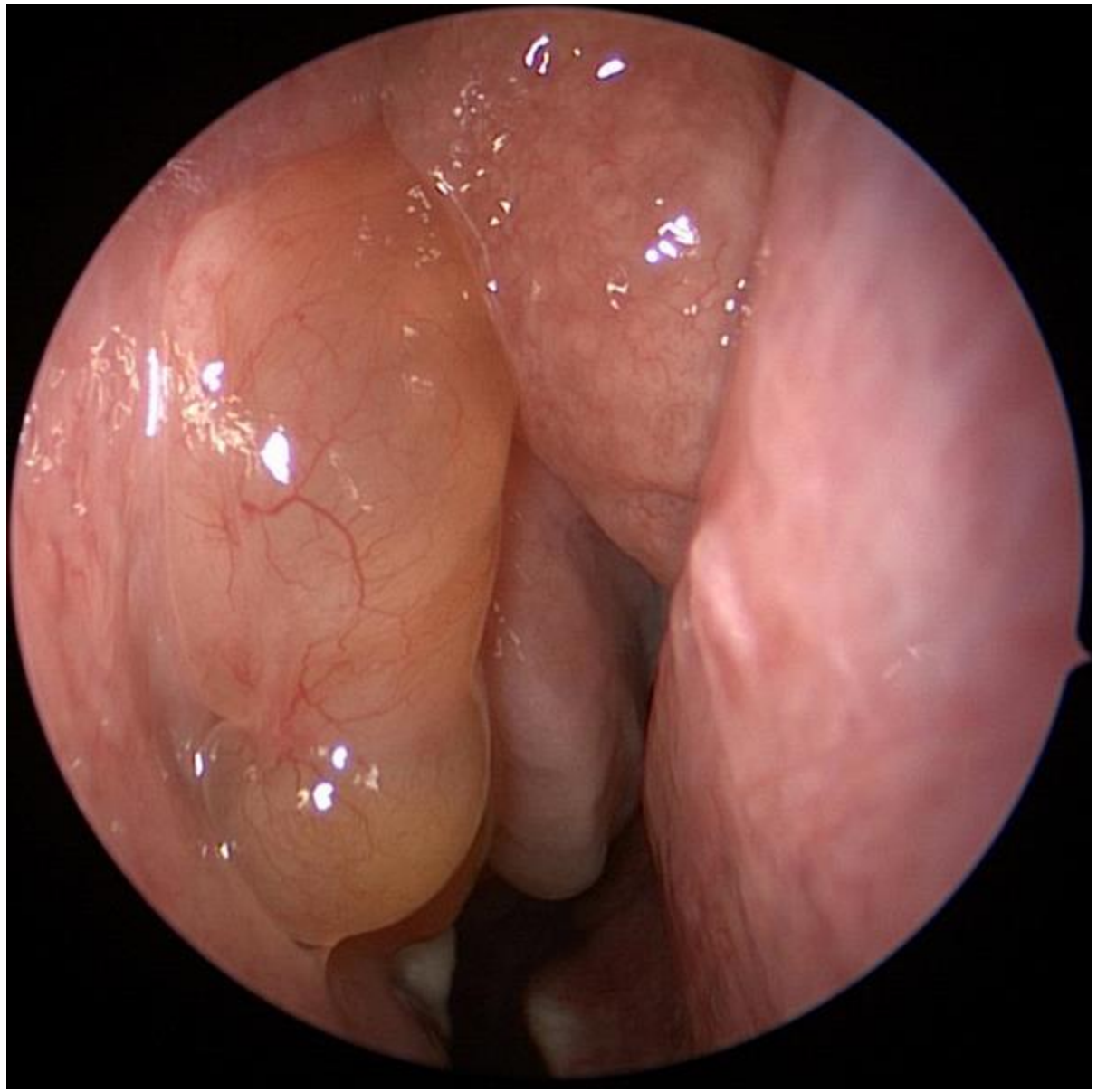
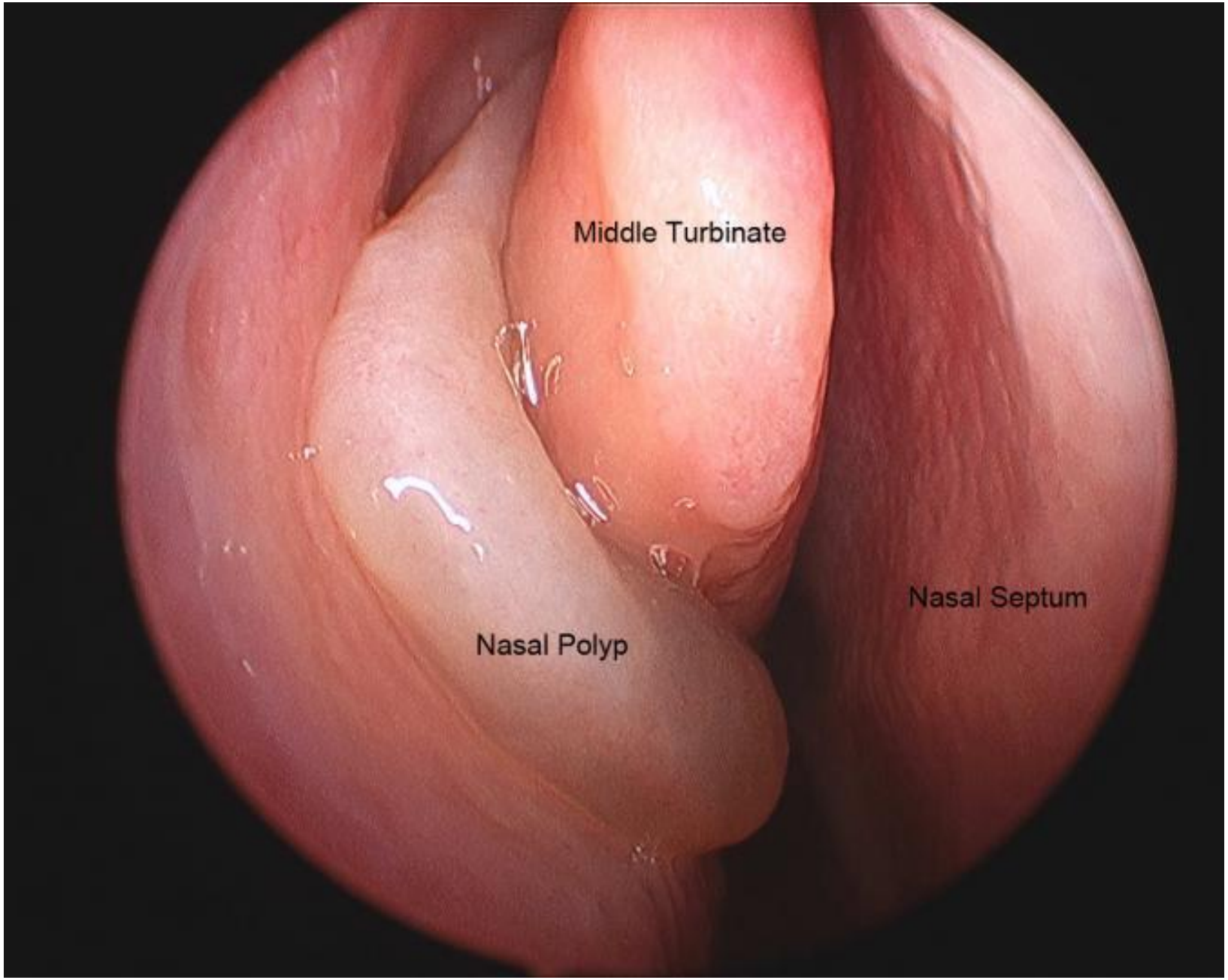
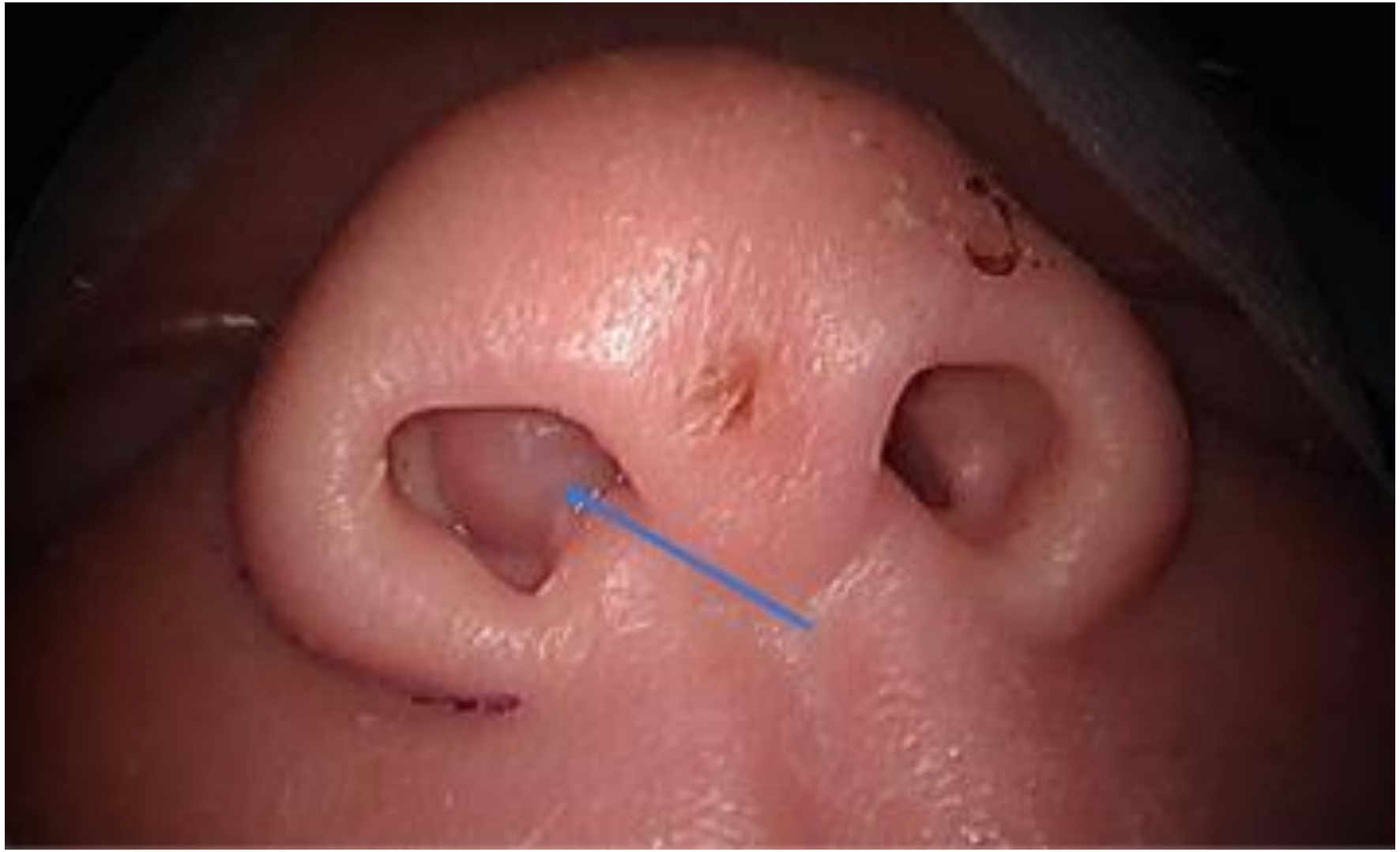

AO

Nasal endoscopy






Middle Turbinate
Nasal Septum
Nasal Polyp



Deviated Nasal Septum

Straight Septum

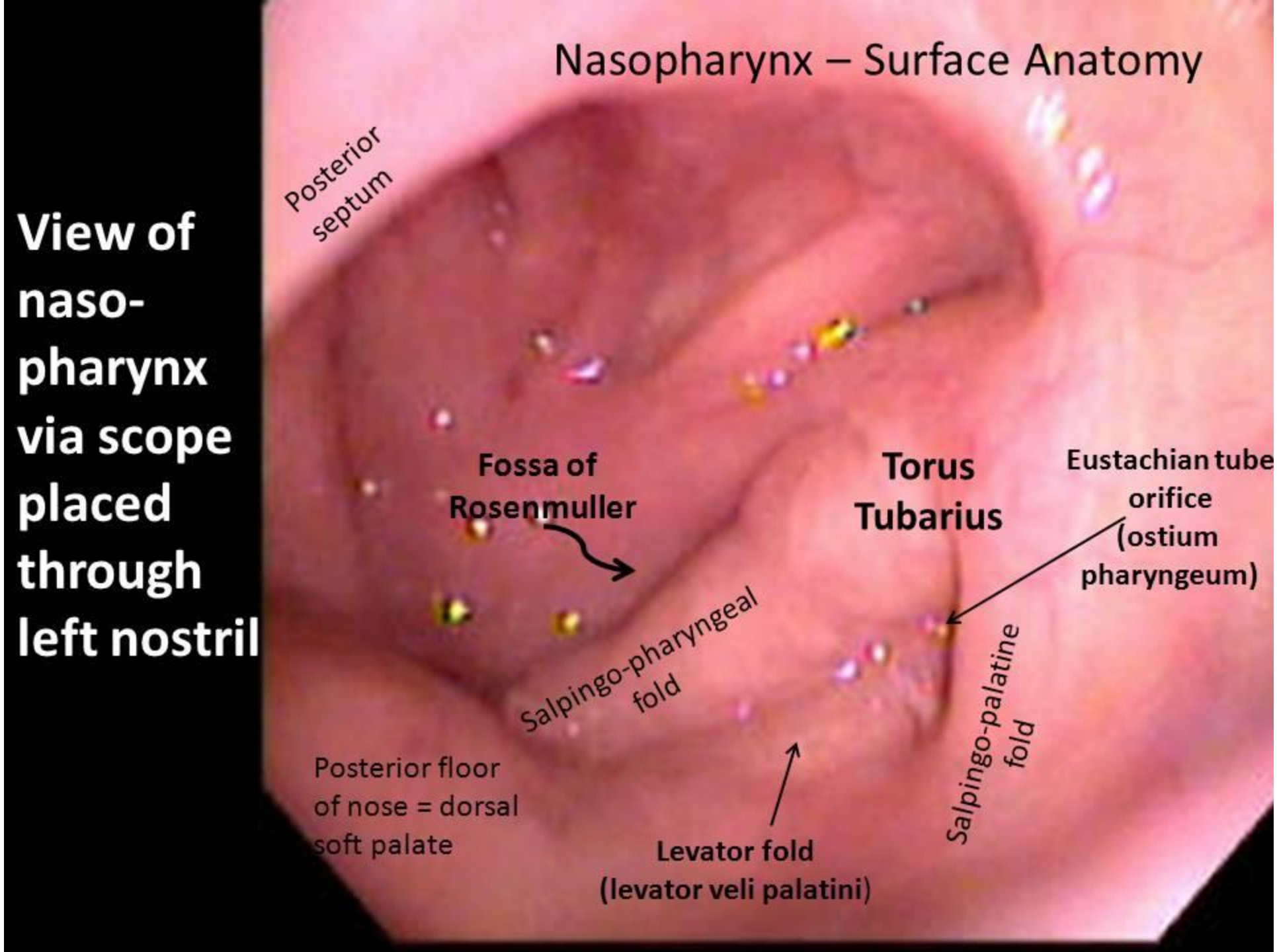
Adenoids Before Adenoidectomy

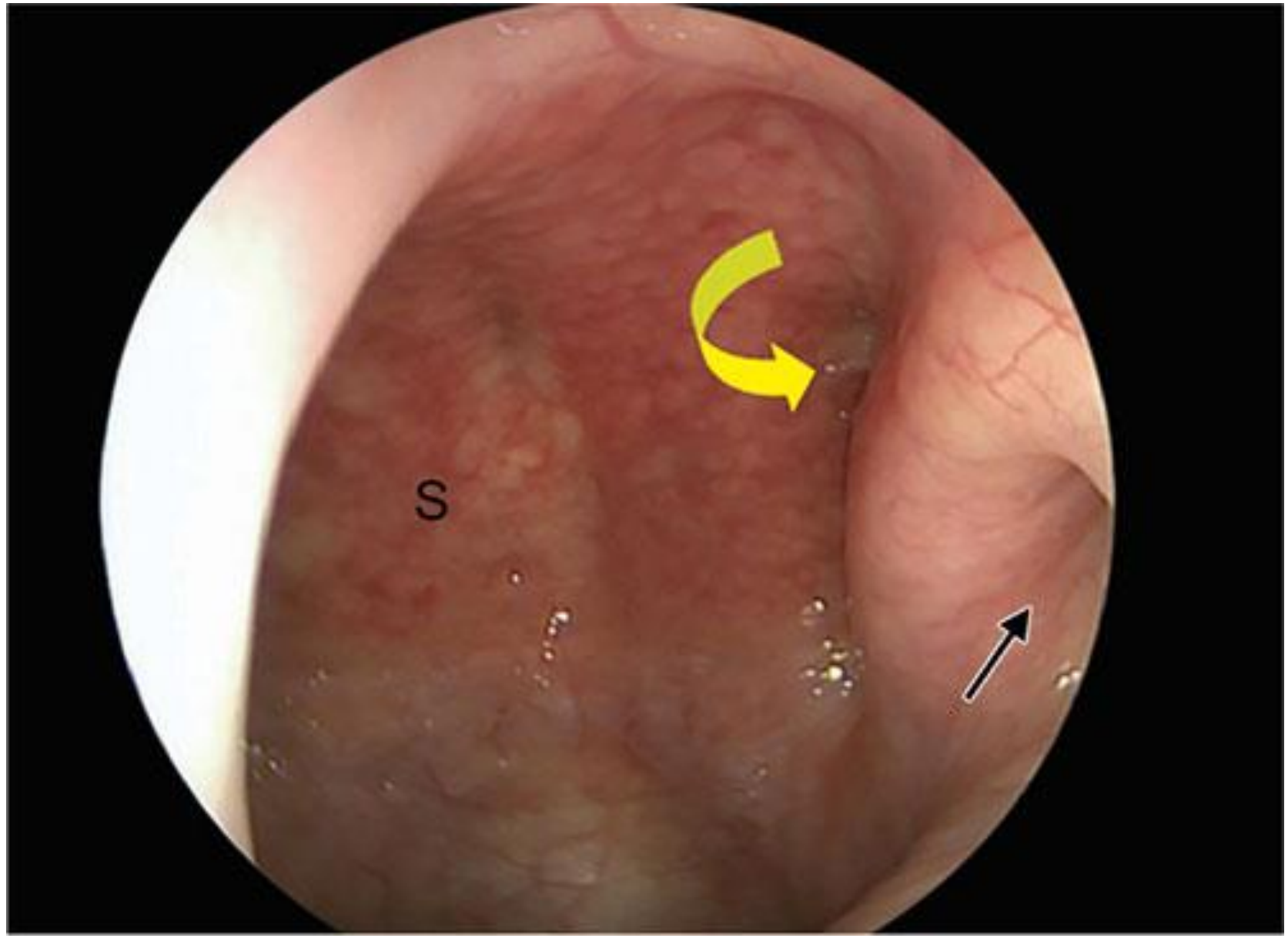
Adenoid Bed After Adenoidectomy


R

Nasopharynx – Surface Anatomy

View of naso-pharynx via scope placed through left nostril

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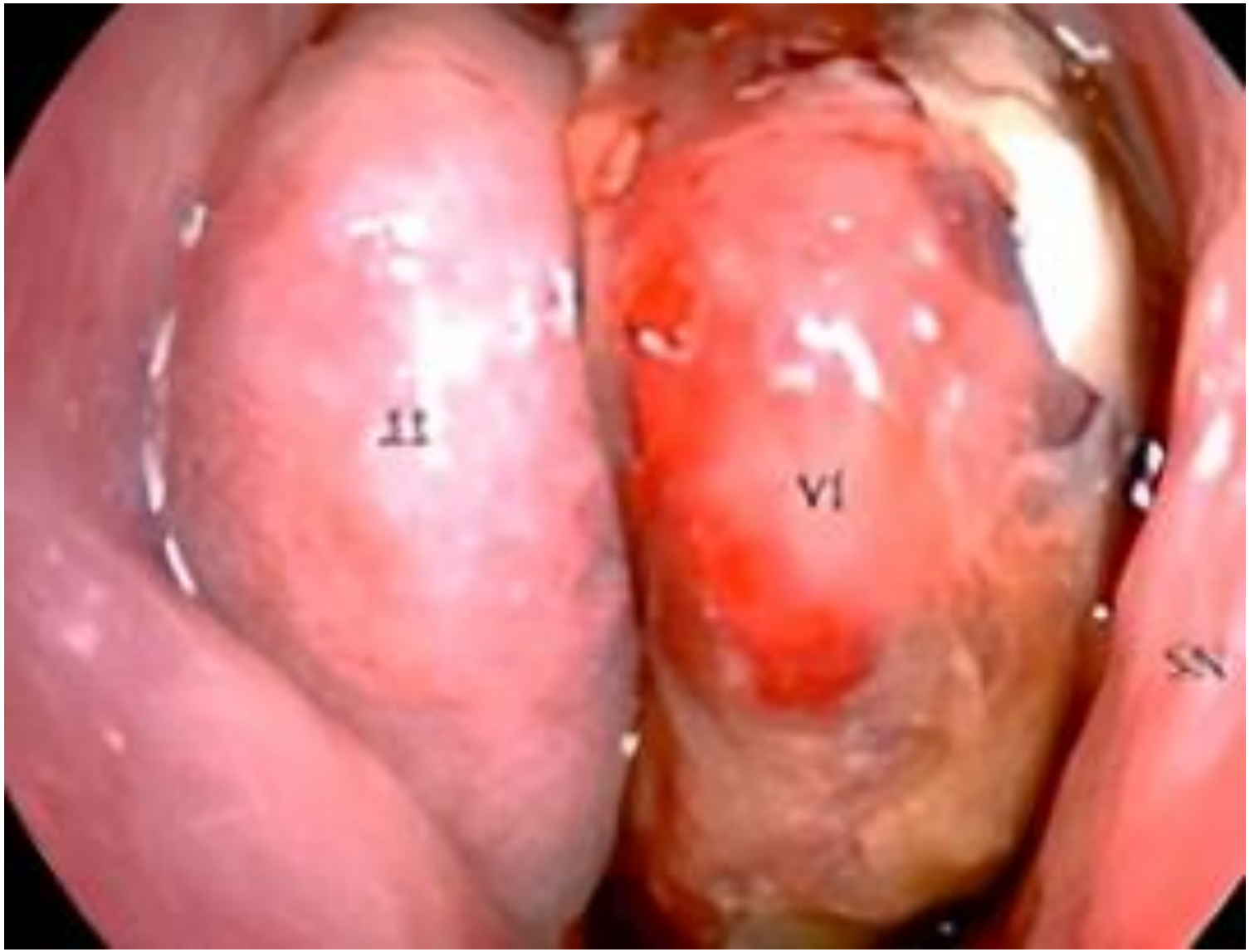
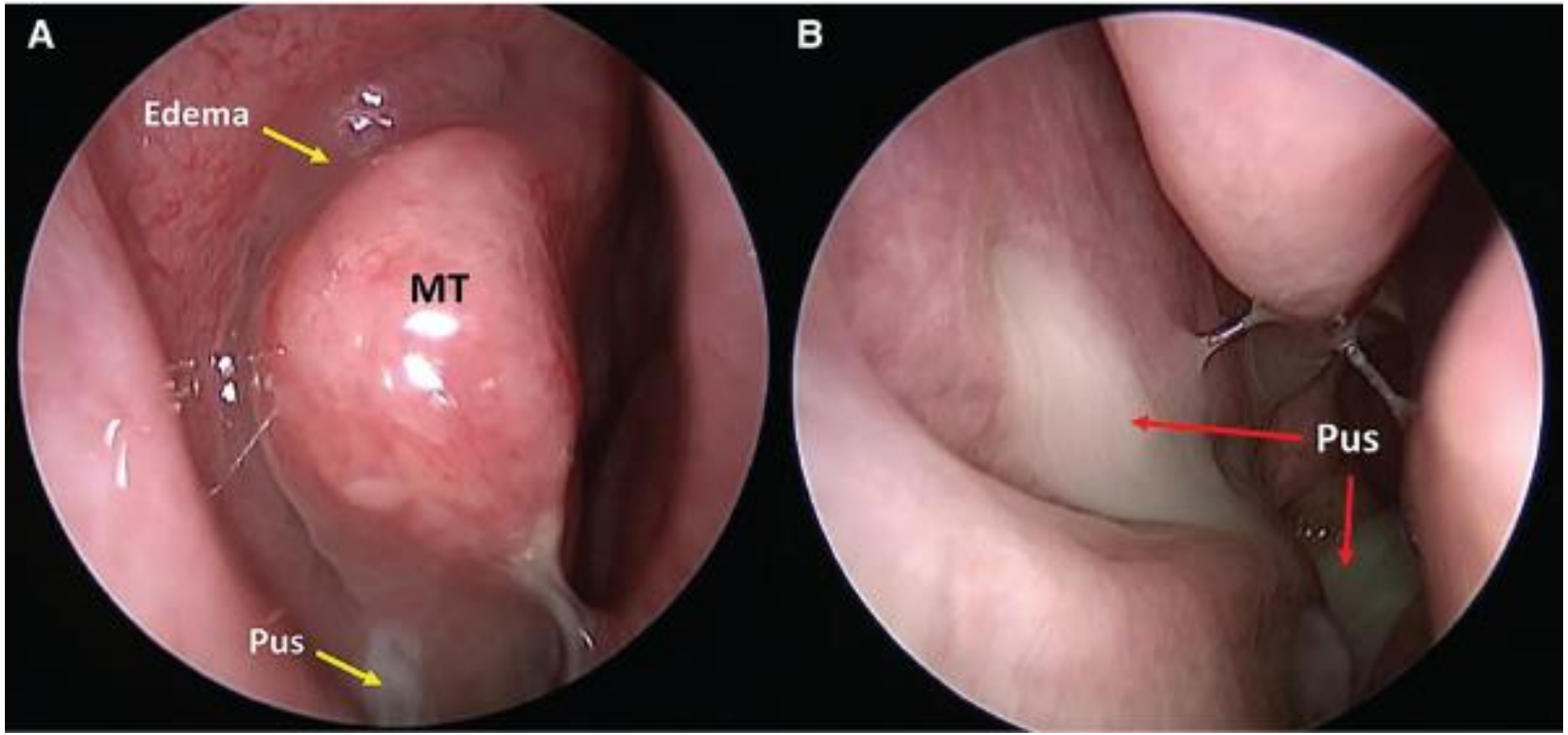
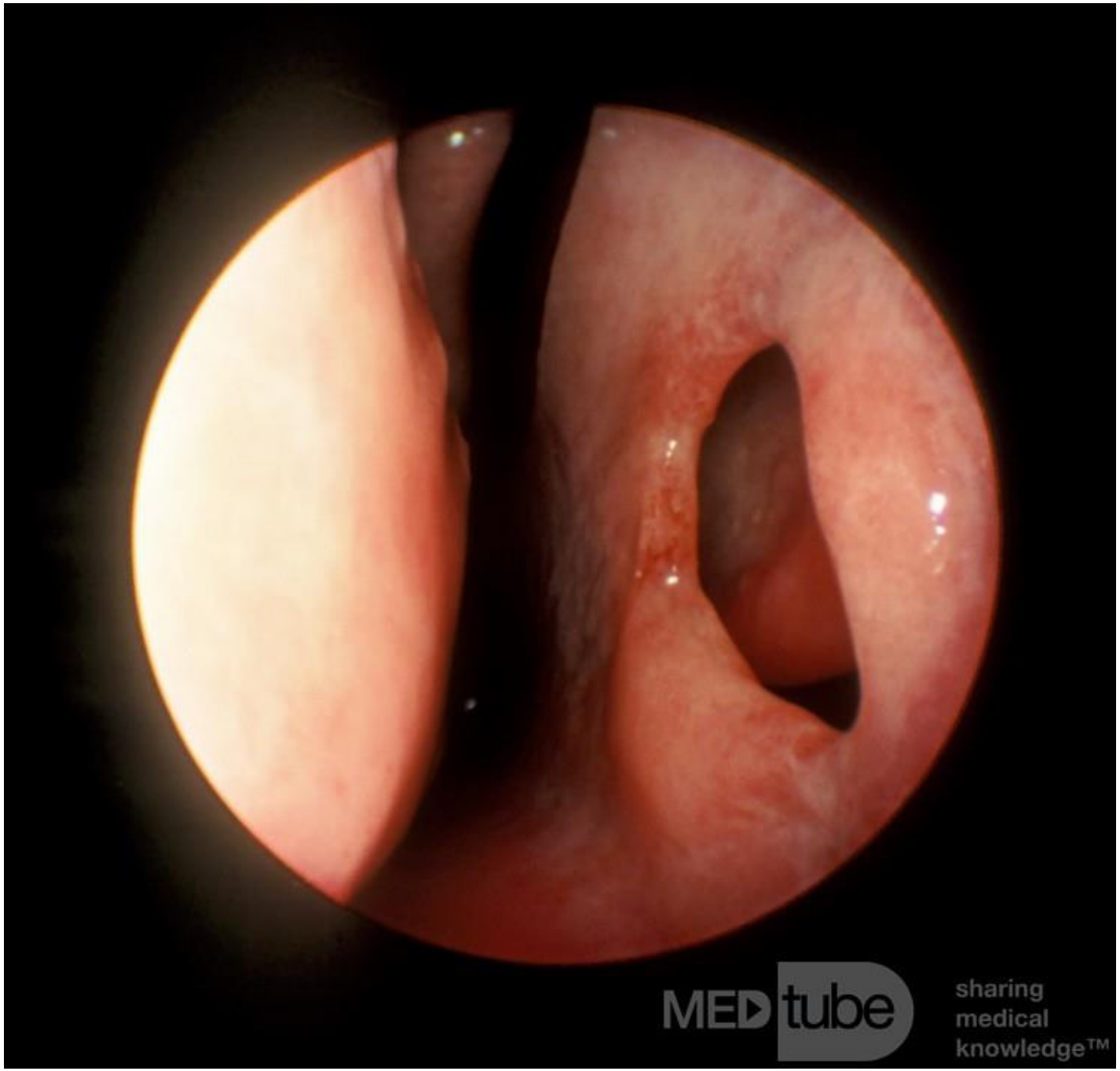

II
VI


A
Edema
MT
Pus
B
Pus


MEDtube
sharing
medical
knowledge™


a
b

Nasal Discharge

Unilateral

FB (children)

U/l Choanal atresia

Antro-choanal polyp

U/L Chronic sinusitis

U/L Rhinosporidiosis

Rhinolith , CSF Rhinorrhea

Neoplasm Nose & PNS

Bilateral

Enlarged Adenoids

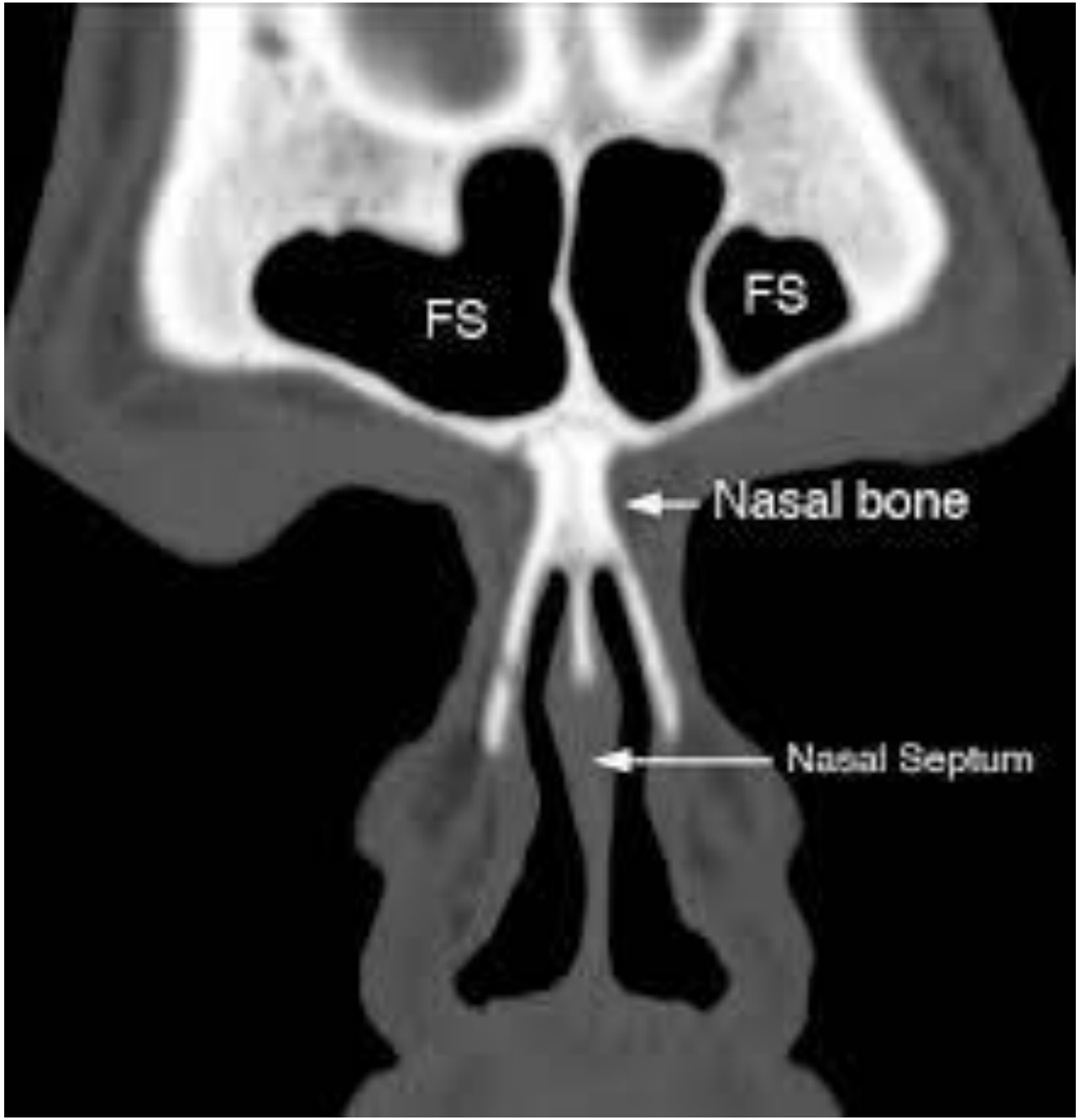
B/l Choanal atresia

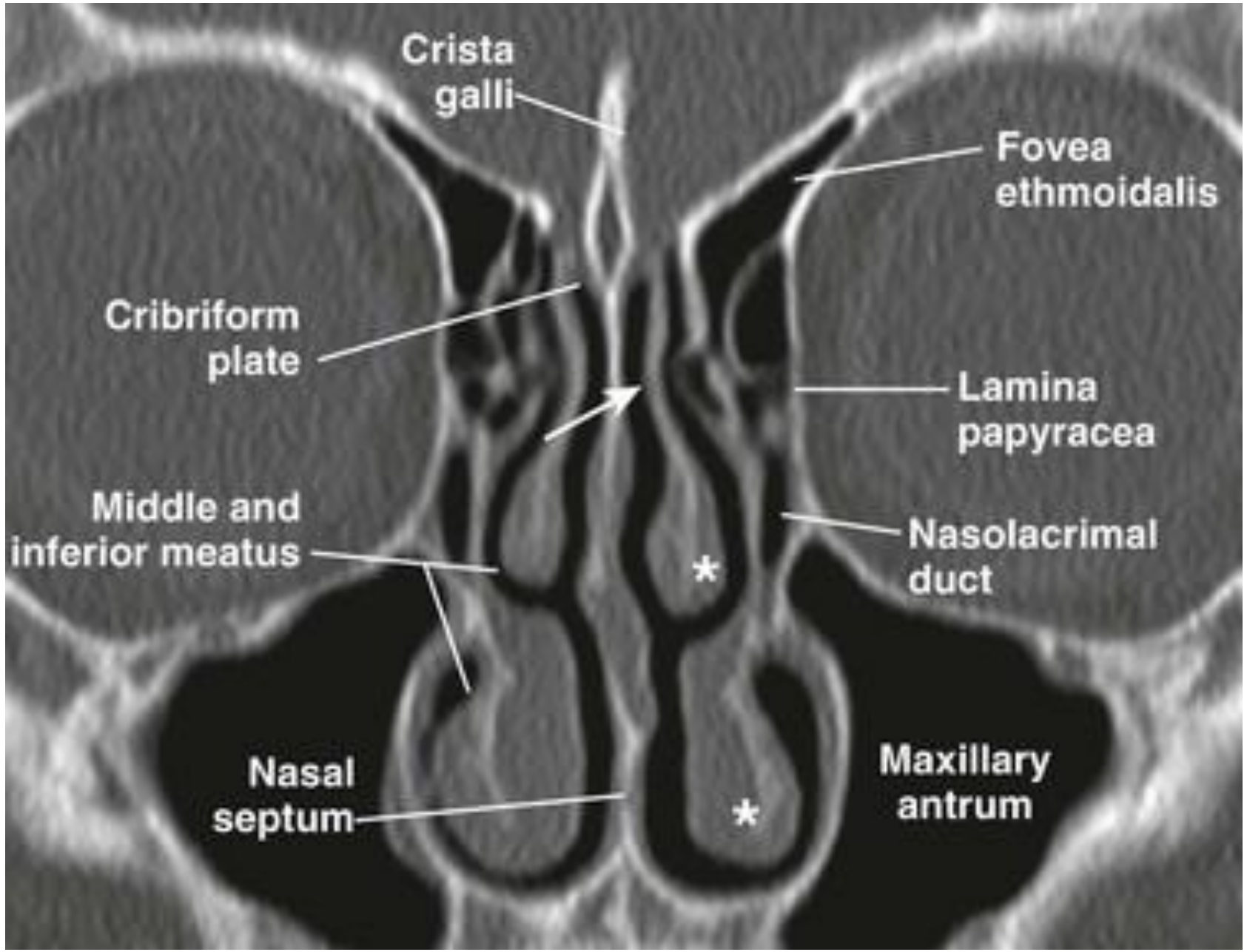
Ethmoidal polyp

B/LChronic sinusitis

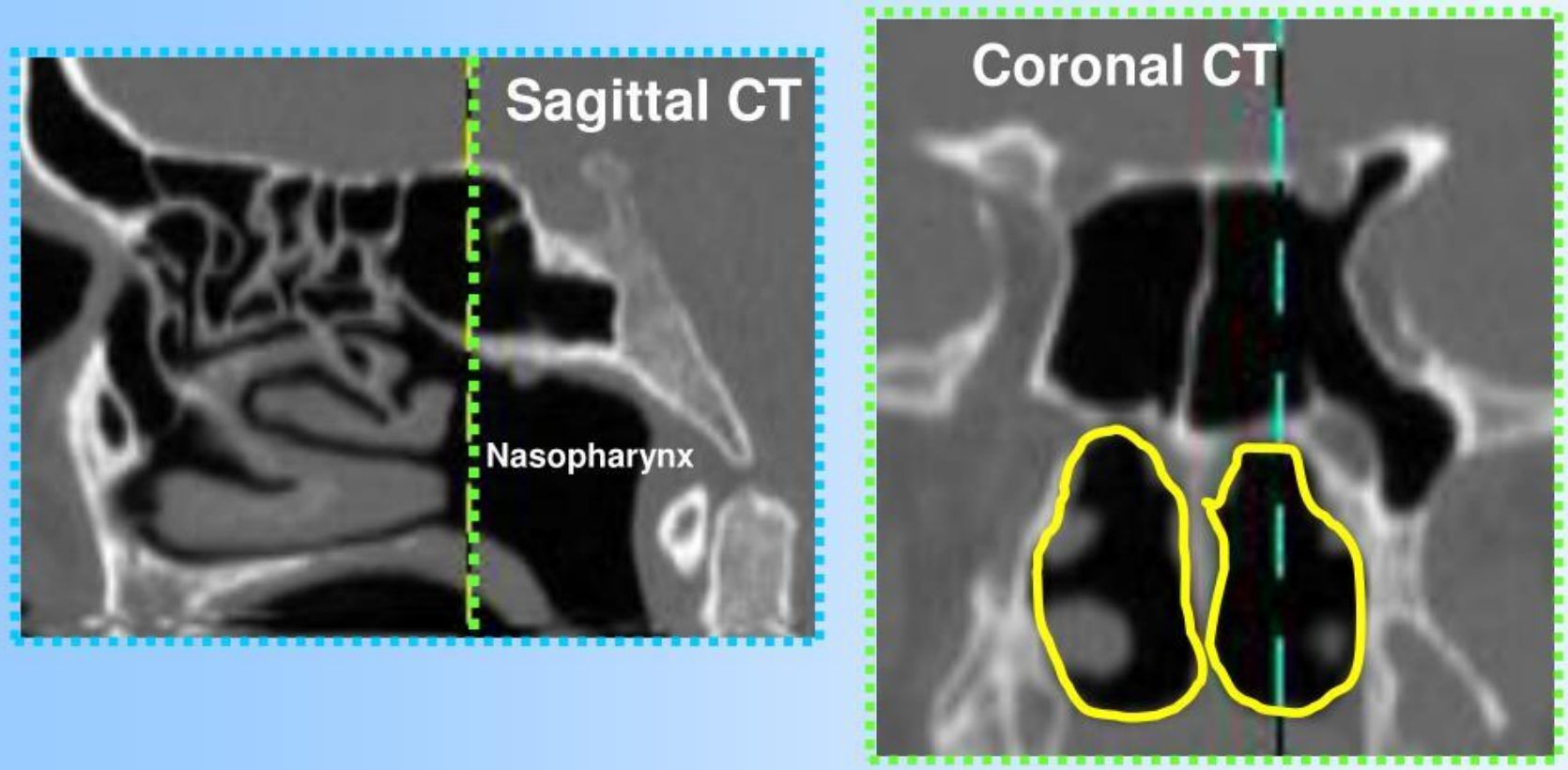
B/L Rhinosporidiosis

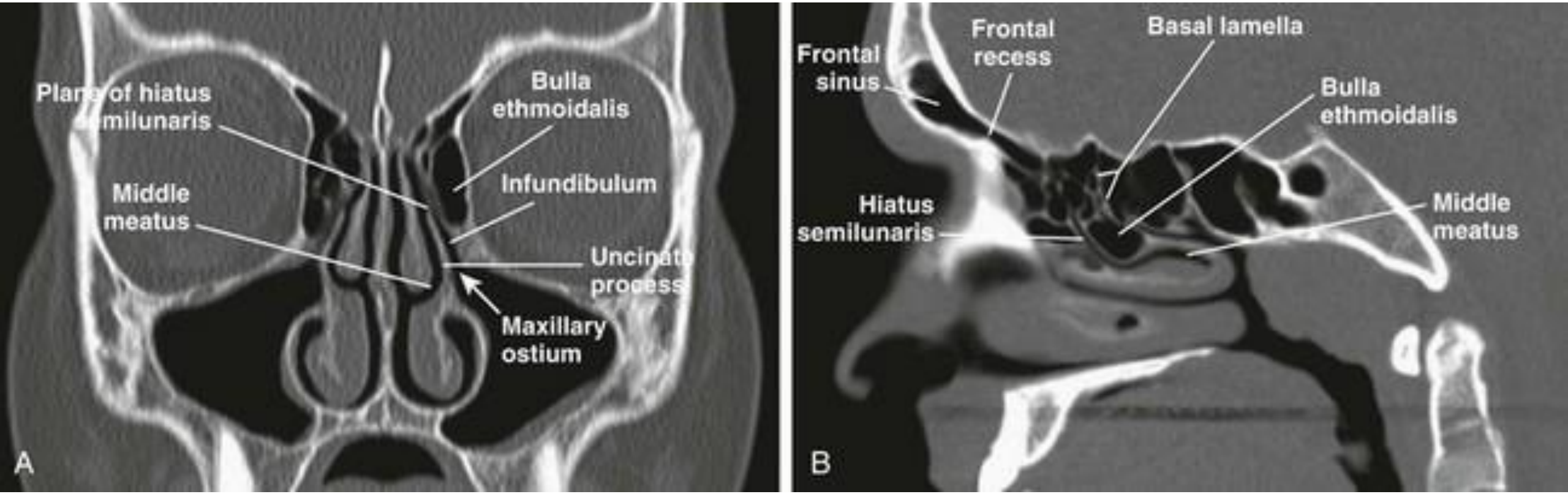
AR, VMR

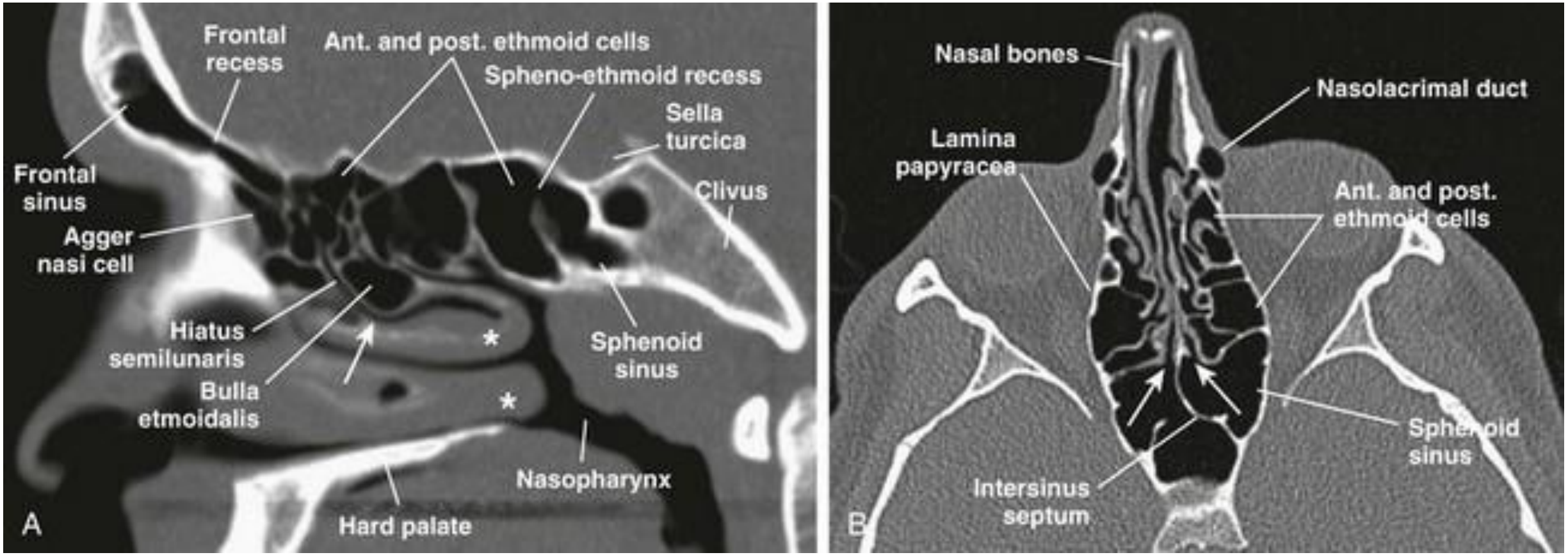

FS
FS
Nasal bone
Nasal Septum

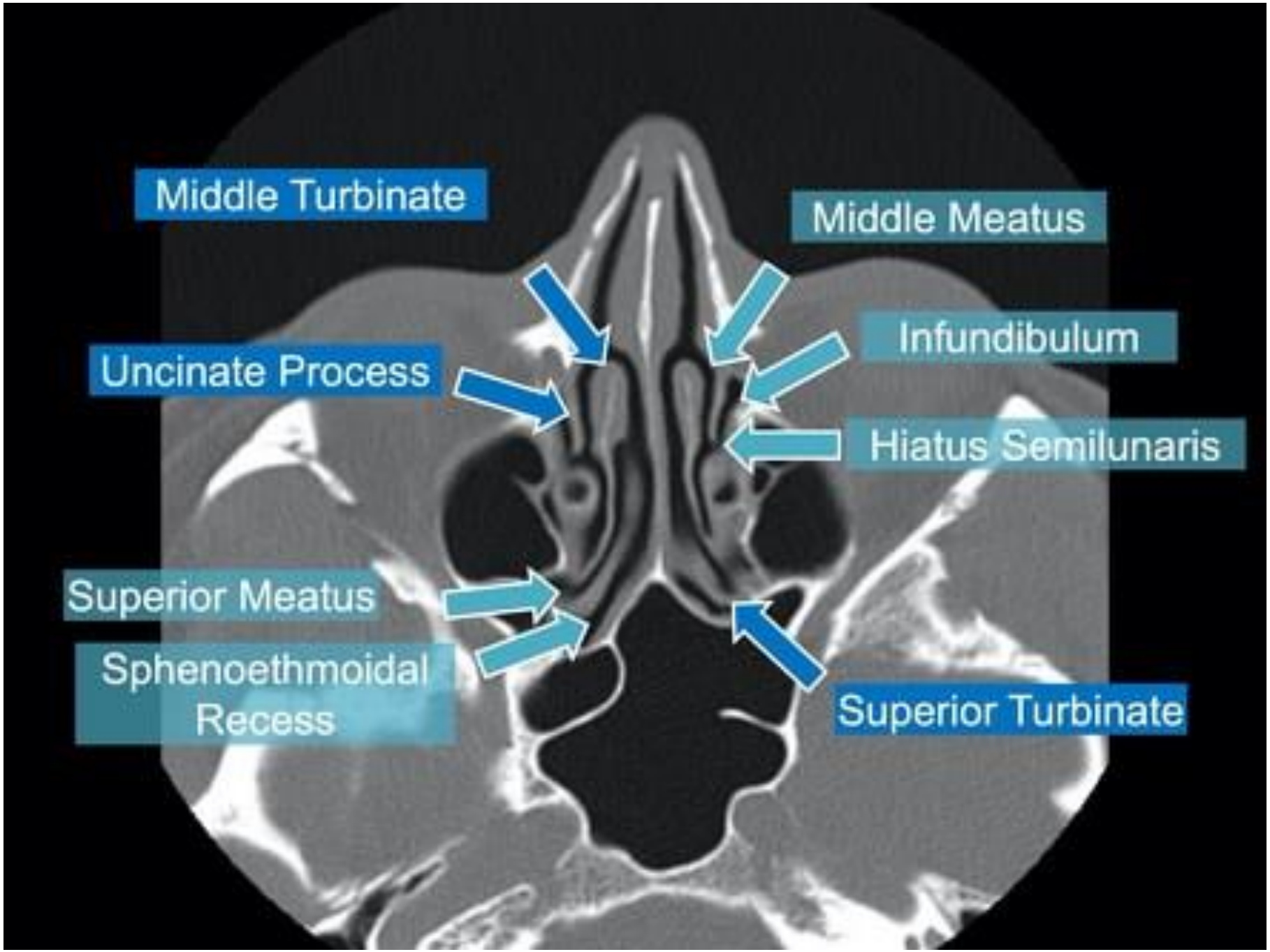

Crista galli
Fovea ethmoidalis
Cribriform plate
Lamina papyracea
Middle and inferior meatus
Nasolacrimal duct
Nasal septum
Maxillary antrum

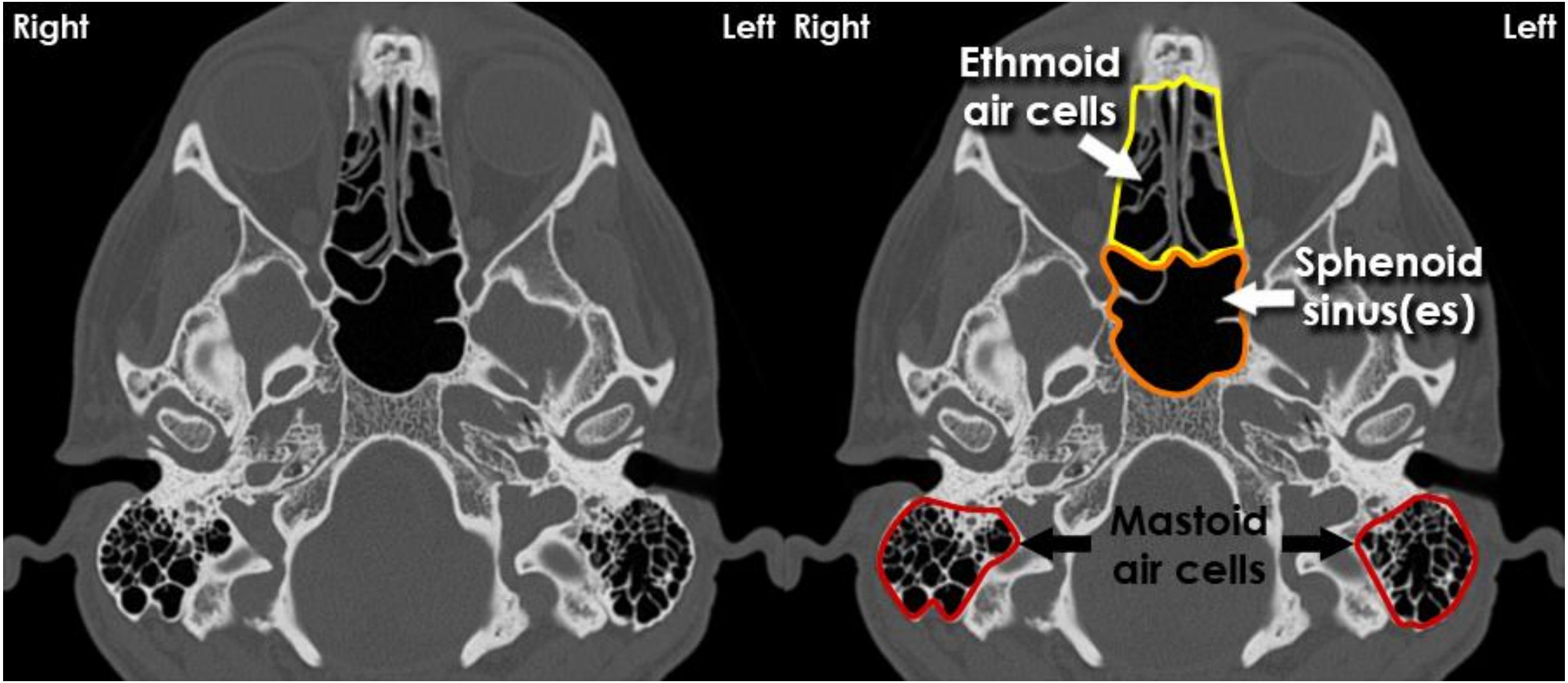
Posterior choana

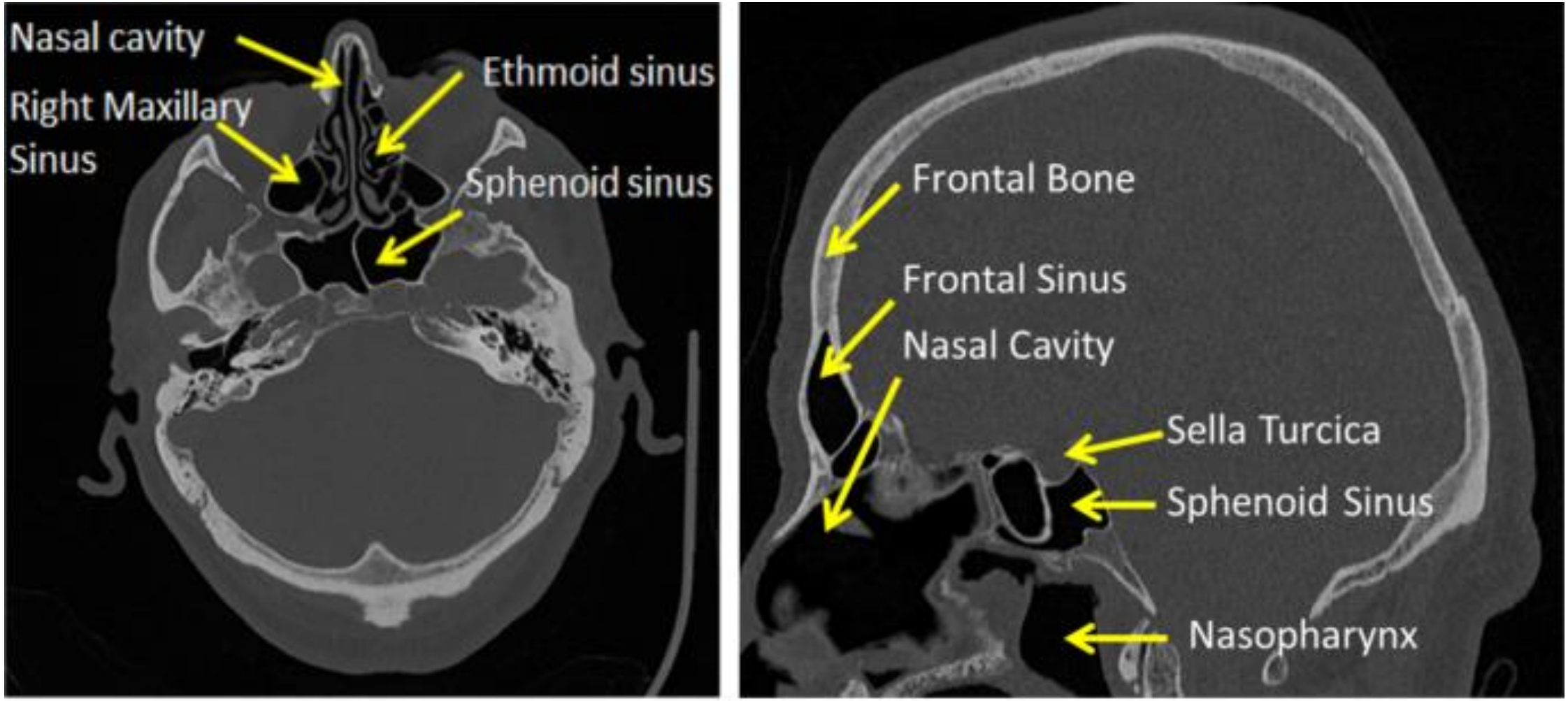



Plane of hiatus semilunaris
Bulla ethmoidalis
Infundibulum
Middle meatus
Uncinate process
Maxillary ostium
A
Frontal sinus
Frontal recess
Basal lamella
Bulla ethmoidalis
Hiatus semilunaris
Middle meatus
B


Frontal recess
Ant. and post. ethmoid cells
Spheno-ethmoid recess
Sella turcica
Frontal sinus
Clivus
Agger nasi cell
Hiatus semilunaris
Sphenoid sinus
Bulla etmoidalis
Nasopharynx
Hard palate
A
Nasal bones
Nasolacrimal duct
Lamina papyracea
Ant. and post. ethmoid cells
Sphenoid sinus
Intersinus septum
B

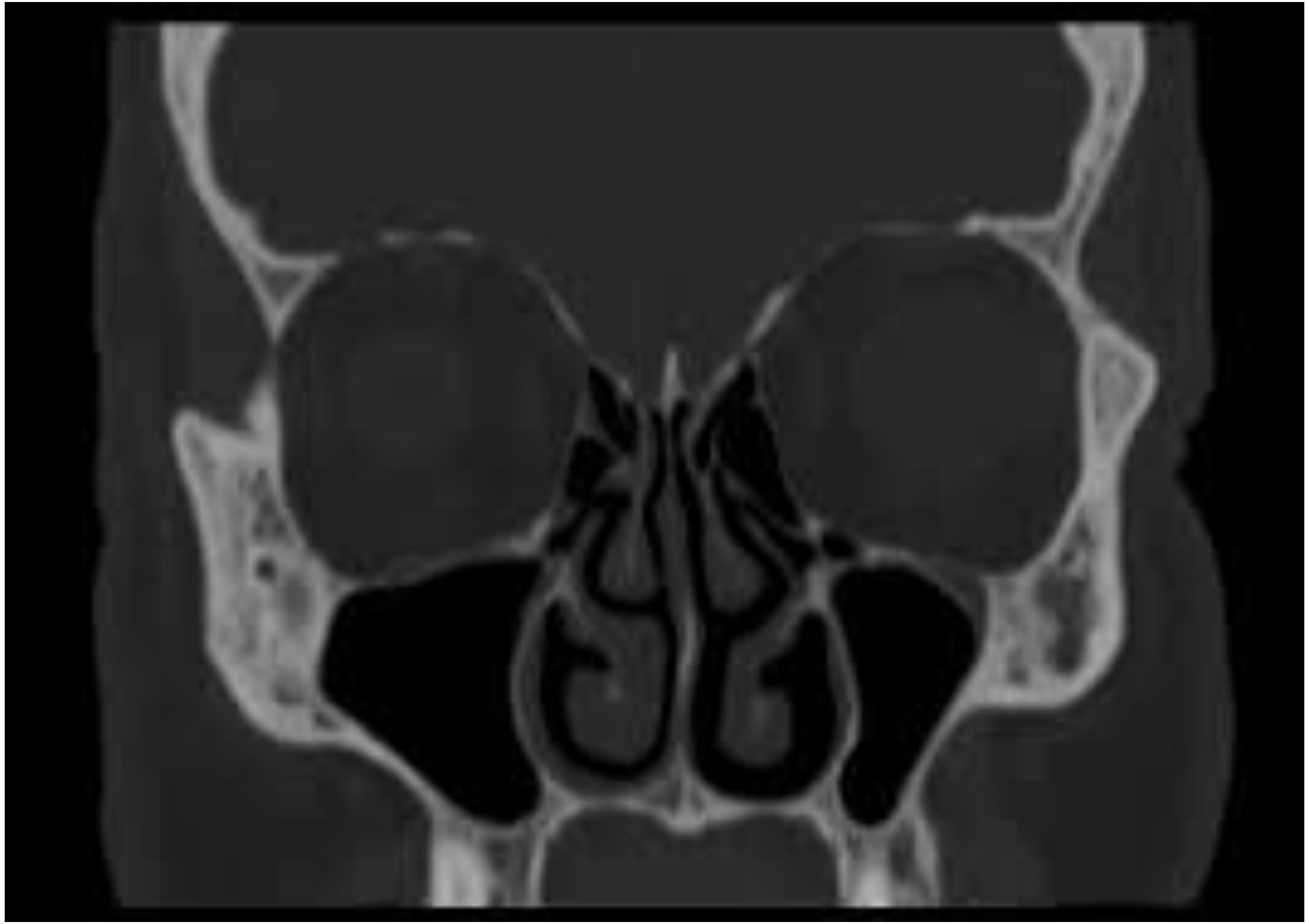

Middle Turbinate
Middle Meatus
Infundibulum
Uncinate Process
Hiatus Semilunaris
Superior Meatus
Sphenoethmoidal Recess
Superior Turbinate

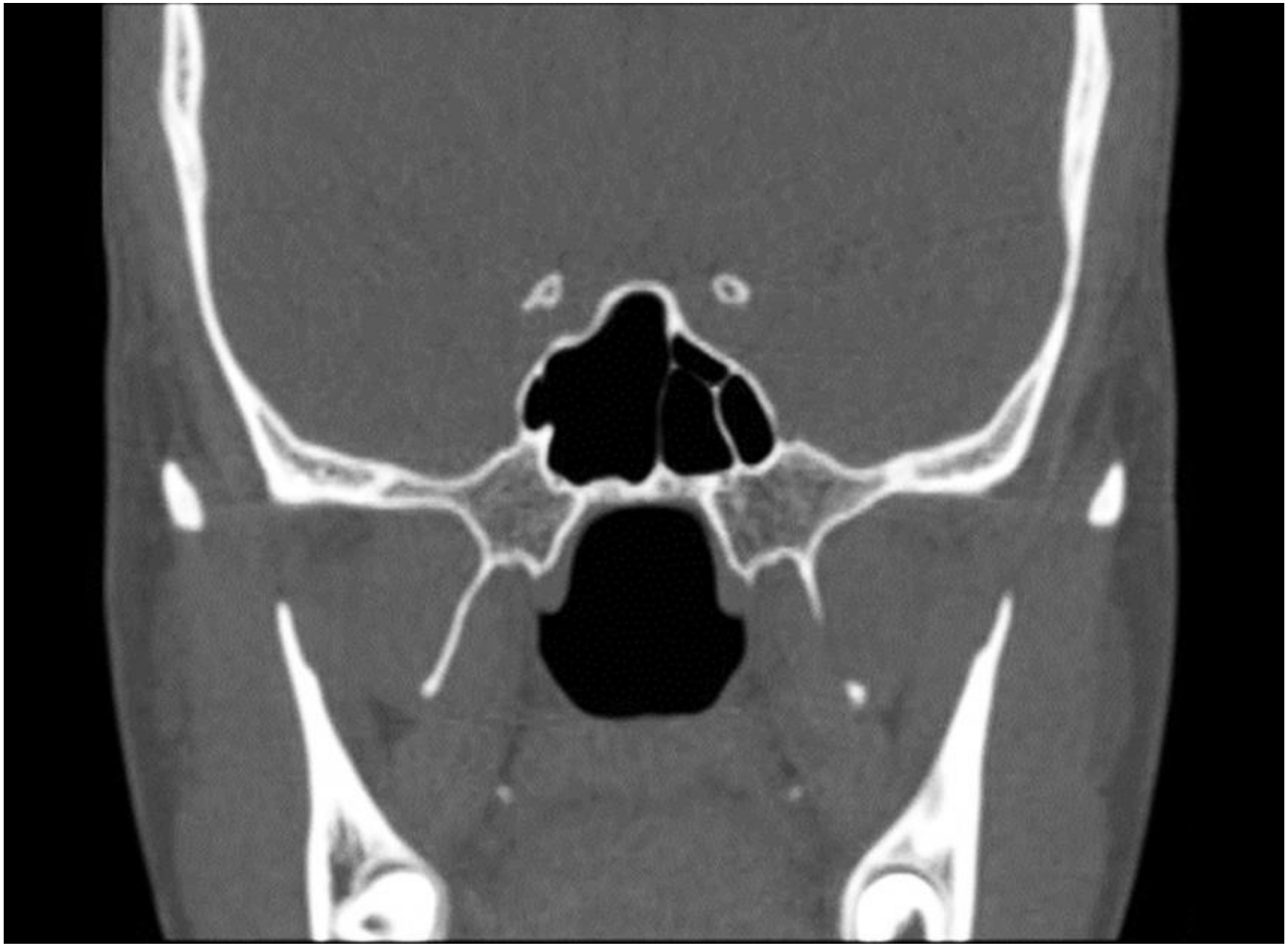

Right
Left
Right
Left
Ethmoid air cells
Sphenoid sinus(es)
Mastoid air cells

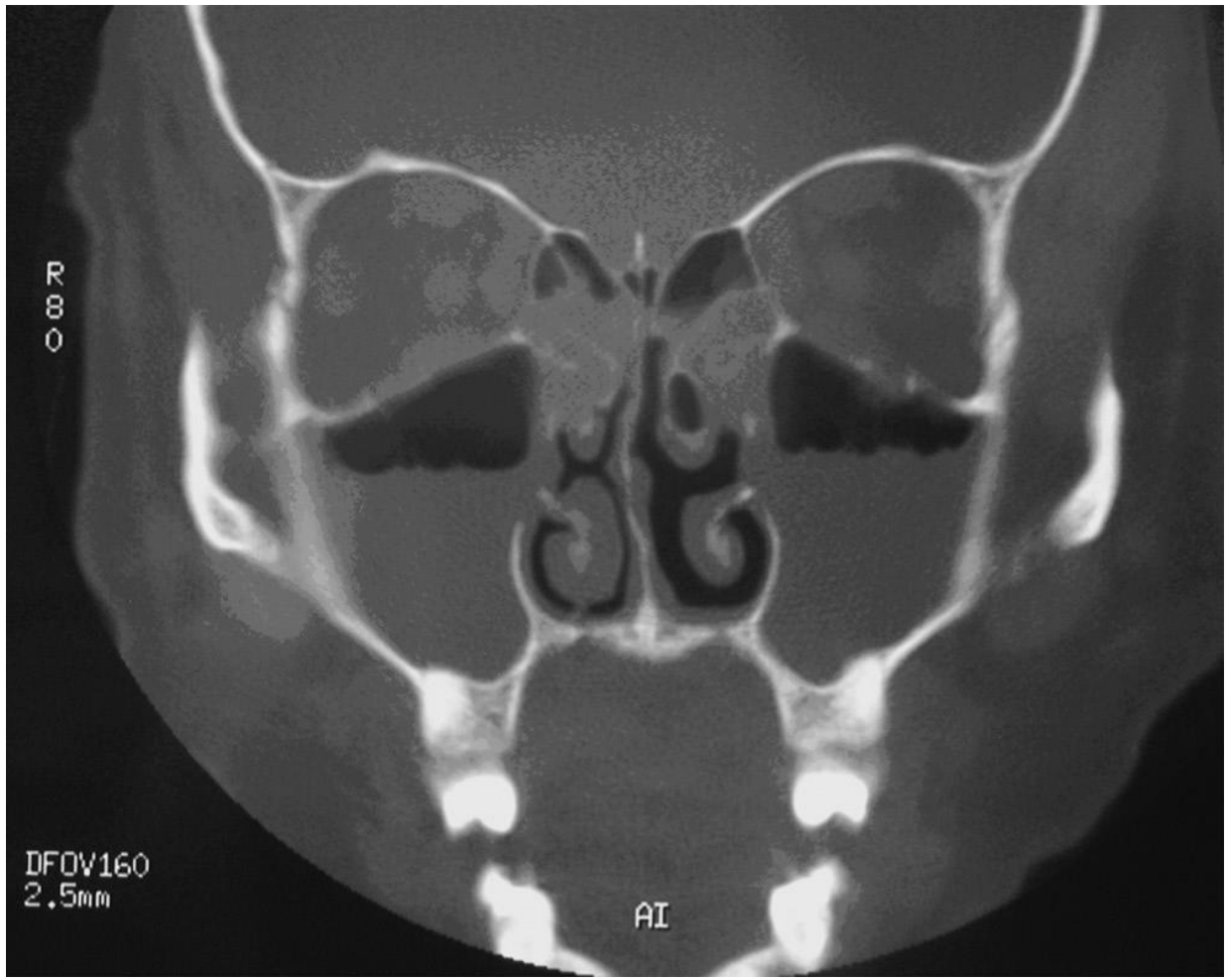


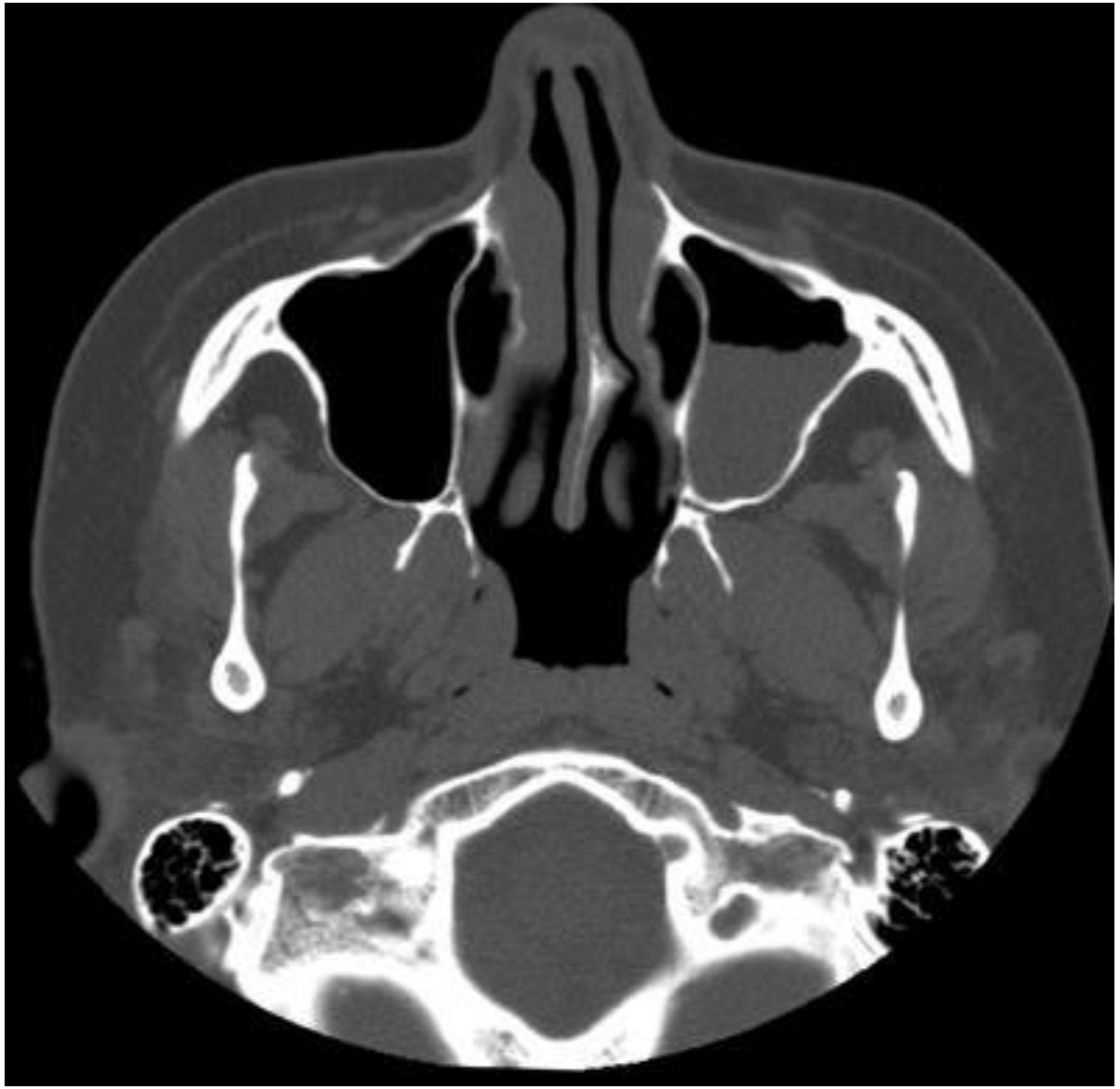
(a) Axial view

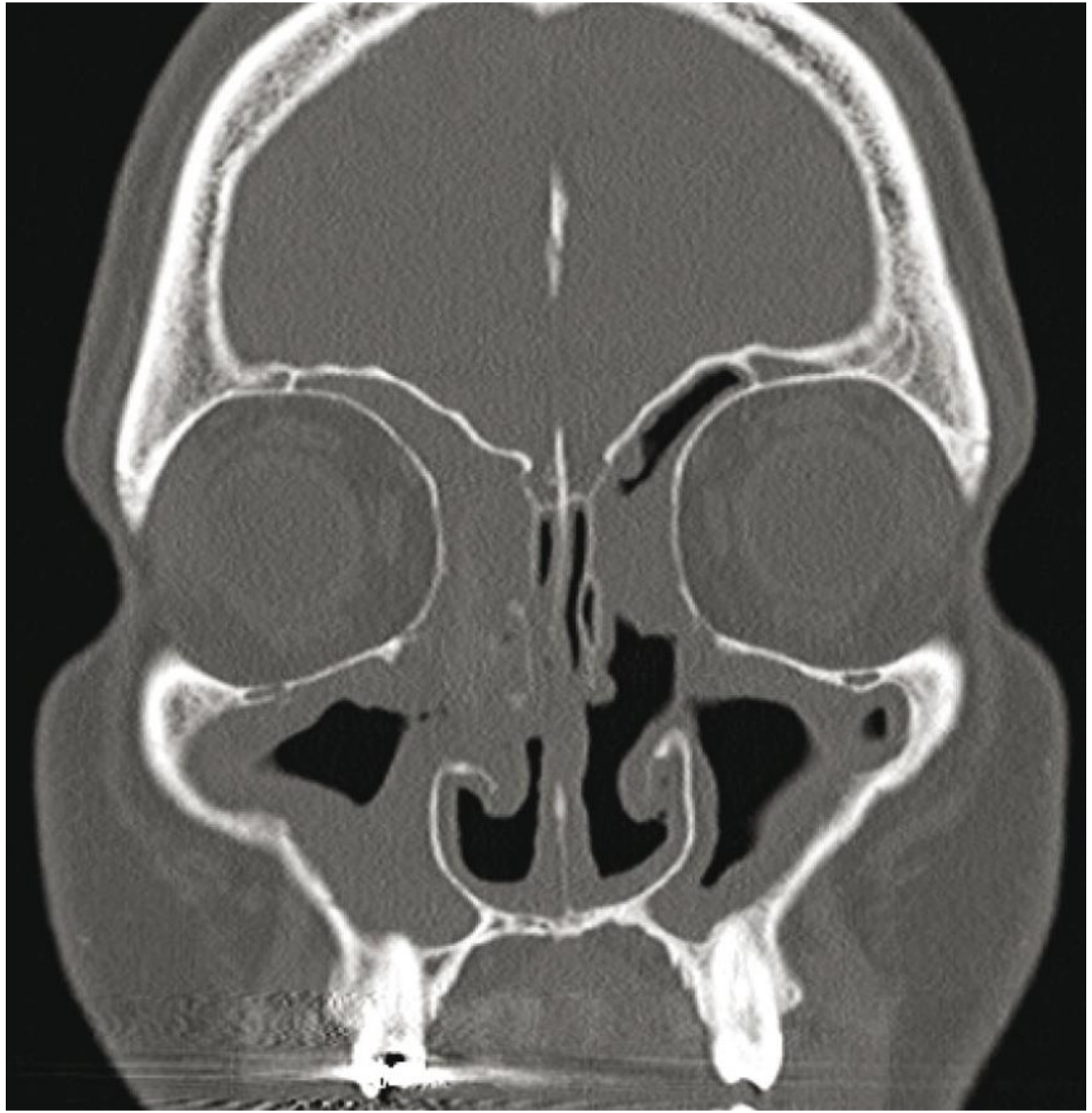
(b) Sagittal view

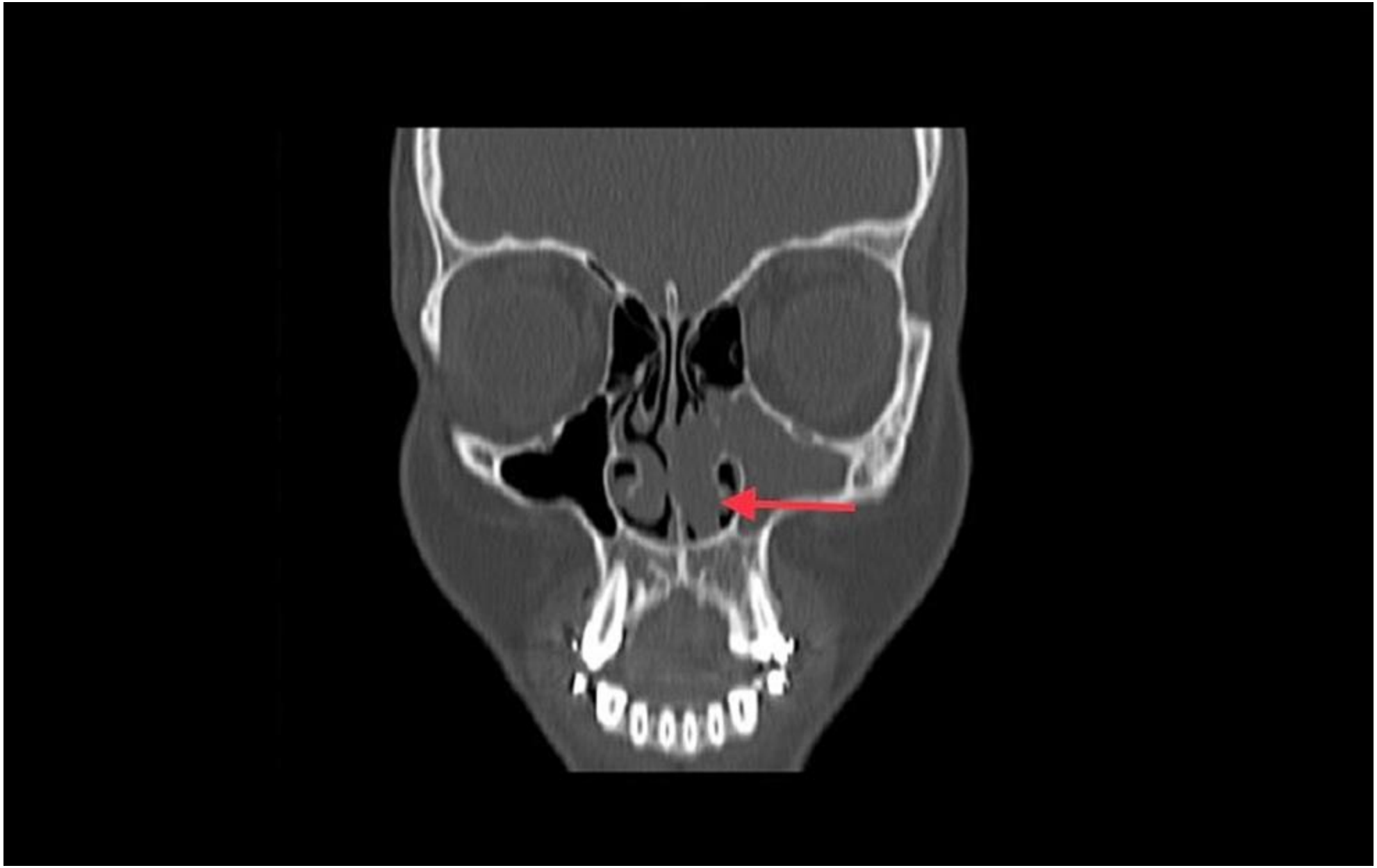





R
8
0
DFOV160
2.5mm
AI





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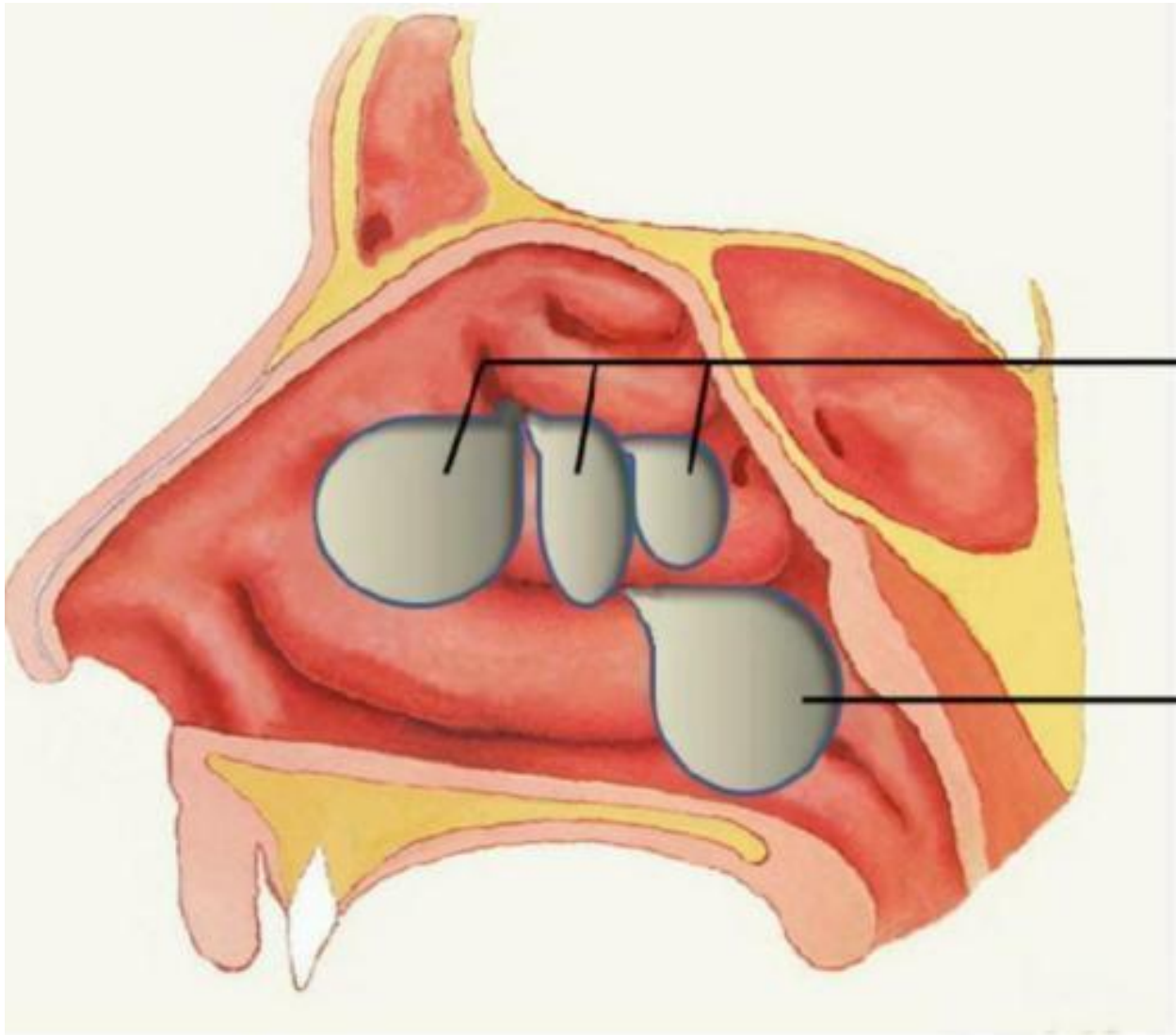
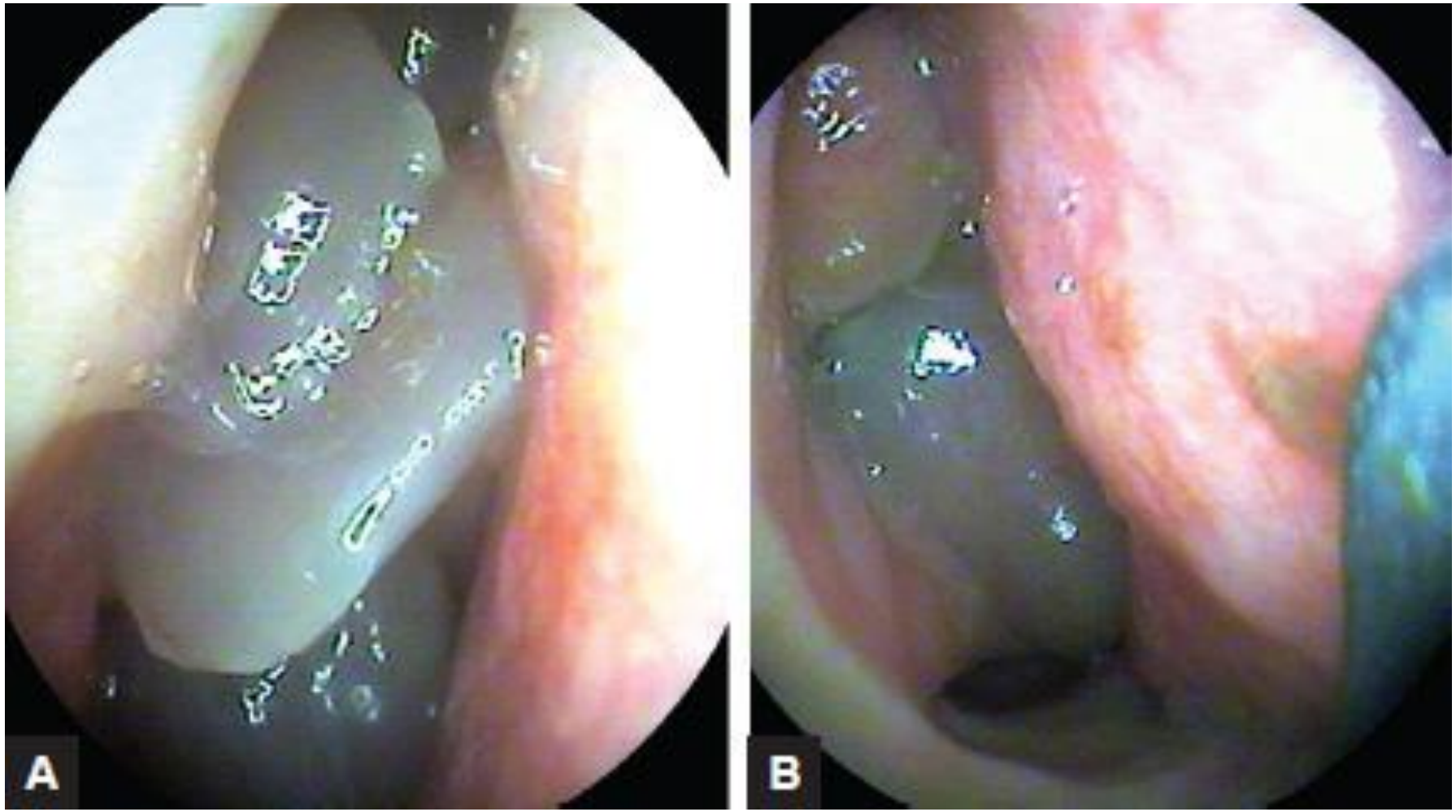
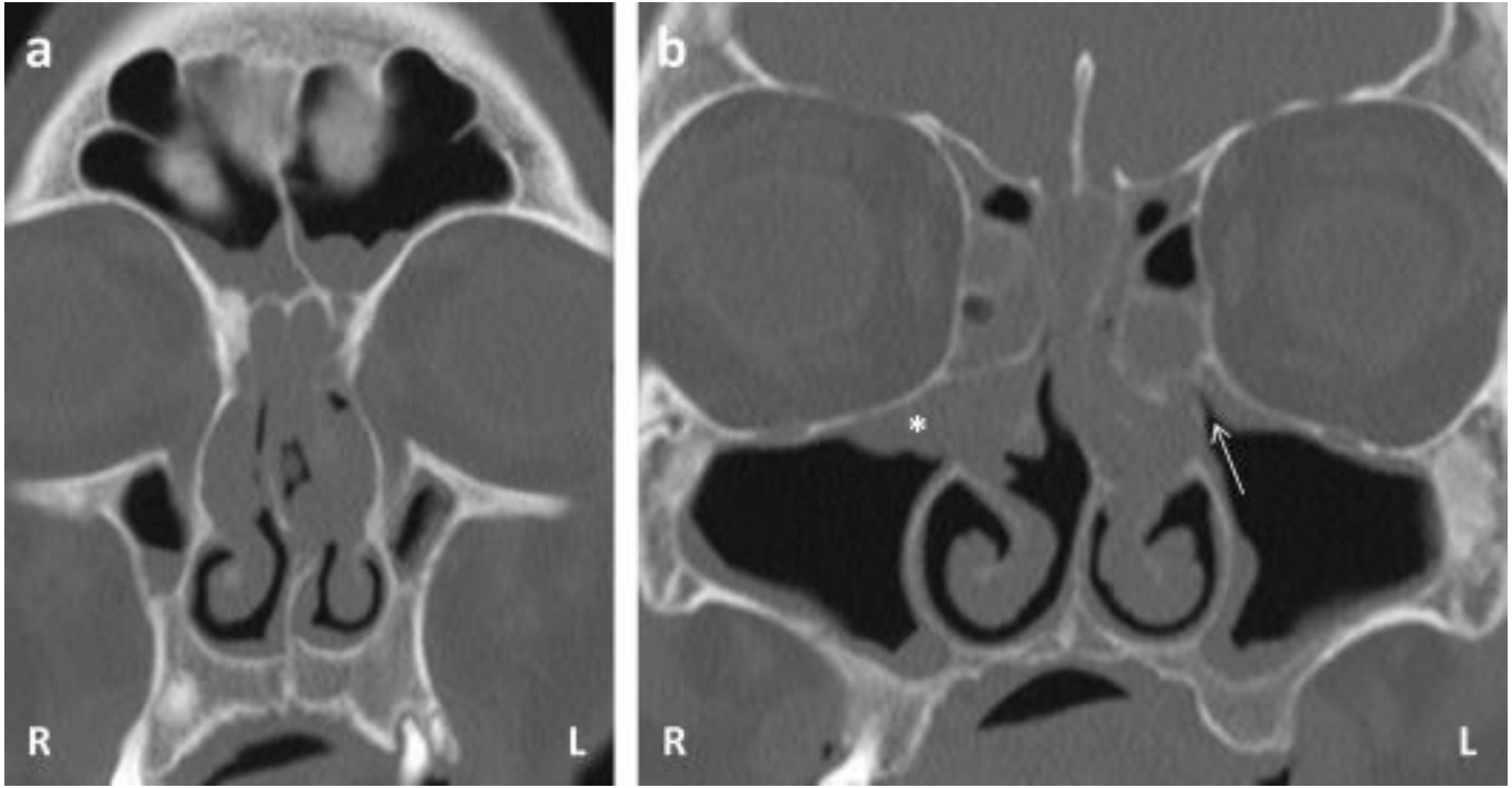


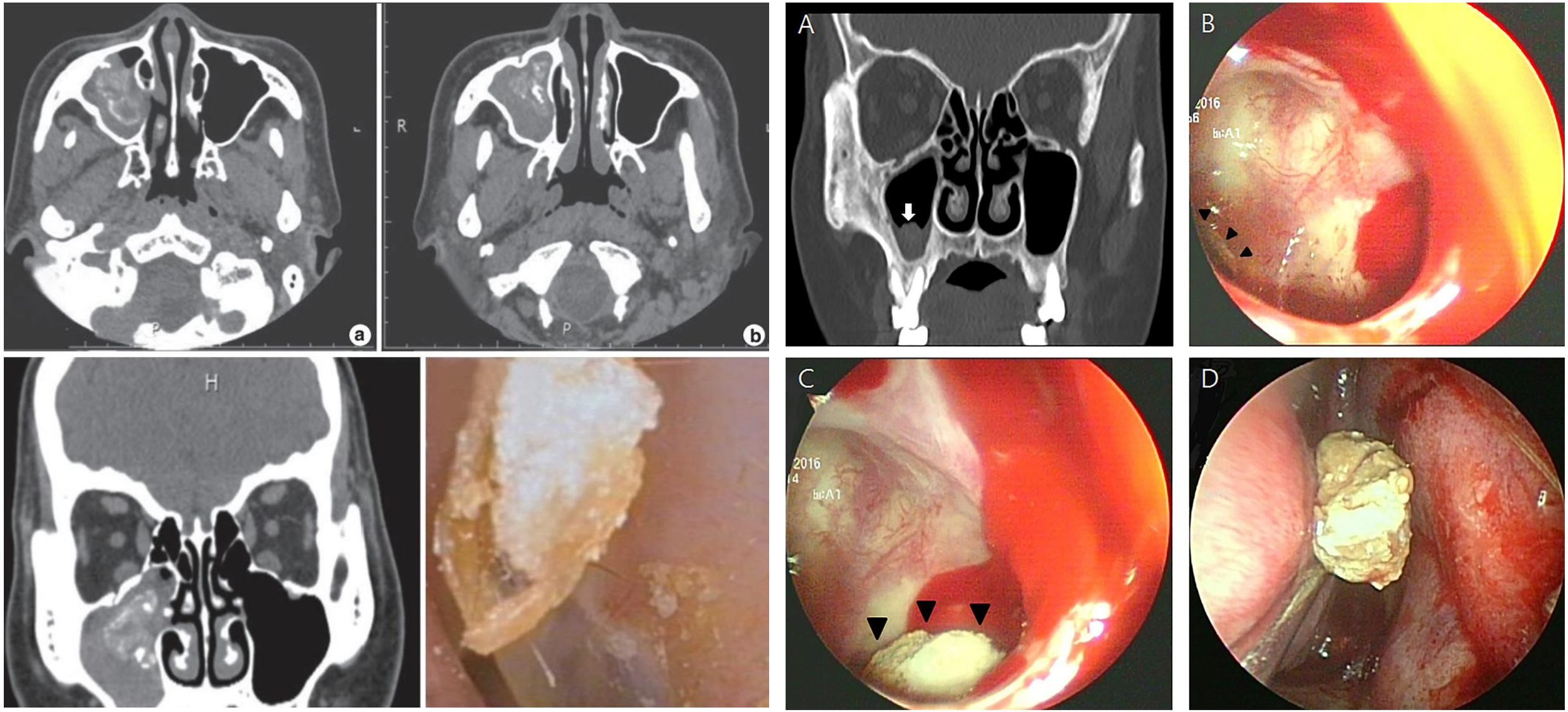
Lateral Nasal View of Sinus Polyps

Ethmoid sinus polyps

Maxillary sinus polyp

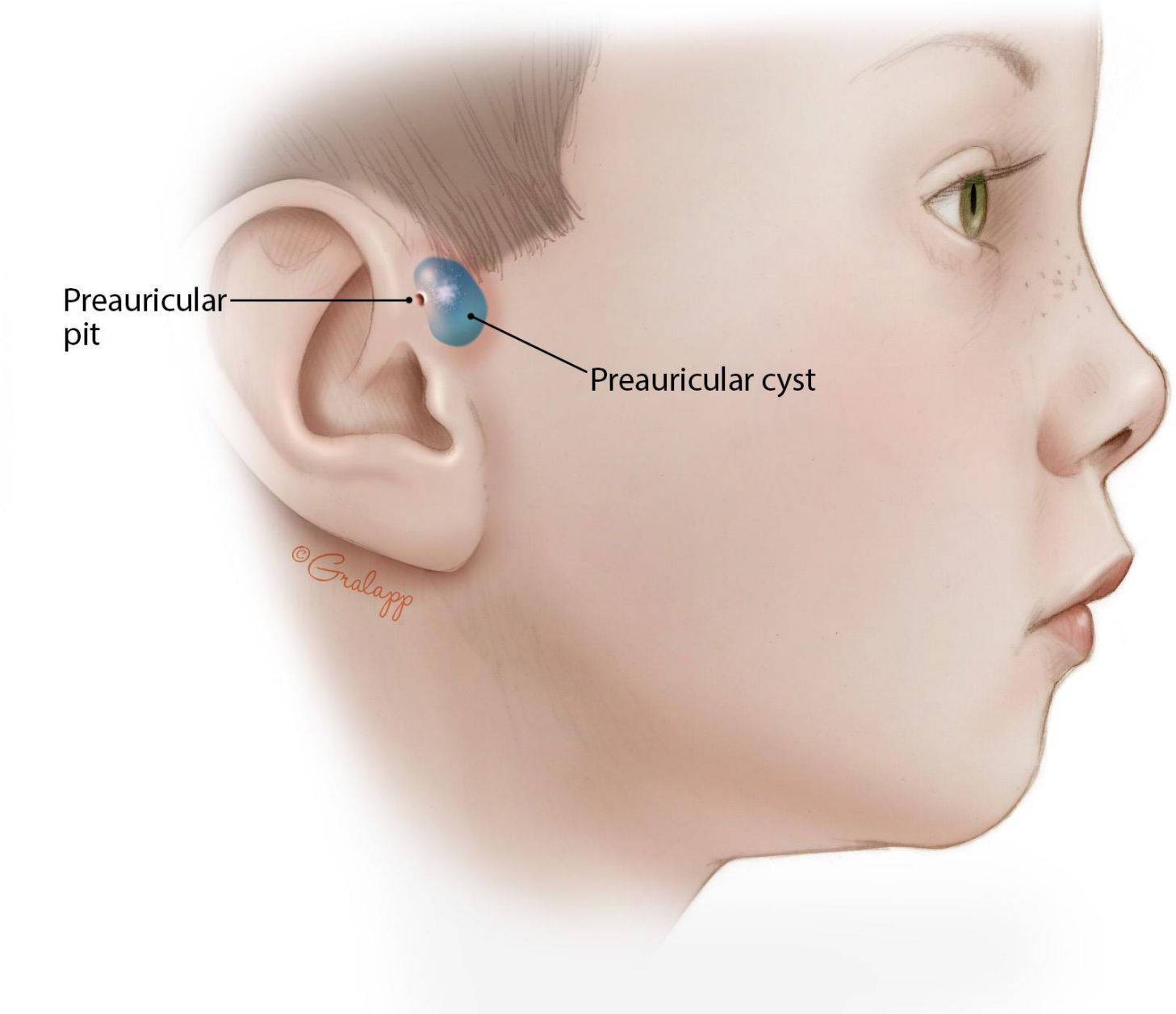

A
B


a
R
L
b
*
R
L


a
R
P
b
A
B
2016
bu:A1
H
C
2016
bu:A1
D

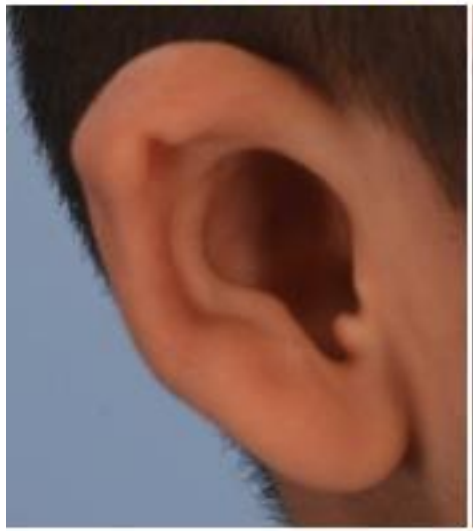
Otology


Helix
Triangular Fossa
Scapha
Helix
Superior Crus
Anti Helix
Concha Cymba
Inferior Crus
Helicis Crus
Concha Cavum
Tragus
Intertragic Notch
Anti Tragus
Lobule

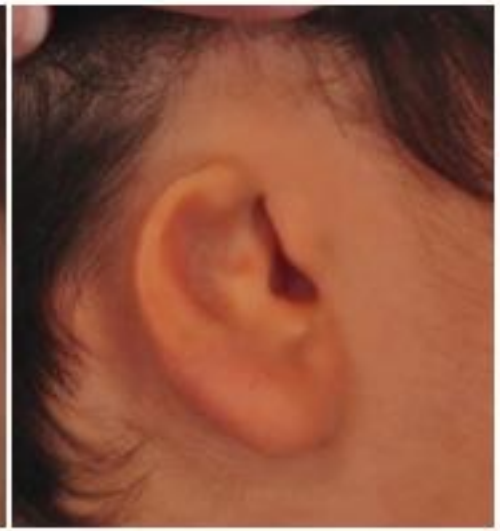

Preauricular pit
Preauricular cyst
©Gralapp

Spectrum of Microtia Severity

Least Severe → Most Severe



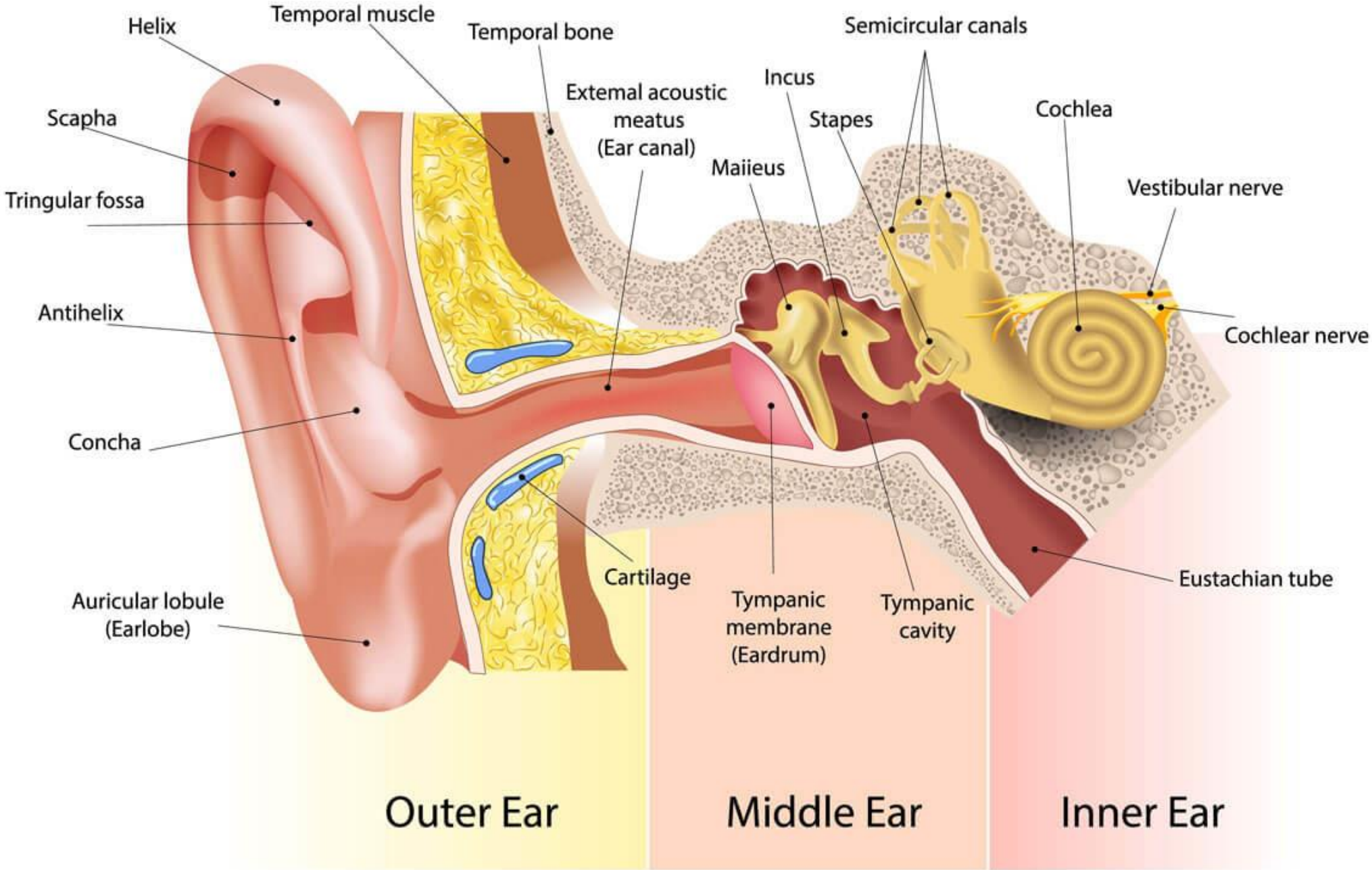
The ear is smaller but still looks like an ear because most normal features are present

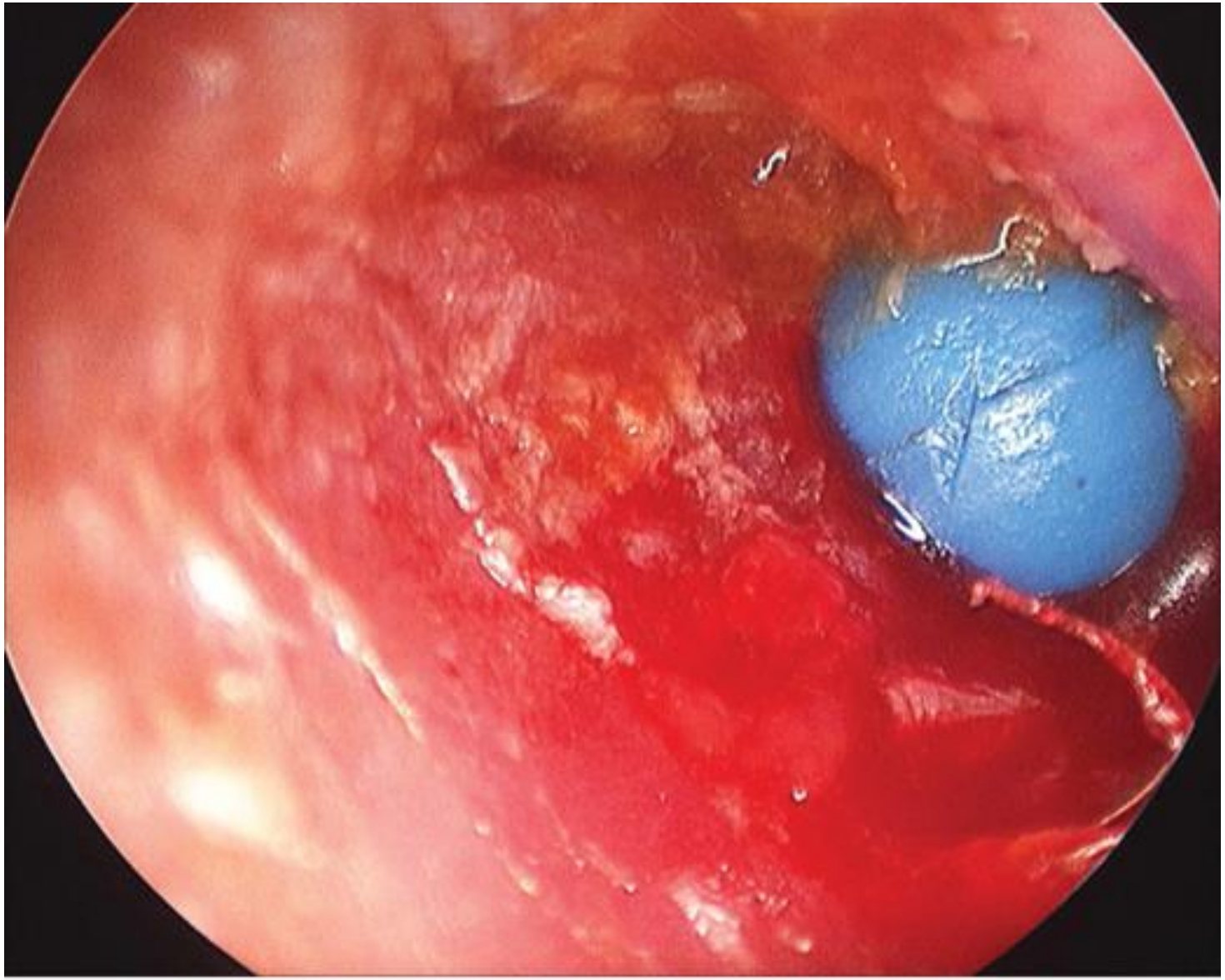


Some normal features are present but the upper ear is severely deficient. The canal may be present or absent.

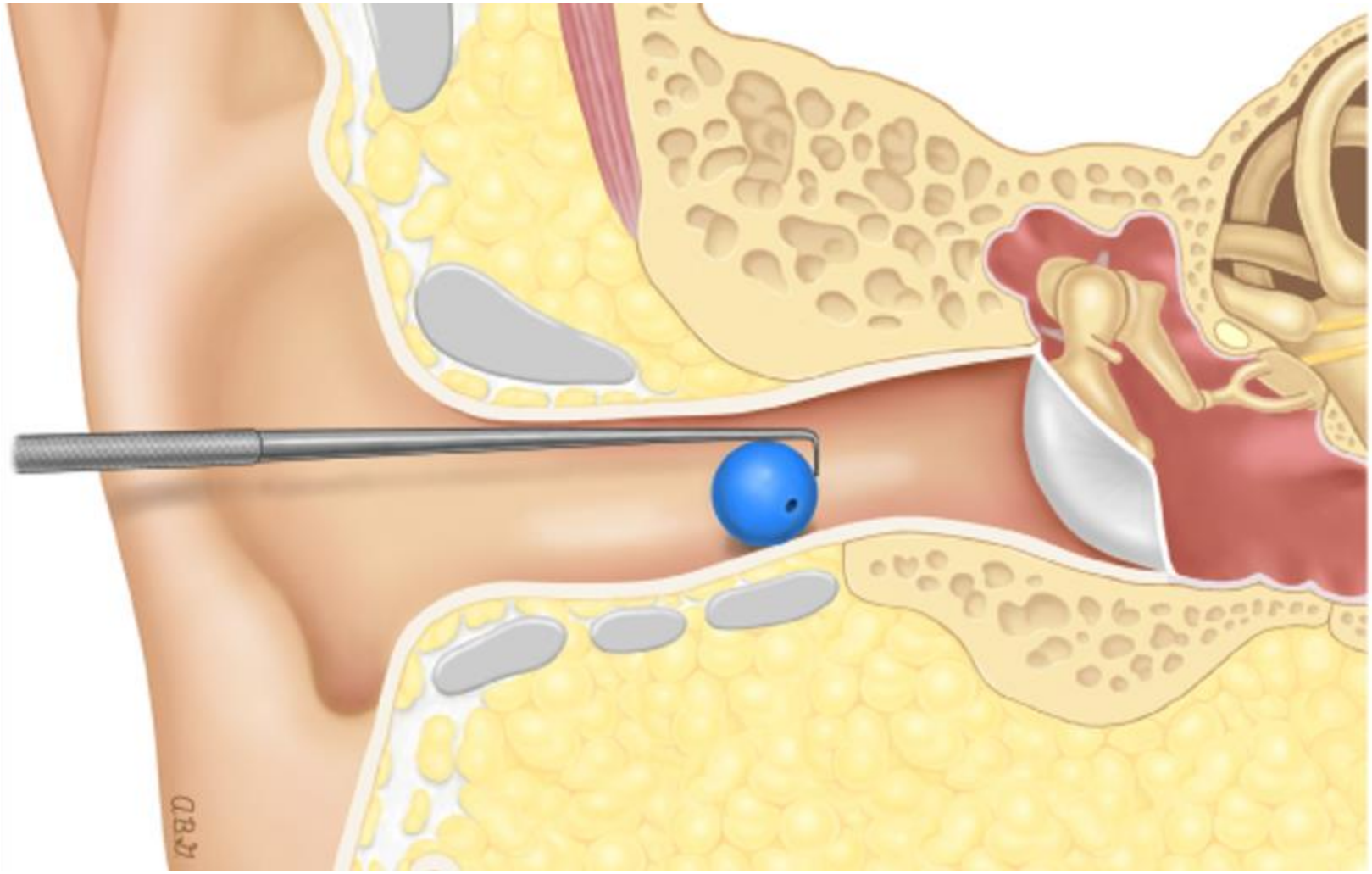
A small piece of cartilage is present just above the ear lobe which is displaced upward and forward. The canal is almost always absent.

Anotia is when there is a complete absence of the ear and canal.

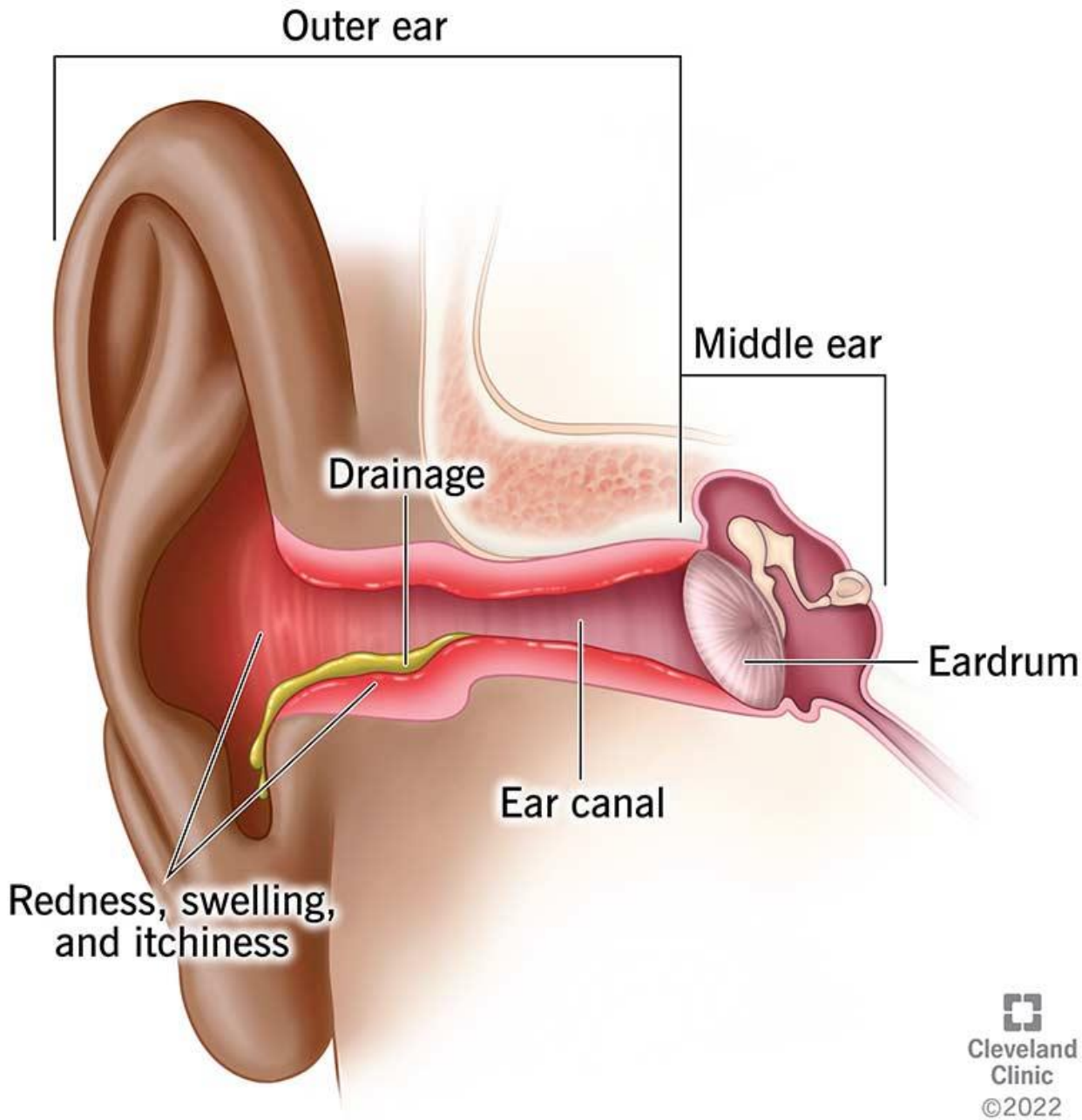

Helix
Temporal muscle
Temporal bone
Semicircular canals
Incus
Extemal acoustic
meatus
(Ear canal)
Cochlea
Scapha
Stapes
Maiieus
Vestibular nerve
Tringular fossa
Antihelix
Cochlear nerve
Concha
Cartilage
Eustachian tube
Auricular lobule
(Earlobe)
Tympanic
membrane
(Eardrum)
Tympanic
cavity
Outer Ear
Middle Ear
Inner Ear



Source: Usatine RP, Smith MA, Mayeaux EJ, Chumley HS: *The Color Atlas of Family Medicine, Second Edition:* www.accessmedicine.com



Swimmer's Ear




MEDtube
sharing
medical
knowledge™

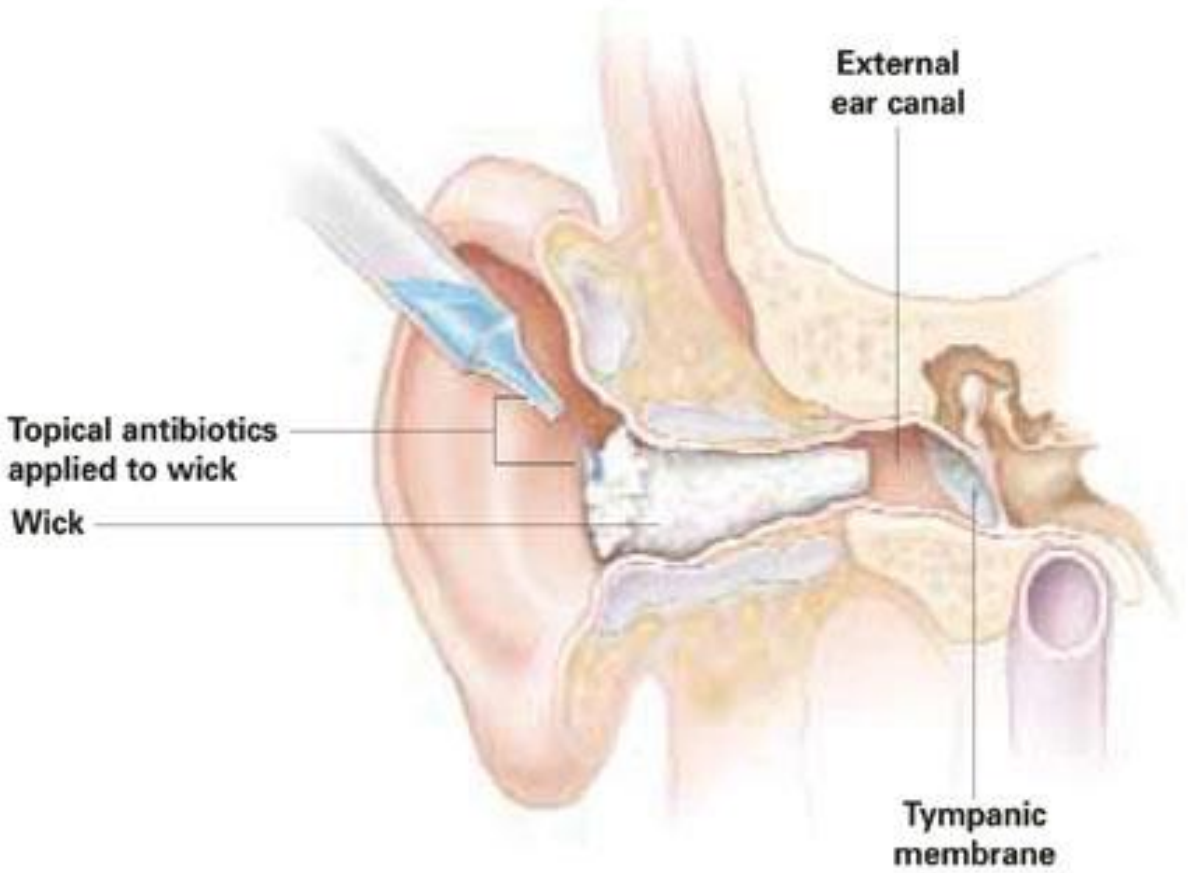
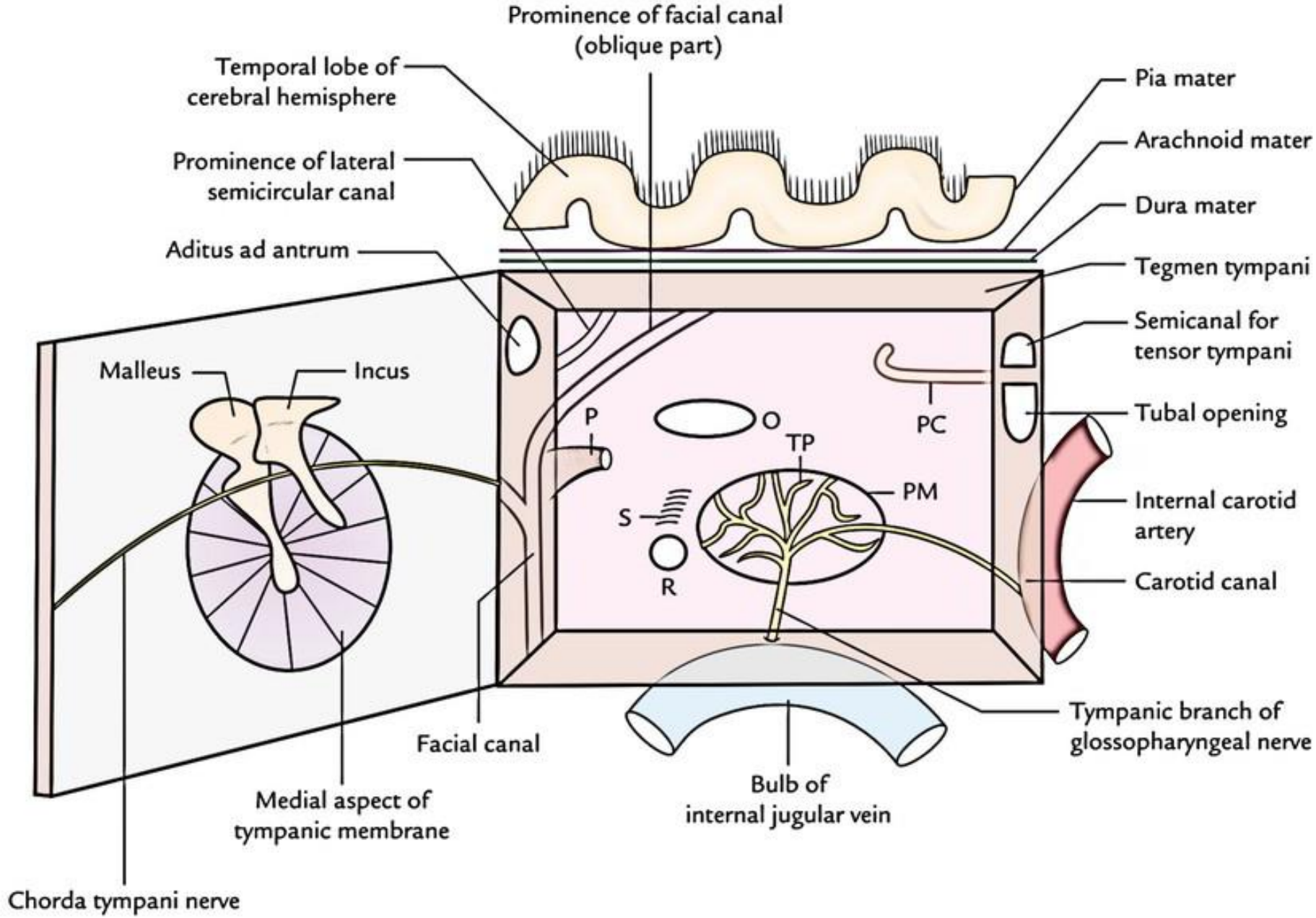
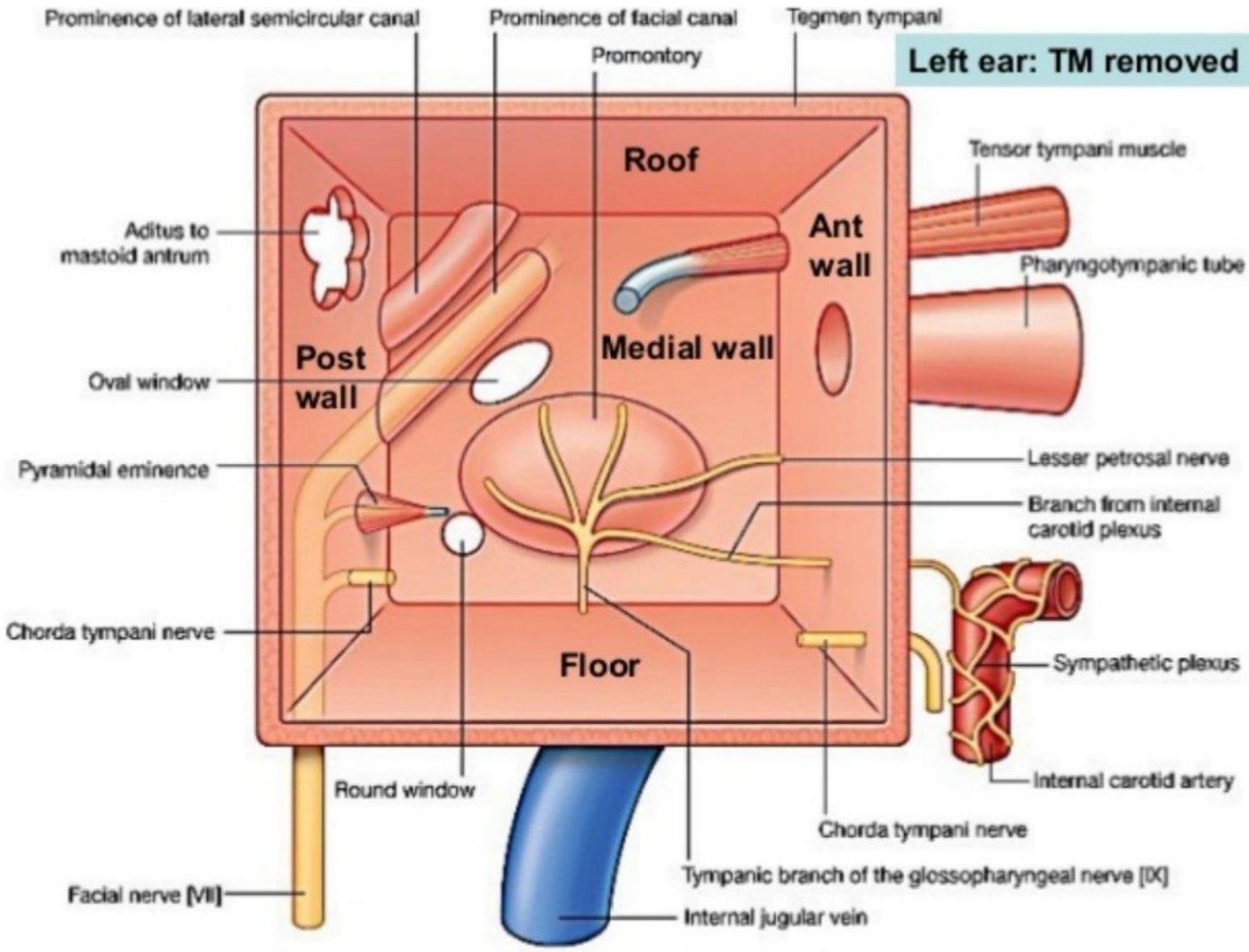
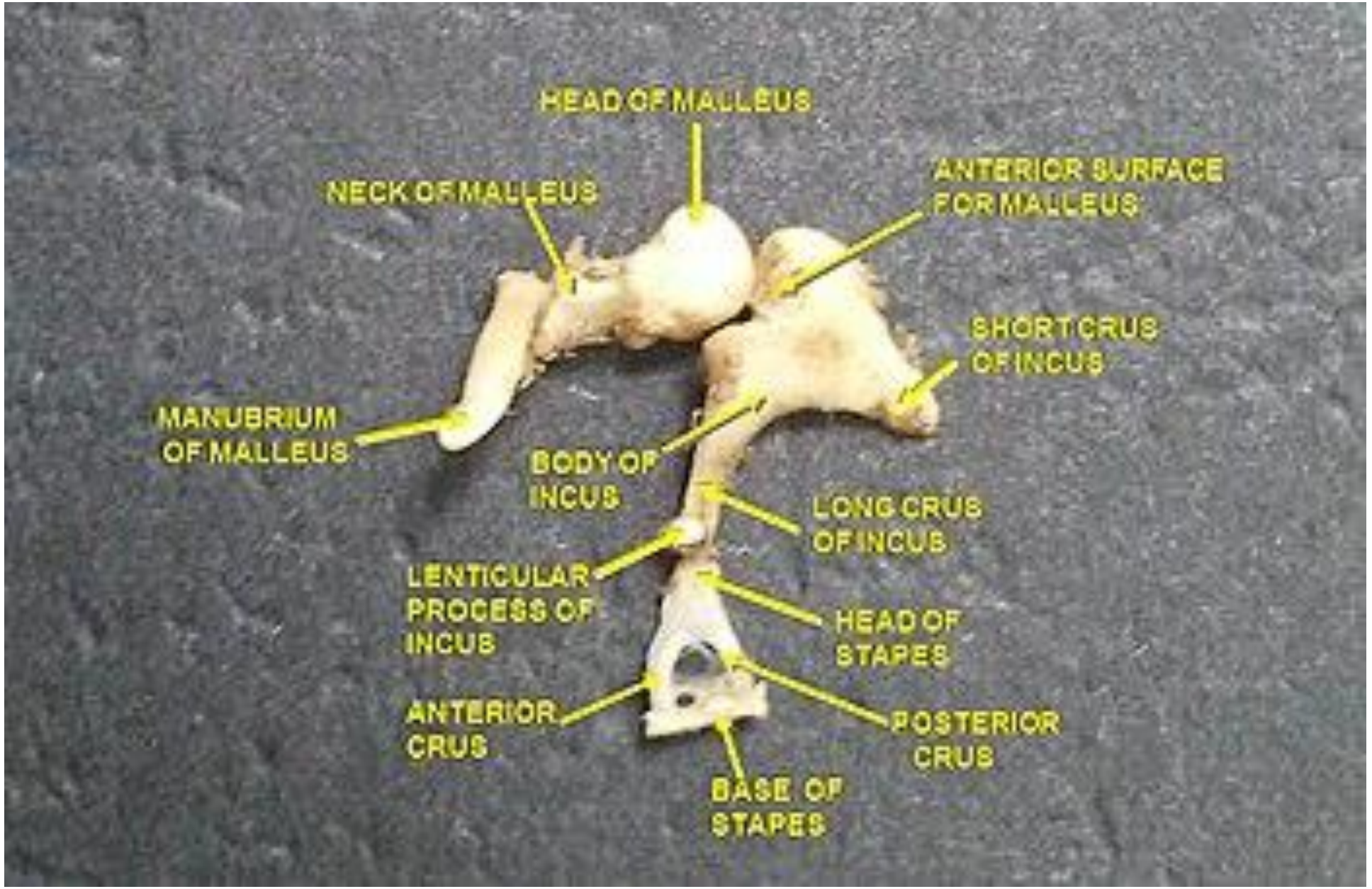
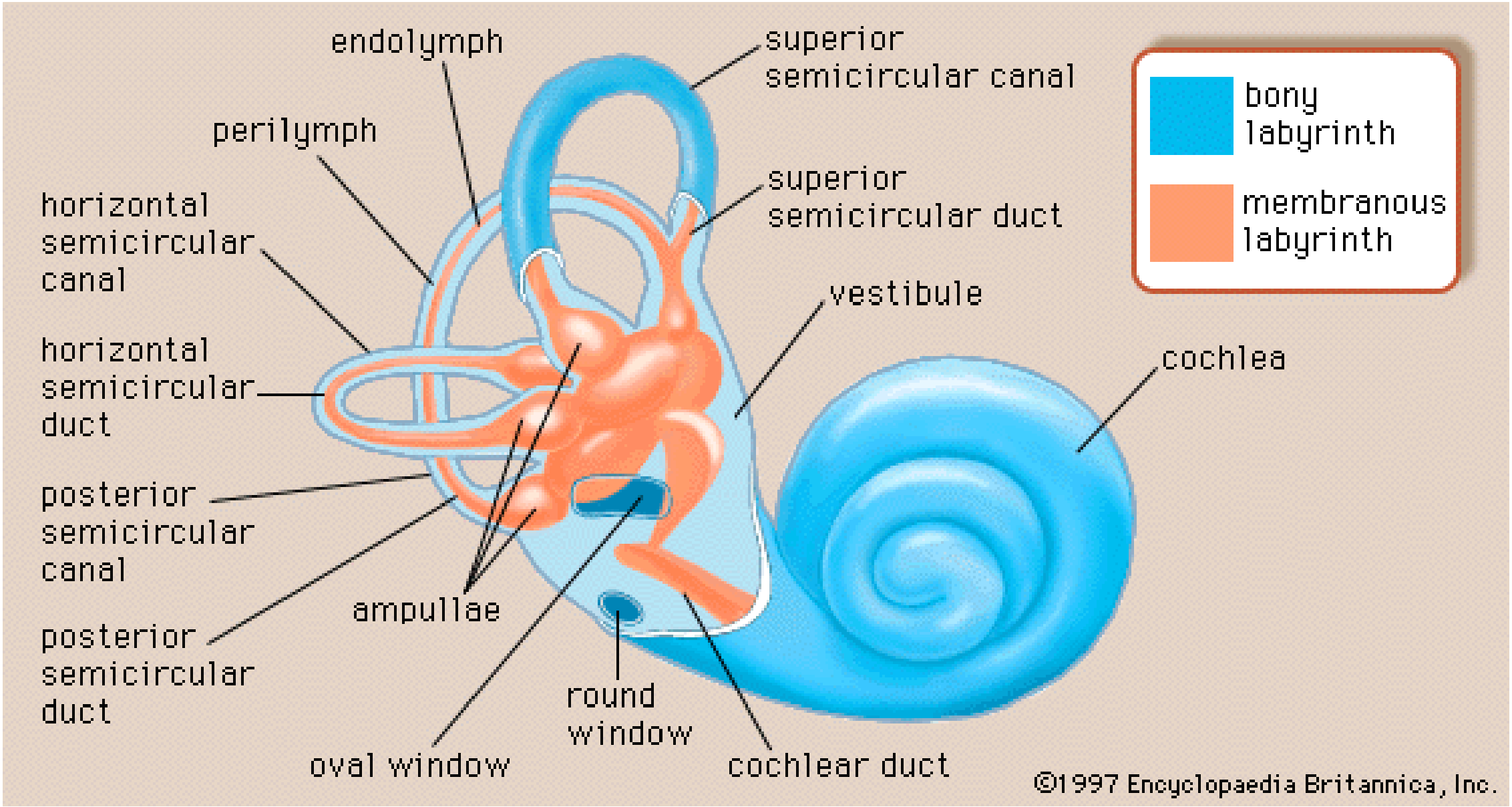

External ear canal
Topical antibiotics applied to wick
Wick
Tympanic membrane

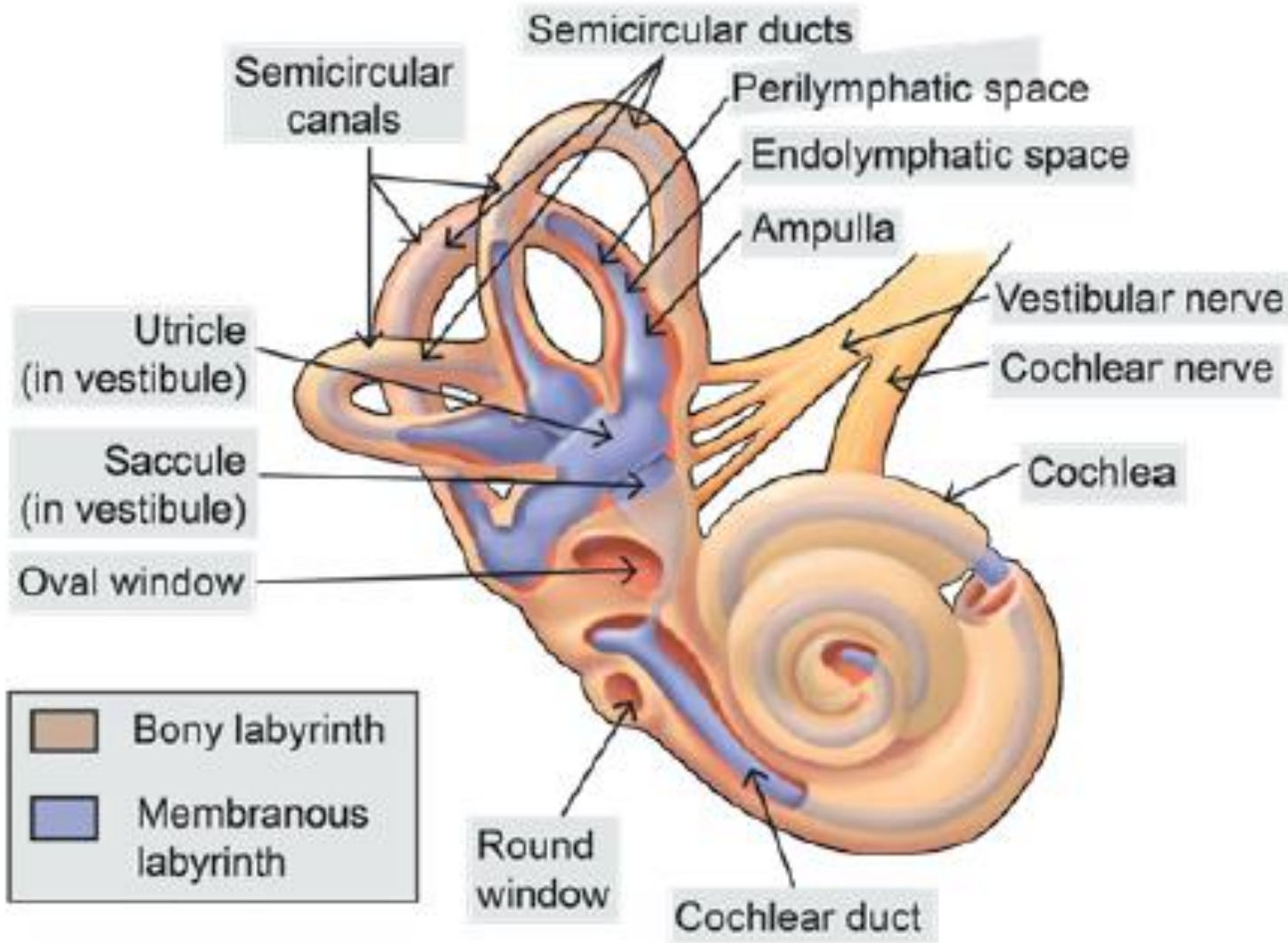

Image Courtesy of G. Thompson, MD
Copyright ©2015 Doctorfungus

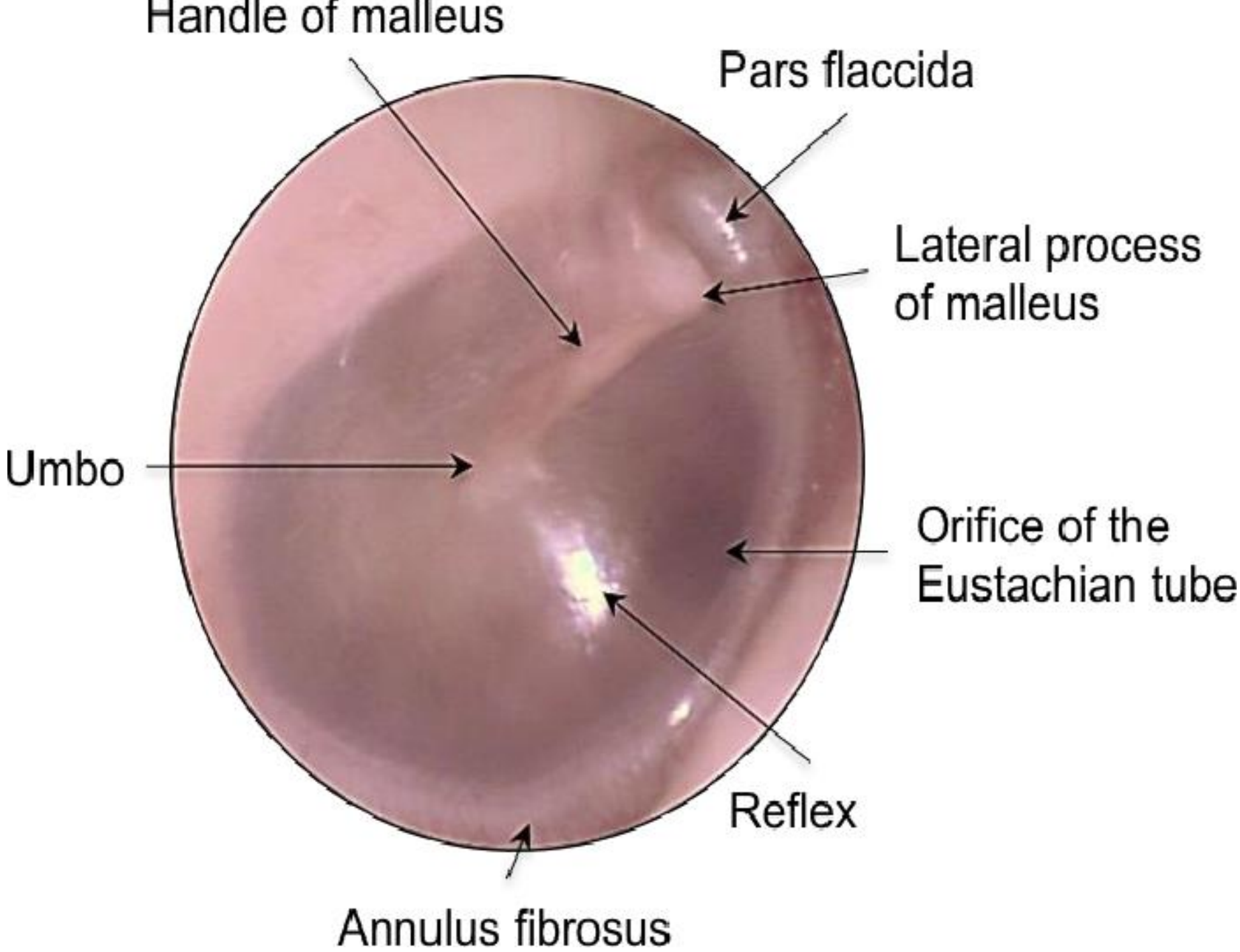

Prominence of facial canal
(oblique part)
Temporal lobe of
cerebral hemisphere
Prominence of lateral
semicircular canal
Aditus ad antrum
Pia mater
Arachnoid mater
Dura mater
Tegmen tympani
Semicanal for
tensor tympani
Tubal opening
Internal carotid
artery
Carotid canal
Malleus
Incus
P
O
TP
PC
PM
S
R
Facial canal
Medial aspect of
tympanic membrane
Chorda tympani nerve
Bulb of
internal jugular vein
Tympanic branch of
glossopharyngeal nerve

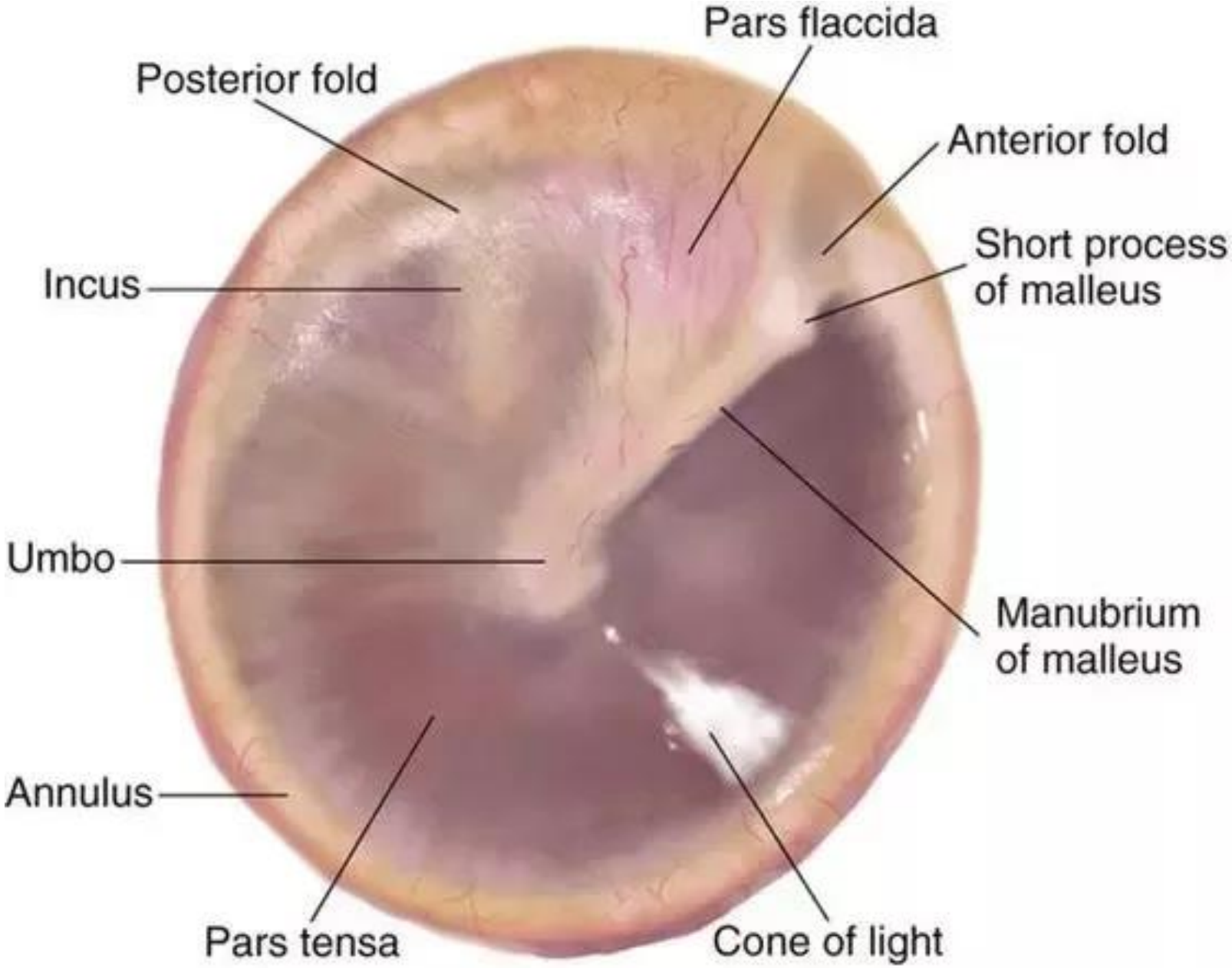

Left ear: TM removed
Prominence of lateral semicircular canal
Prominence of facial canal
Promontory
Tegmen tympani
Roof
Tensor tympani muscle
Aditus to mastoid antrum
Ant wall
Pharyngotympanic tube
Post wall
Medial wall
Oval window
Pyramidal eminence
Lesser petrosal nerve
Branch from internal carotid plexus
Chorda tympani nerve
Floor
Sympathetic plexus
Round window
Internal carotid artery
Chorda tympani nerve
Tympanic branch of the glossopharyngeal nerve [IX]
Facial nerve [VII]
Internal jugular vein


HEAD OF MALLEUS
NECK OF MALLEUS
ANTERIOR SURFACE FOR MALLEUS
SHORT CRUS OF INCUS
MANUBRIUM OF MALLEUS
BODY OF INCUS
LONG CRUS OF INCUS
LENTICULAR PROCESS OF INCUS
HEAD OF STAPES
ANTERIOR CRUS
POSTERIOR CRUS
BASE OF STAPES

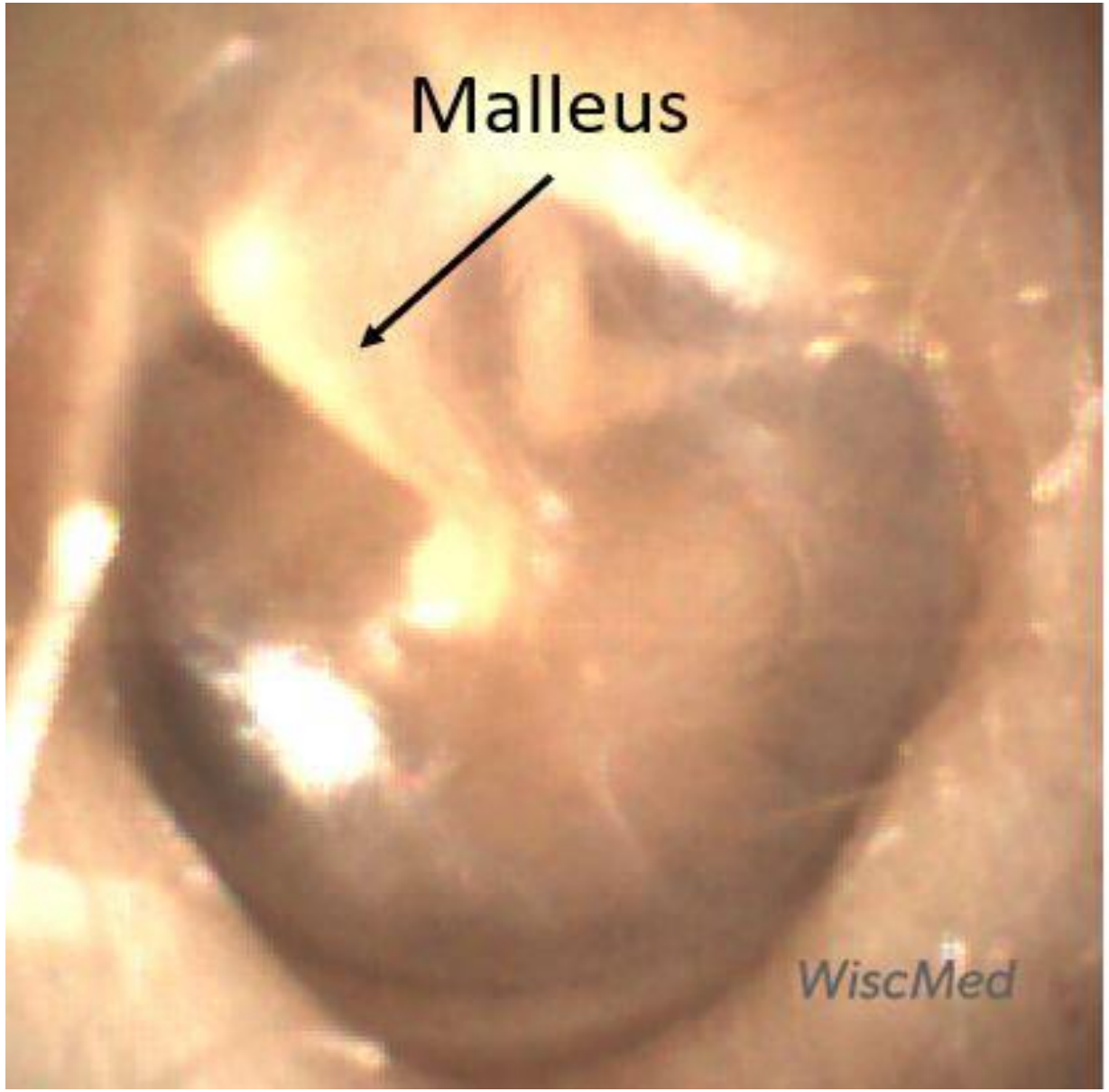

endolymph
perilymph
horizontal semicircular canal
horizontal semicircular duct
posterior semicircular canal
posterior semicircular duct
ampullae
oval window
round window
cochlear duct
superior semicircular canal
superior semicircular duct
vestibule
cochlea
bony labyrinth
membranous labyrinth
©1997 Encyclopaedia Britannica, Inc.

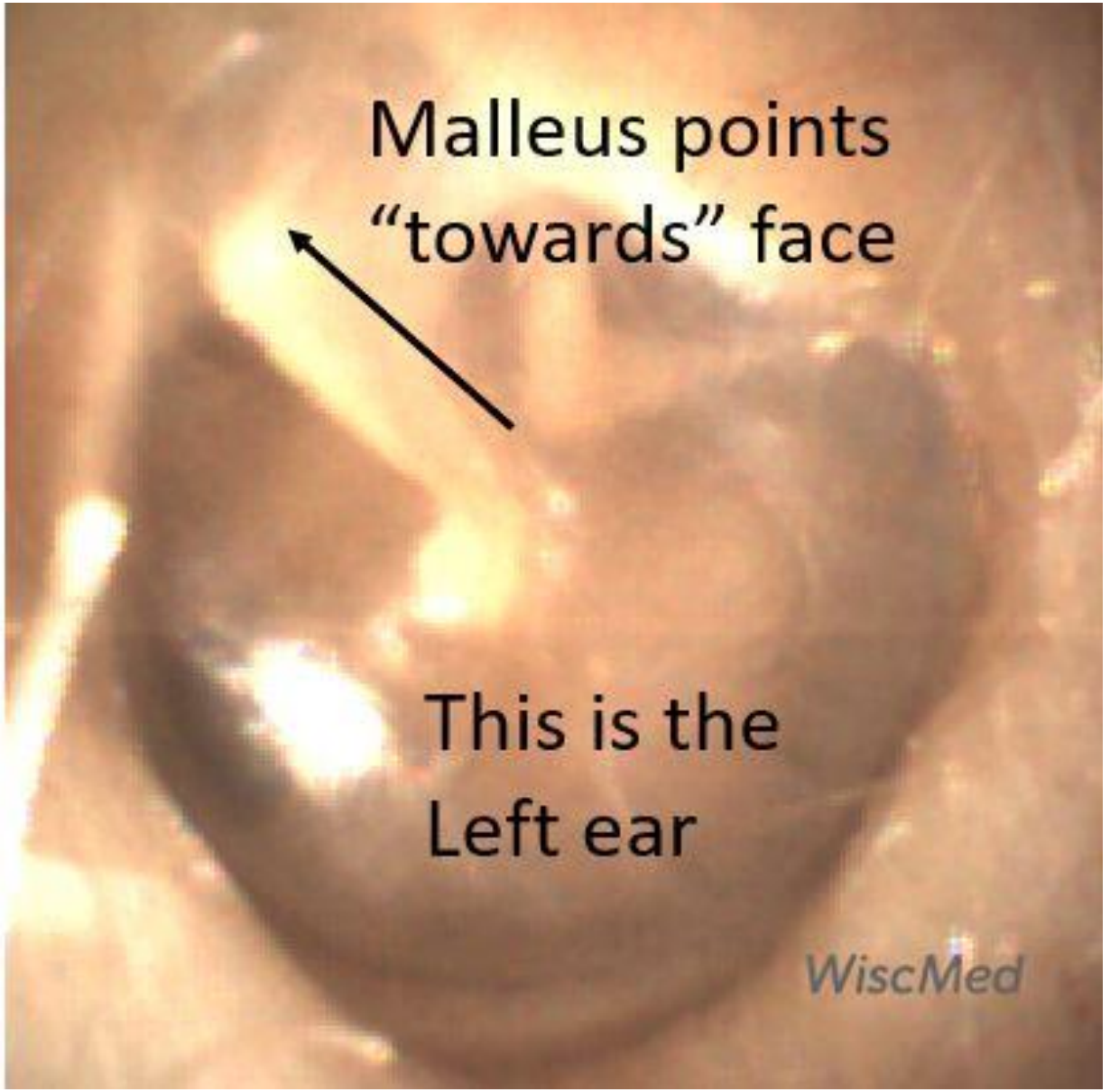

Semicircular ducts
Semicircular canals
Perilymphatic space
Endolymphatic space
Ampulla
Vestibular nerve
Cochlear nerve
Utricle (in vestibule)
Saccule (in vestibule)
Cochlea
Oval window
Bony labyrinth
Membranous labyrinth
Round window
Cochlear duct

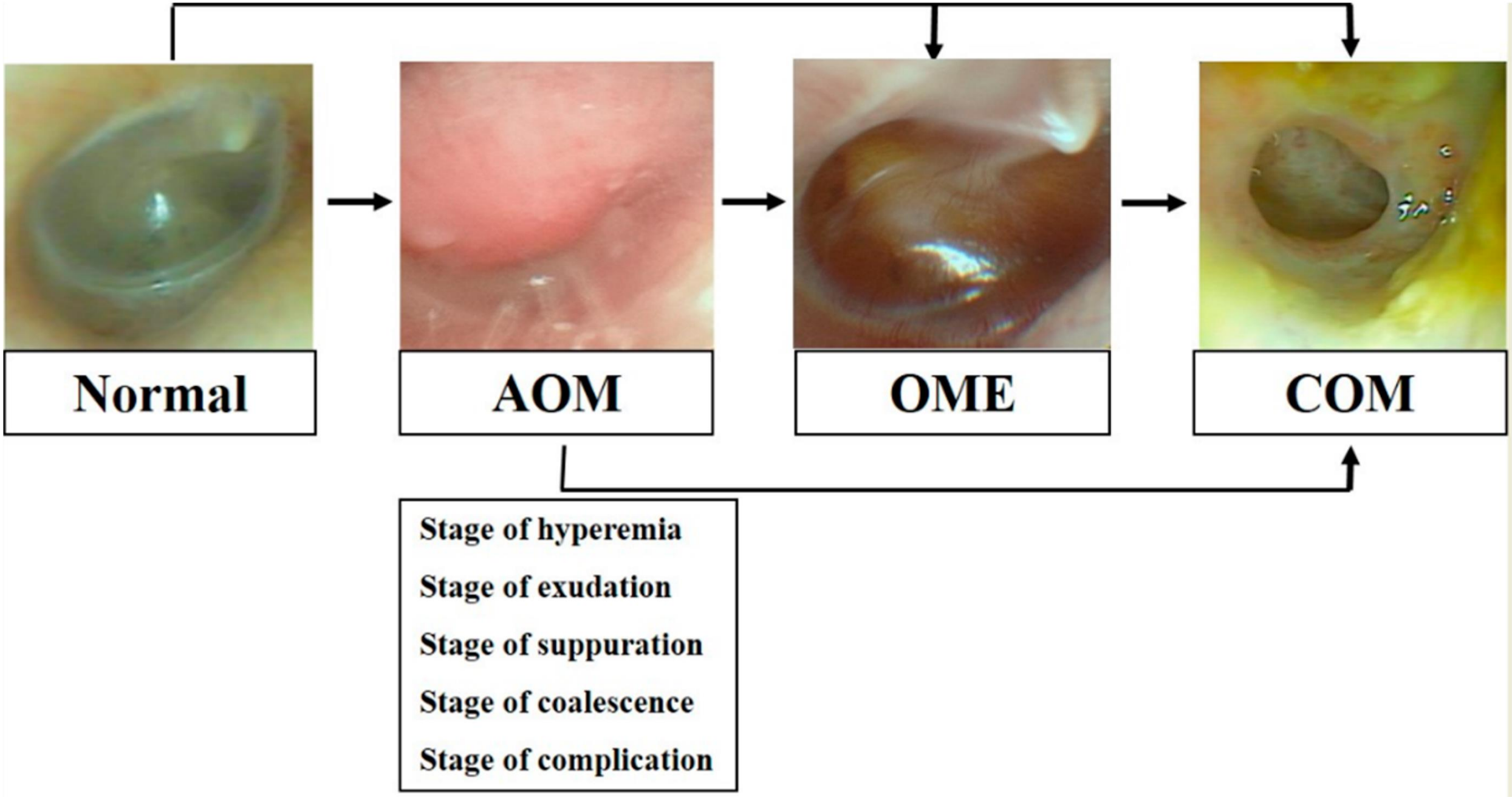

Handle of malleus
Pars flaccida
Lateral process
of malleus
Umbo
Orifice of the
Eustachian tube
Reflex
Annulus fibrosus

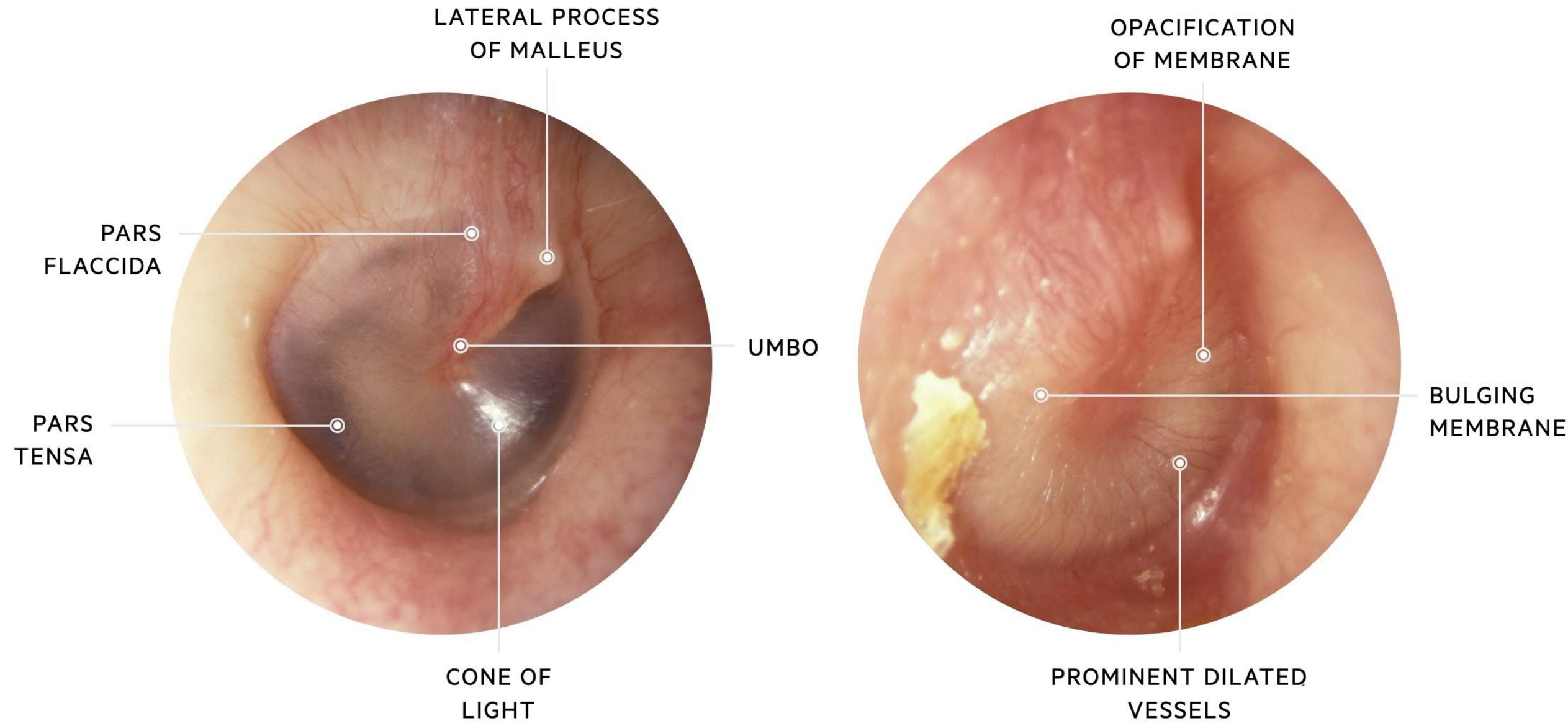


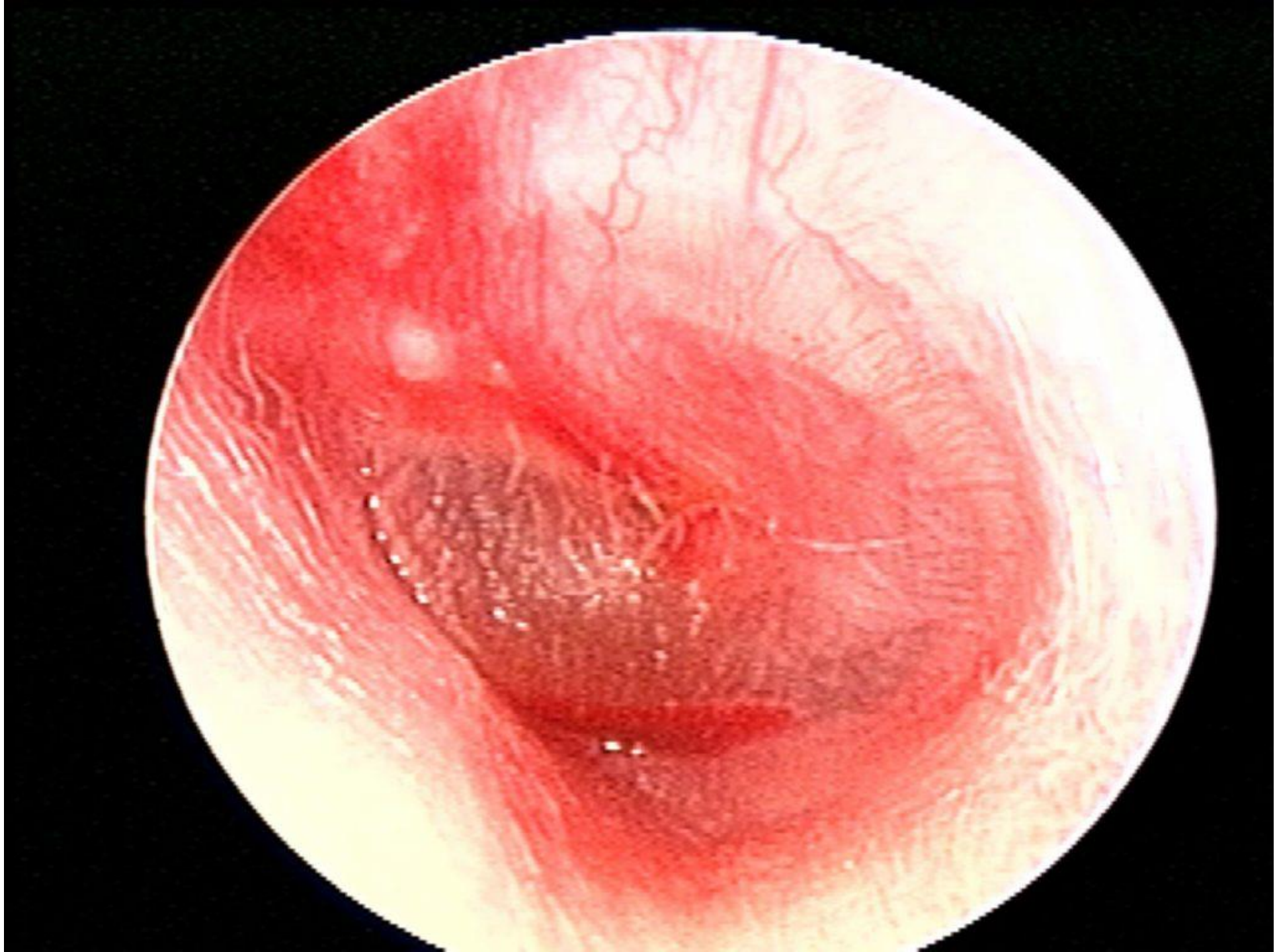
TYMPANIC MEMBRANE


Malleus
WiscMed


Malleus points
“towards” face
This is the
Left ear
WiscMed

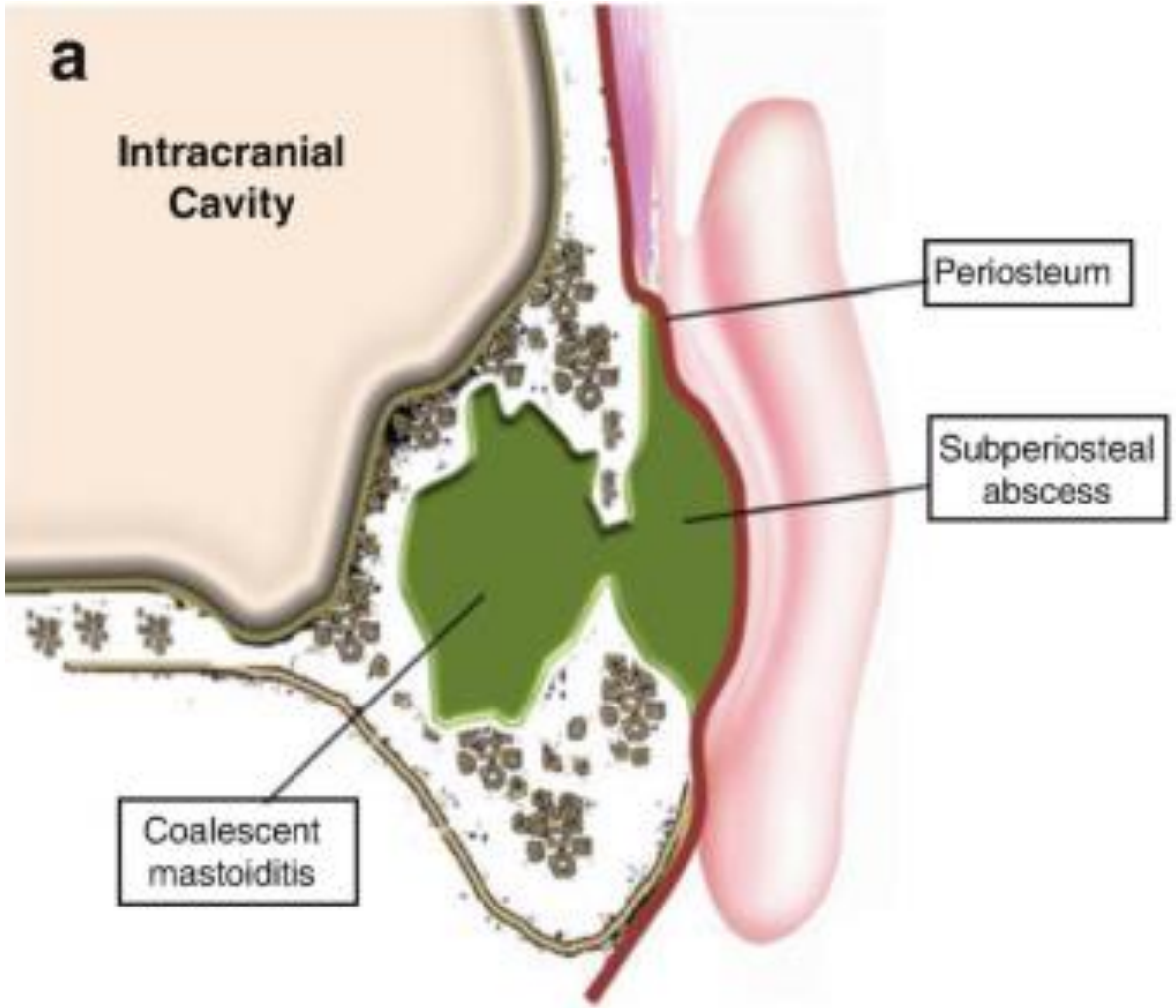

Normal
AOM
OME
COM
Stage of hyperemia
Stage of exudation
Stage of suppuration
Stage of coalescence
Stage of complication

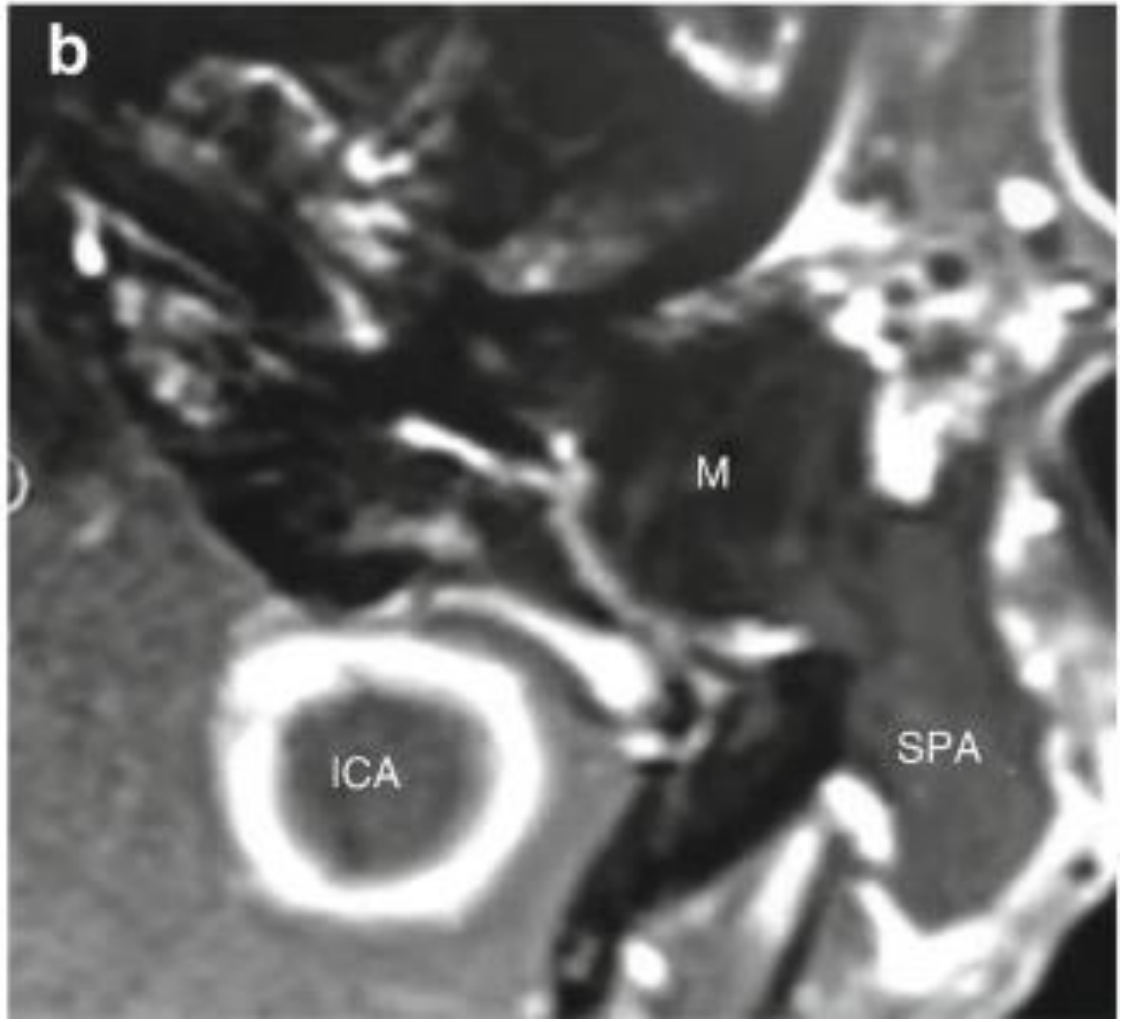

LATERAL PROCESS
OF MALLEUS
PARS
FLACCIDA
UMBO
PARS
TENSA
CONE OF
LIGHT
OPACIFICATION
OF MEMBRANE
BULGING
MEMBRANE
PROMINENT DILATED
VESSELS



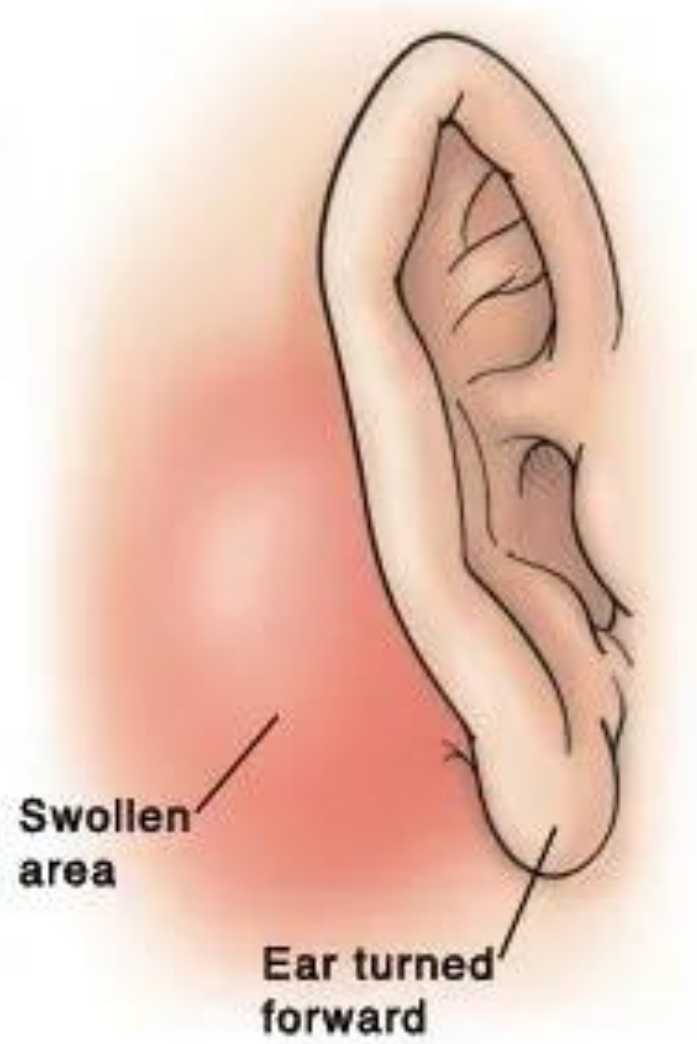
Light House sign

Pinhole perforation


a
Intracranial Cavity
Periosteum
Subperiosteal abscess
Coalescent mastoiditis

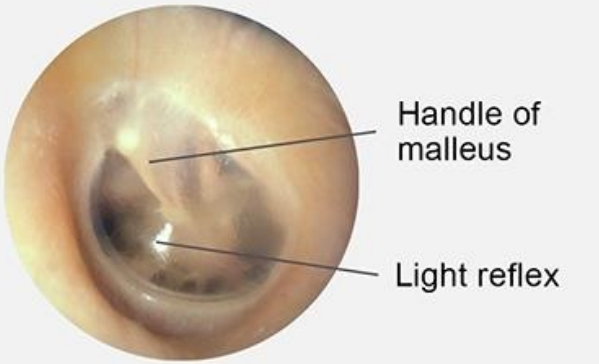

b
M
ICA
SPA


Mastoid
Infection


Swollen area
Ear turned forward

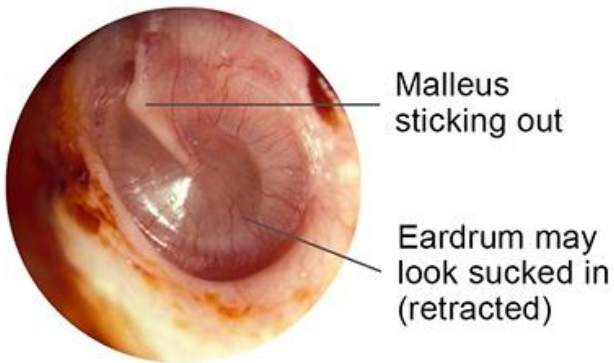
DDx for Postauricular Swelling

Mastoiditis	Ear pain
	Postauricular tenderness, erythema, swelling (obliterating postauricular crease), fluctuance, or mass (poorly circumscribed, immobile)
	Displacement of the auricle
	Abnormal tympanic membrane
Postauricular lymphadenopathy	Well-circumscribed and freely mobile mass
Periauricular cellulitis without otitis externa	Normal tympanic membrane
Periauricular cellulitis with otitis externa	Severe pain over the tragus and pinna
Auricular perichondritis	Preservation of the postauricular crease
	Normal tympanic membrane
Mumps	Swelling over the parotid gland rather than the mastoid
	Normal tympanic membrane
Mastoid tumor	Normal tympanic membrane

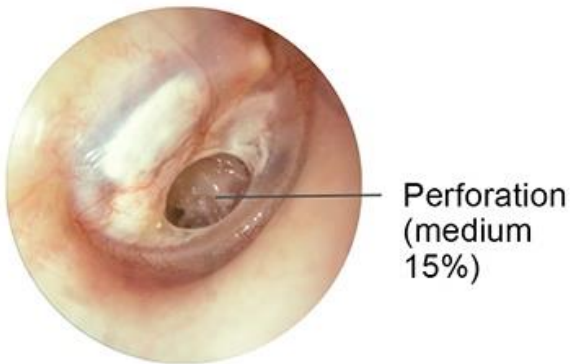


Normal eardrum L

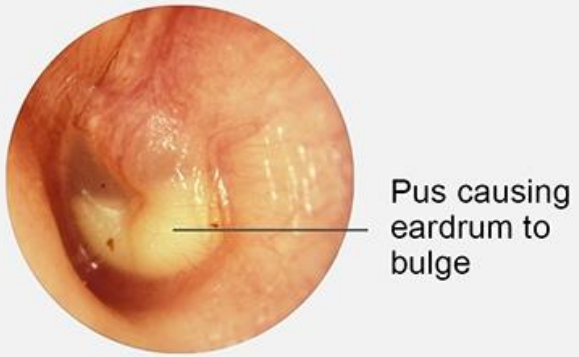
Normal eardrum R



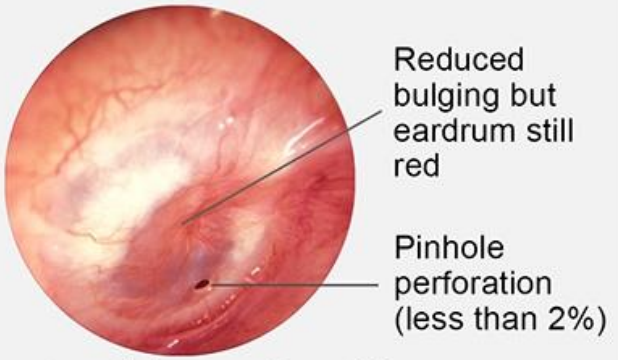
Otitis media with effusion (OME) L



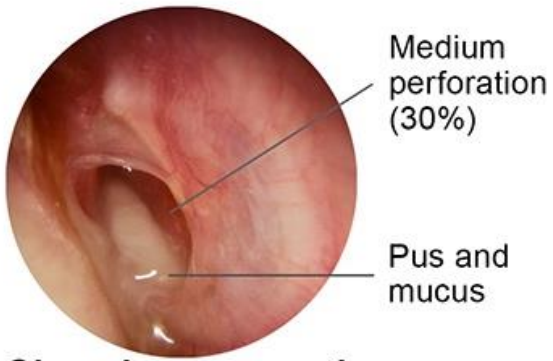
Dry perforation R



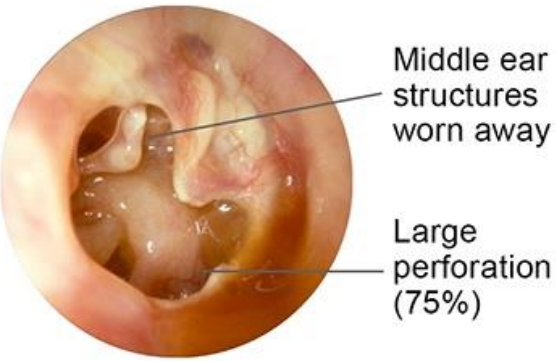
Acute otitis media (AOM) L



Acute otitis media with small perforation (AOMwiP) R



Chronic suppurative otitis media (CSOM) L



Chronic suppurative otitis media (CSOM) R

Central perforation
(anterior)

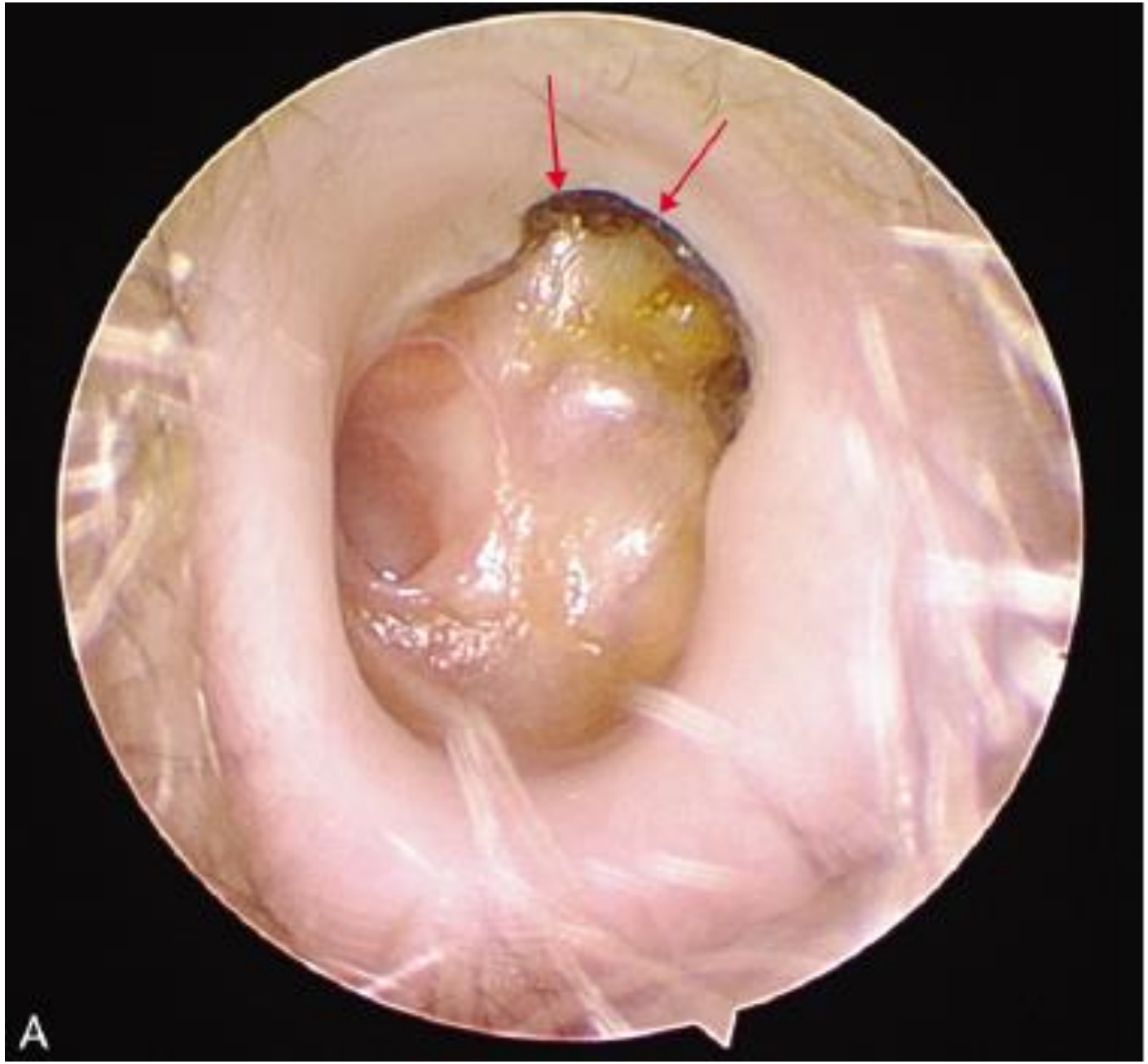
Central perforation
(medium sized)

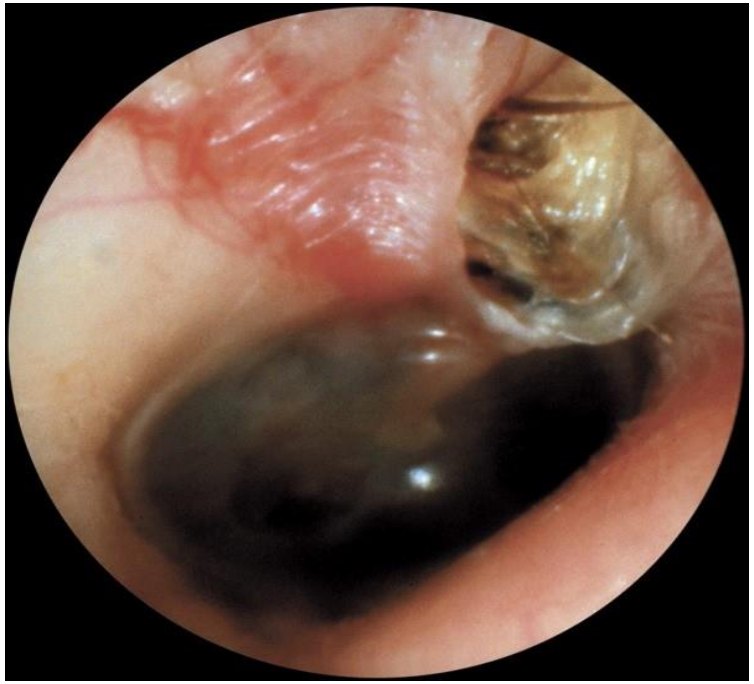
Subtotal perforation

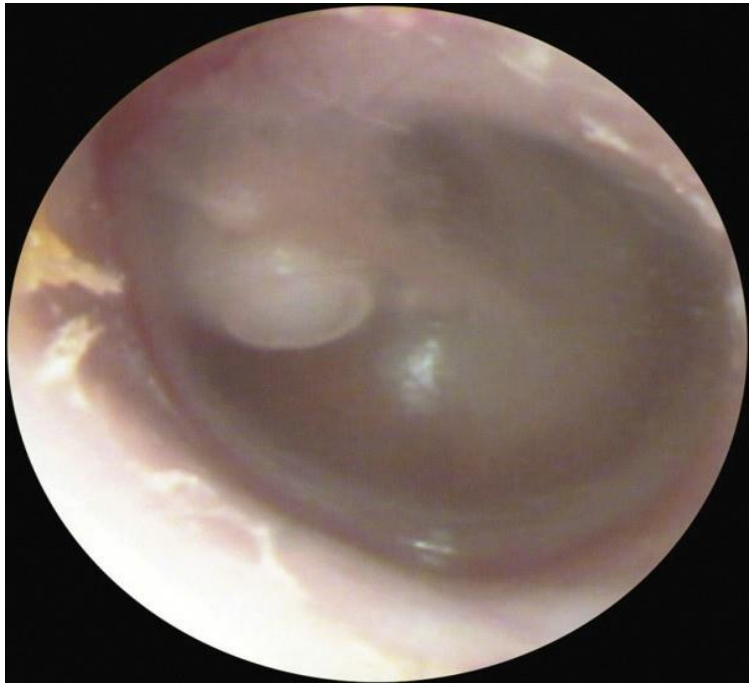
Total perforation with
destruction of even
the fibrous annulus

Attic perforation

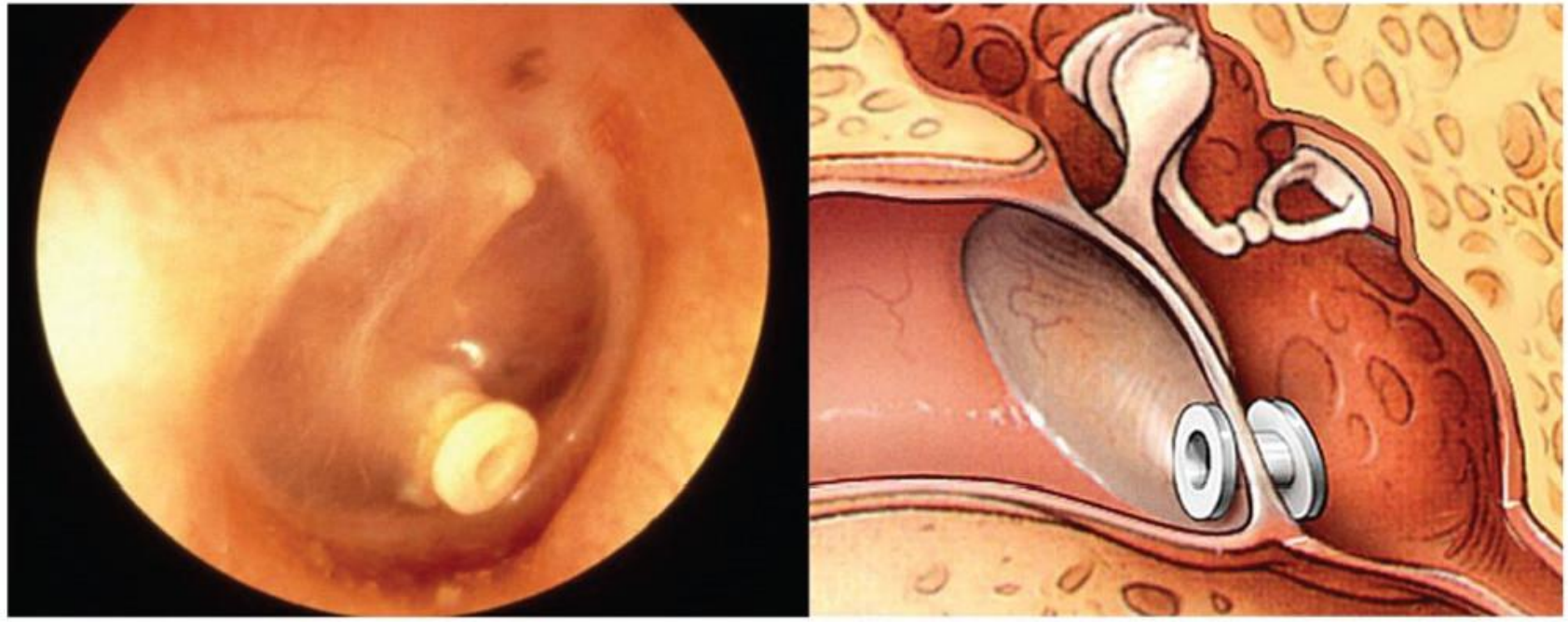
Posterosuperior marginal
perforation

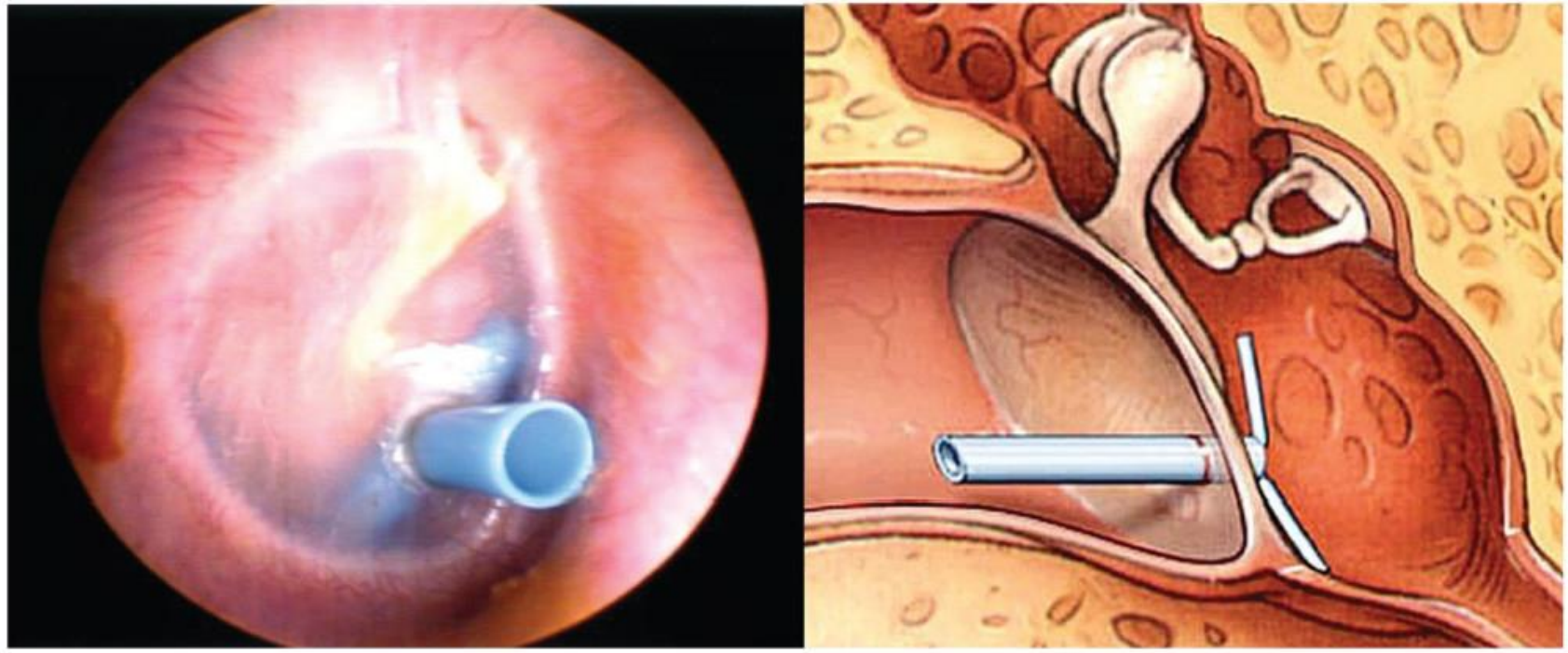

A



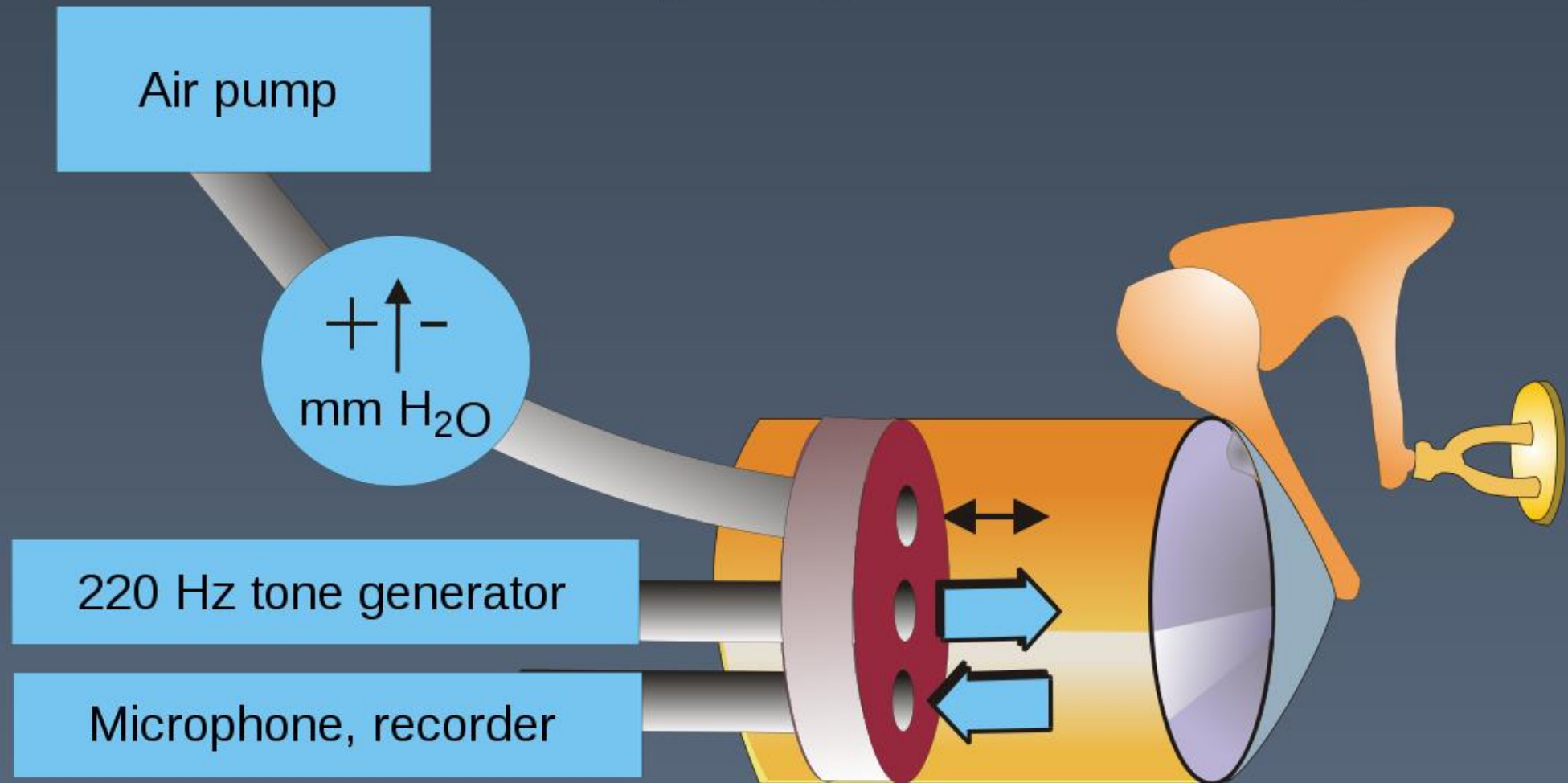



Eardrum
Tube

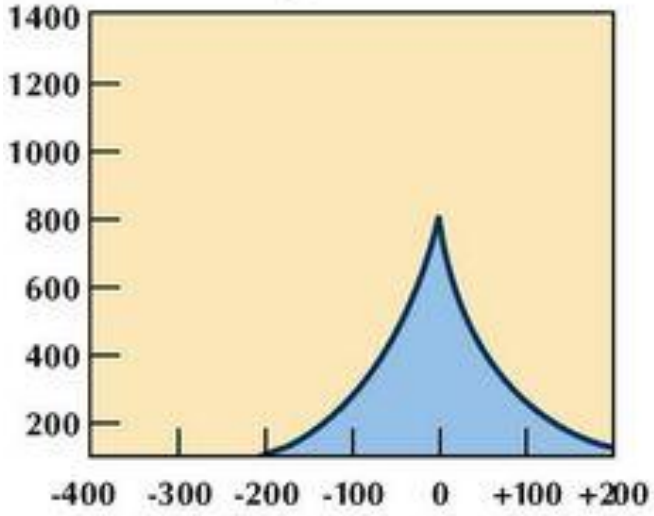




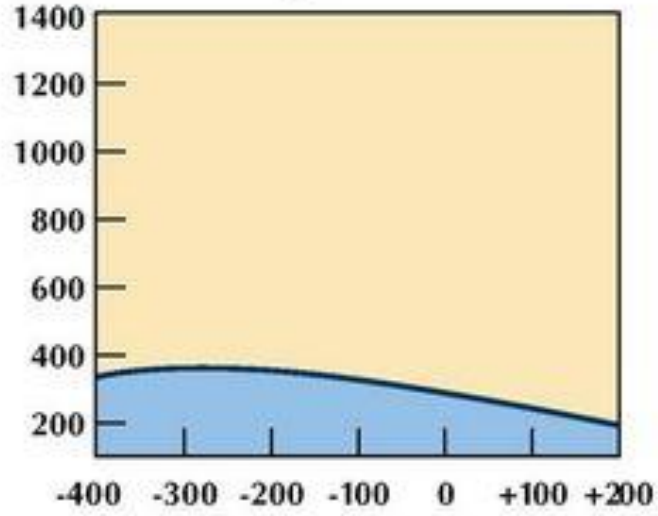
Tympanometry



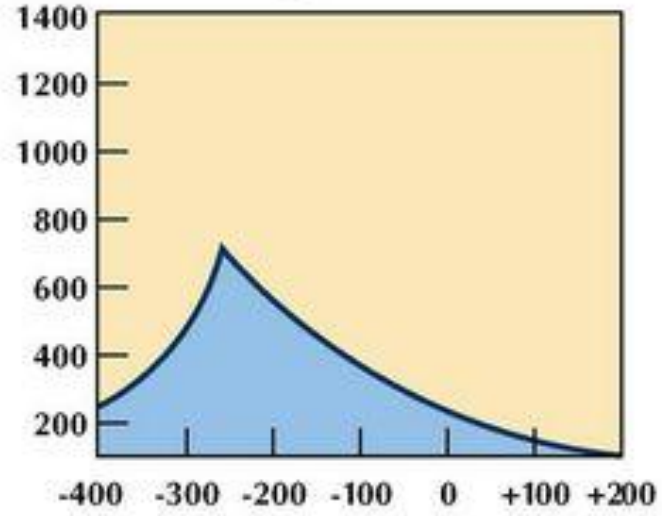
Type A



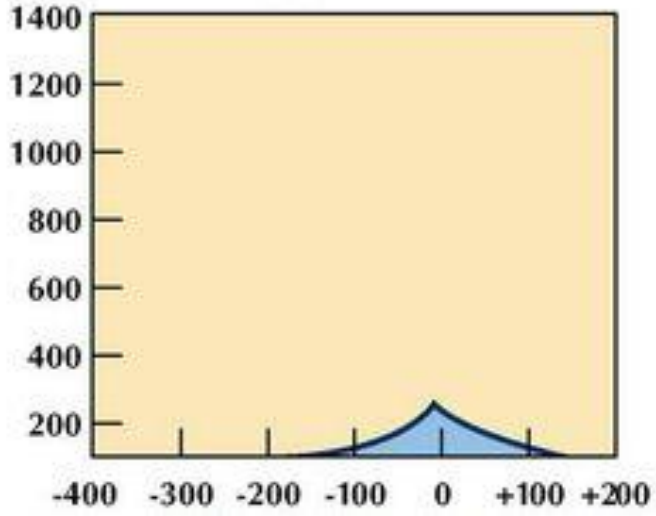
Type B



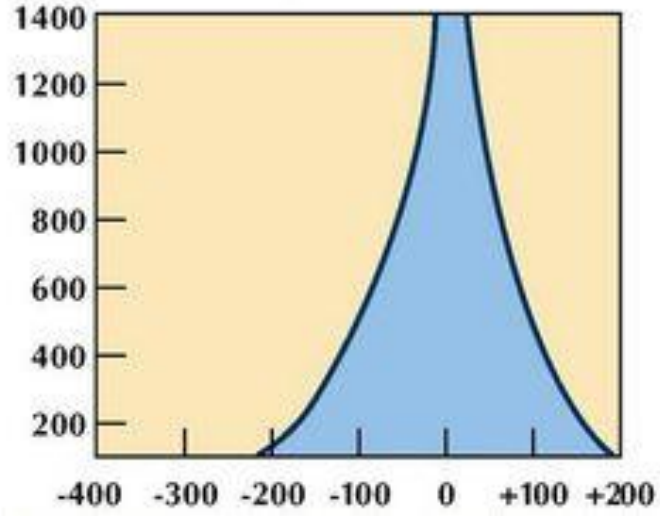
Type C



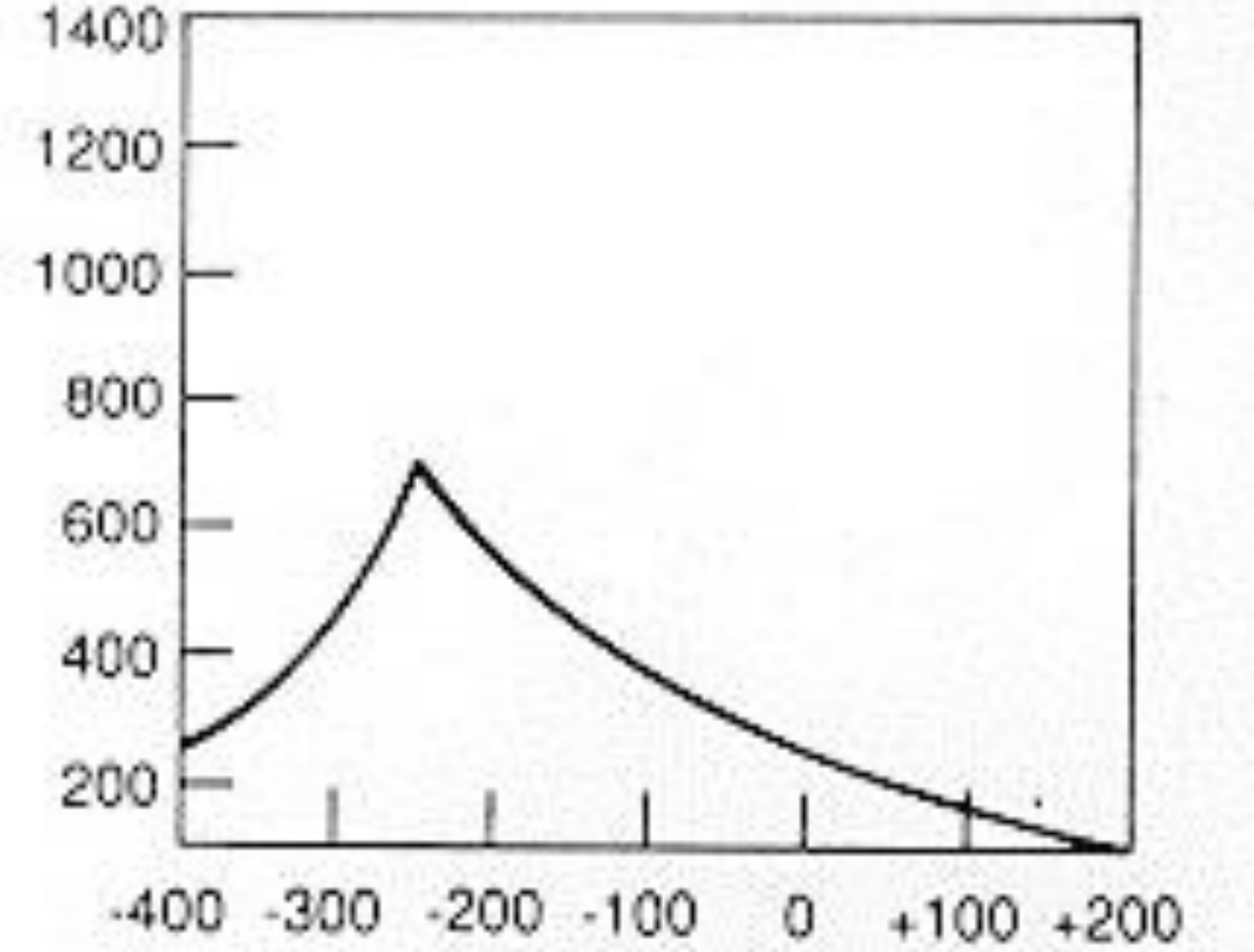
Type As

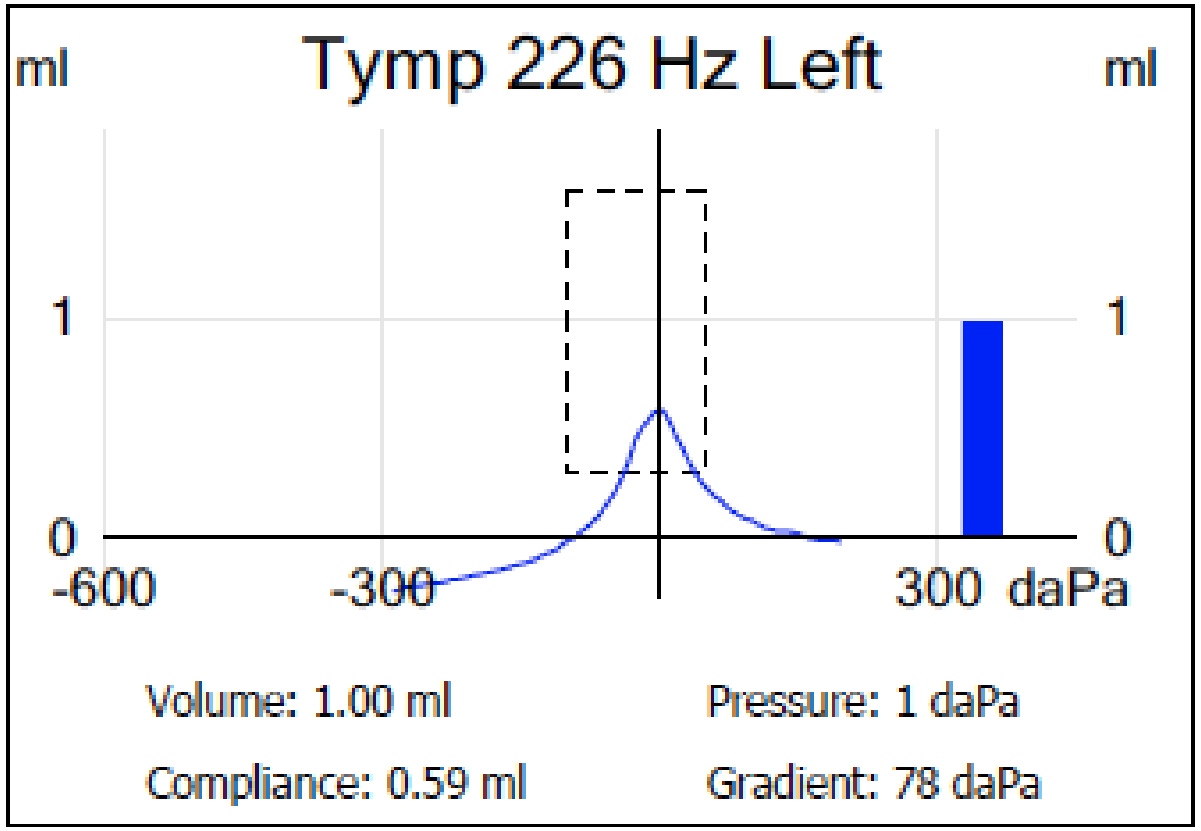


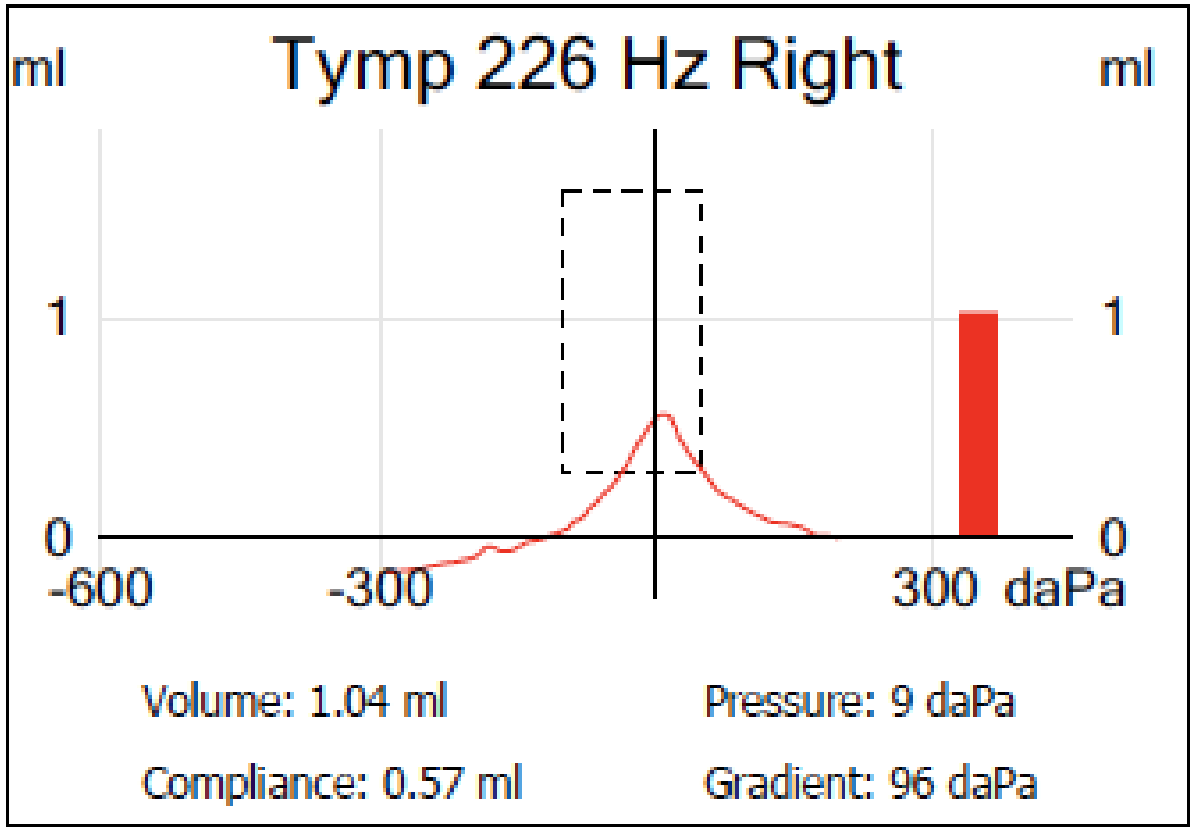
Type AD

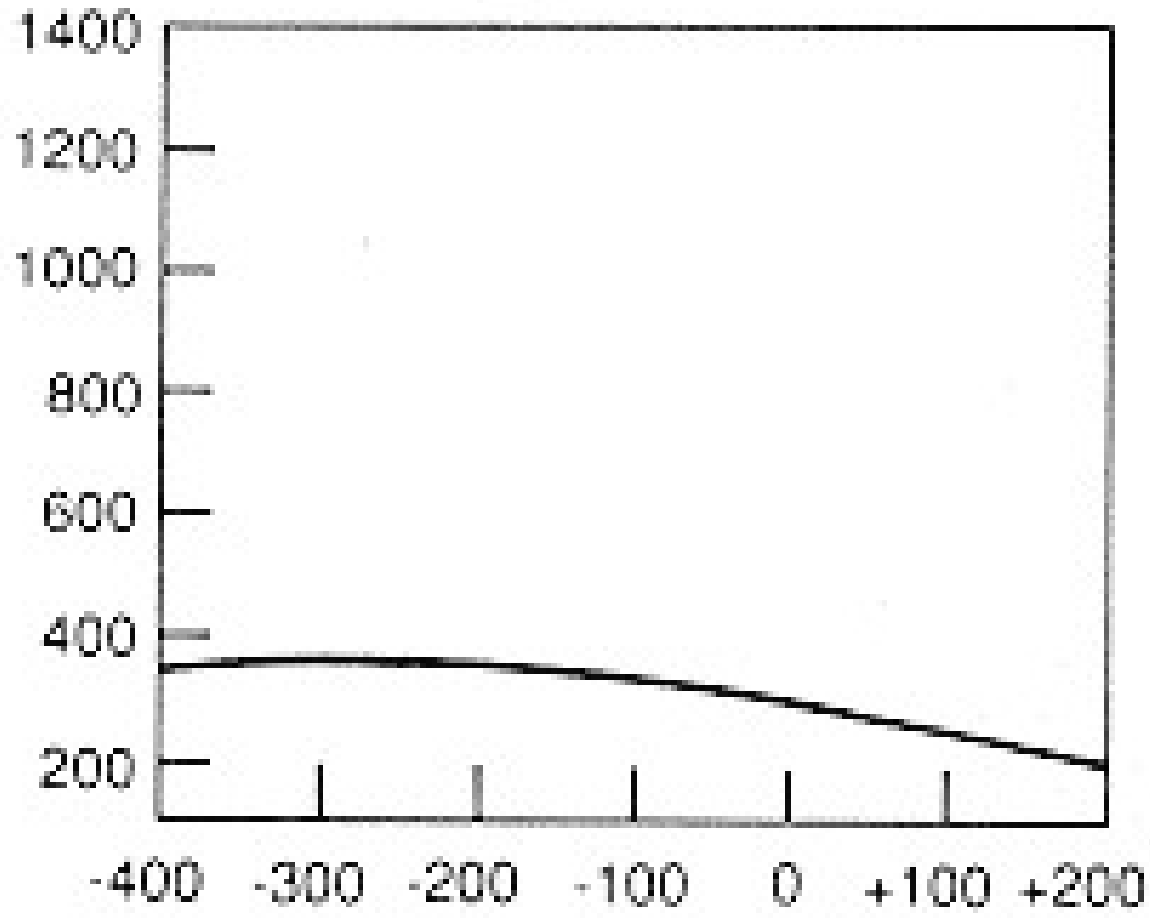


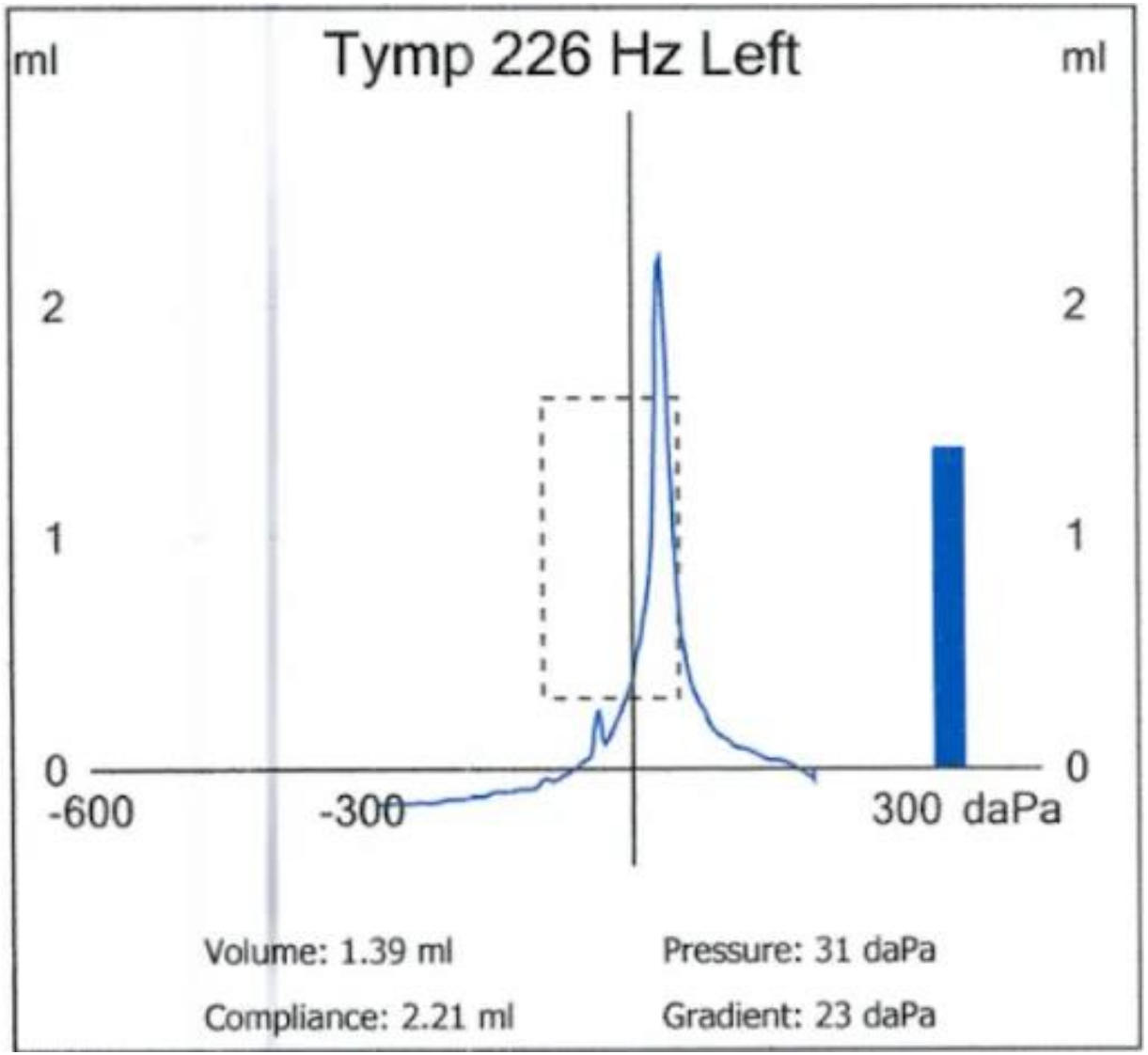
Type A	Indicative of normal middle-ear function
Type As	Indicates a less ‘compliant’ middle-ear system; can indicate otosclerosis
Type Ad	Indicates a highly ‘compliant’ middle-ear system; can indicate ossicular chain discontinuity
Type B	Consistent with middle-ear pathology such as fluid or infection (low volume) or perforation (if high volume)
Type C	Consistent with Eustachian tube dysfunction which is commonly associated with nasal conditions such as allergies or upper respiratory tract infection

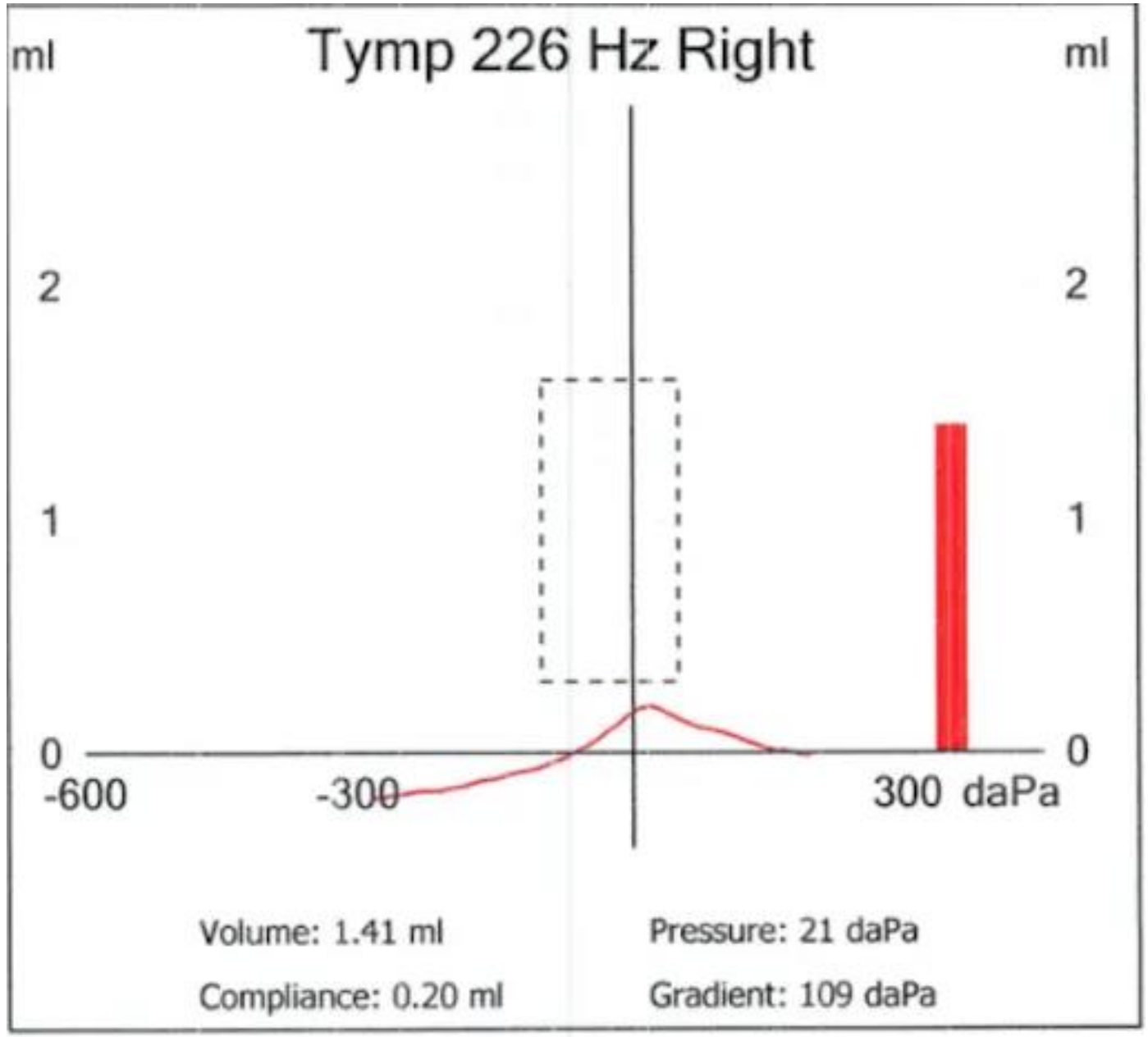

1400
1200
1000
800
600
400
200
-400
-300
-200
-100
0
+100
+200

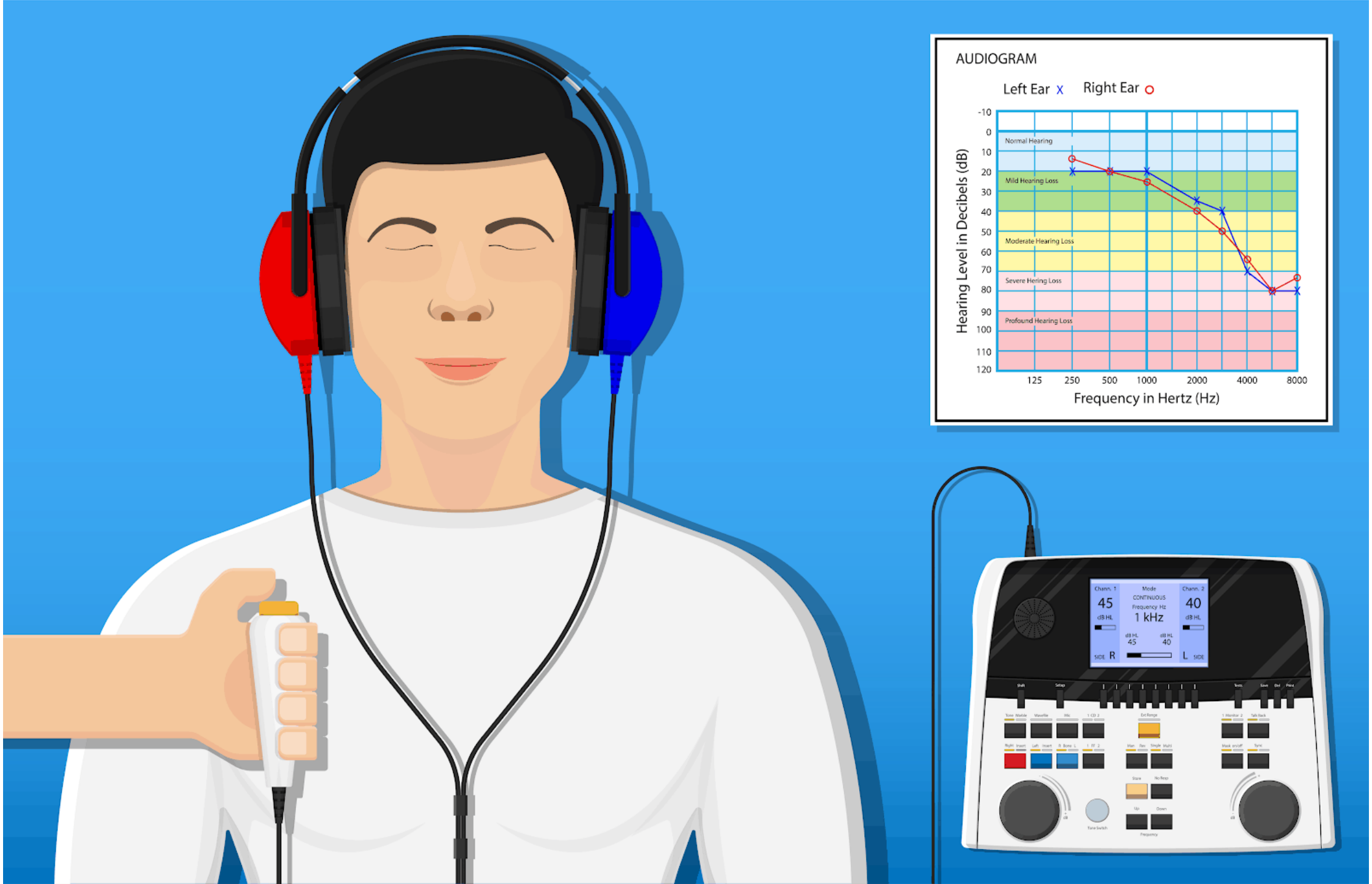

ml
Tymp 226 Hz Left
ml
1
1
0
0
-600
-300
300 daPa
Volume: 1.00 ml
Pressure: 1 daPa
Compliance: 0.59 ml
Gradient: 78 daPa

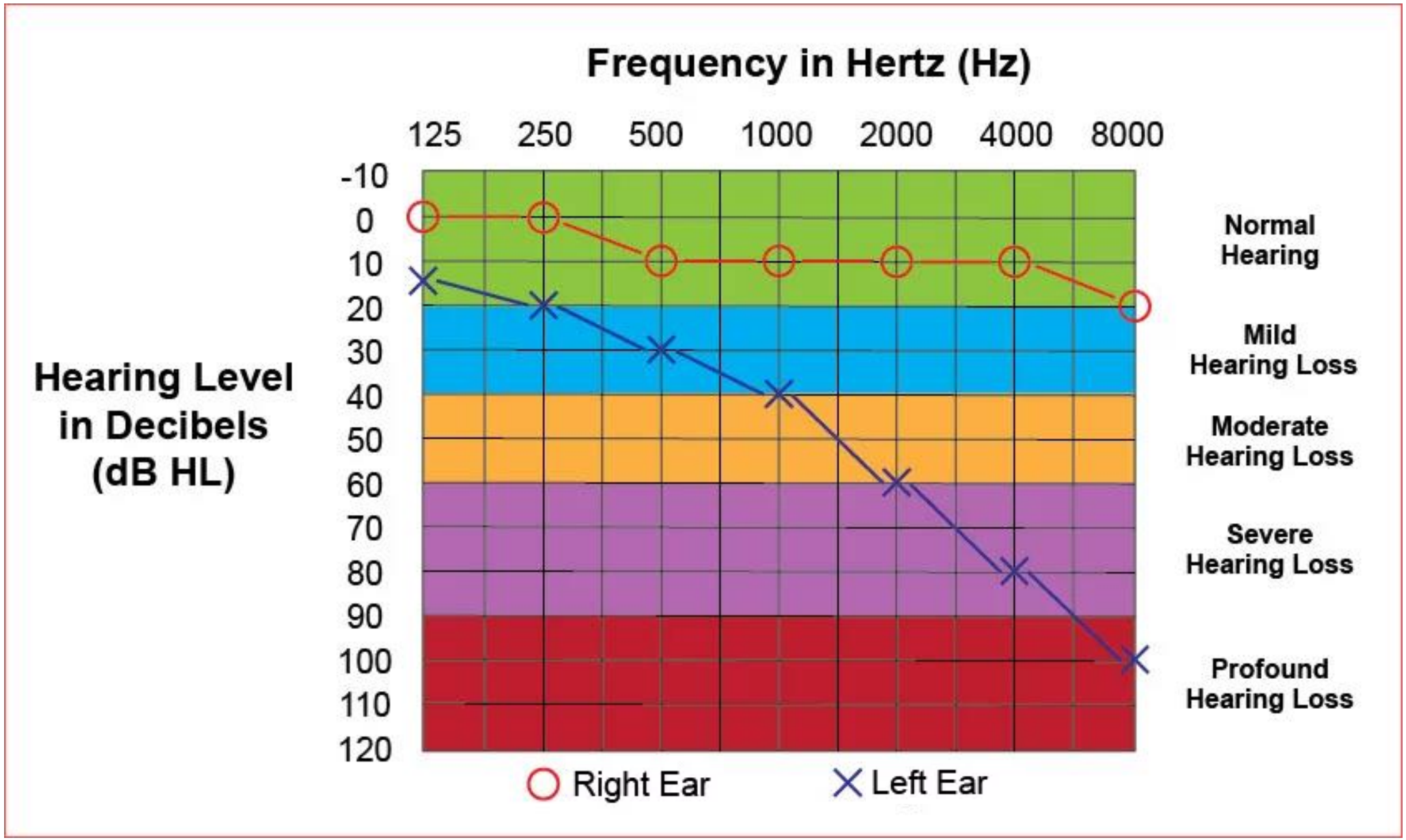

ml
Tymp 226 Hz Right
ml
1
1
0
0
-600
-300
300 daPa
Volume: 1.04 ml
Pressure: 9 daPa
Compliance: 0.57 ml
Gradient: 96 daPa


1400
1200
1000
800
600
400
200
-400
-300
-200
-100
0
+100
+200

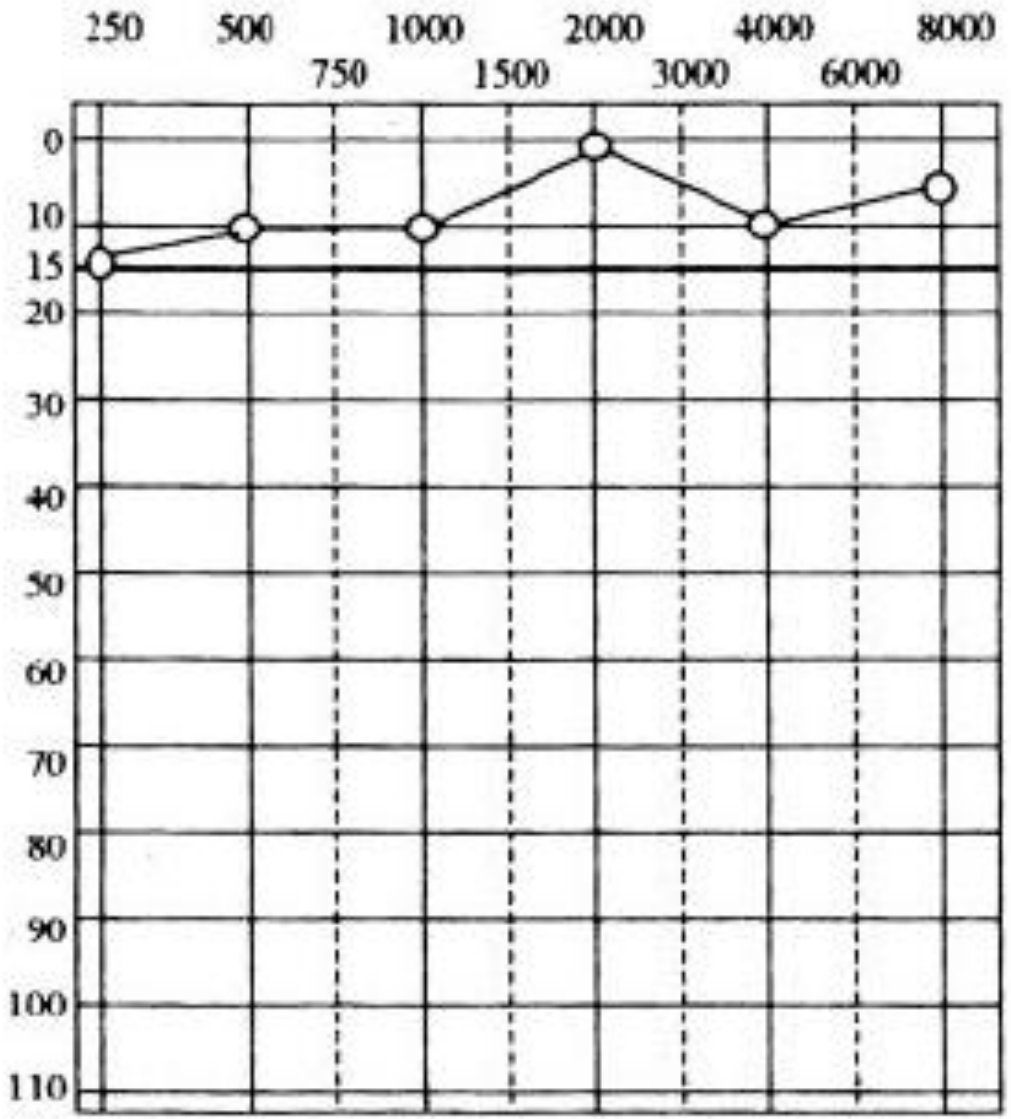

Tymp 226 Hz Left
ml
ml
2
2
1
1
0
0
-600
-300
300 daPa
Volume: 1.39 ml
Pressure: 31 daPa
Compliance: 2.21 ml
Gradient: 23 daPa


Tymp 226 Hz Right
ml
ml
2
2
1
1
0
0
-600
-300
300 daPa
Volume: 1.41 ml
Pressure: 21 daPa
Compliance: 0.20 ml
Gradient: 109 daPa

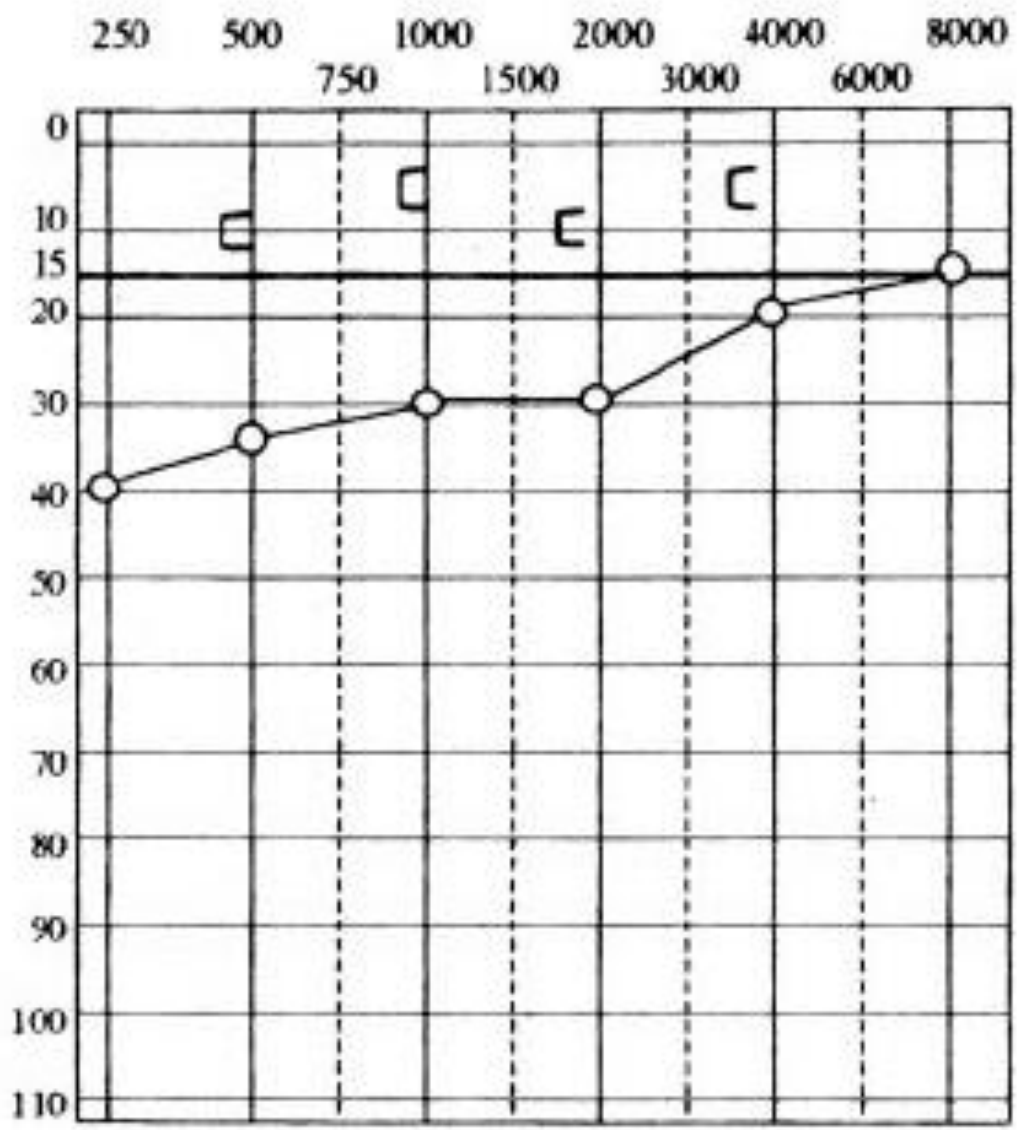

AUDIOGRAM
Left Ear X
Right Ear O
Hearing Level in Decibels (dB)
-10
0
10
20
30
40
50
60
70
80
90
100
110
120
Normal Hearing
Mild Hearing Loss
Moderate Hearing Loss
Severe Hering Loss
Profound Hearing Loss
125
250
500
1000
2000
4000
8000
Frequency in Hertz (Hz)
Chann. 1
45
dB HL
Mode
CONTINUOUS
Frequency Hz
1 kHz
Chann. 2
40
dB HL
dB HL
45
dB HL
40
SIDE R
L SIDE


Frequency in Hertz (Hz)
125
250
500
1000
2000
4000
8000
-10
0
10
20
30
40
50
60
70
80
90
100
110
120
Hearing Level in Decibels (dB HL)
Normal Hearing
Mild Hearing Loss
Moderate Hearing Loss
Severe Hearing Loss
Profound Hearing Loss
Right Ear
Left Ear

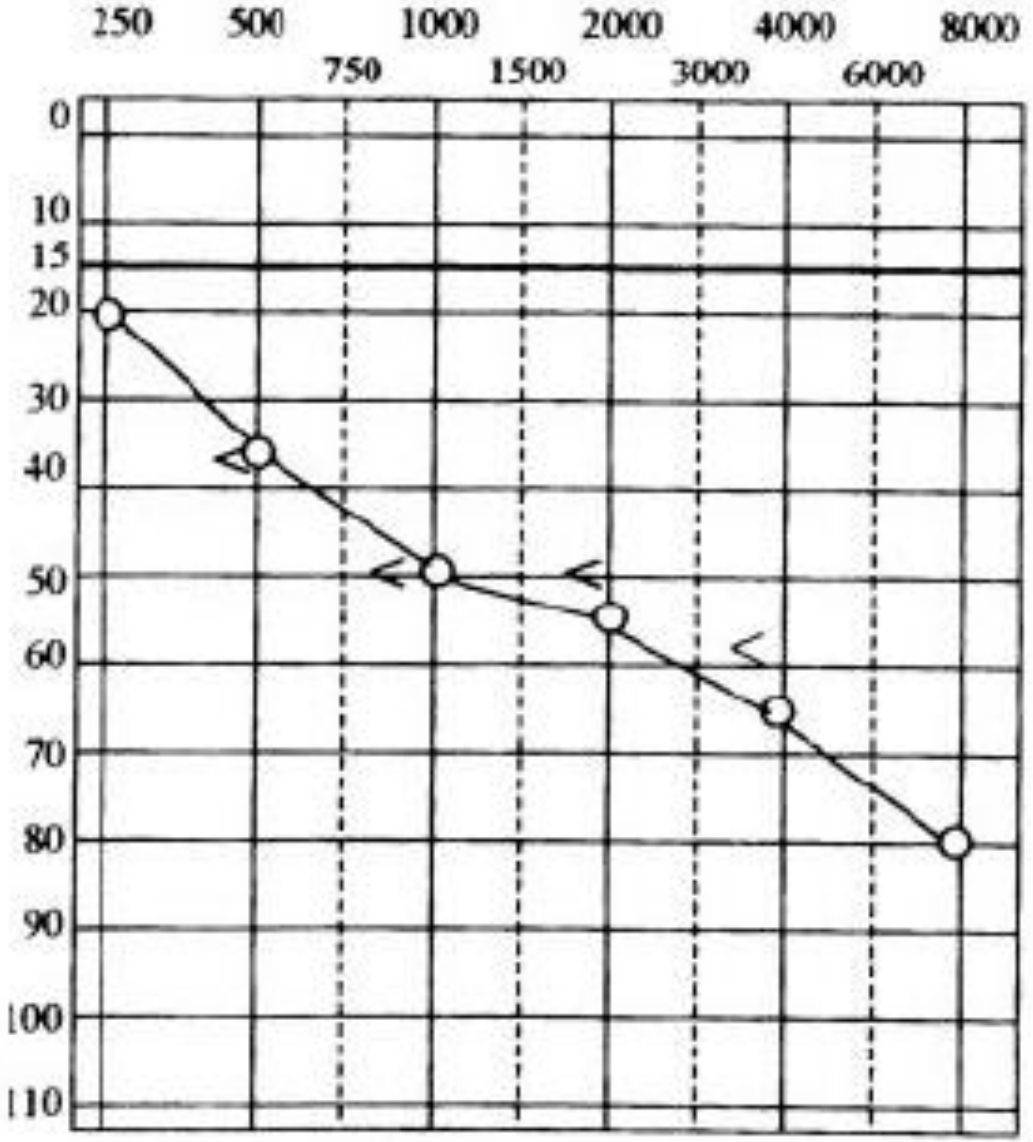
A. Normal Hearing



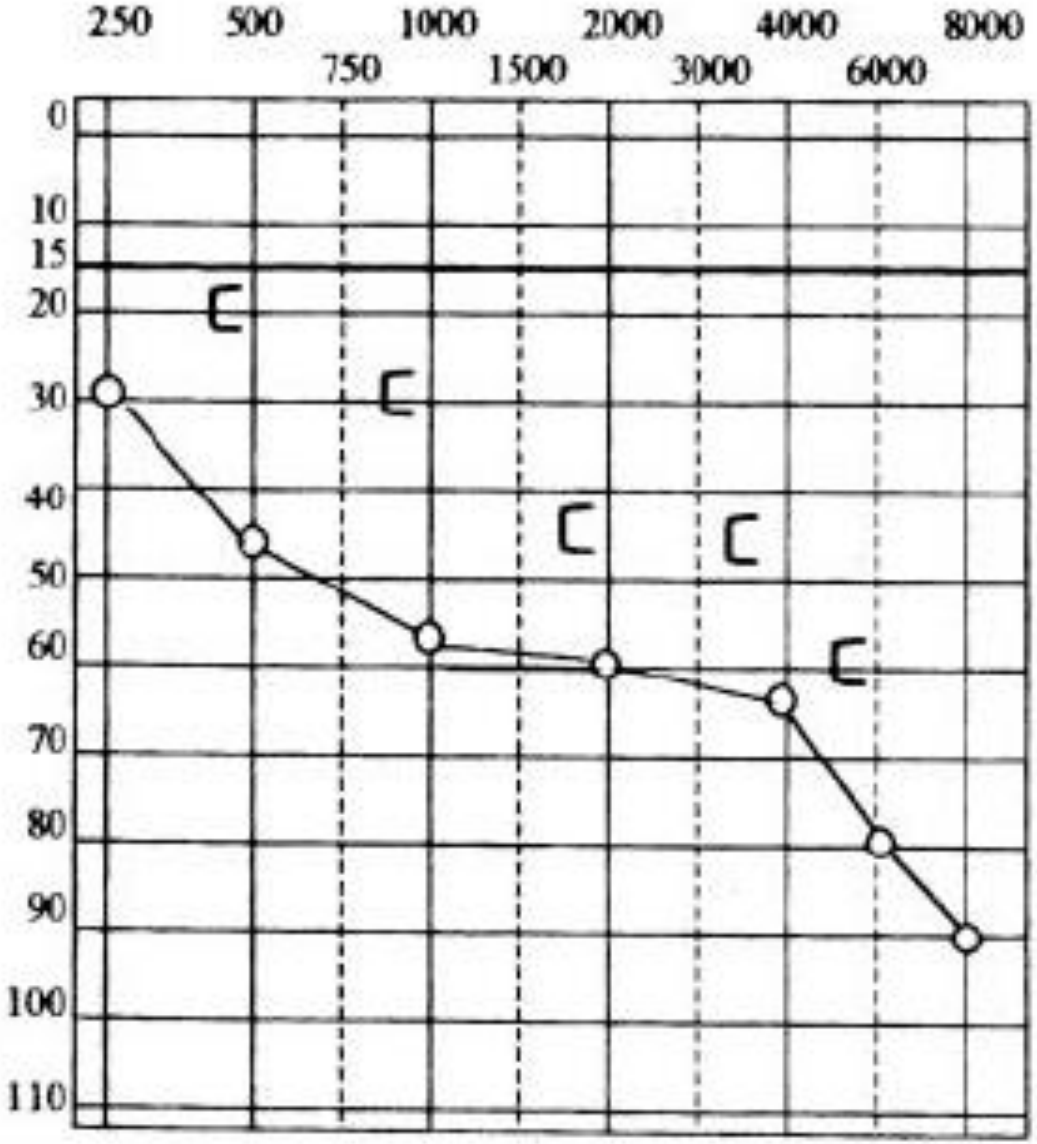
B. Conductive hearing loss

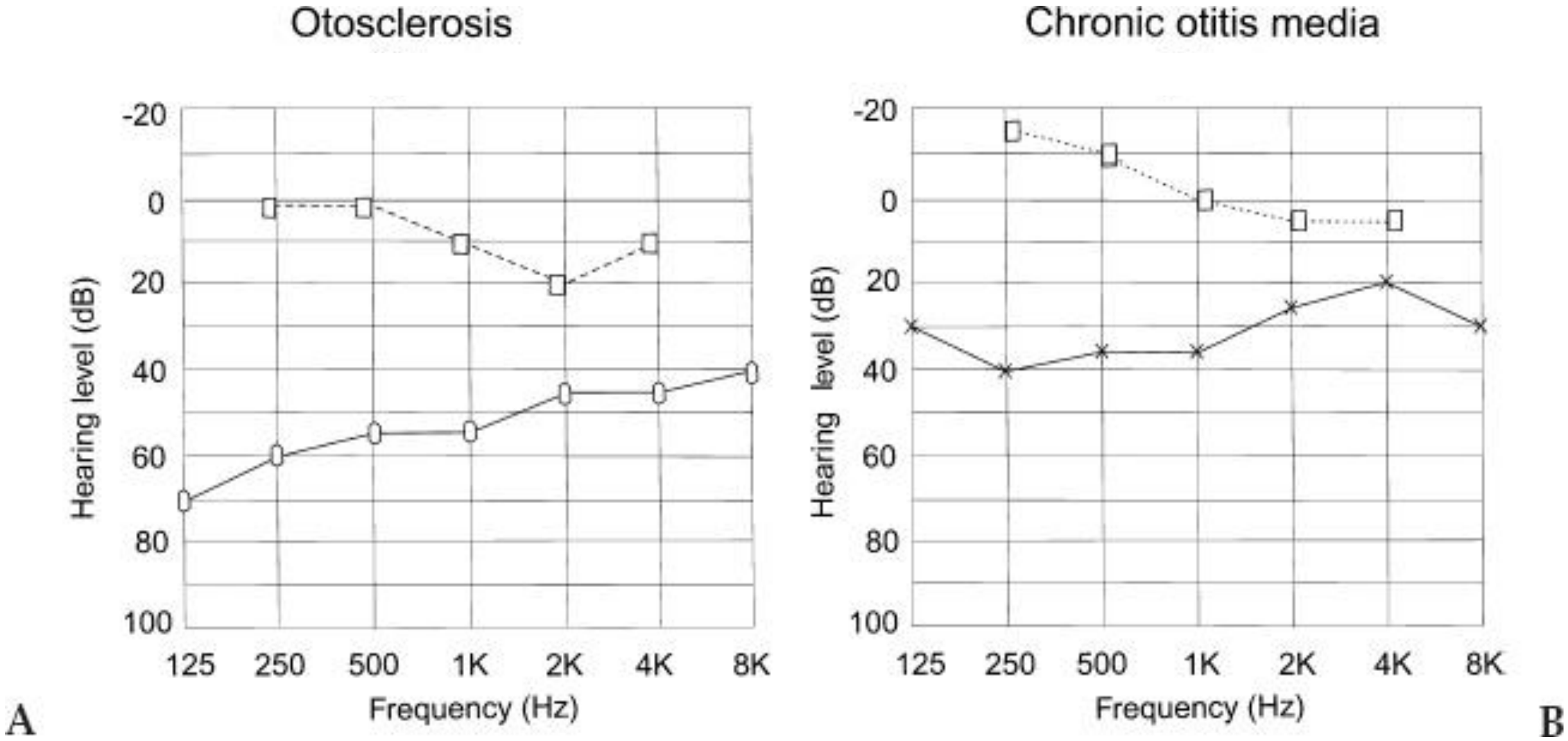


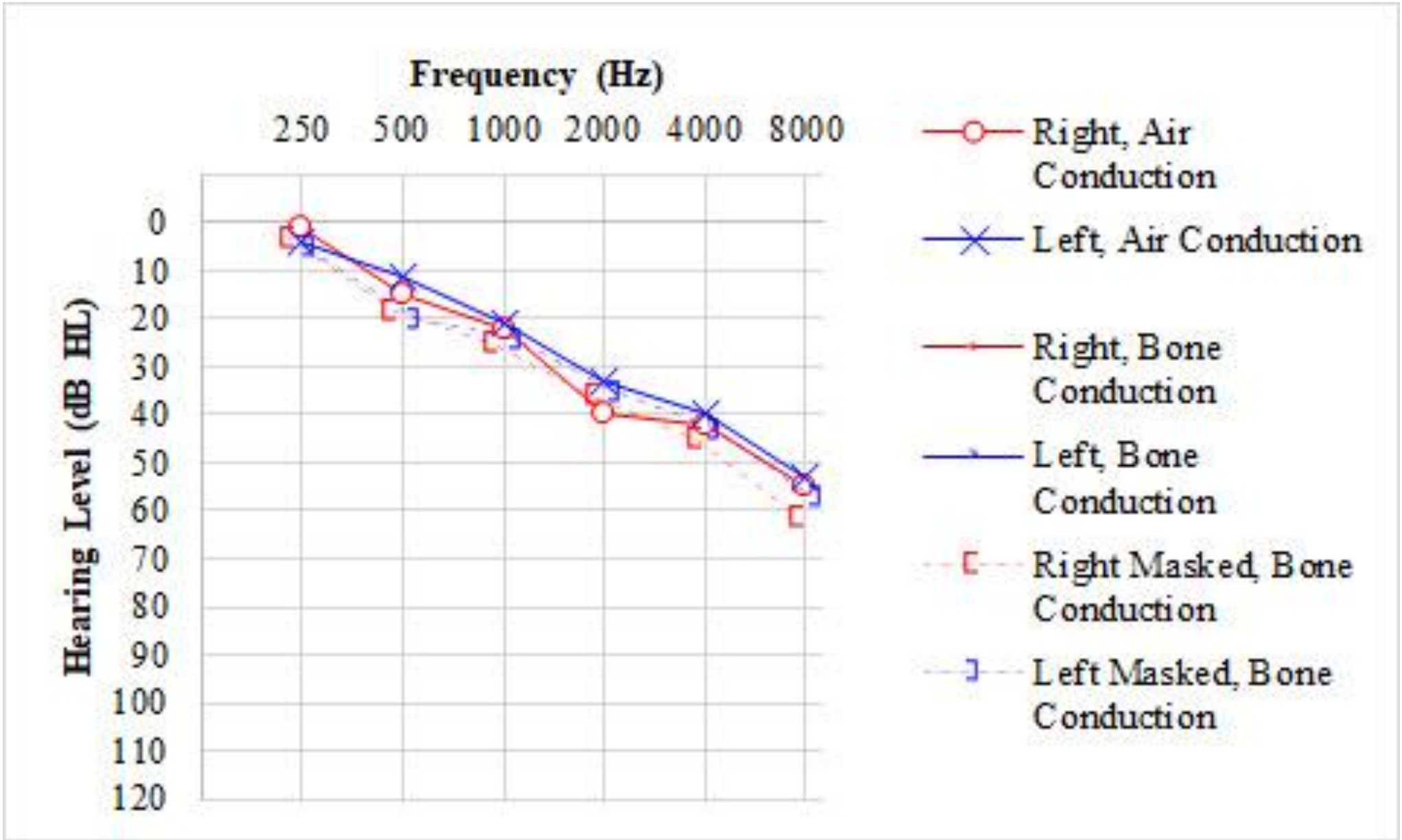
C. Sensorineural hearing loss



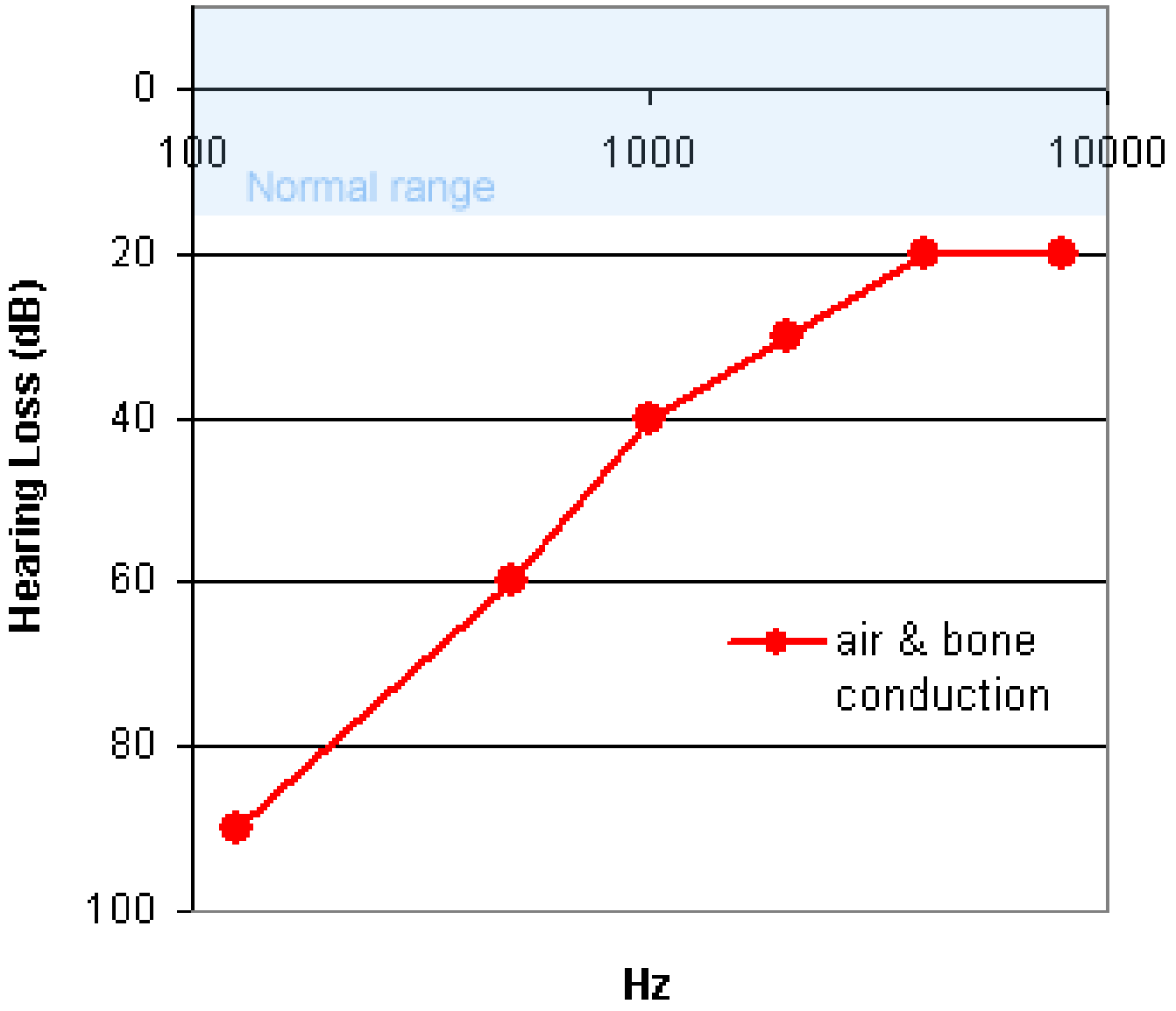
D. Mixed hearing loss

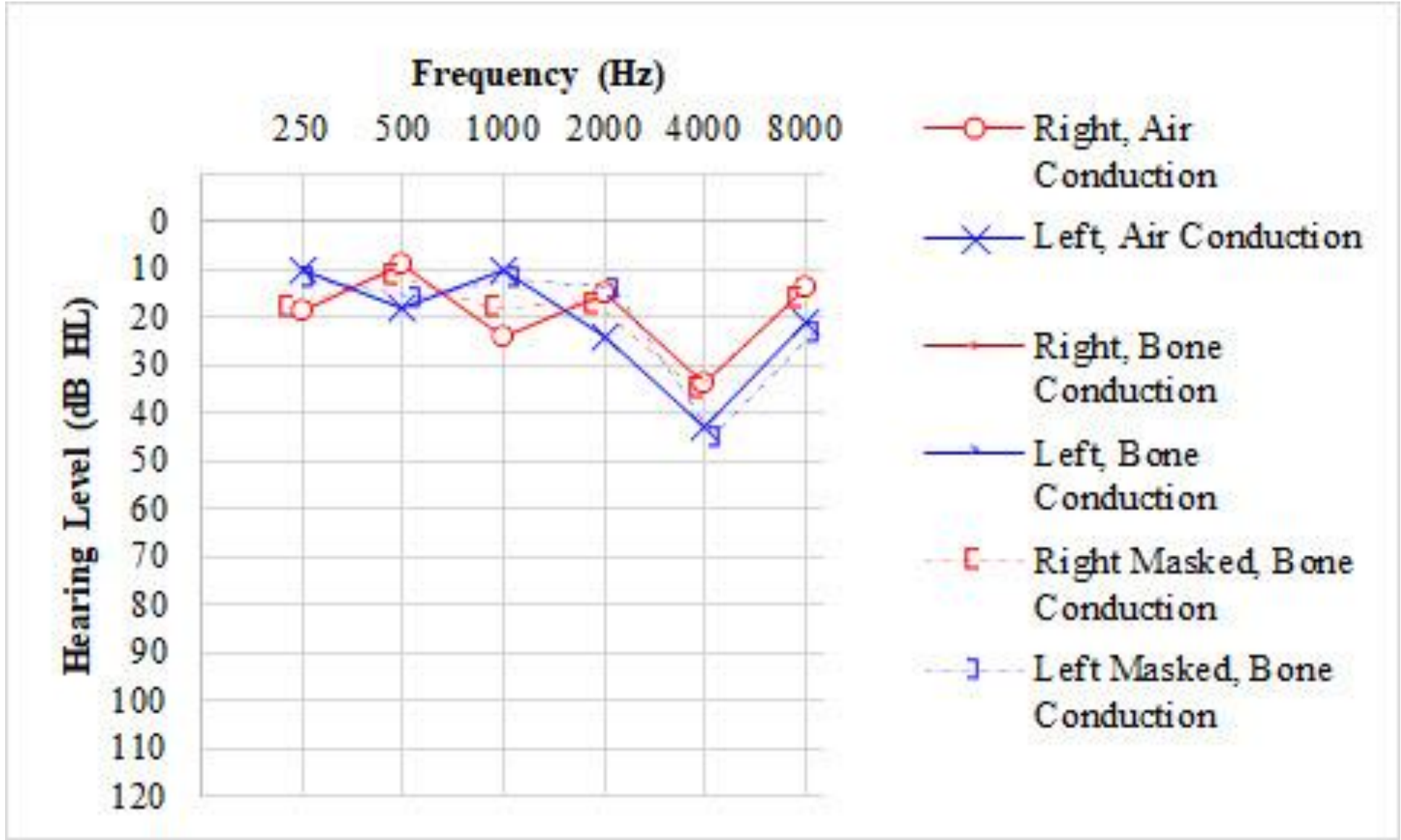


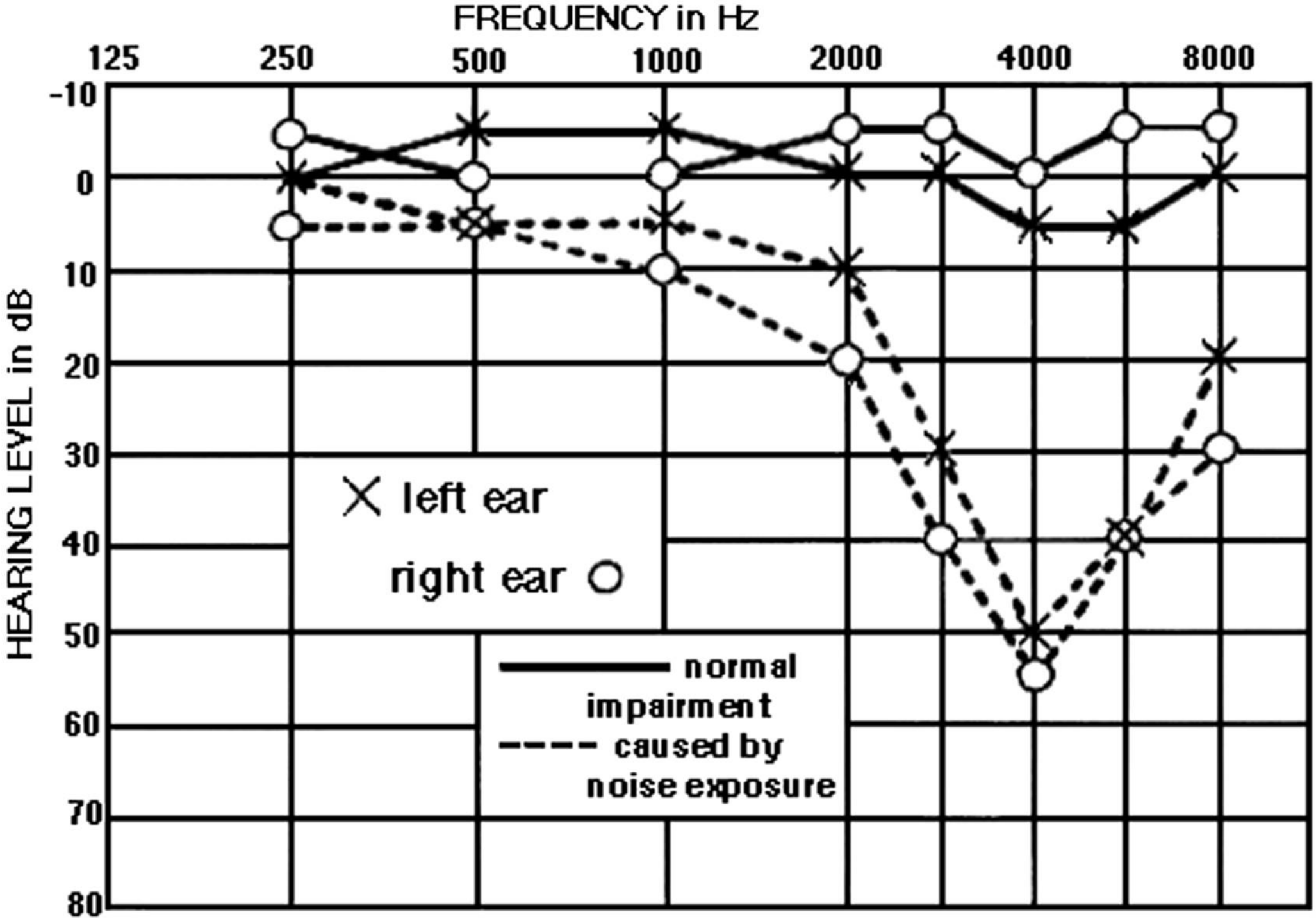

Otosclerosis
-20
0
20
40
60
80
100
Hearing level (dB)
125
250
500
1K
2K
4K
8K
Frequency (Hz)
A
Chronic otitis media
-20
0
20
40
60
80
100
Hearing level (dB)
125
250
500
1K
2K
4K
8K
Frequency (Hz)
B

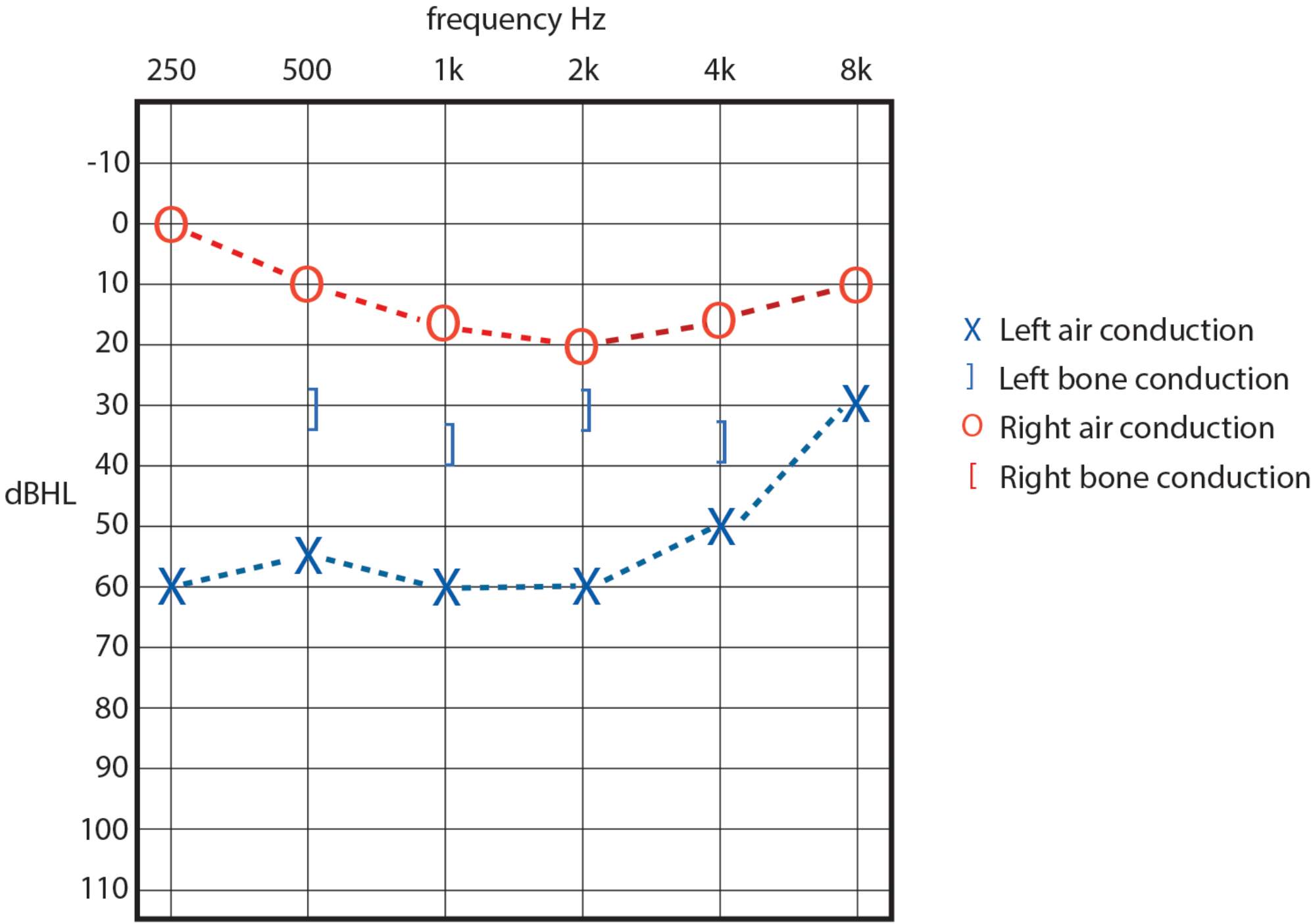

Frequency (Hz)
250
500
1000
2000
4000
8000
Hearing Level (dB HL)
0
10
20
30
40
50
60
70
80
90
100
110
120
Right, Air Conduction
Left, Air Conduction
Right, Bone Conduction
Left, Bone Conduction
Right Masked, Bone Conduction
Left Masked, Bone Conduction

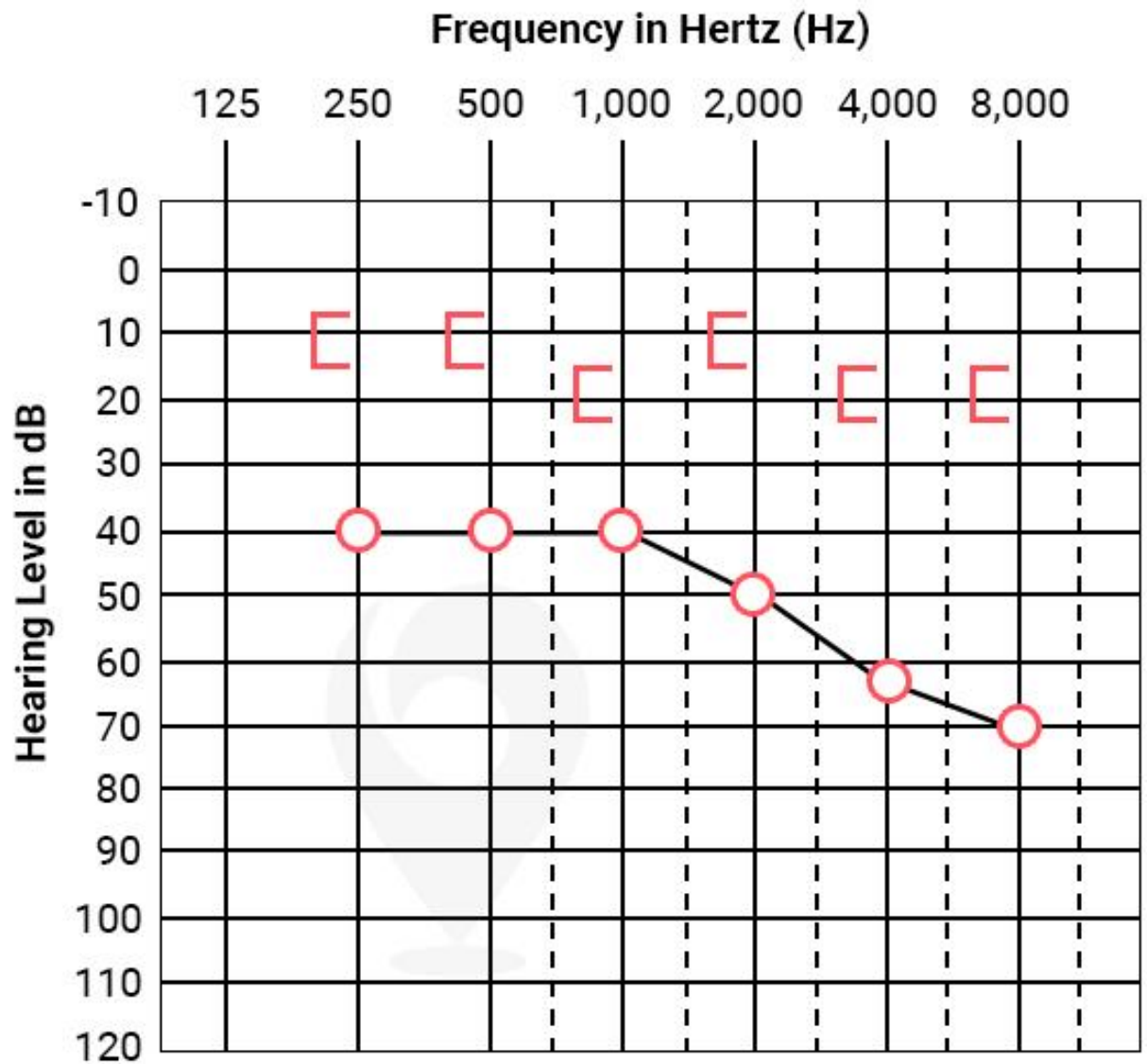
Hearing loss in Meniere's disease

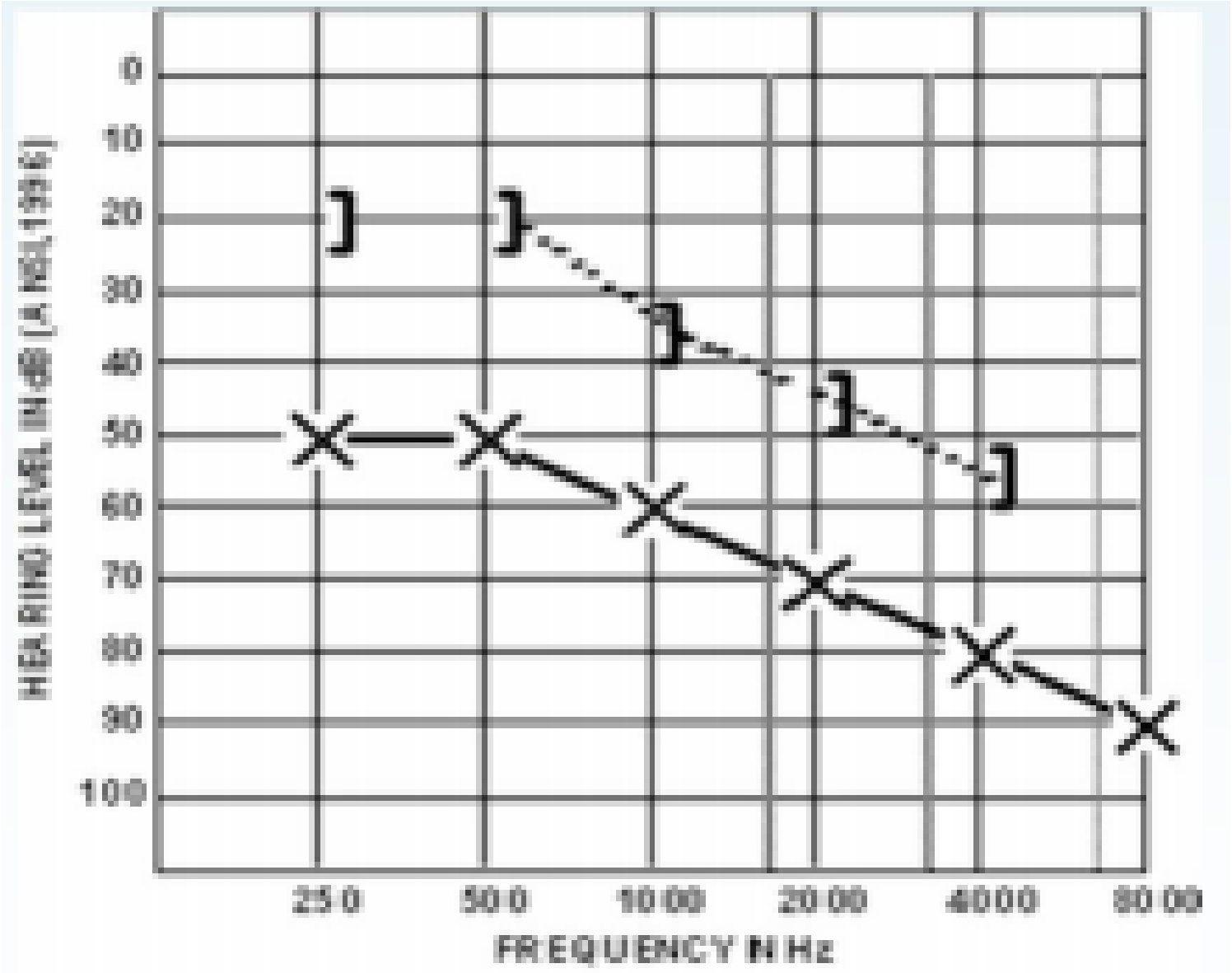


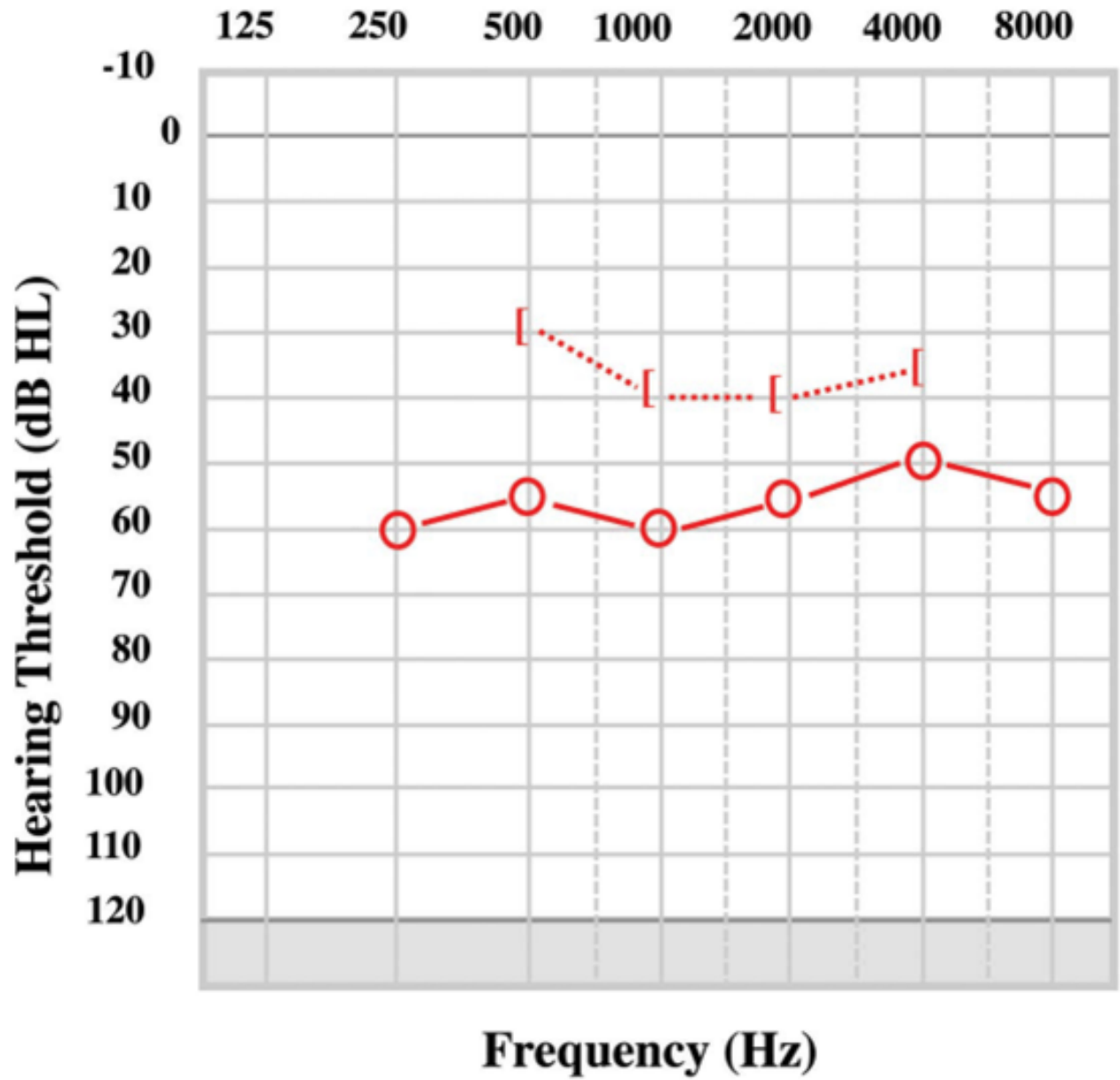

Frequency (Hz)
250
500
1000
2000
4000
8000
Hearing Level (dB HL)
0
10
20
30
40
50
60
70
80
90
100
110
120
Right, Air Conduction
Left, Air Conduction
Right, Bone Conduction
Left, Bone Conduction
Right Masked, Bone Conduction
Left Masked, Bone Conduction

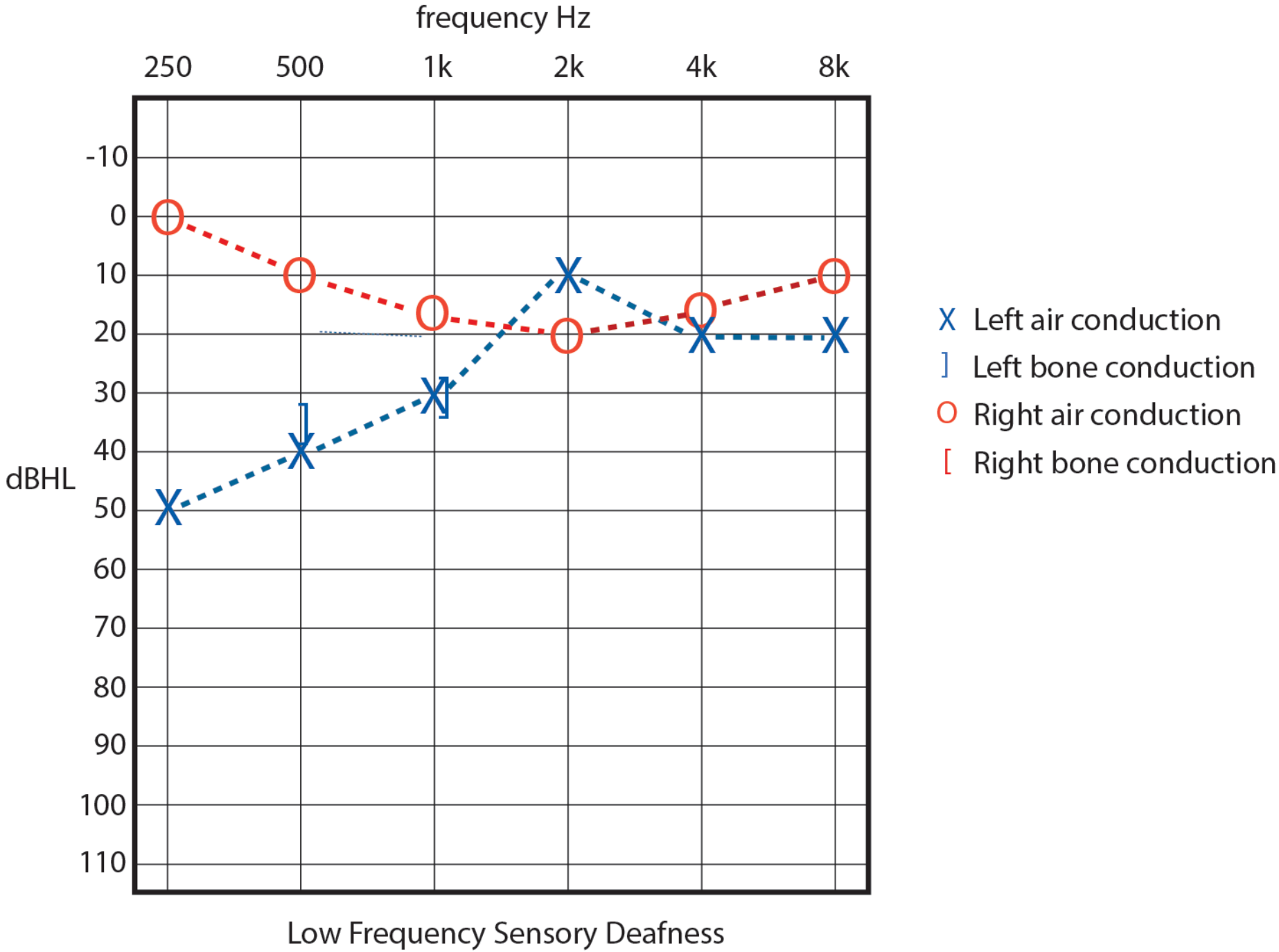

FREQUENCY in Hz
125
250
500
1000
2000
4000
8000
-10
0
10
20
30
40
50
60
70
80
HEARING LEVEL in dB
left ear
right ear
normal
impairment
caused by
noise exposure

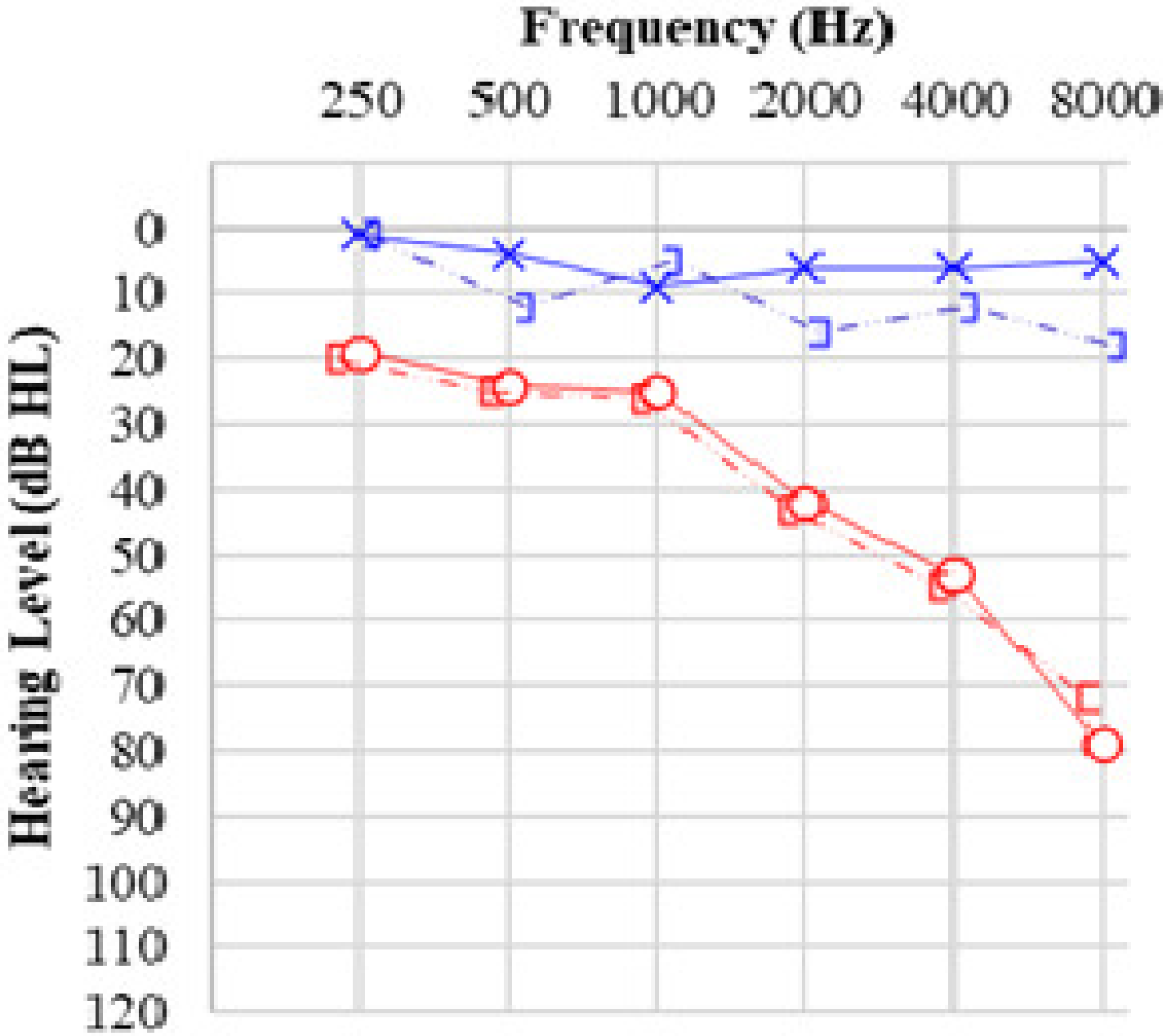

frequency Hz
250
500
1k
2k
4k
8k
-10
0
10
20
30
40
50
60
70
80
90
100
110
dBHL
X Left air conduction
] Left bone conduction
O Right air conduction
[Right bone conduction

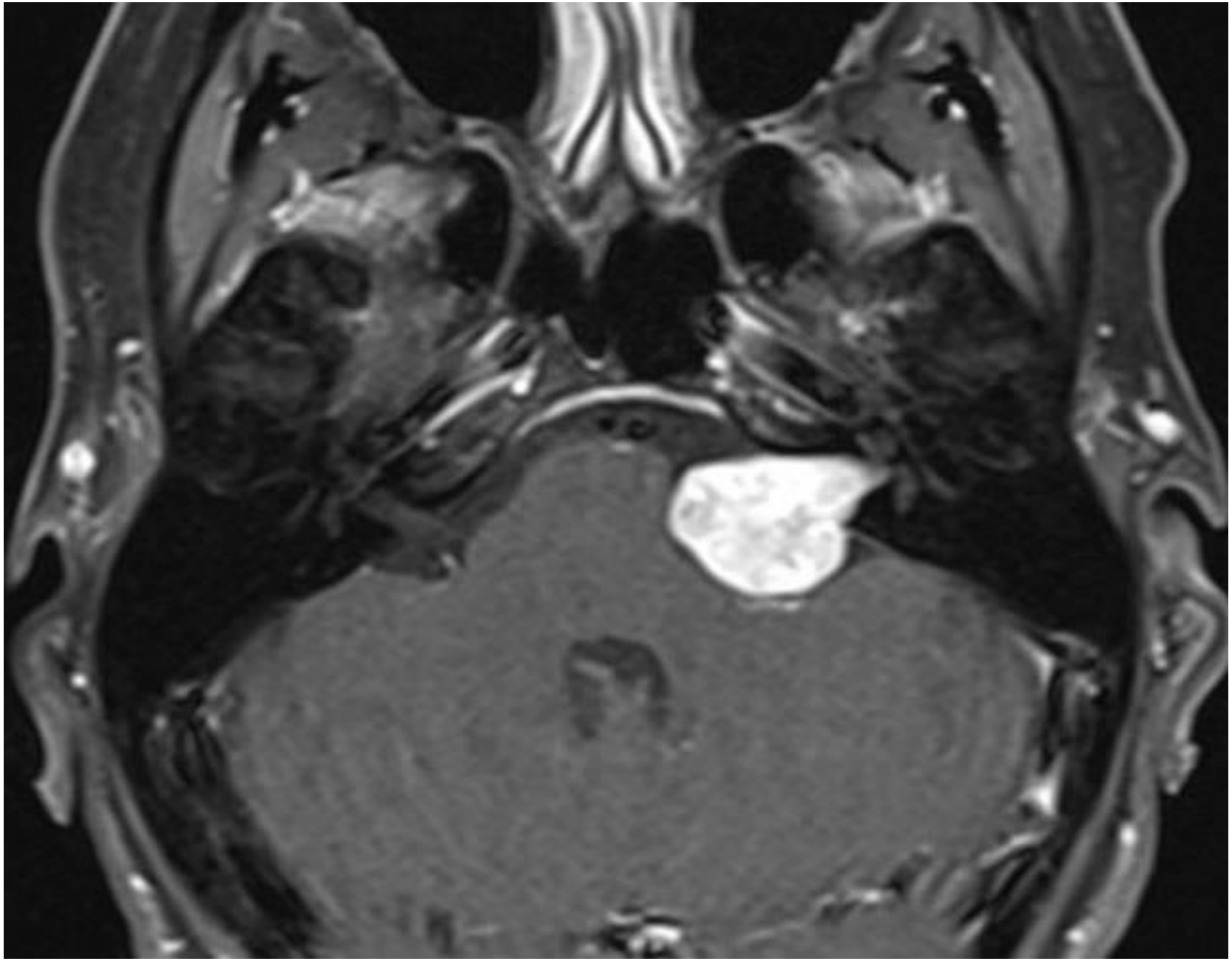

Frequency in Hertz (Hz)
125
250
500
1,000
2,000
4,000
8,000
Hearing Level in dB
-10
0
10
20
30
40
50
60
70
80
90
100
110
120


HEARING LEVEL IN dB (ANSI,1996)
0
10
20
30
40
50
60
70
80
90
100
250
500
1000
2000
4000
8000
FREQUENCY IN Hz

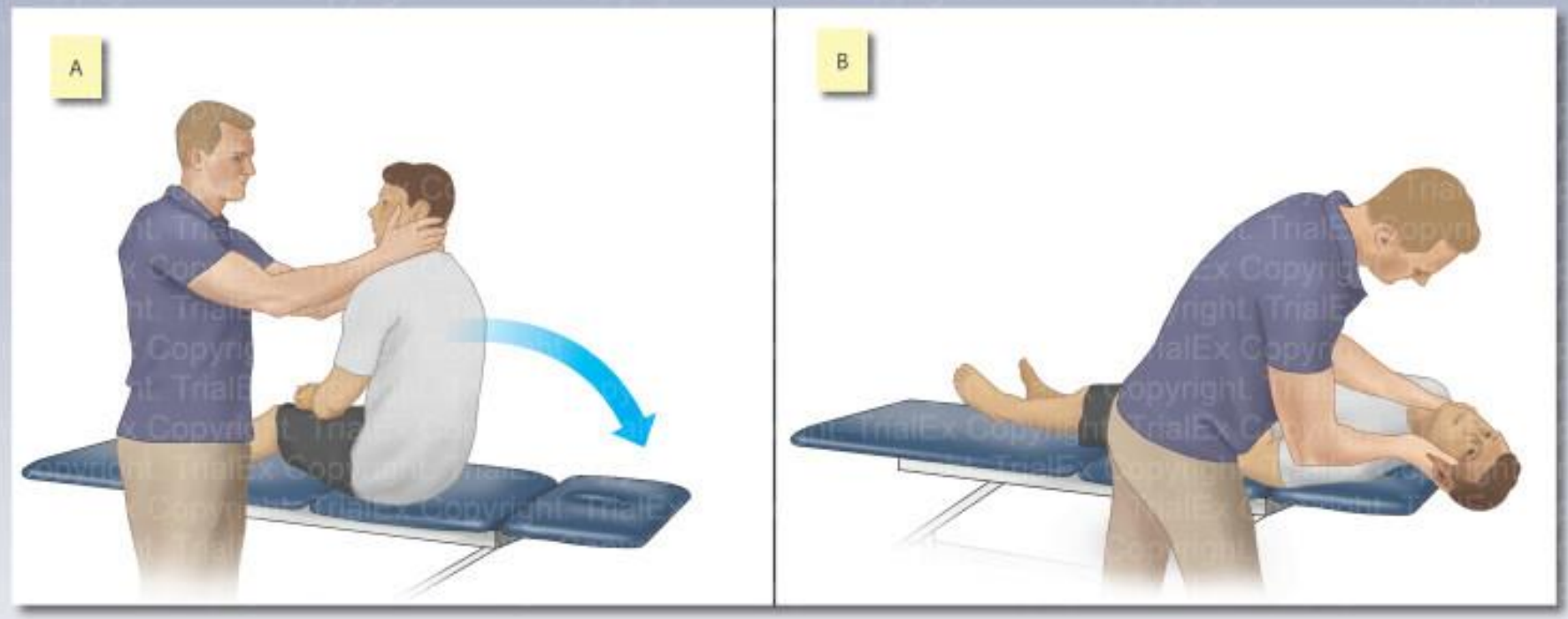

125
250
500
1000
2000
4000
8000
-10
0
10
20
30
40
50
60
70
80
90
100
110
120
Hearing Threshold (dB HL)
Frequency (Hz)

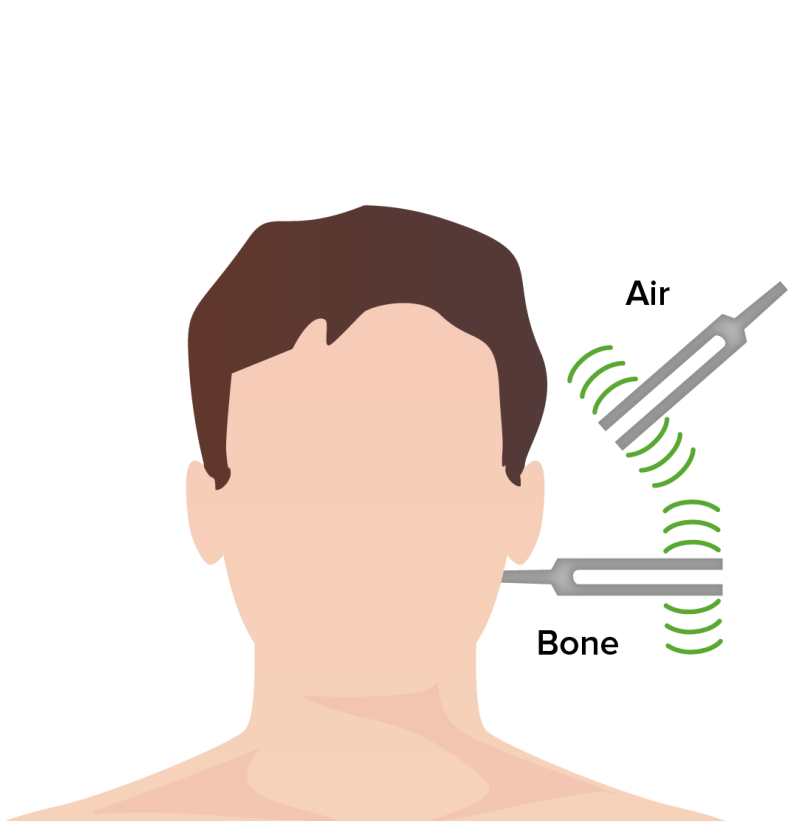

frequency Hz
250
500
1k
2k
4k
8k
-10
0
10
20
30
40
50
60
70
80
90
100
110
dBHL
X Left air conduction
] Left bone conduction
O Right air conduction
[Right bone conduction
Low Frequency Sensory Deafness


Frequency (Hz)
250
500
1000
2000
4000
8000
Hearing Level (dB HL)
0
10
20
30
40
50
60
70
80
90
100
110
120

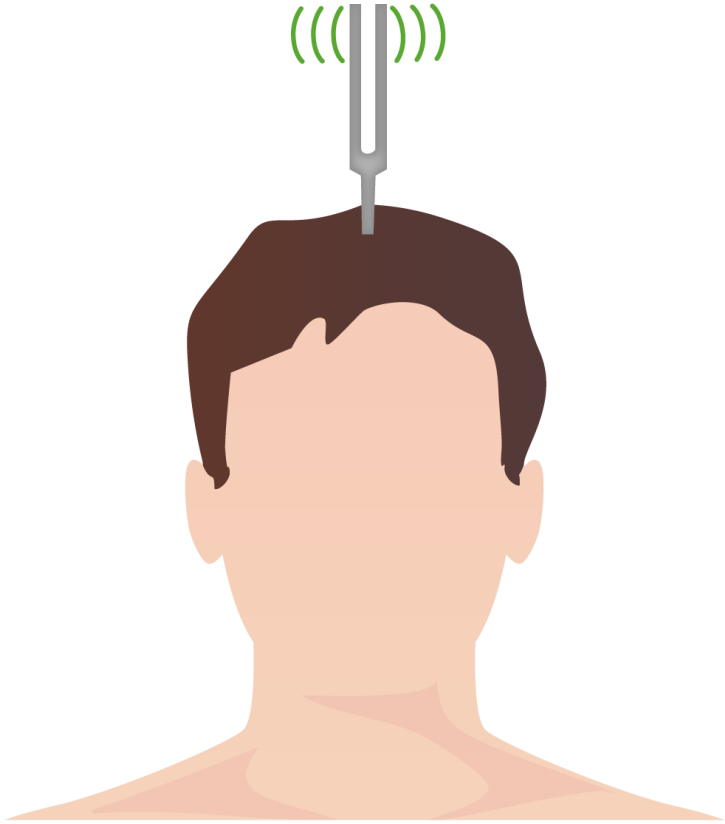


Dix-Hallpike Test



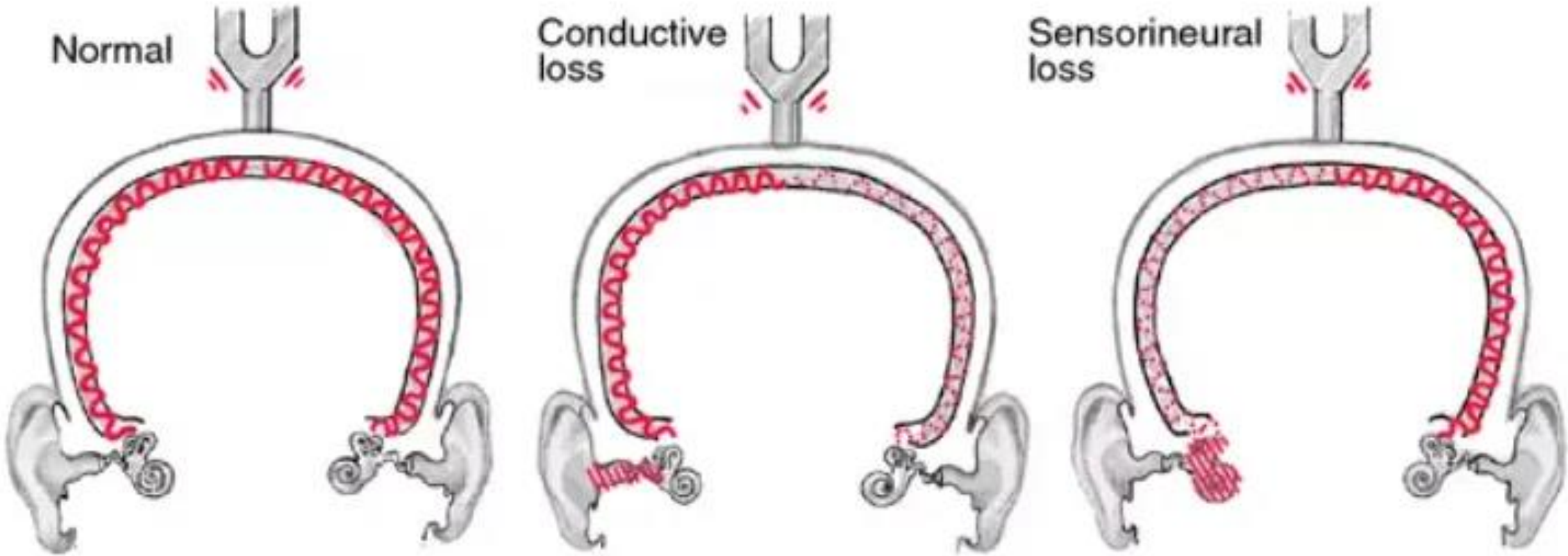


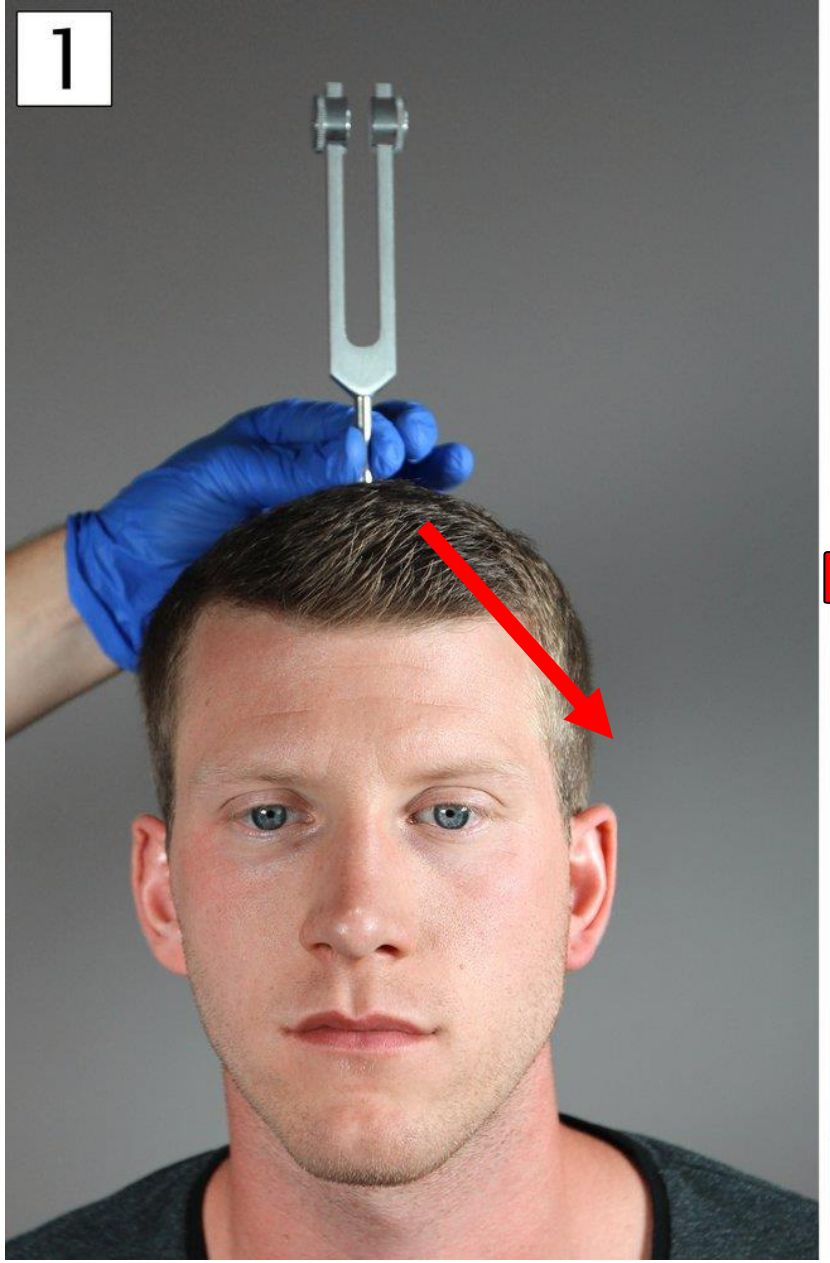
Rinne Test



Weber Test

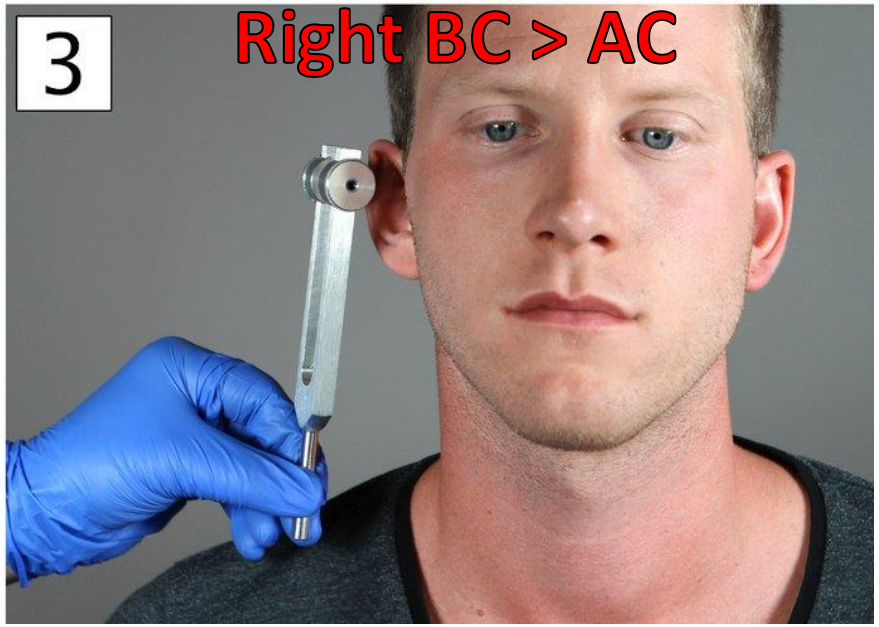
Hearing loss	Rinne test (Conduction)	Weber test (Localization)
None	Air > bone	Midline
Sensorineural		Normal ear
Conductive	Bone > air	Affected ear


Normal
Conductive loss
Sensorineural loss



Rinne Negative on the Right

Right BC > AC

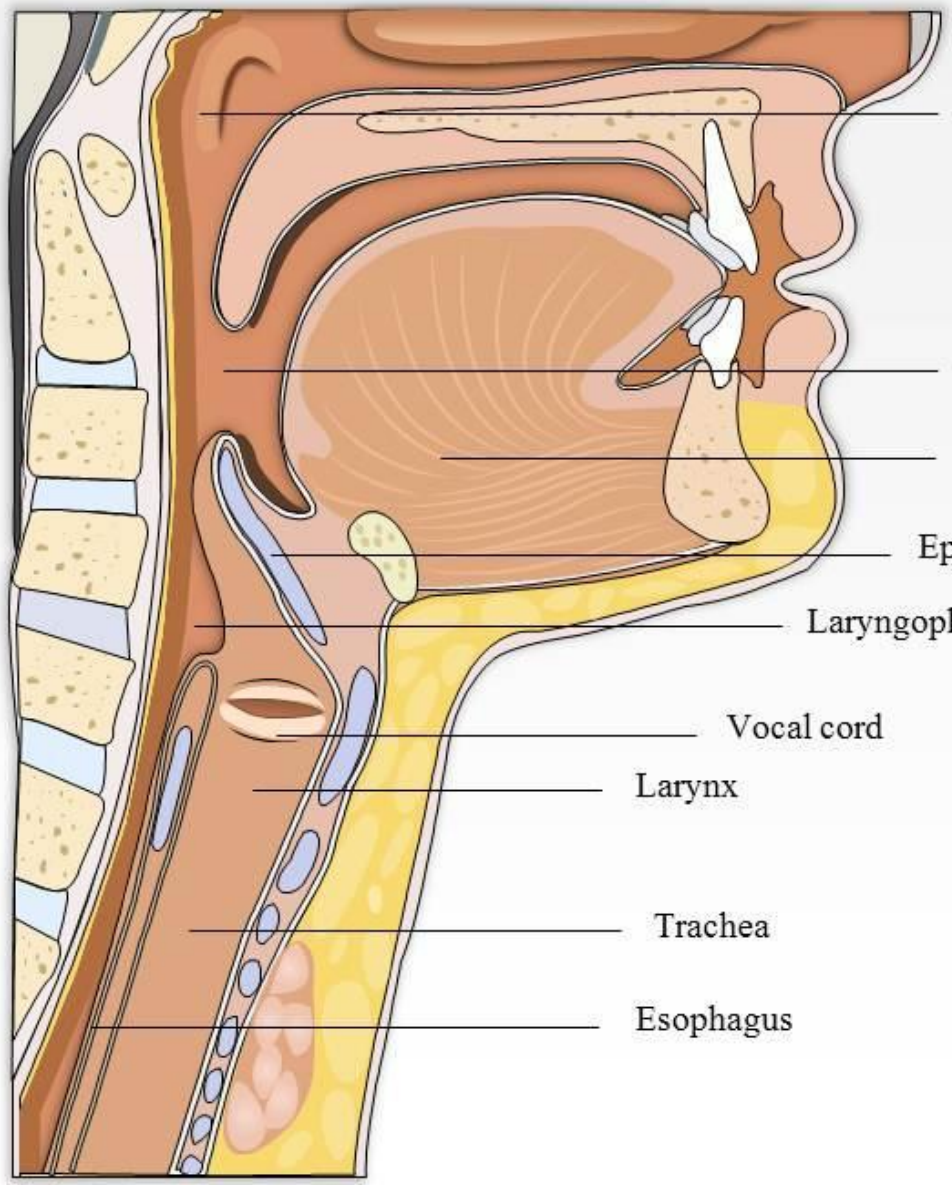


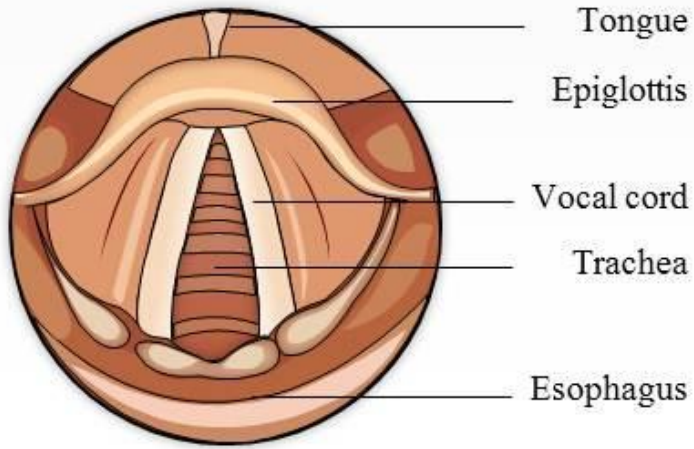
How would you interpret this result?

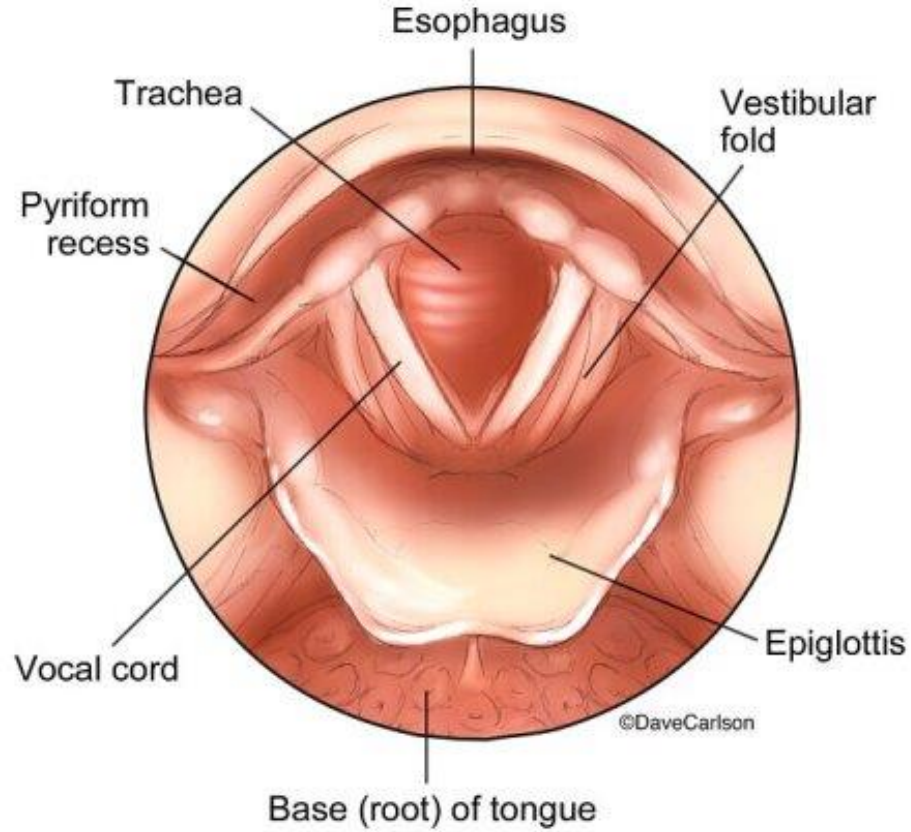
What is the diagnosis?

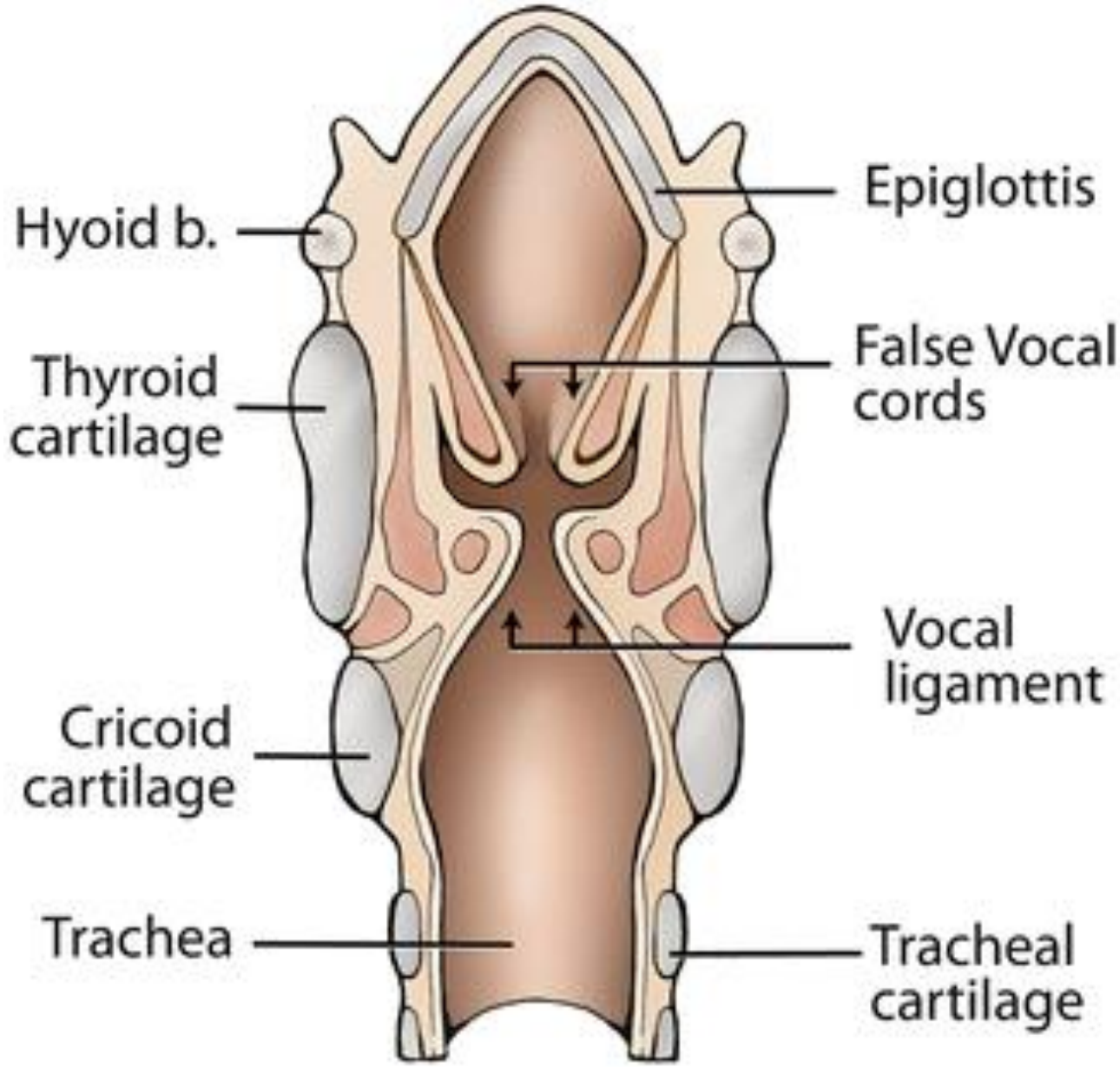
Laryngology + Head & Neck

Anatomy Of Larynx

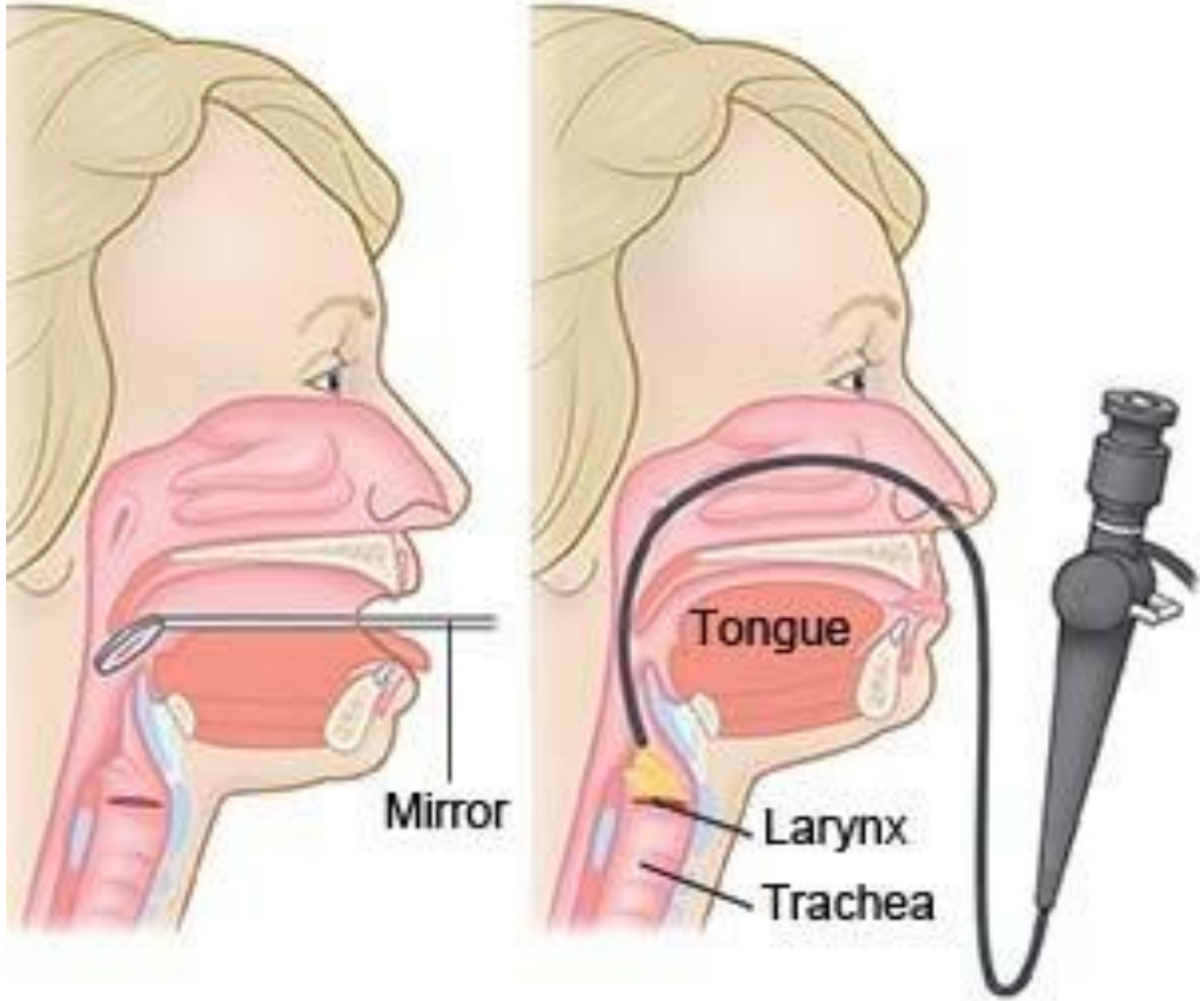






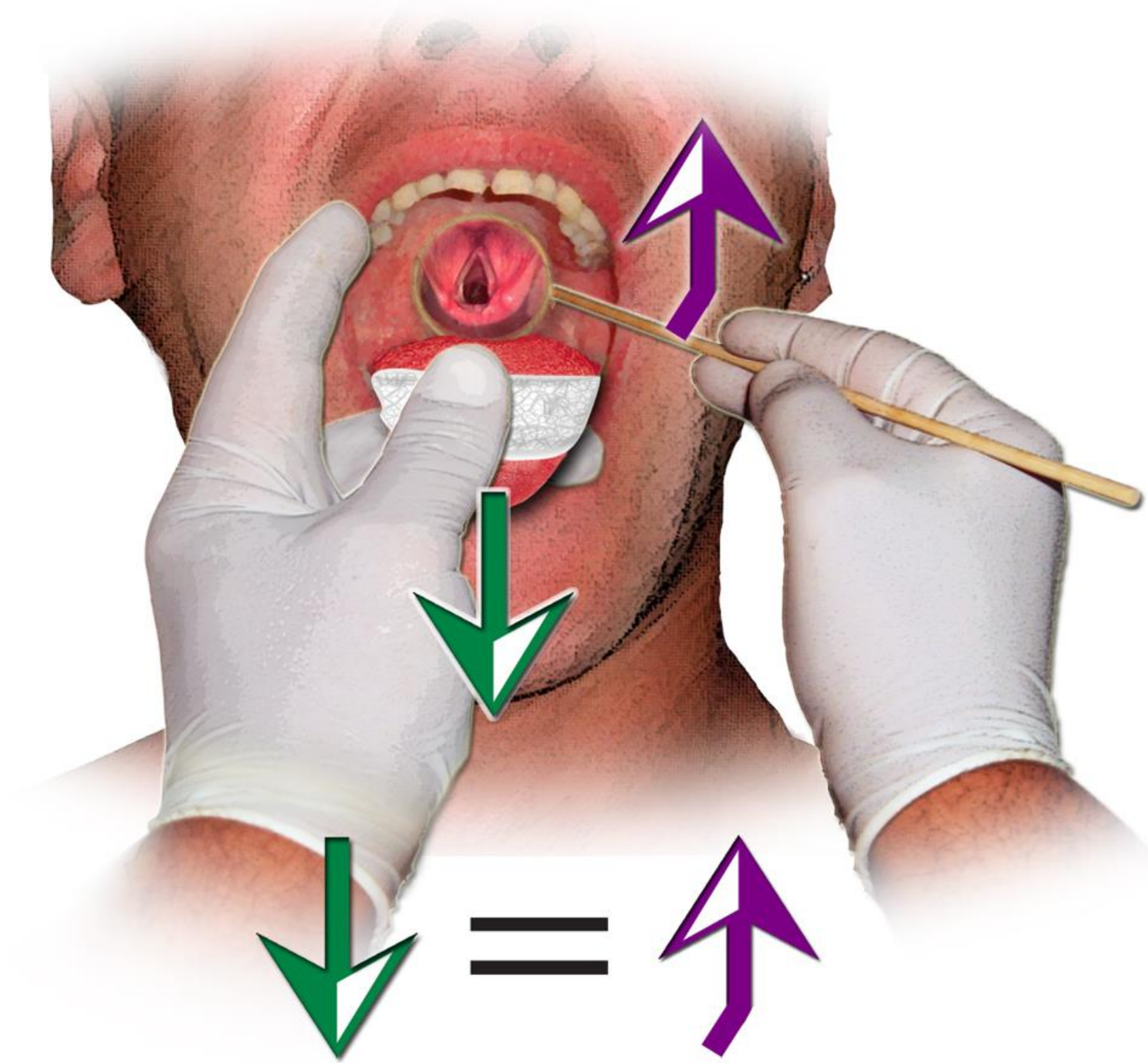

Hyoid b.
Thyroid cartilage
Cricoid cartilage
Trachea
Epiglottis
False Vocal cords
Vocal ligament
Tracheal cartilage

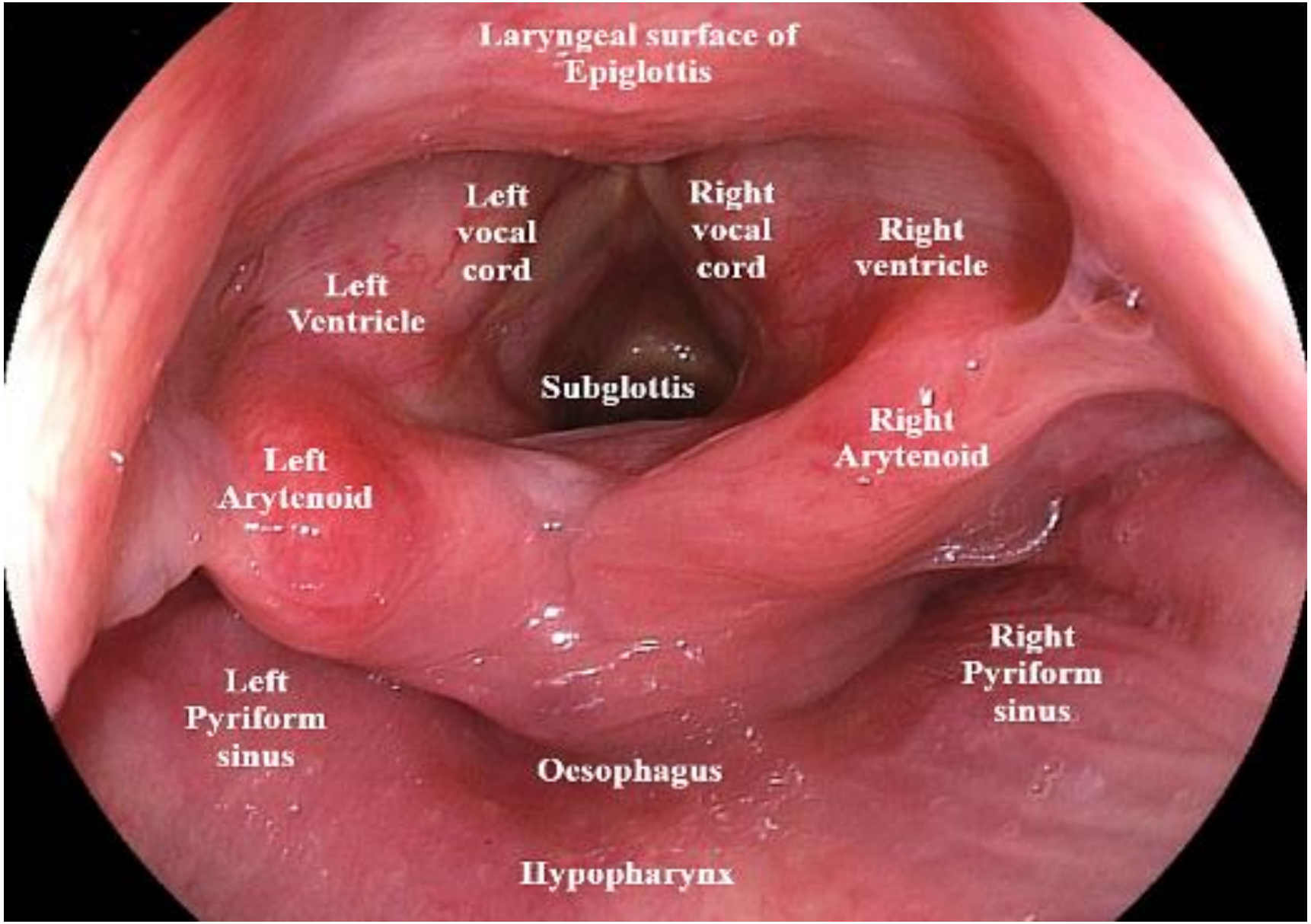
Direct Laryngoscopy

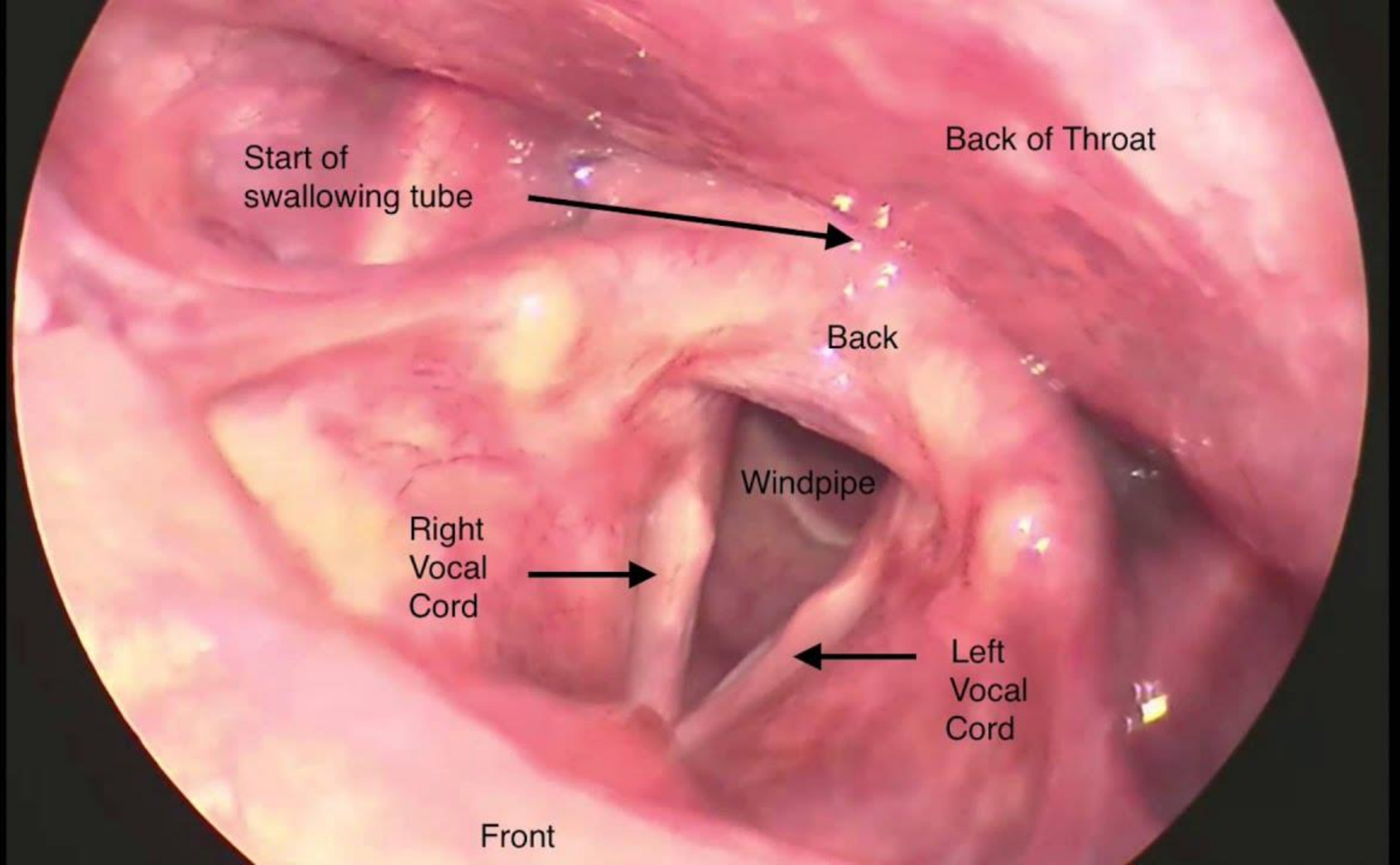


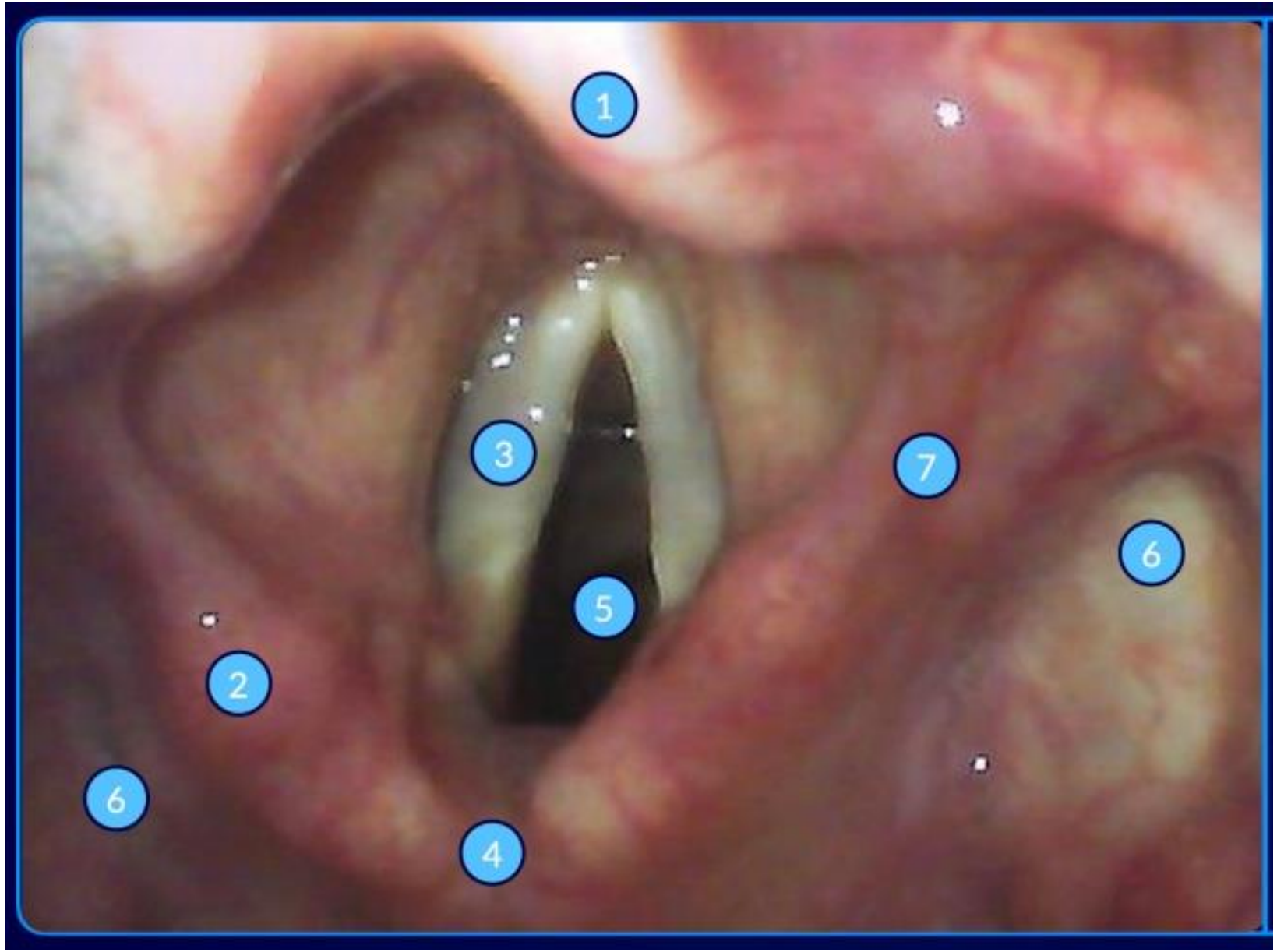
Indirect Oral Laryngoscopy

Indirect Nasal Laryngoscopy




Laryngeal surface of Epiglottis
Left vocal cord
Right vocal cord
Right ventricle
Left Ventricle
Subglottis
Right Arytenoid
Left Arytenoid
Right Pyriform sinus
Left Pyriform sinus
Oesophagus
Hypopharynx


Start of
swallowing tube
Back of Throat
Back
Windpipe
Right
Vocal
Cord
Left
Vocal
Cord
Front


1
3
7
6
5
2
6
4

LARYNGITIS

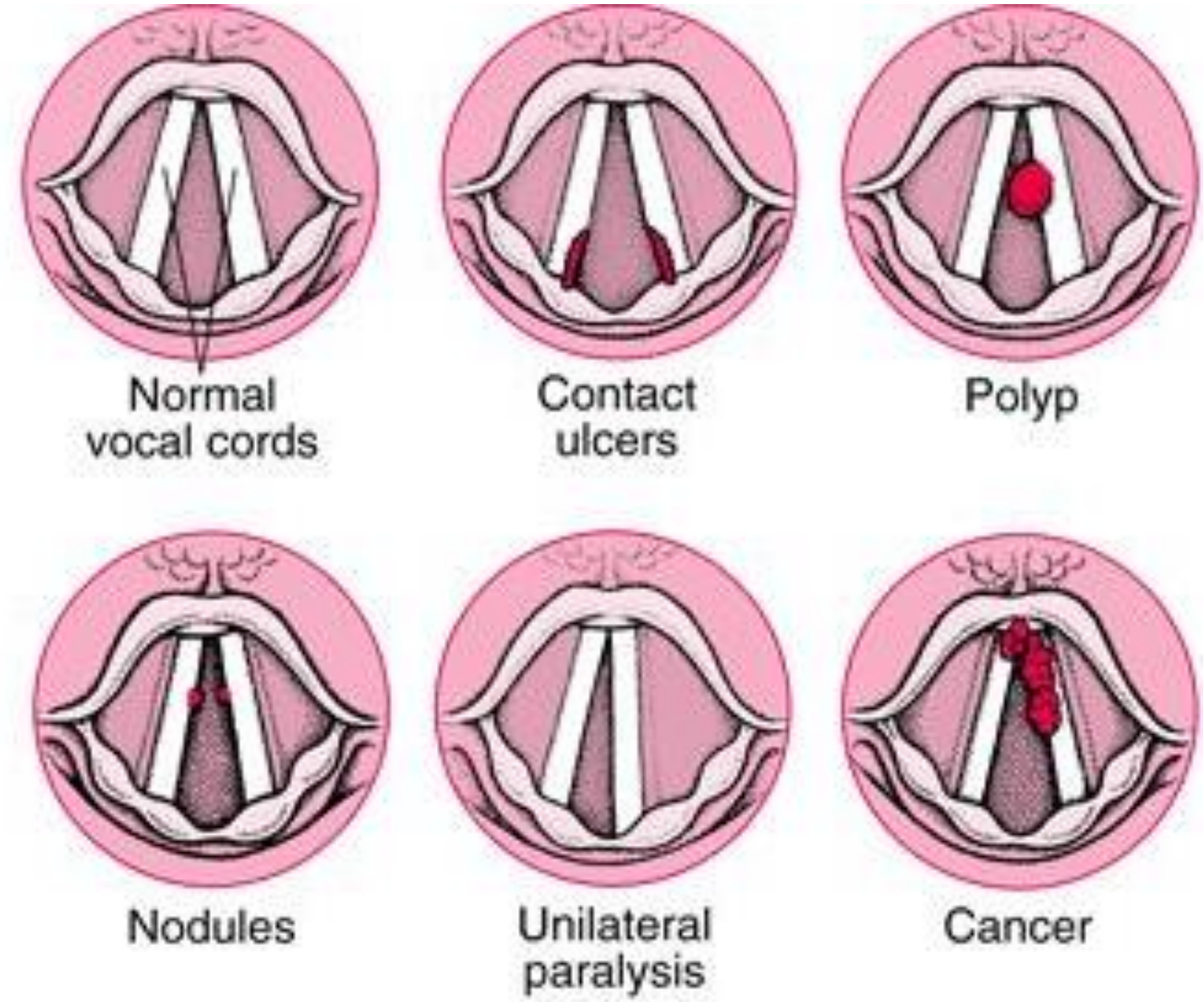
POLYP

CANCER

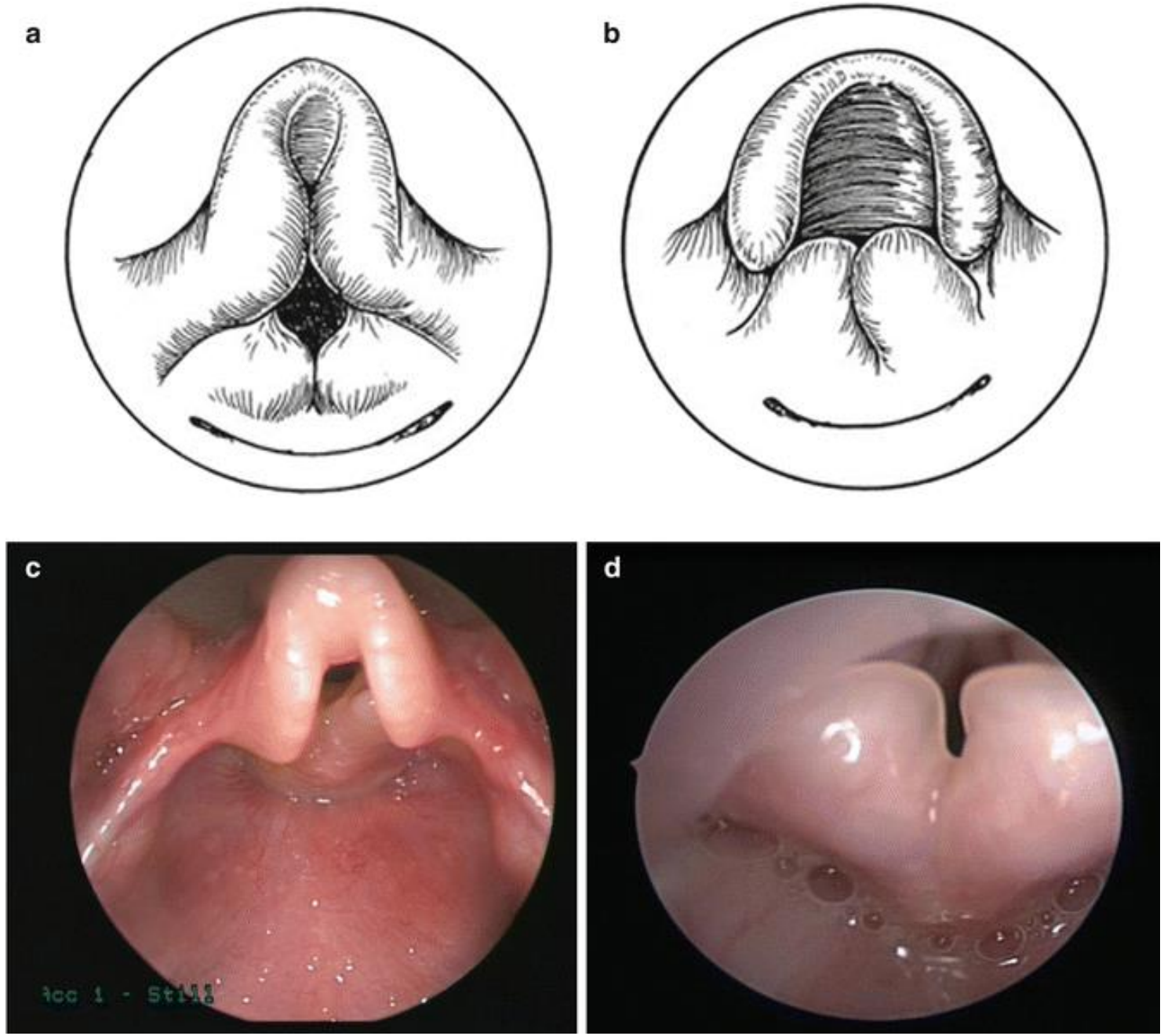
NODULE

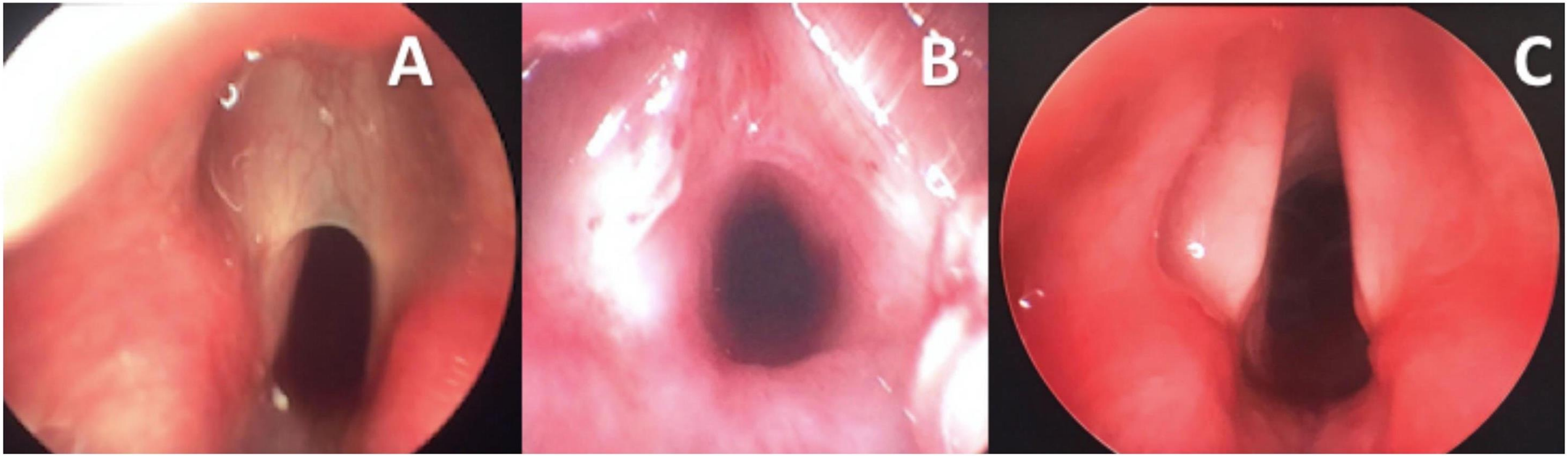
PARALYSIS

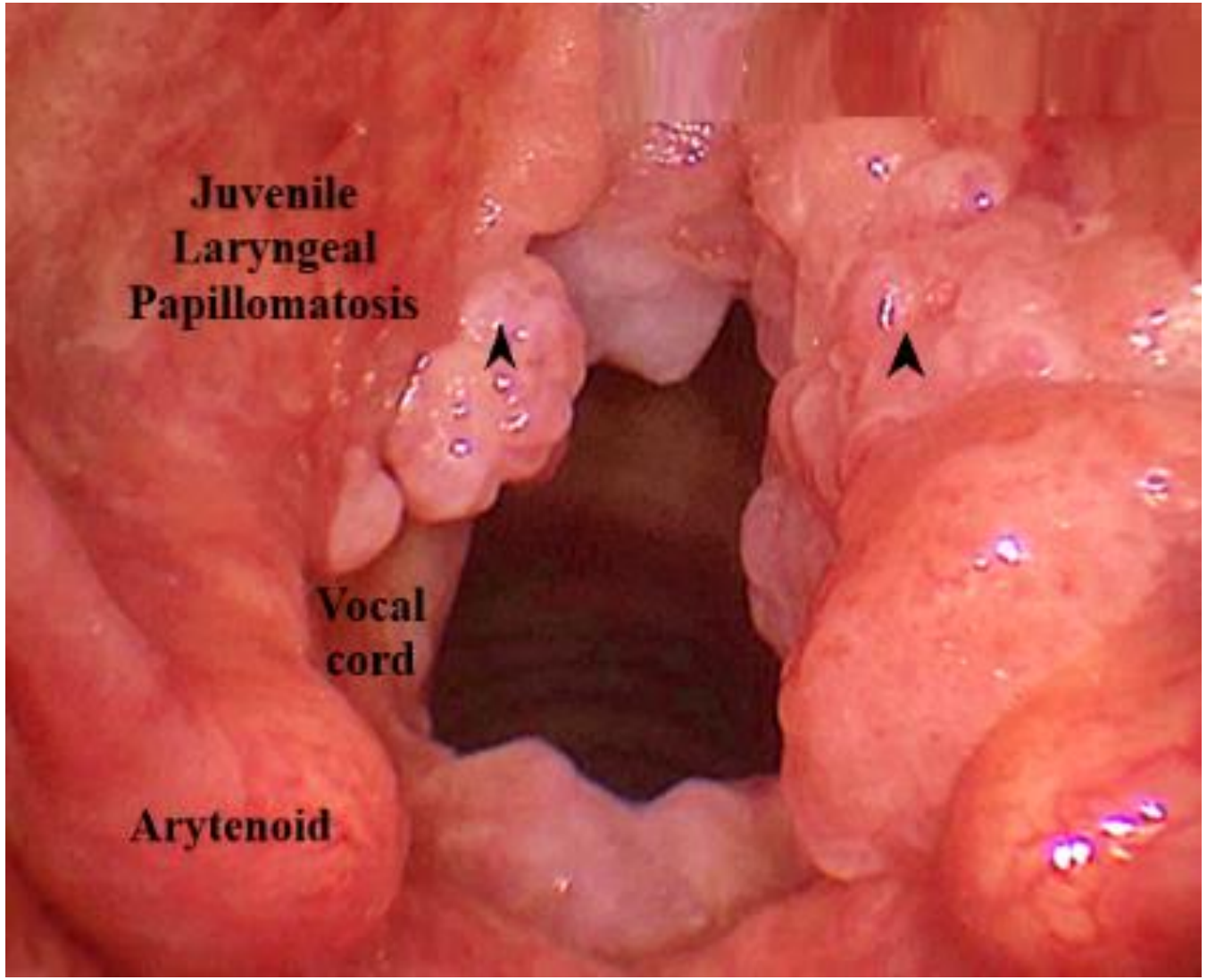
CONTACT ULCERS



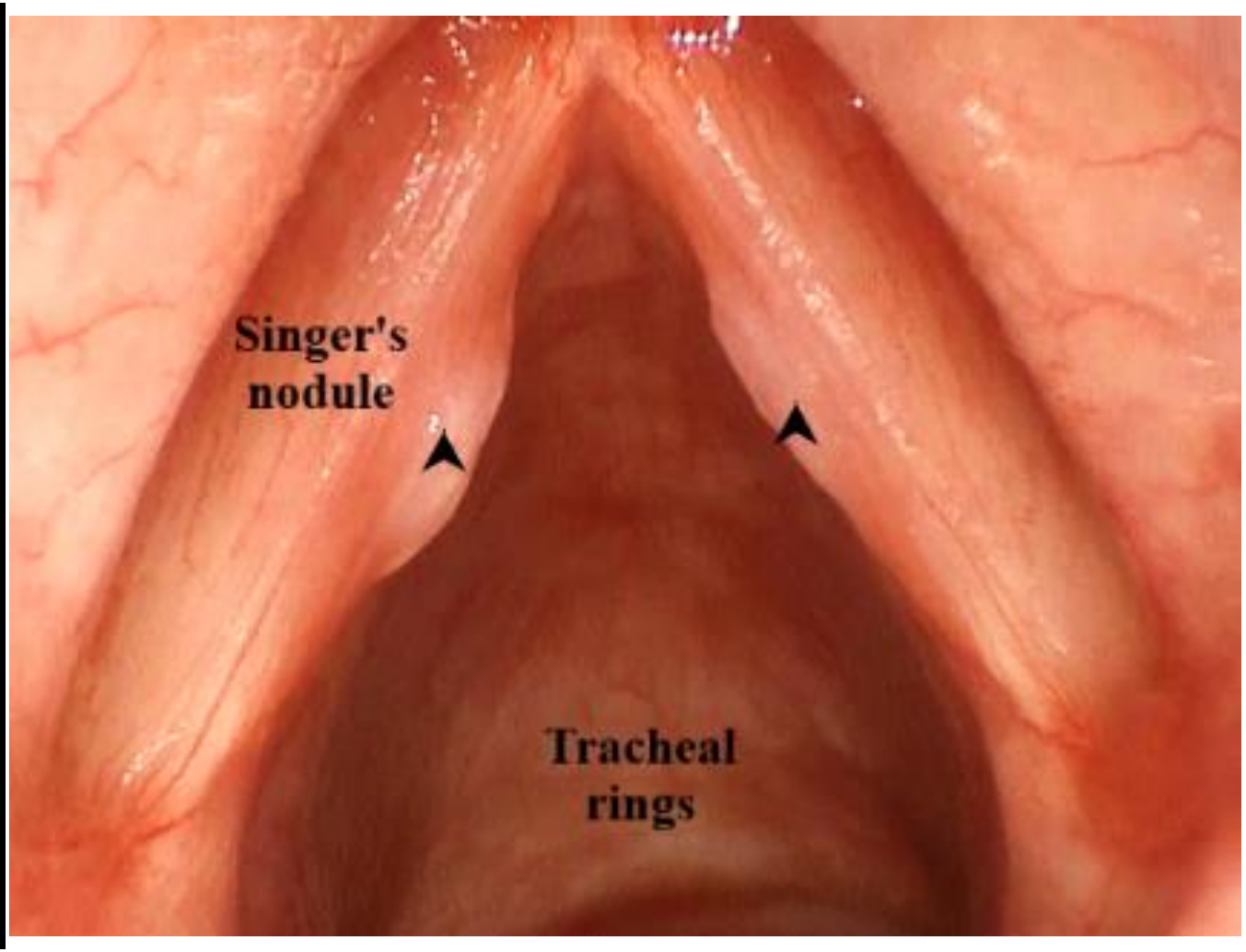
Examination Findings

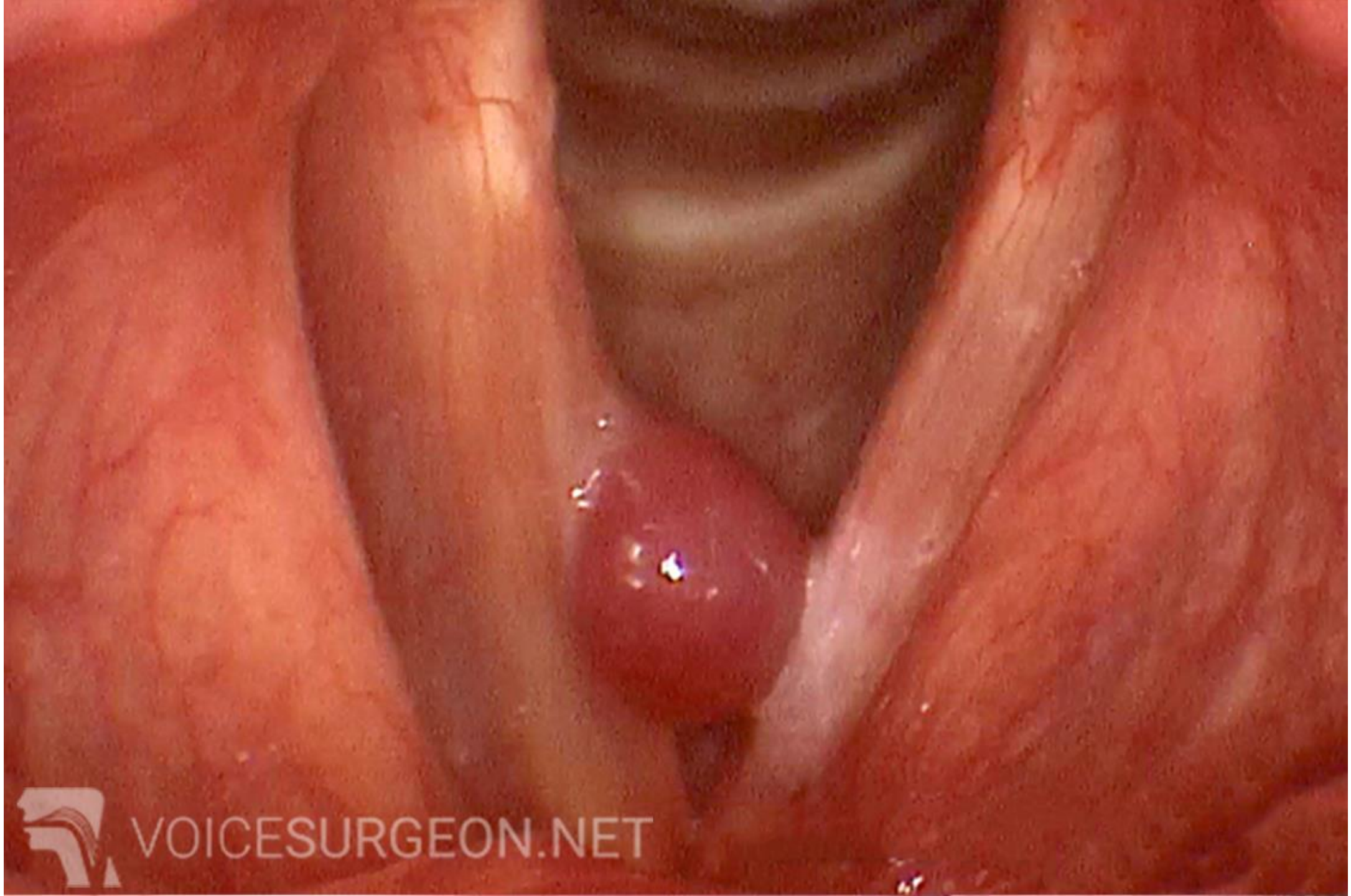

a
b
c
d


A
B
C


Juvenile
Laryngeal
Papillomatosis
Vocal
cord
Arytenoid

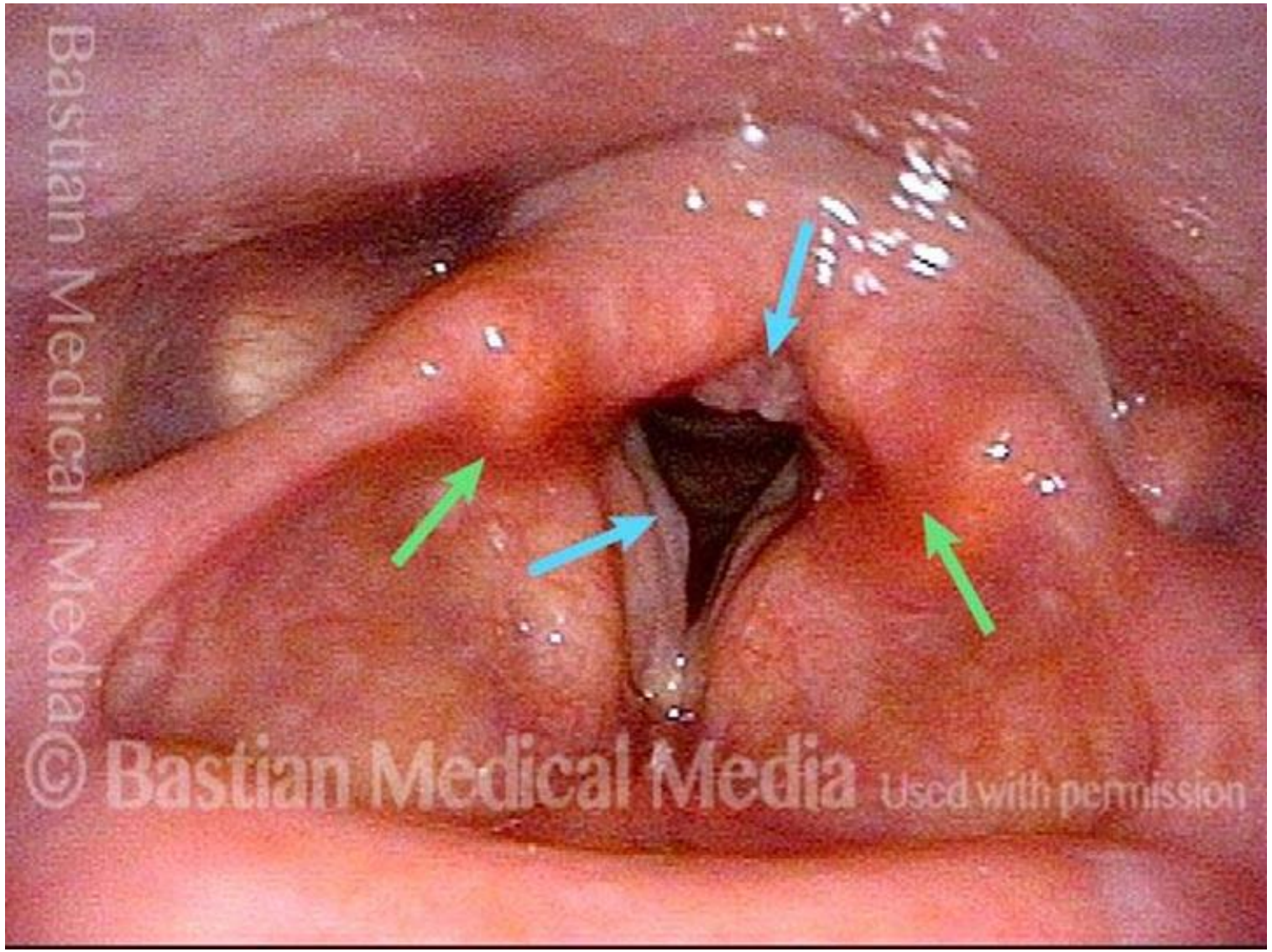

True vocal cord nodules
Nodule
Nodule


Singer's nodule
Tracheal rings


VOICESURGEON.NET

Normal voice box

Non-smoker with severe reflux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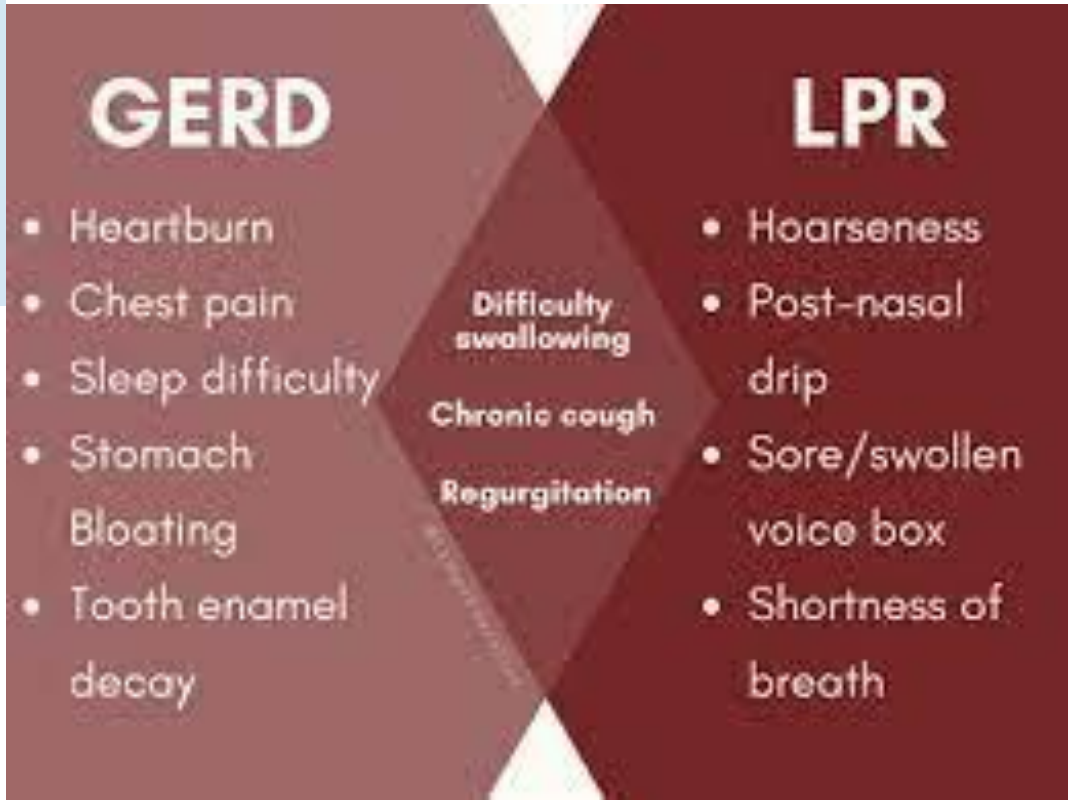
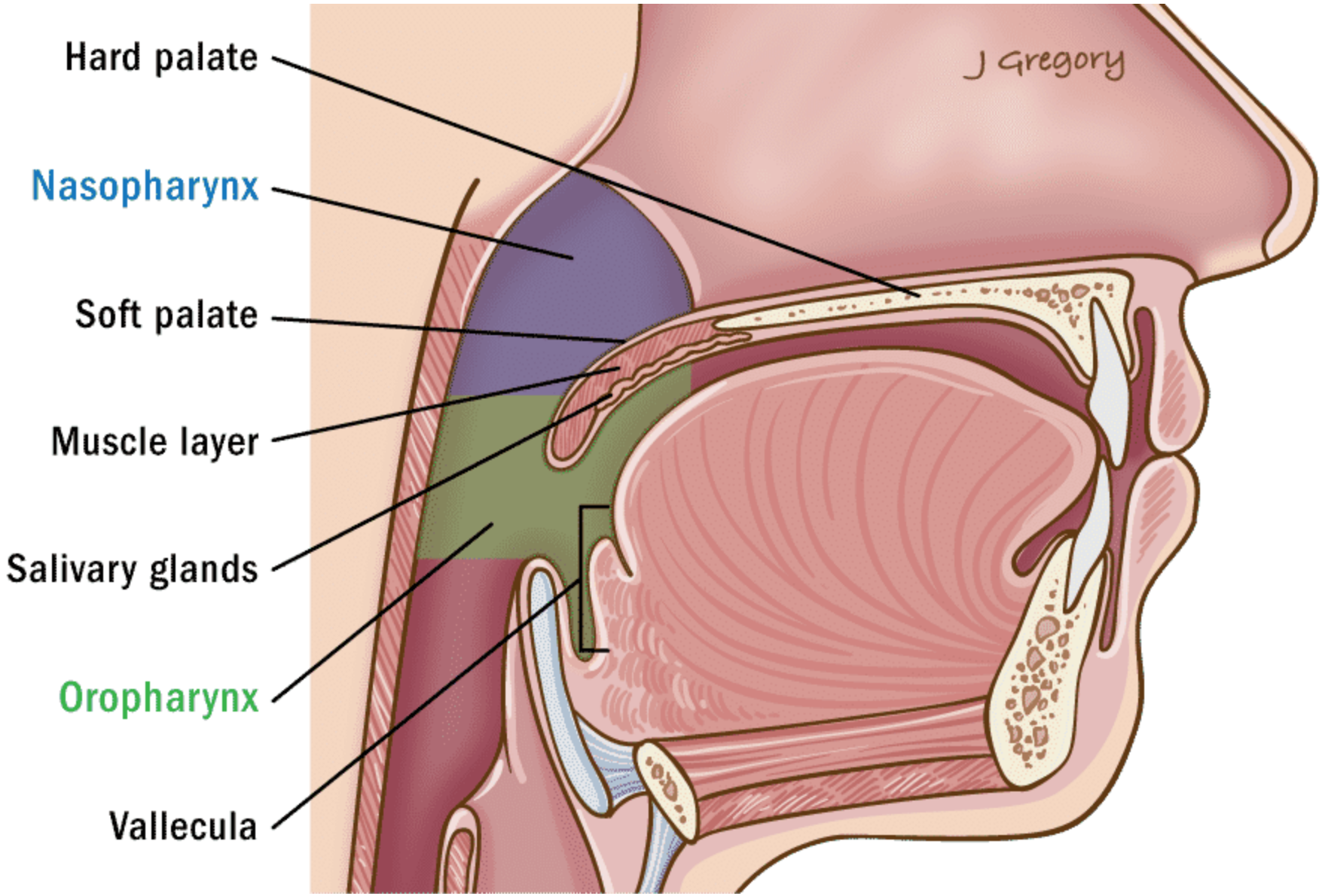
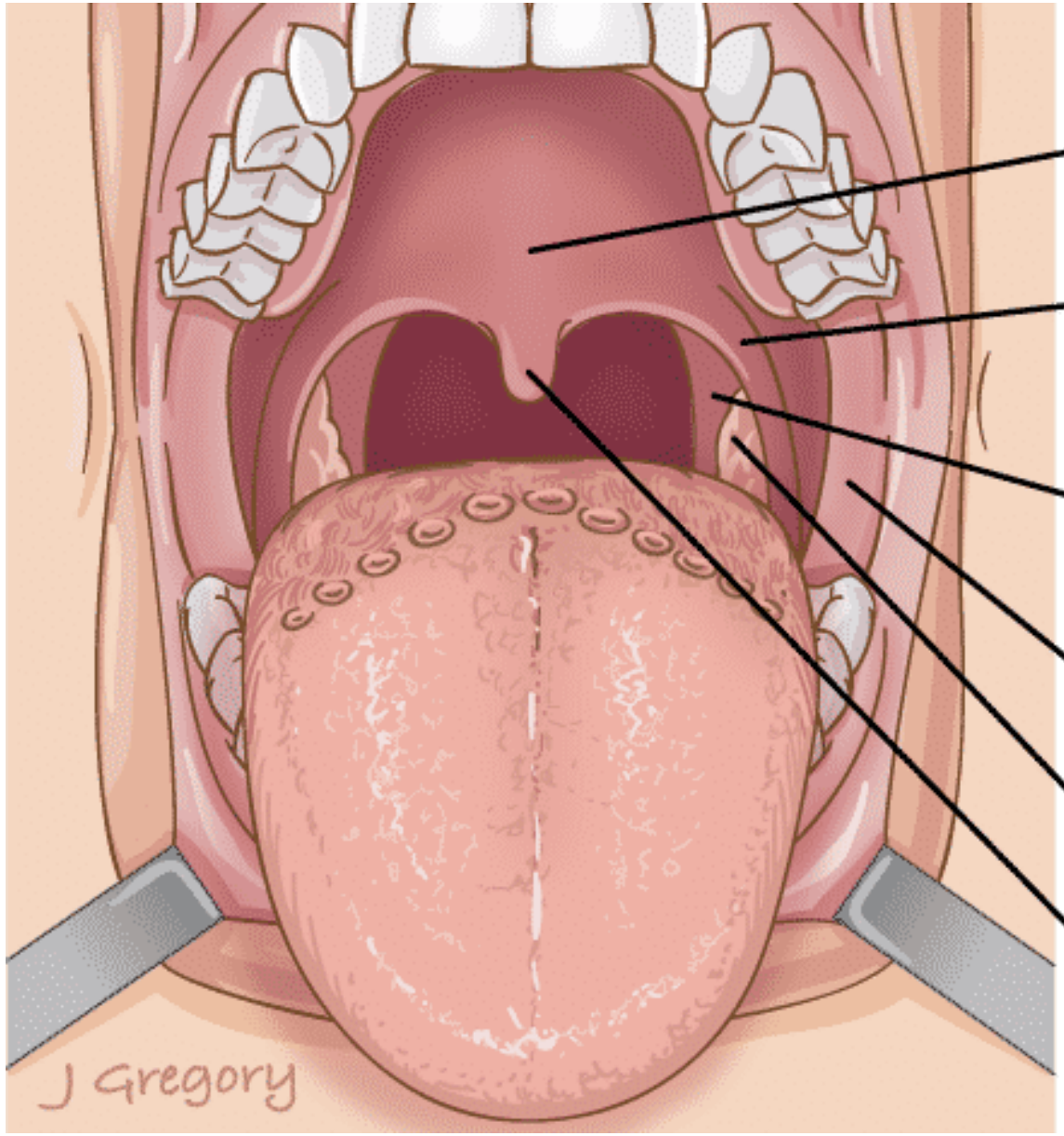
GERD	LPR
Accompanied by esophagitis and/ or heartburn	Esophagitis or heartburn is rarely present
Reflux is nocturnal or in supine position	Reflux during daytime or in upright position
Abnormal esophageal motility and prolonged esophageal acid exposure	Intermittent episodes of reflux
Dysfunction of the lower esophageal sphincter	Dysfunction of the upper esophageal sphincter
Throat related symptoms are sometimes present	Leads to throat related symptoms and damage to the laryngopharyngeal epithelium

FIGURE 1

In patients with GERD (left), gastric contents back up into the esophagus, producing tissue damage or esophagitis and heartburn. In those with LPR (right), stomach acid comes up into the throat, causing irritation and changes in the larynx.




Hard palate
Nasopharynx
Soft palate
Muscle layer
Salivary glands
Oropharynx
Vallecula
J Gregory



Soft palate

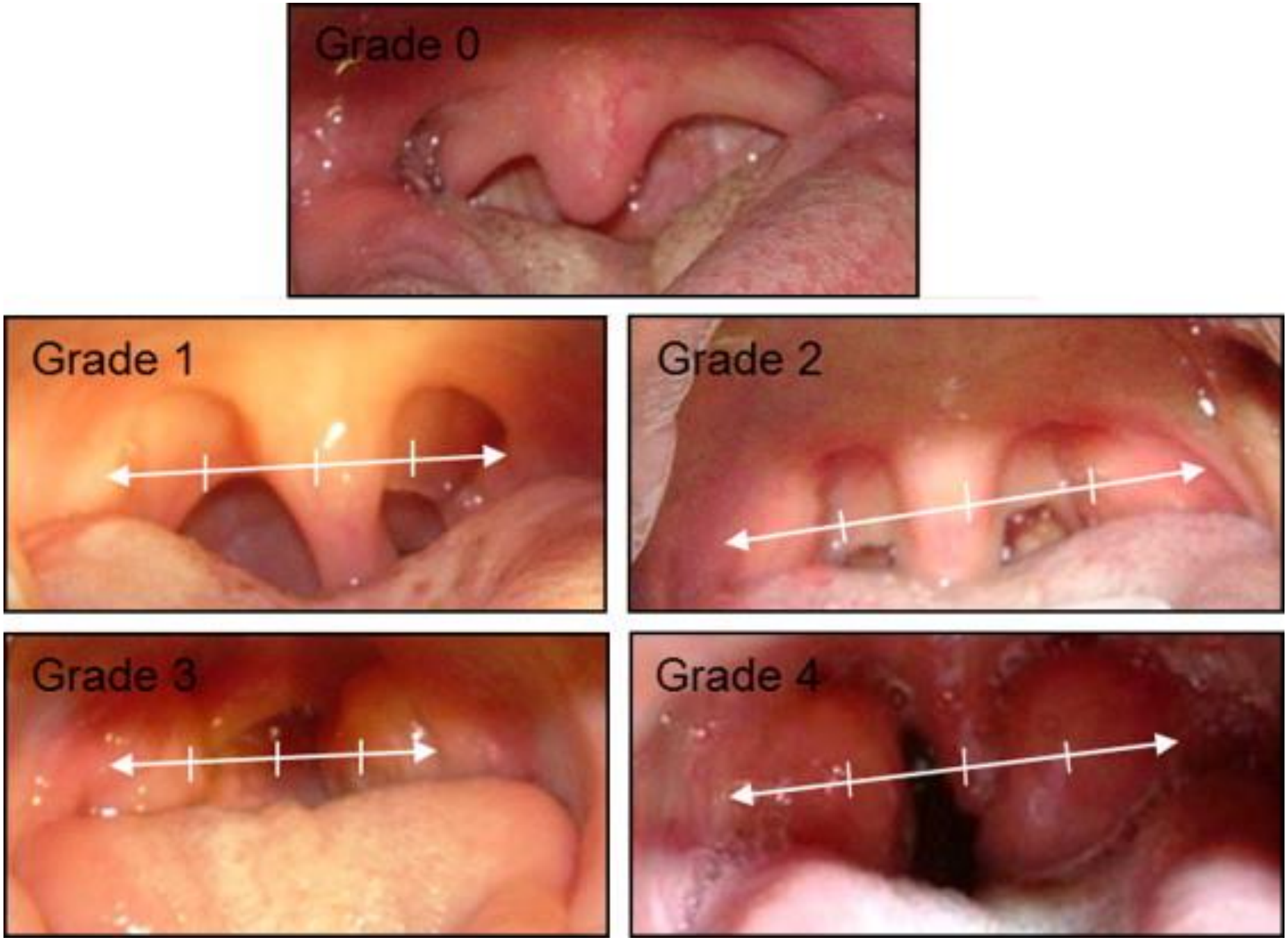
Anterior tonsil pillar
(palatoglossus)

Posterior tonsil pillar
(palatopharyngeus)

Retromolar trigone

Tonsillar fossa

Uvula


Grade 0
Grade 1
Grade 2
Grade 3
Grade 4

CONDITION OF TONSILLTIS

1. Acute Tonsillitis

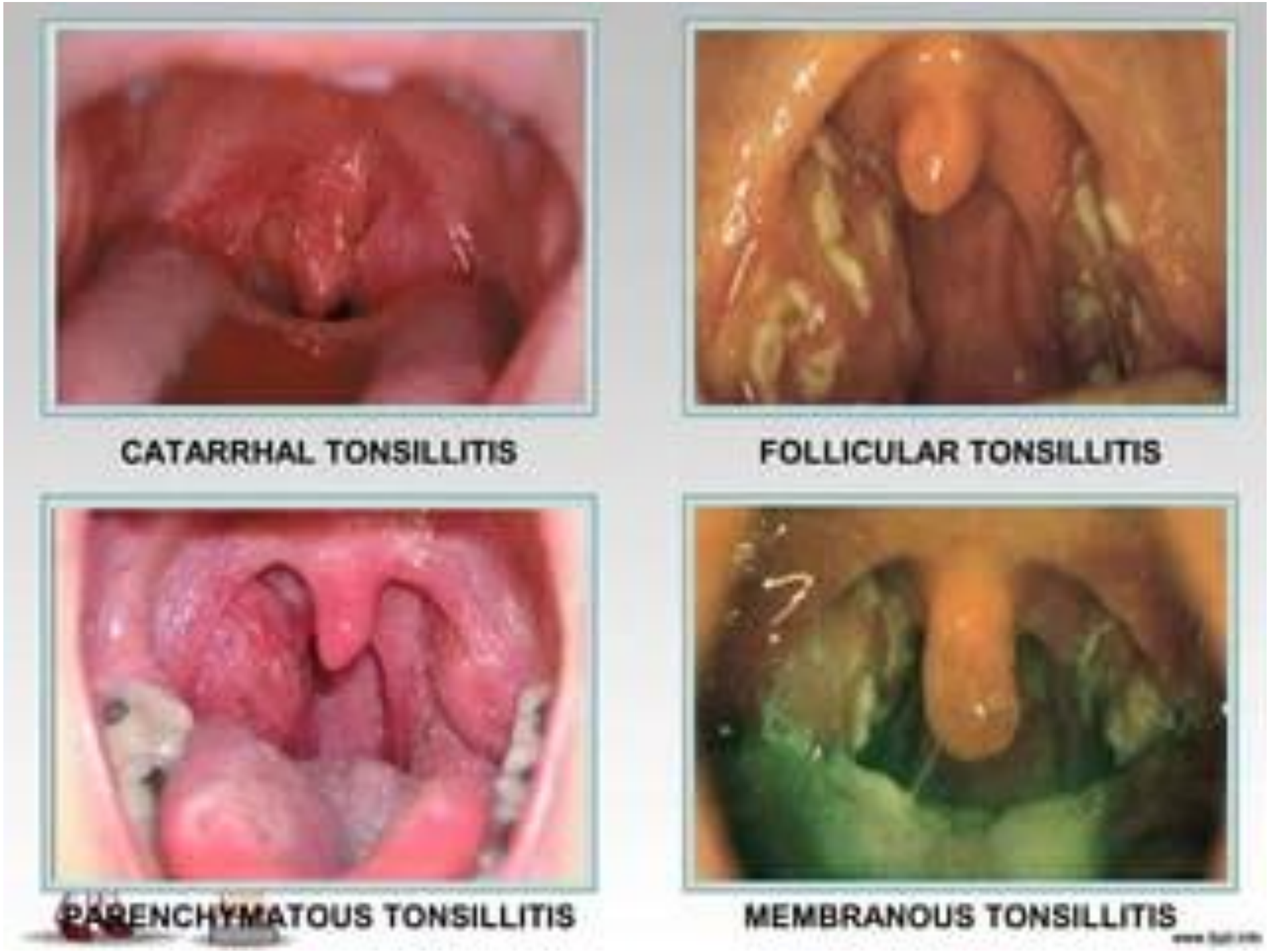
2. Chronic Tonsillitis

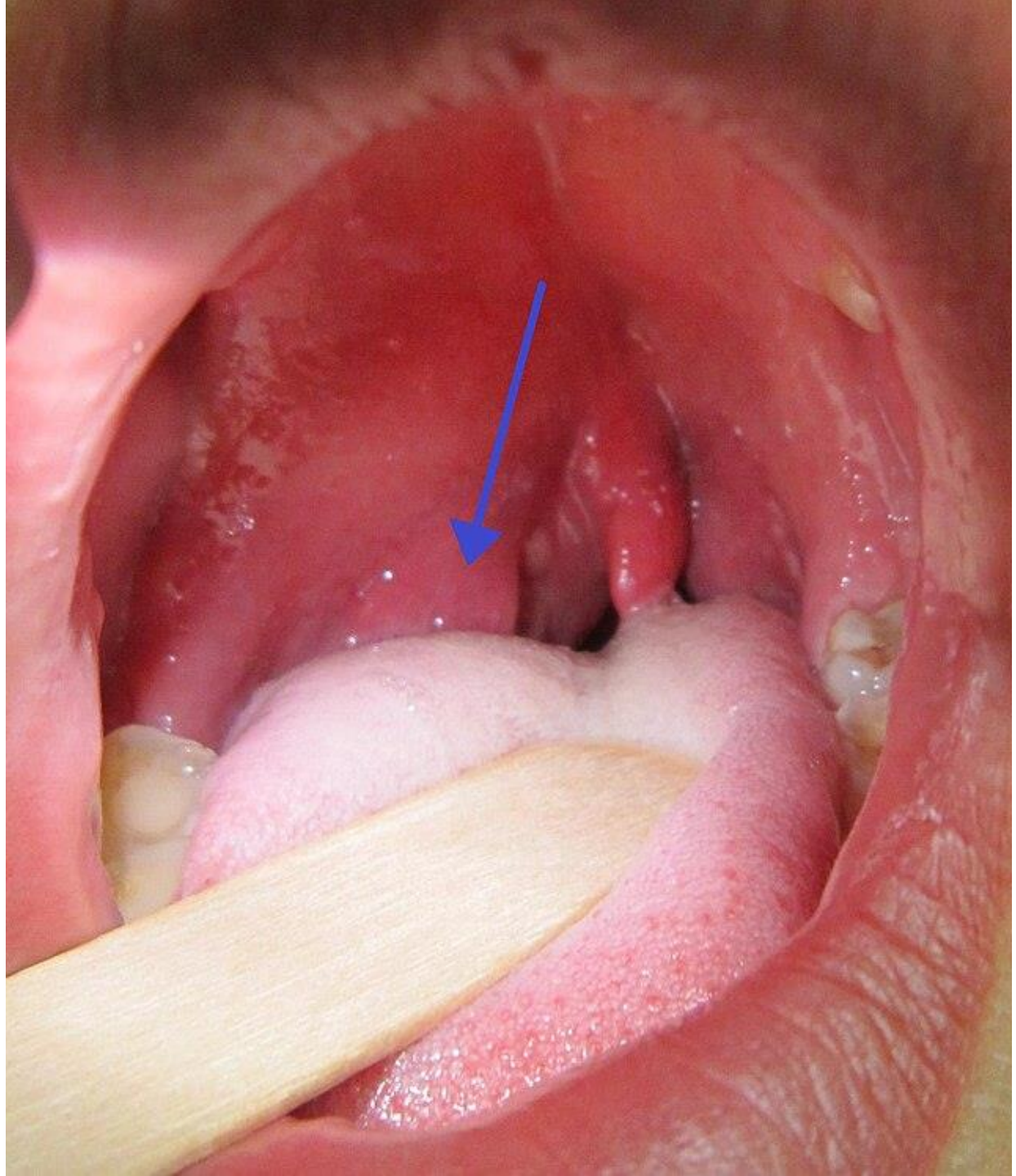
3.Peritonsilar Abscess

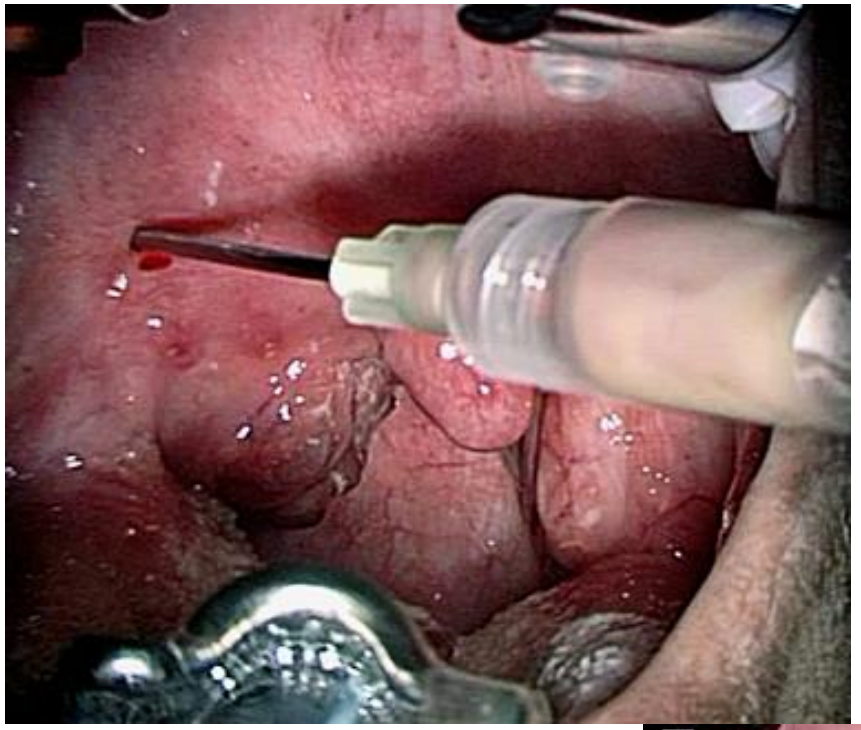
4.Acute mononucleosis

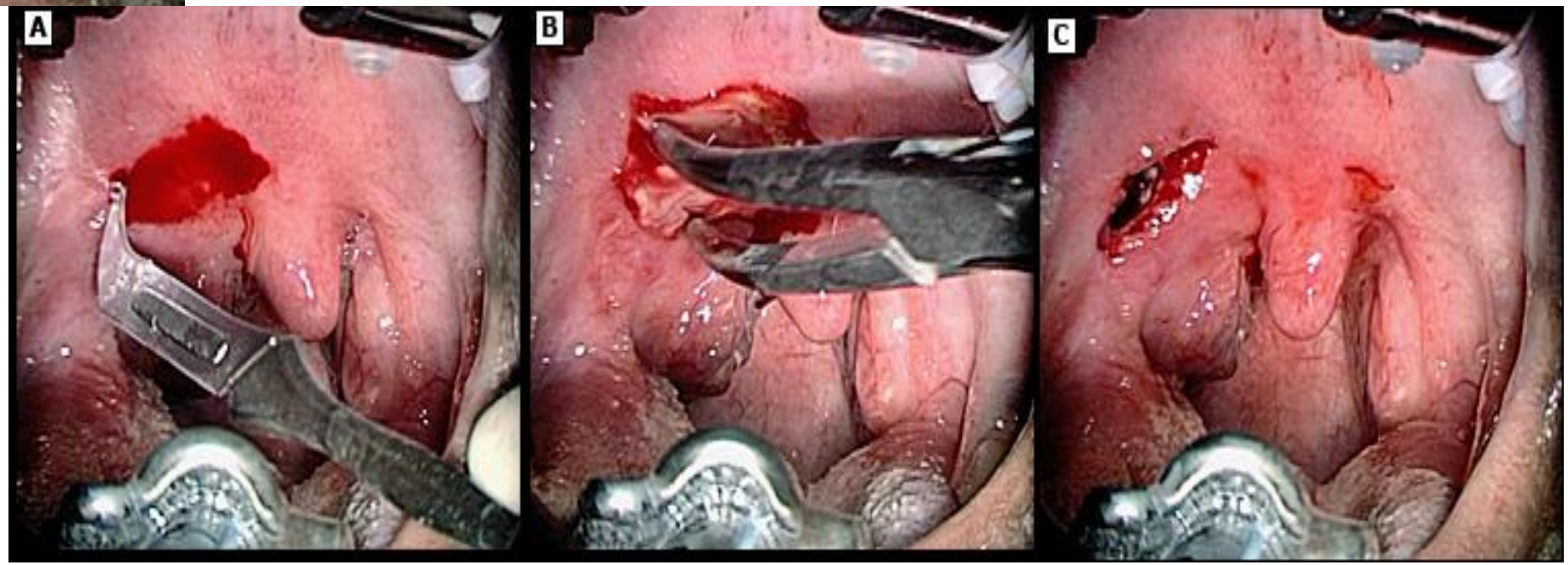
5. Strep throat

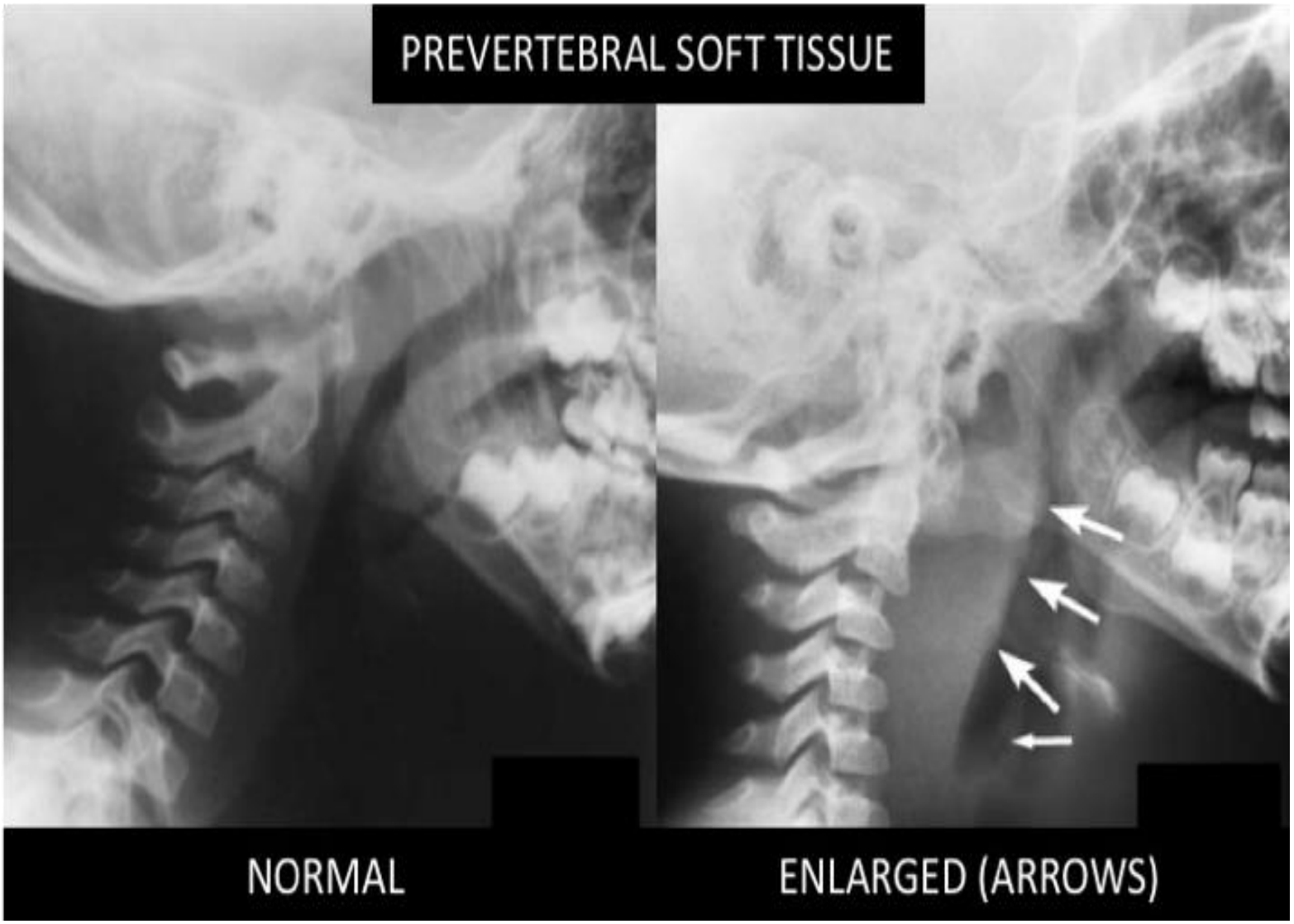
6. Tonsilloliths (Tonsil Stones)

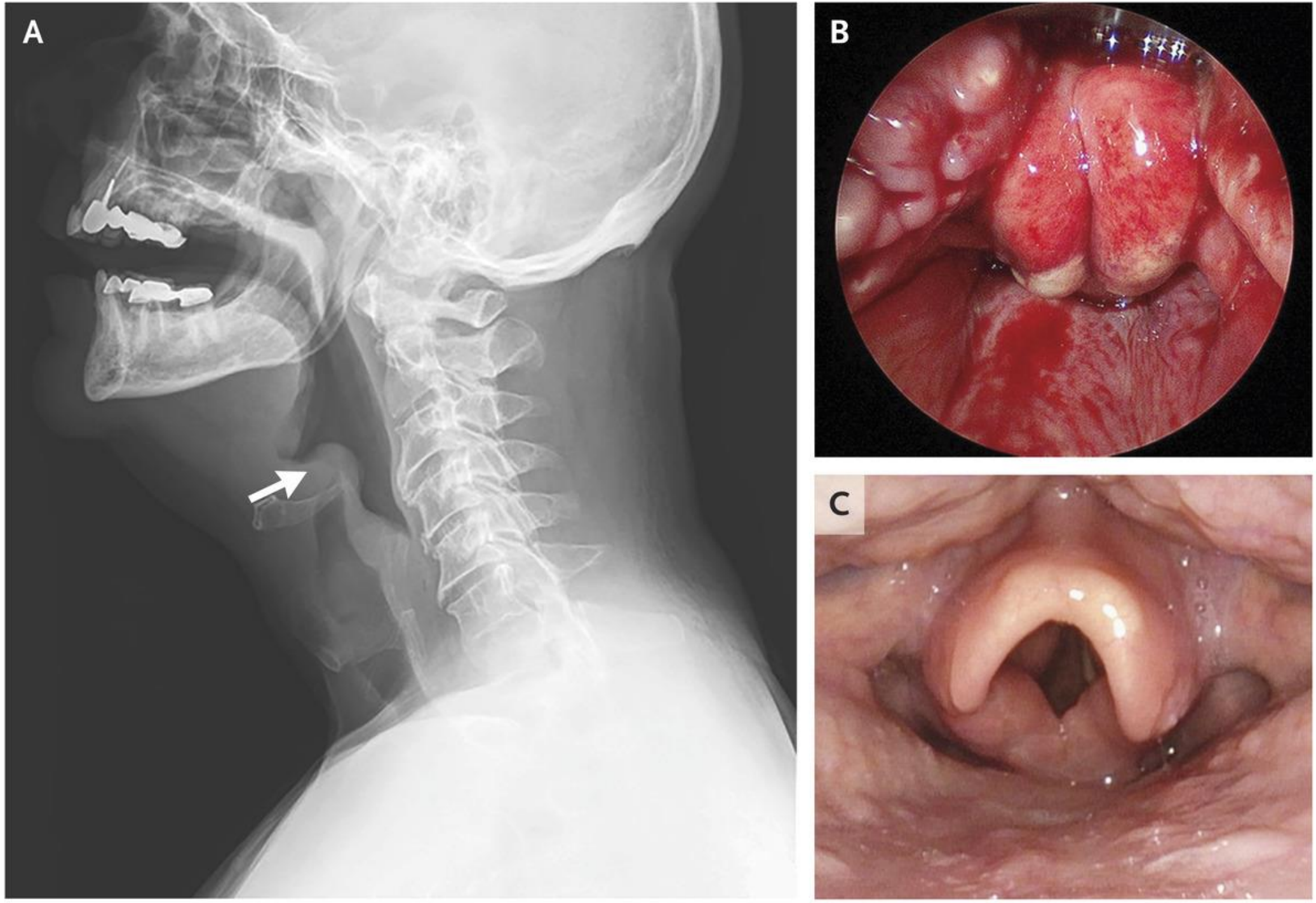

CATARRHAL TONSILLITIS
FOLLICULAR TONSILLITIS
PARENCHYMATOUS TONSILLITIS
MEMBRANOUS TONSILLITIS

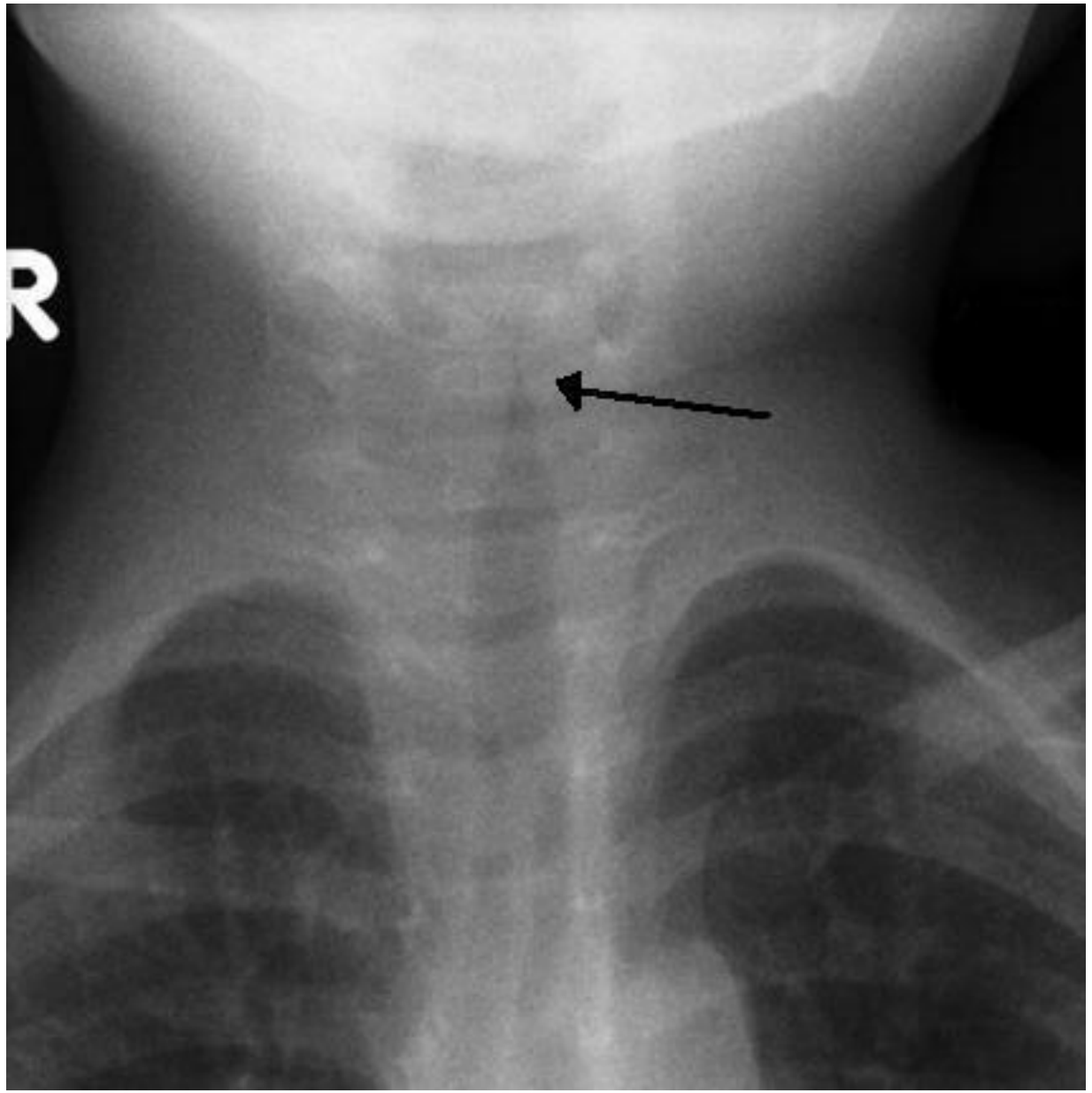





A
B
C


PREVERTEBRAL SOFT TISSUE
NORMAL
ENLARGED (ARROWS)


A
B
C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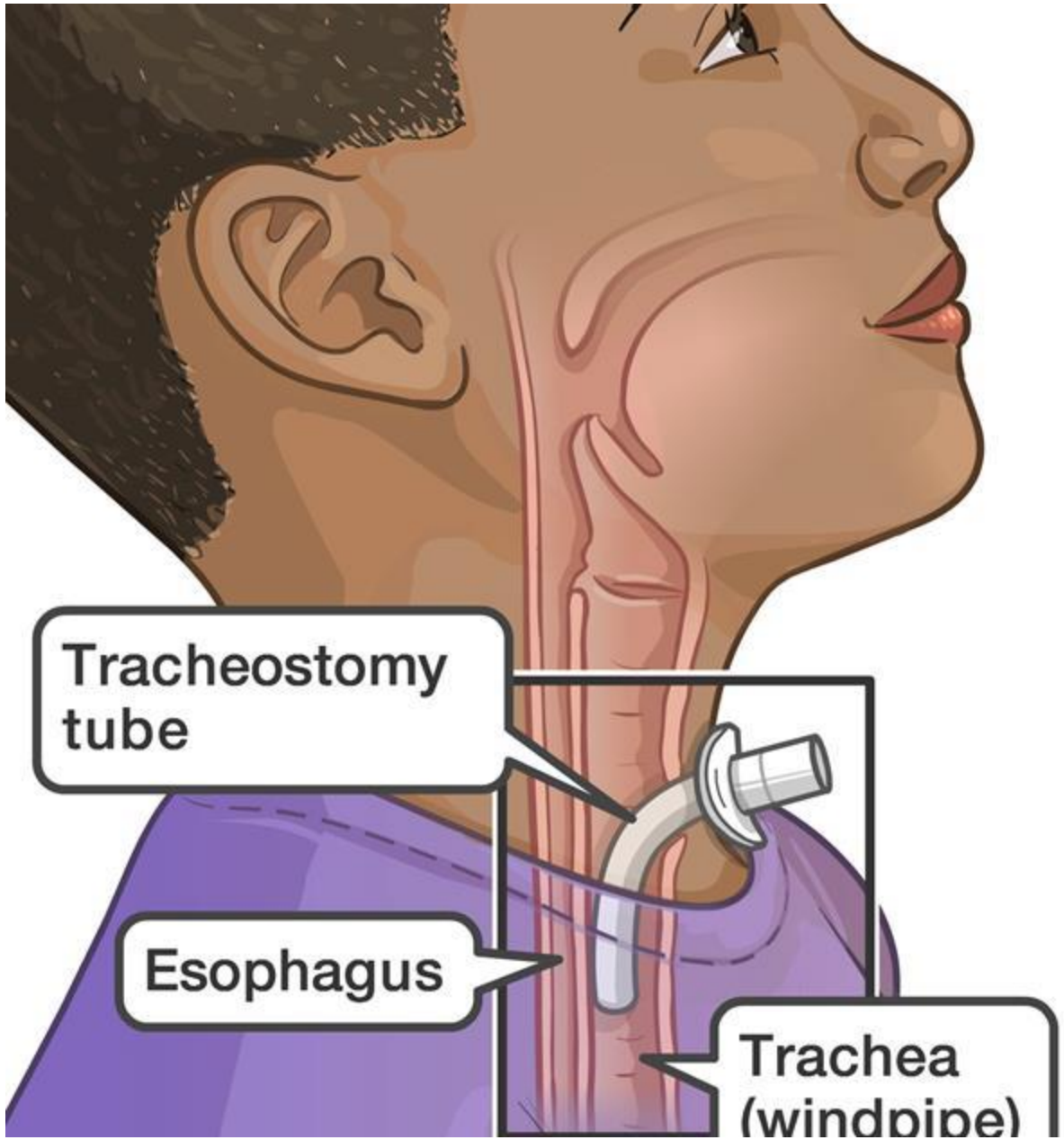
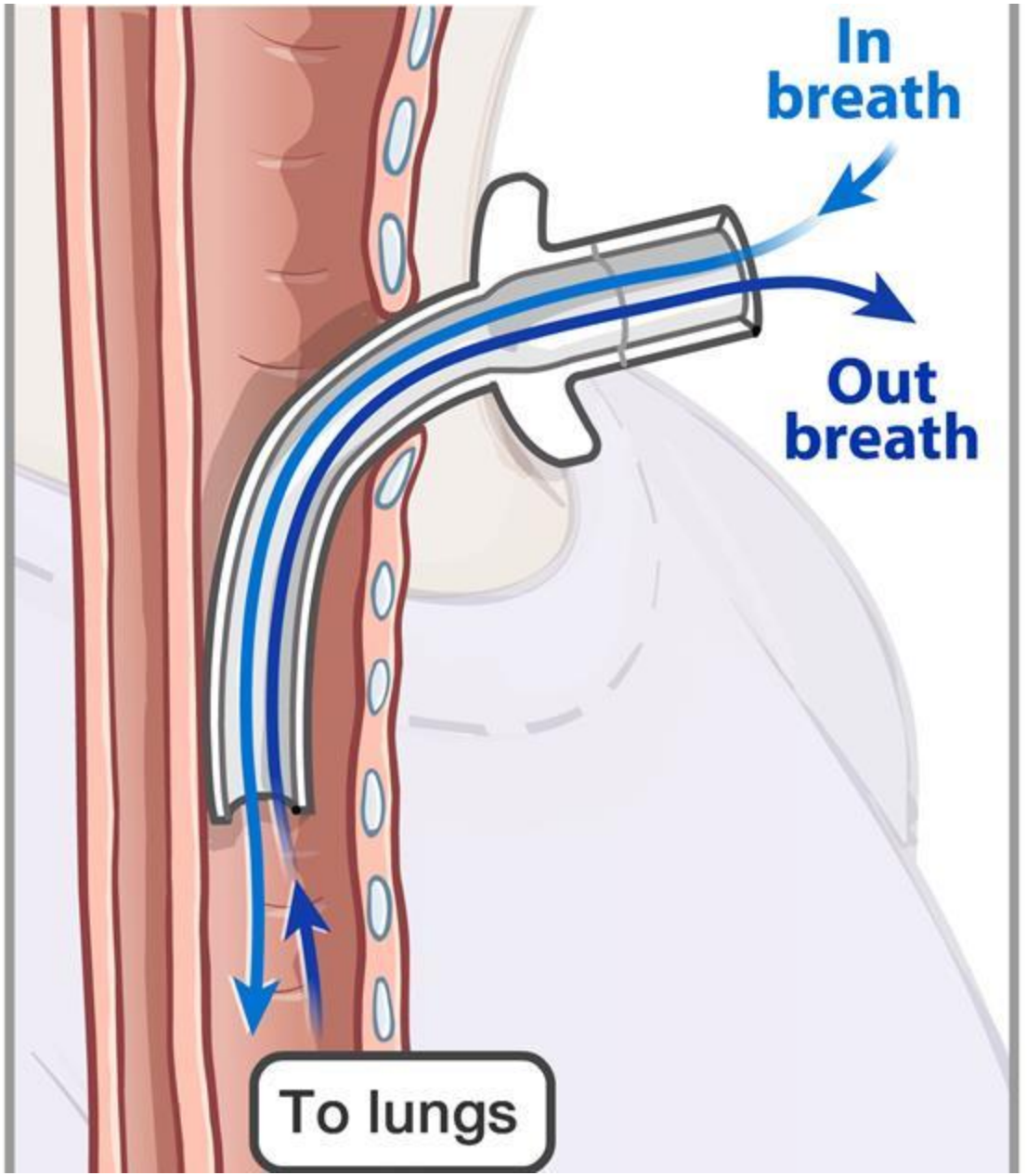
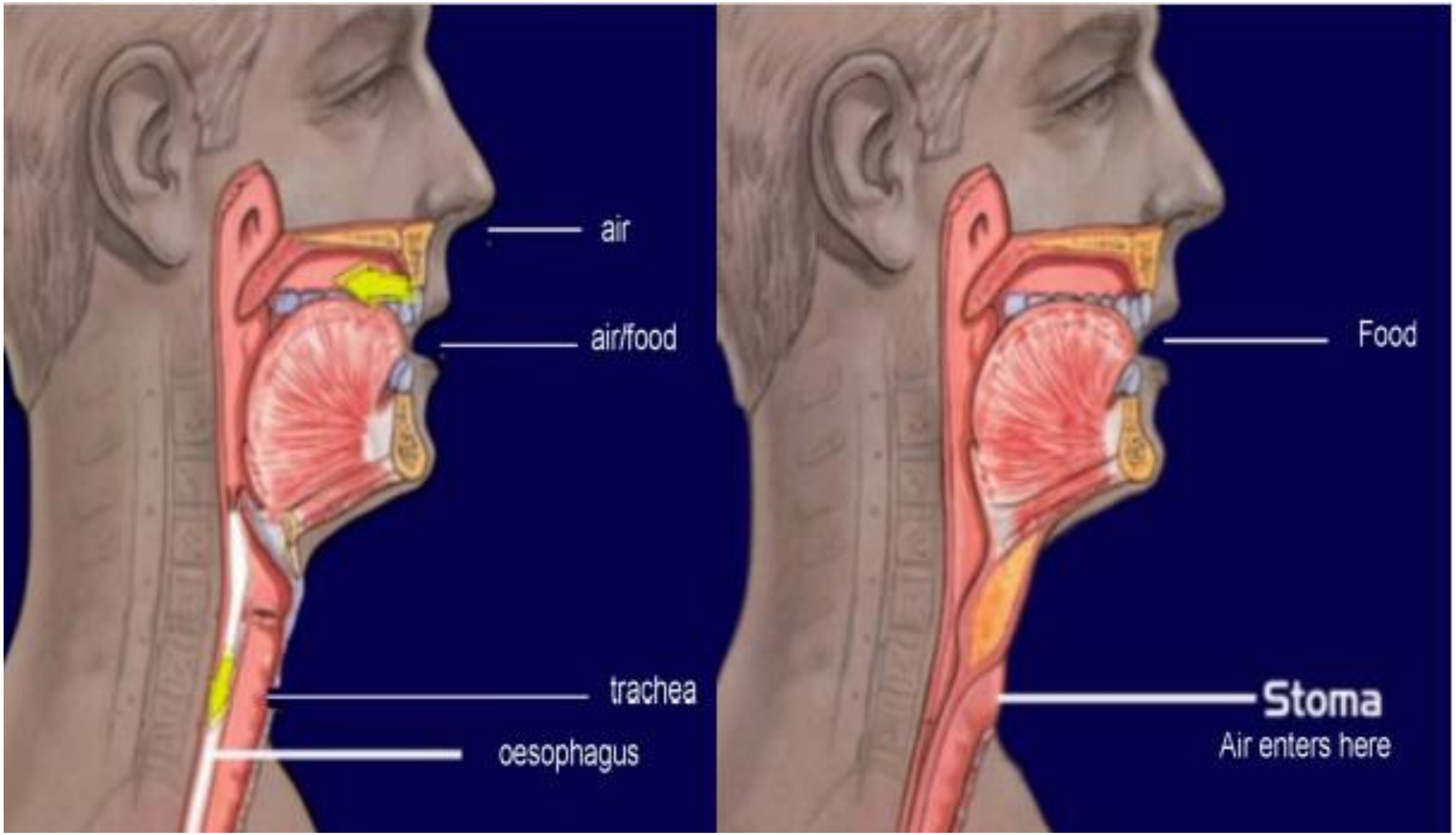
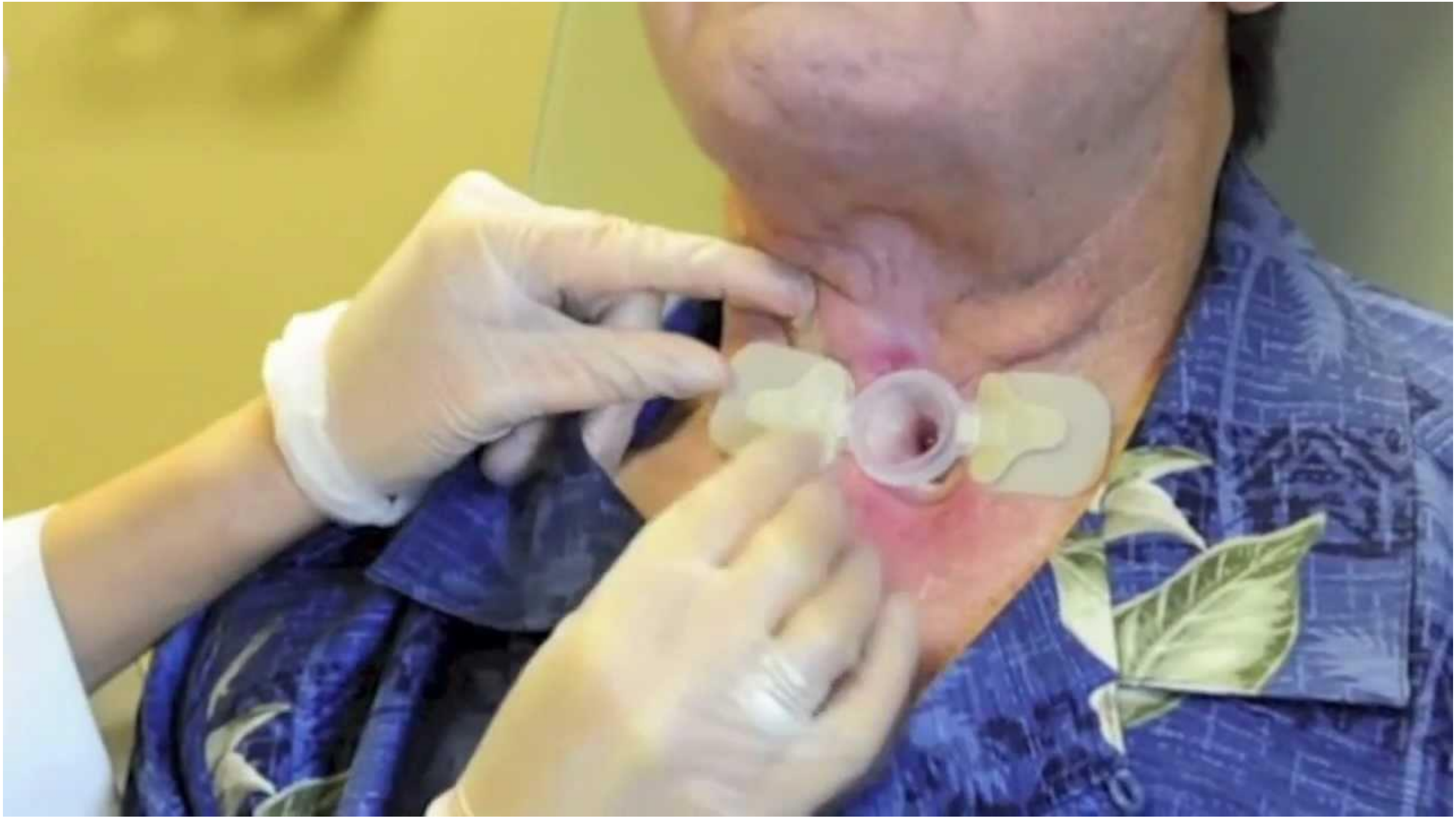

Tracheostomy tube
Esophagus
Trachea (windpipe)


In breath
Out breath
To lungs


air
air/food
trachea
oesophagus
Food
Stoma
Air enters here



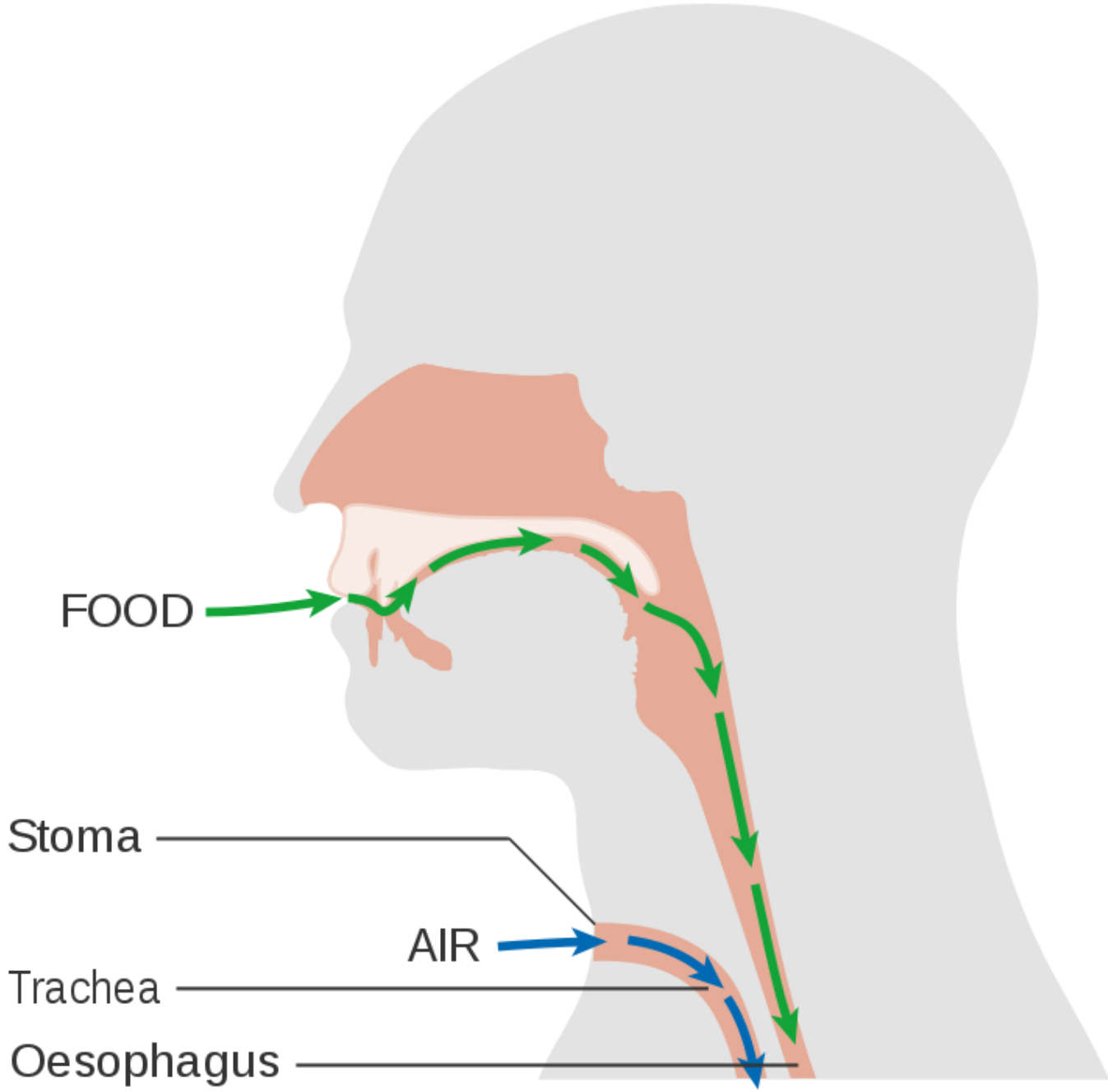
Laryngectomy Airway Management

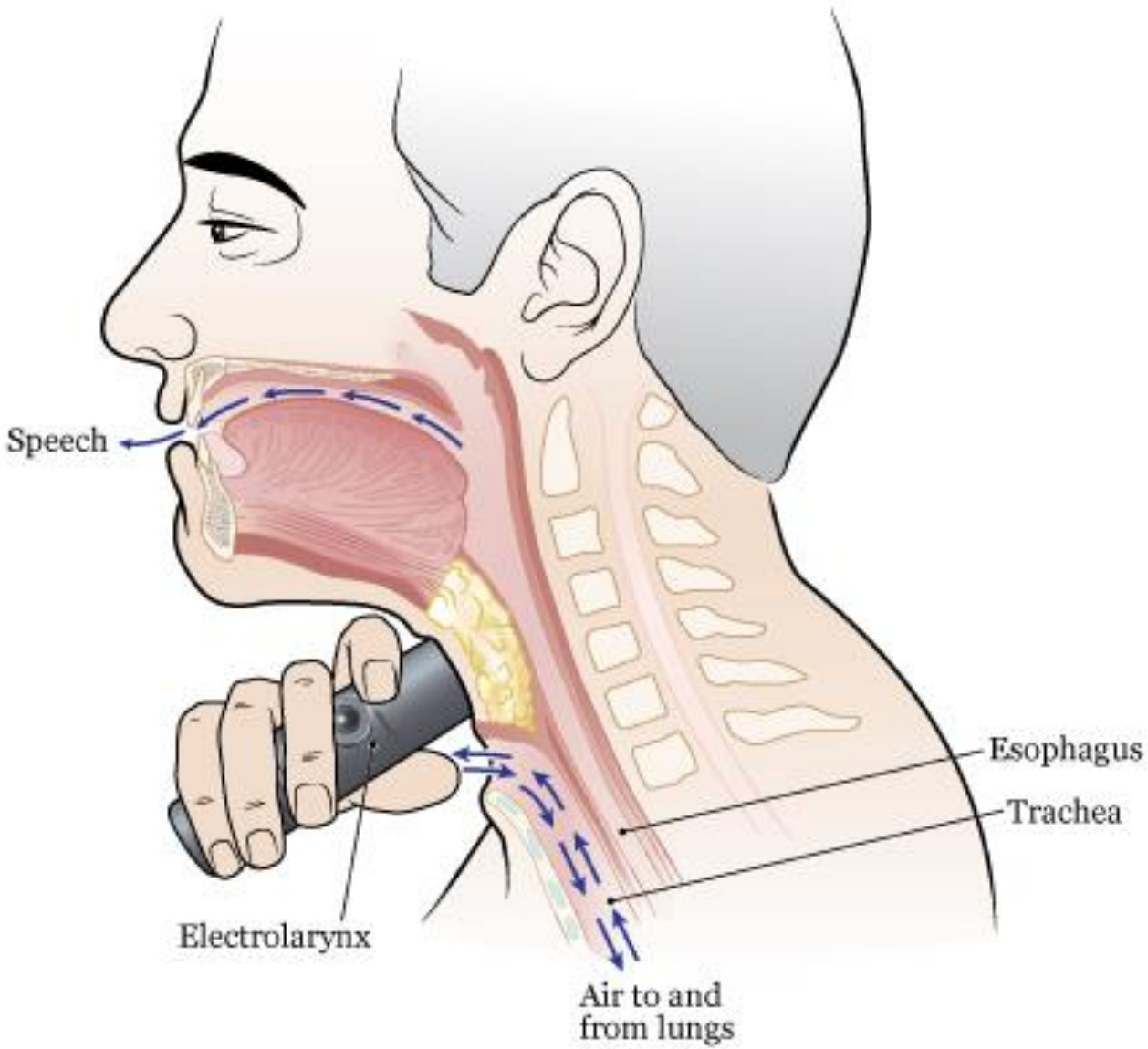
- The stoma does not require a tube, but they are often used.
- May have a heat and moisture exchange (HME) in place.

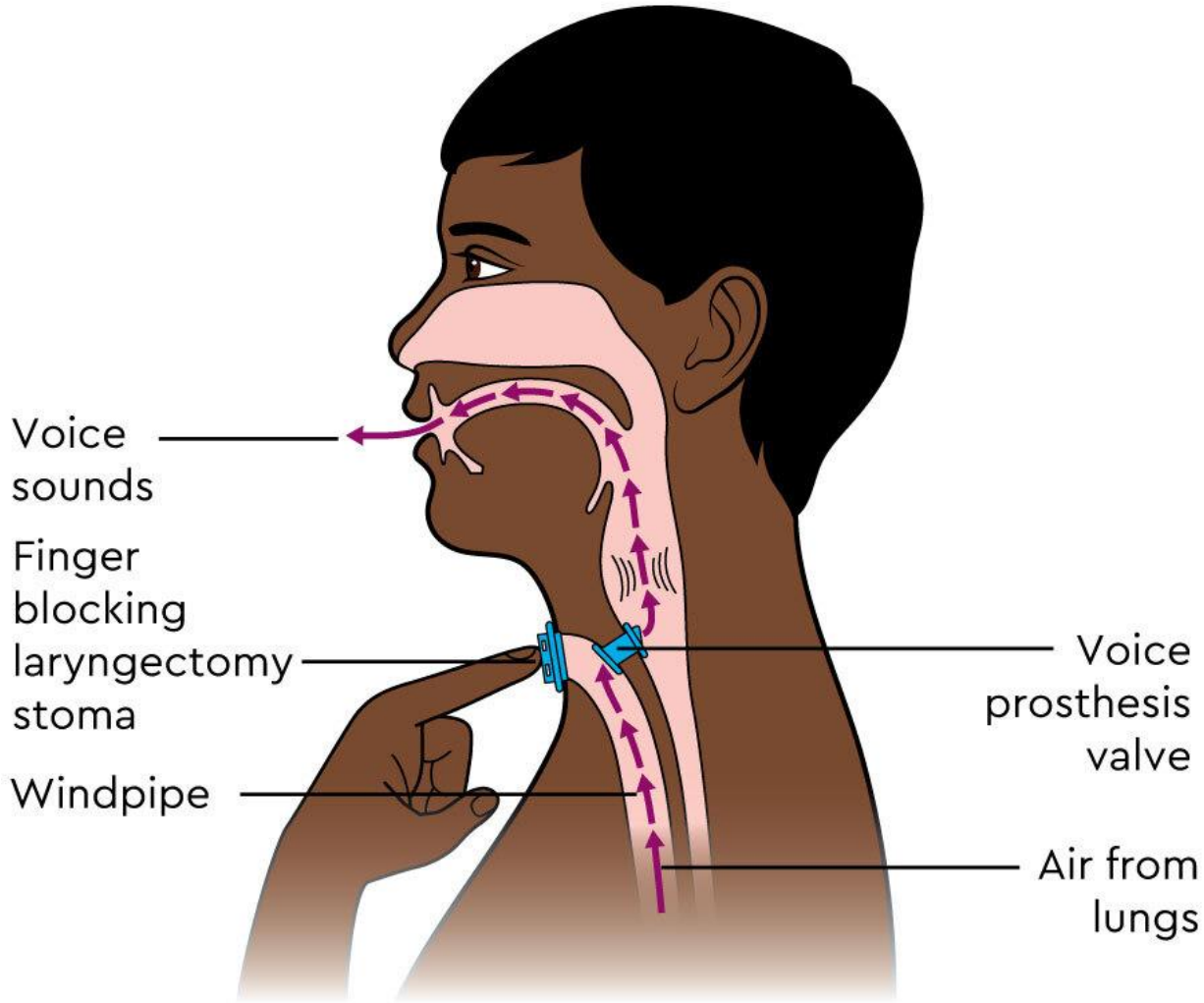
Open Laryngectomy Stoma

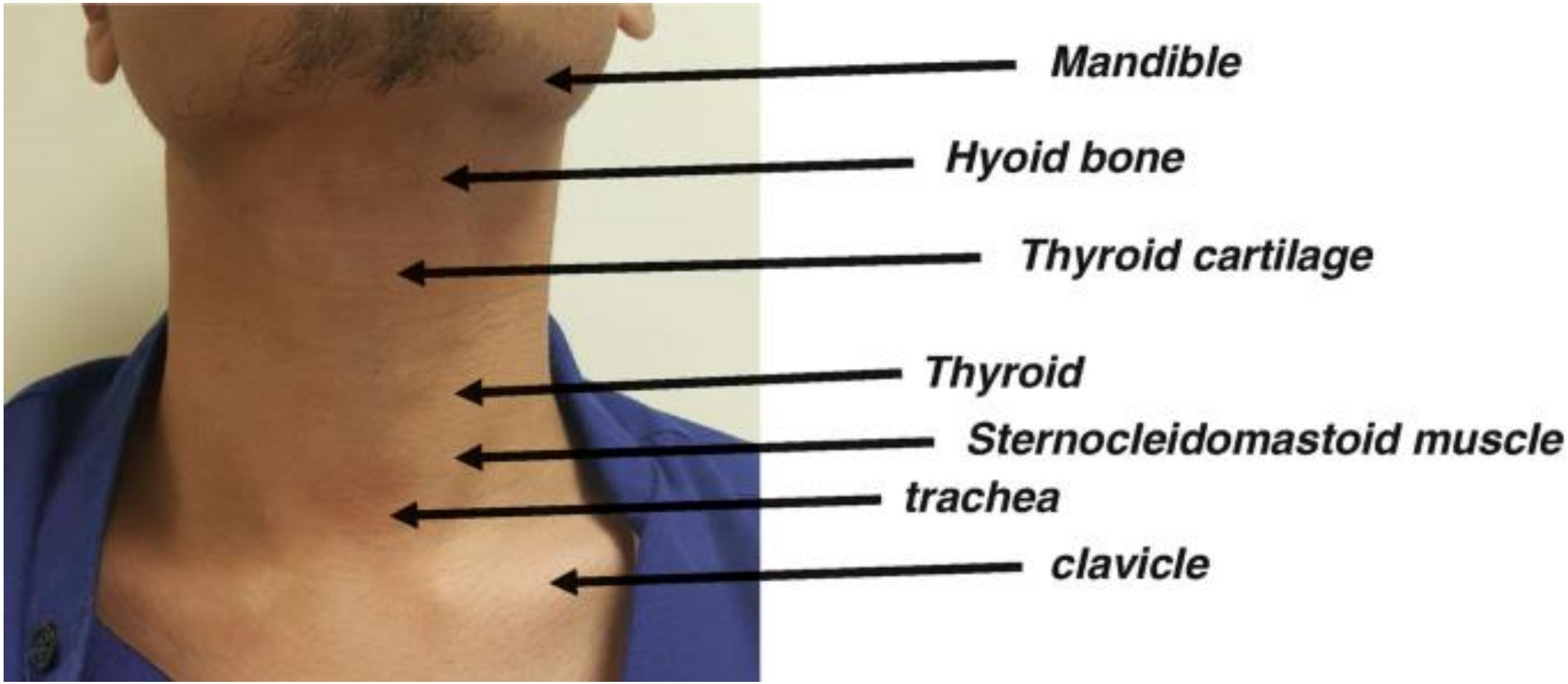
Laryngectomy with lary tube in place

Laryngectomy with HME in place


FOOD
Stoma
AIR
Trachea
Oesophagus


Speech
Esophagus
Trachea
Electrolarynx
Air to and
from lungs


Voice
sounds
Finger
blocking
laryngectomy
stoma
Windpipe
Voice
prosthesis
valve
Air from
lungs

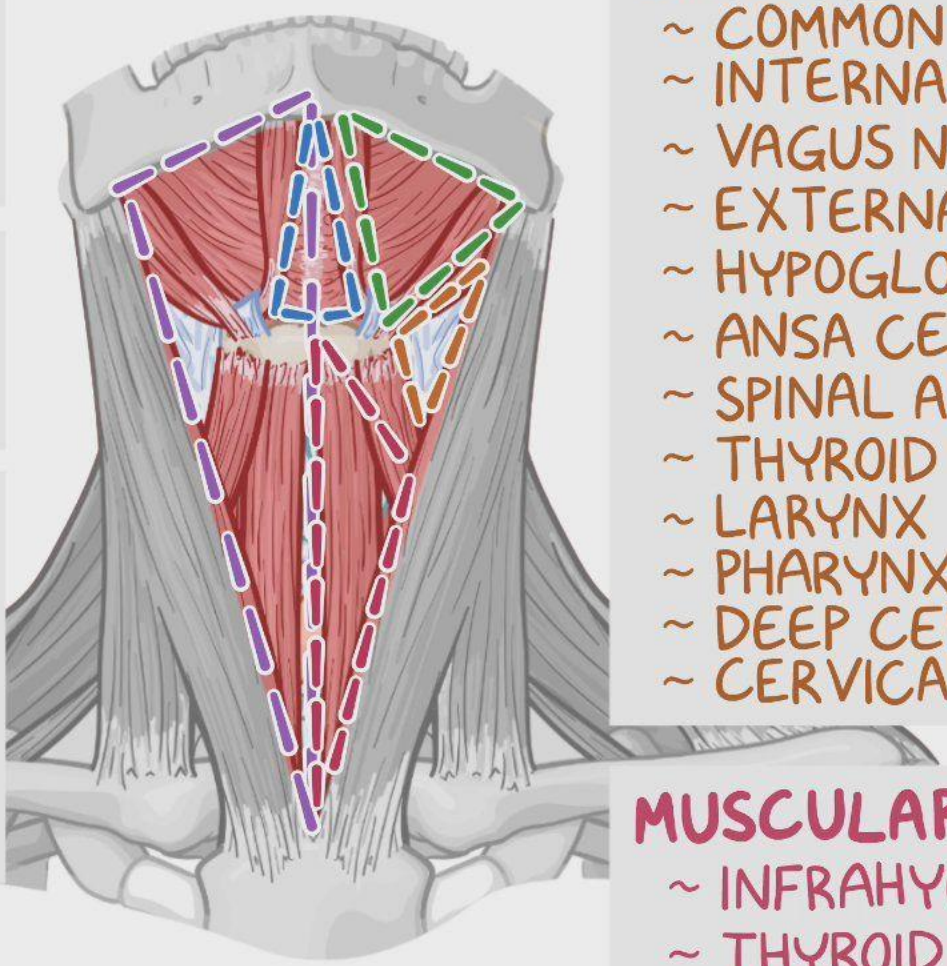

Mandible
Hyoid bone
Thyroid cartilage
Thyroid
Sternocleidomastoid muscle
trachea
clavicle

ANTERIOR TRIANGLE

BOUNDARIES:
- ~ MEDIAN LINE of NECK
- ~ ANT. BORDER of SCM
- ~ INF. BORDER of MANDIBLE

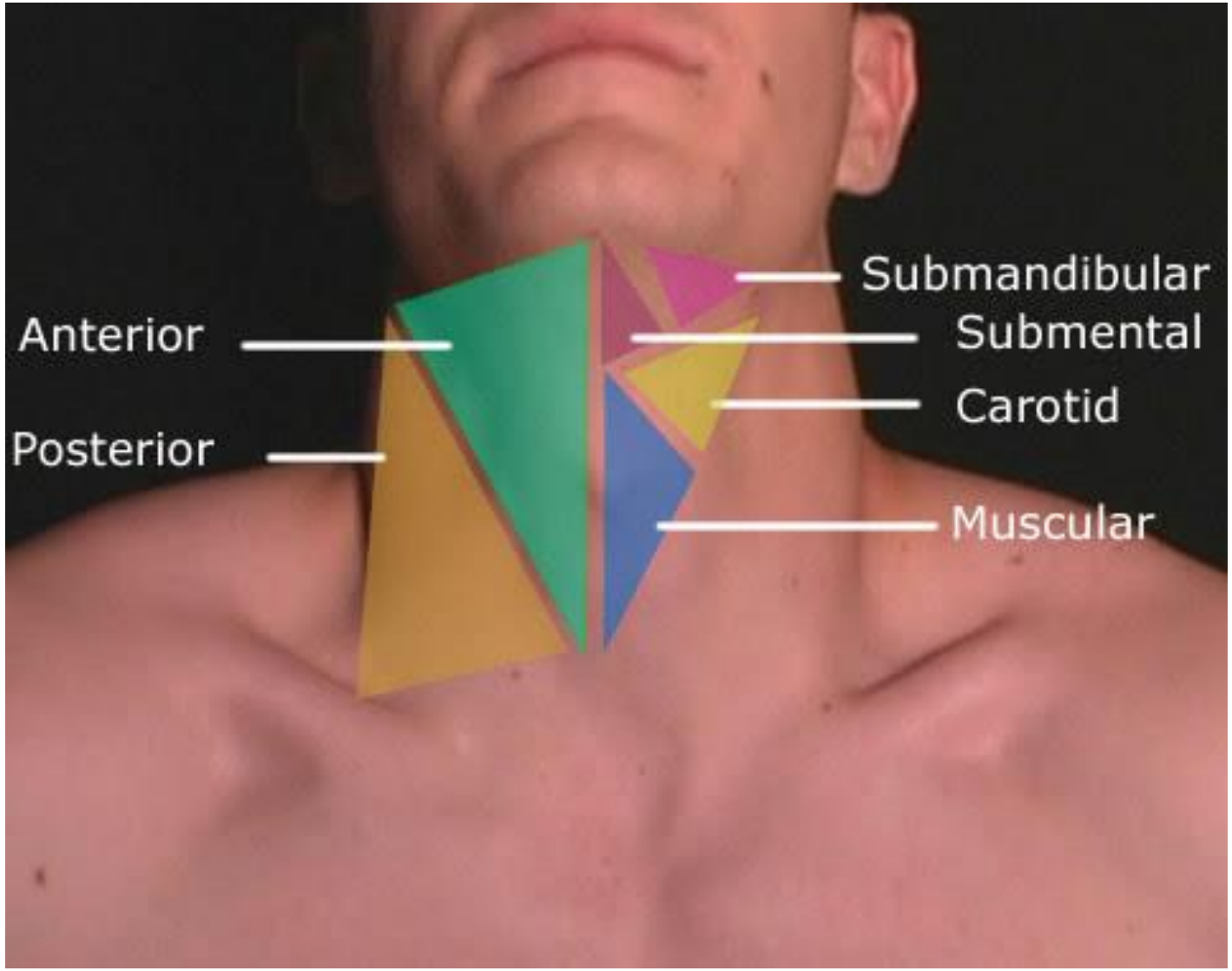
SUBMENTAL
- ~ SUBMENTAL LYMPH NODES
- ~ SMALL VEINS

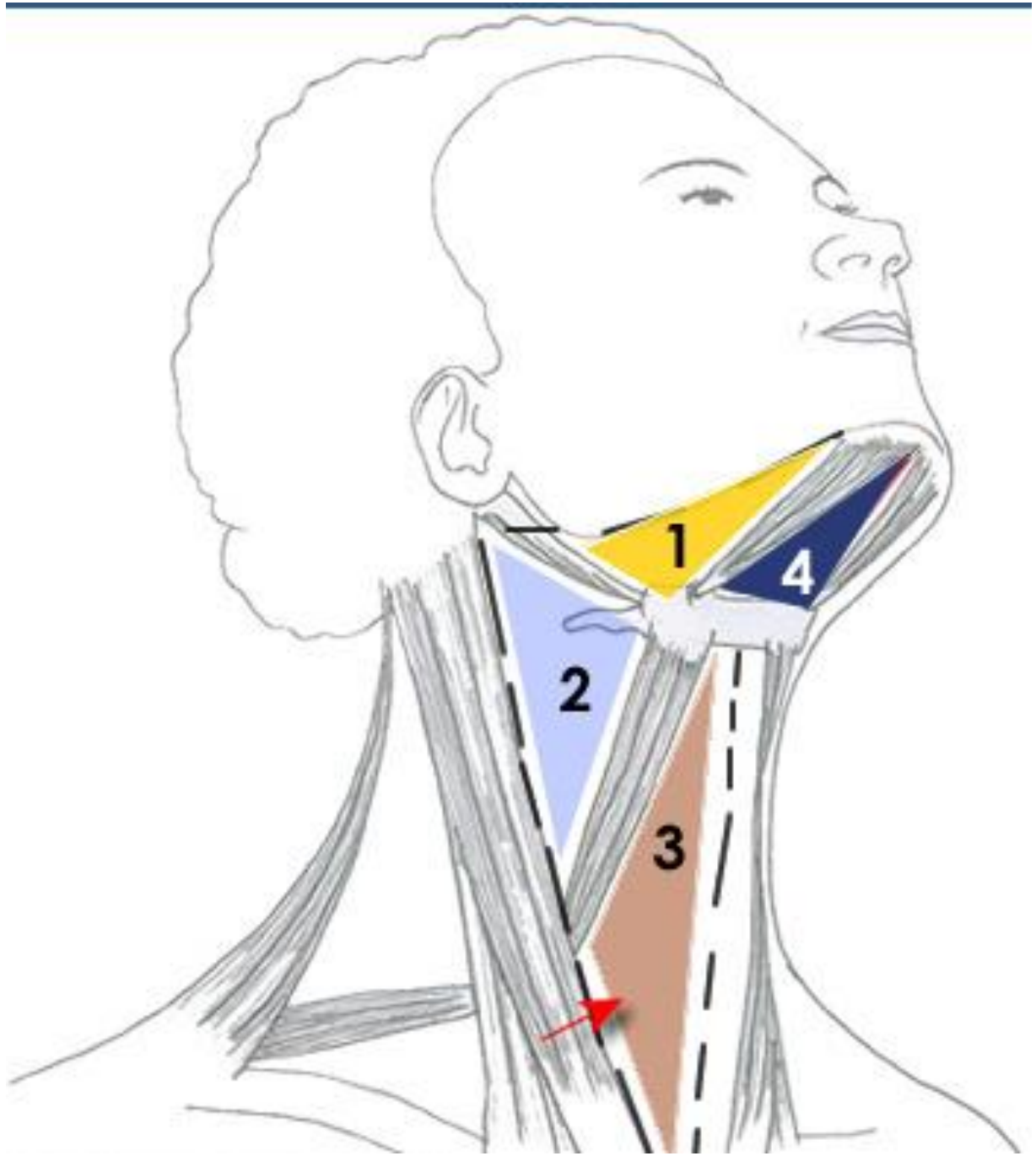
SUBMANDIBULAR
- ~ SUBMANDIBULAR GLAND
- ~ LYMPH NODES
- ~ HYPOGLOSSAL NERVE (CN XII)
- ~ MYLOHYOID NERVE
- ~ FACIAL ARTERY & VEIN



CAROTID
- ~ COMMON CAROTID ARTERY
- ~ INTERNAL JUGULAR VEIN
- ~ VAGUS NERVE (CN X)
- ~ EXTERNAL CAROTID a.
- ~ HYPOGLOSSAL NERVE (CN XII)
- ~ ANSA CERVICALIS
- ~ SPINAL ACCESSORY n. (CN XI)
- ~ THYROID GLAND
- ~ LARYNX
- ~ PHARYNX
- ~ DEEP CERVICAL LYMPH NODES
- ~ CERVICAL PLEXUS

MUSCULAR
- ~ INFRAHYOID MUSCLES
- ~ THYROID & PARATHYROID GLANDS

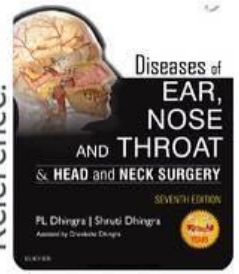

Submandibular
Anterior
Submental
Carotid
Posterior
Muscular

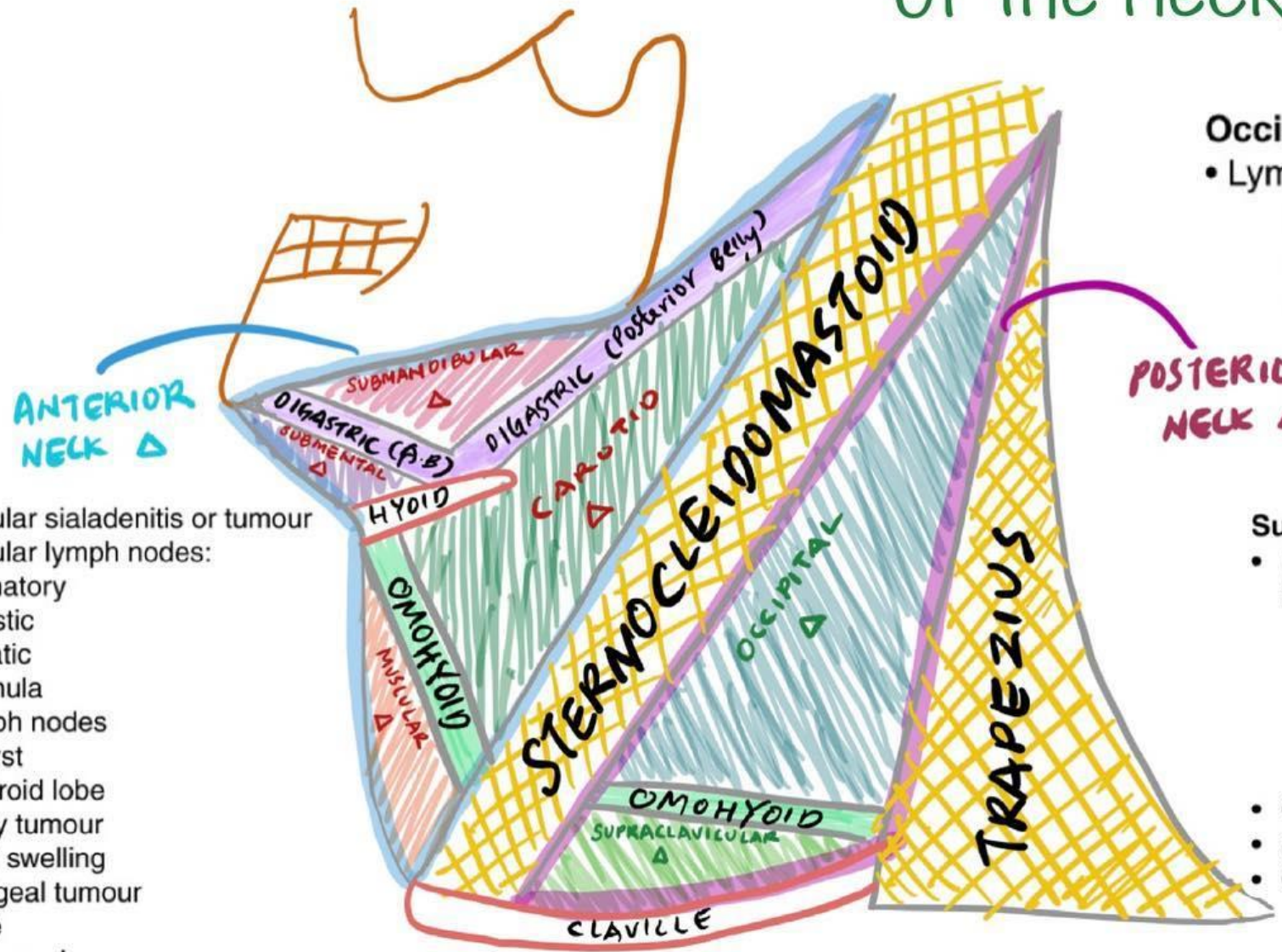

1
2
3
4

By @elaine.tgt
for @imusurgicalsociety

Lateral Swellings of the neck.

Reference:





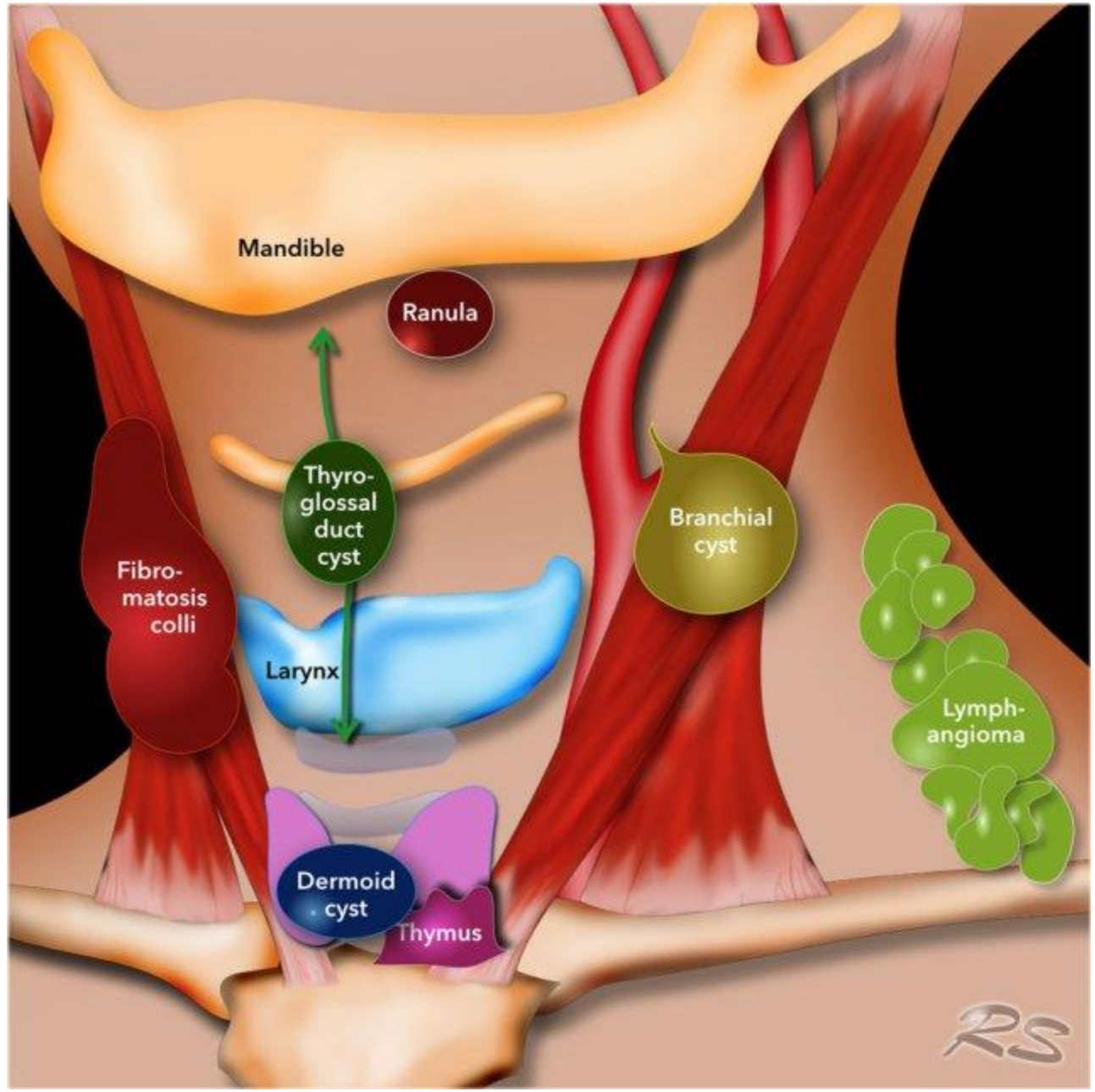
- Submandibular sialadenitis or tumour
- Submandibular lymph nodes:
  - Inflammatory
  - Neoplastic
  - Metastatic
- Plunging ranula
- Jugular lymph nodes
- Branchial cyst
- Swelling thyroid lobe
- Carotid body tumour
- Parotid (tail) swelling
- Parapharyngeal tumour
- Laryngocele
- Pharyngeal pouch

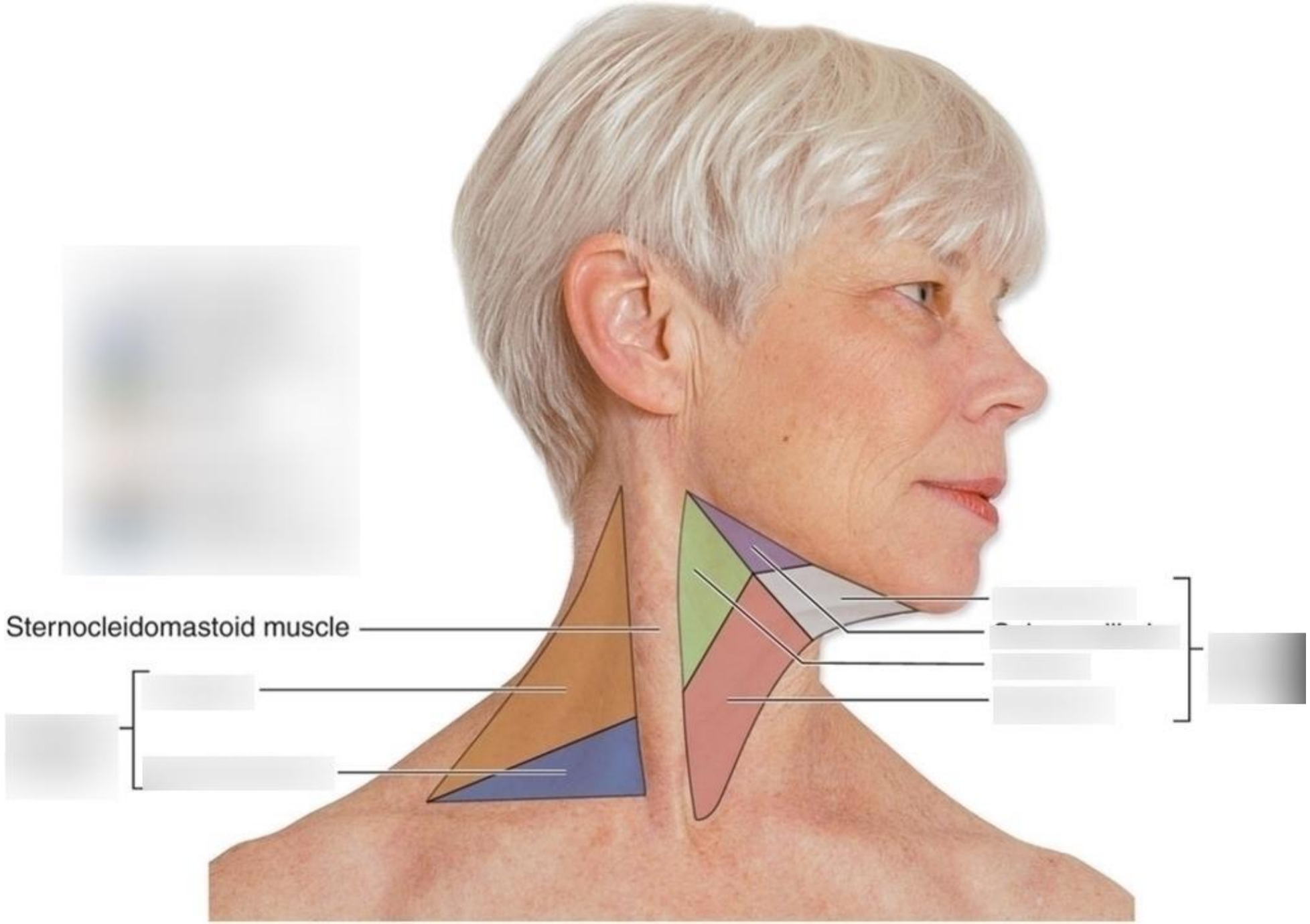
Occipital triangle

- Lymph nodes:
  - Inflammatory
  - Neoplastic
  - Metastatic

Supraclavicular triangle

- Metastatic nodes from infraclavicular primaries:
  - Breast
  - Lung
  - GI tract
  - Kidney
  - Ovary, testis
- Cystic hygroma
- Subclavian aneurysm
- Cervical rib


Mandible
Ranula
Thyro-
glossal
duct
cyst
Fibro-
matosis
colli
Larynx
Branchial
cyst
Lymph-
angioma
Dermoid
cyst
Thymus
RS



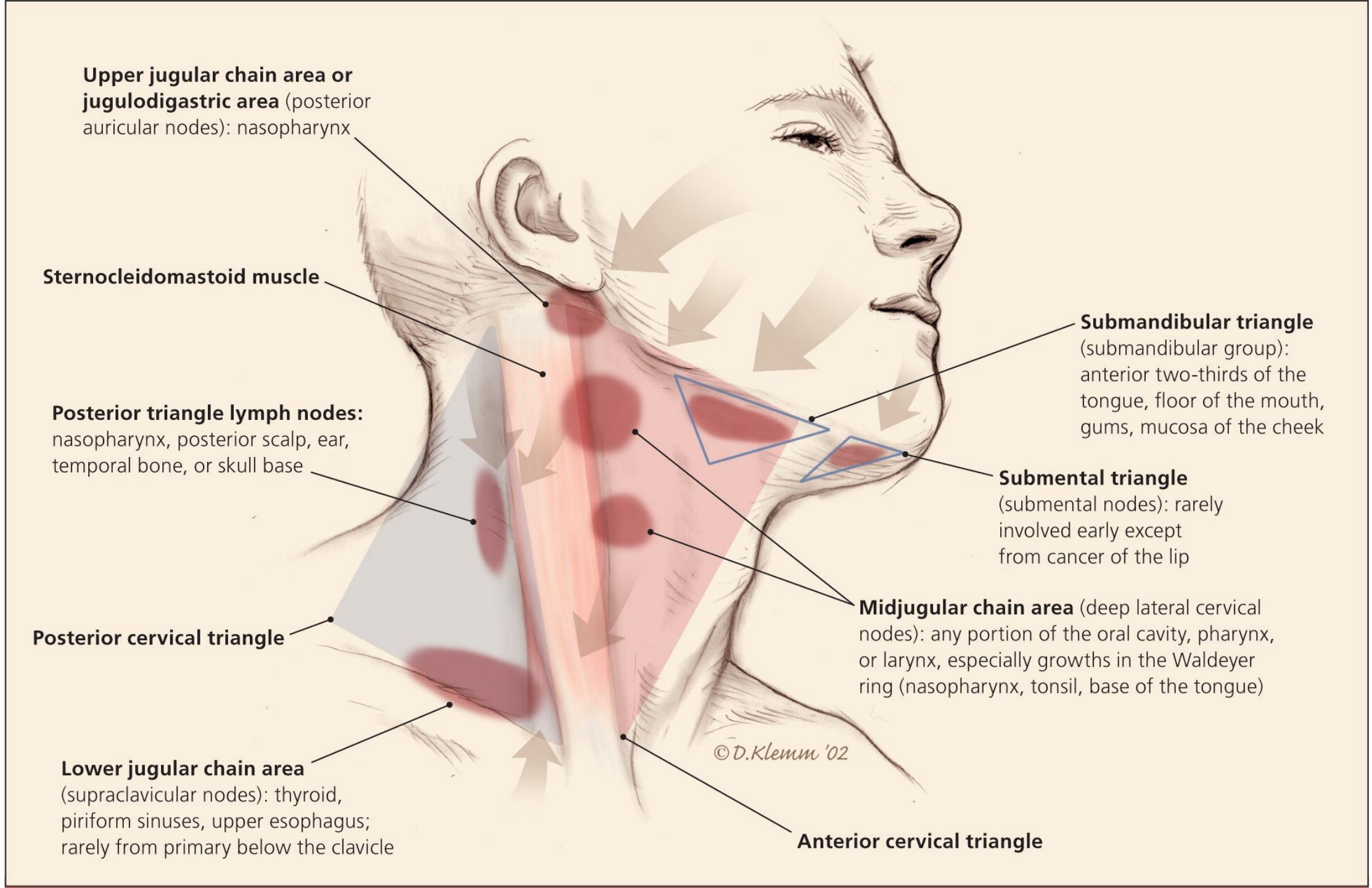
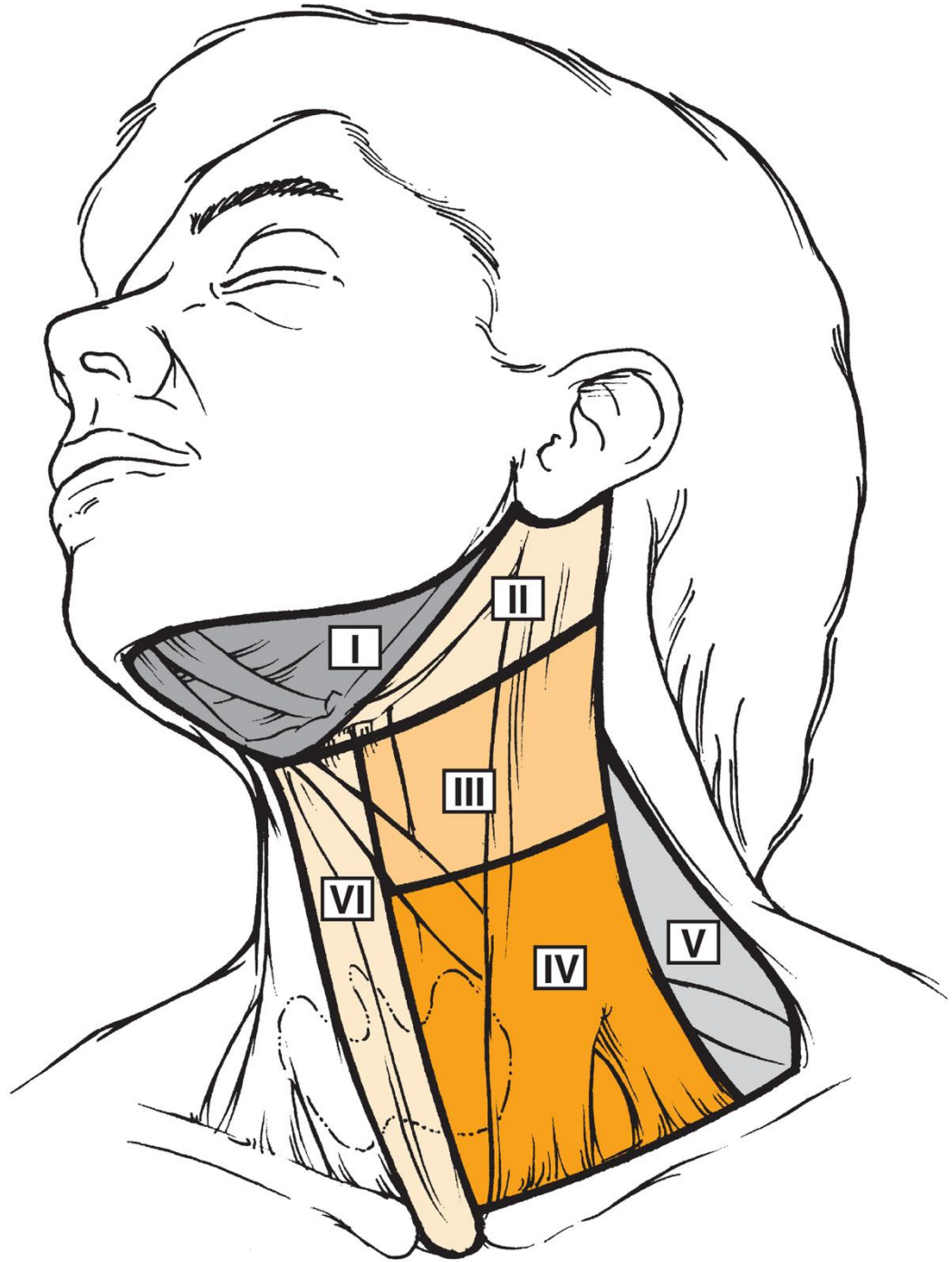
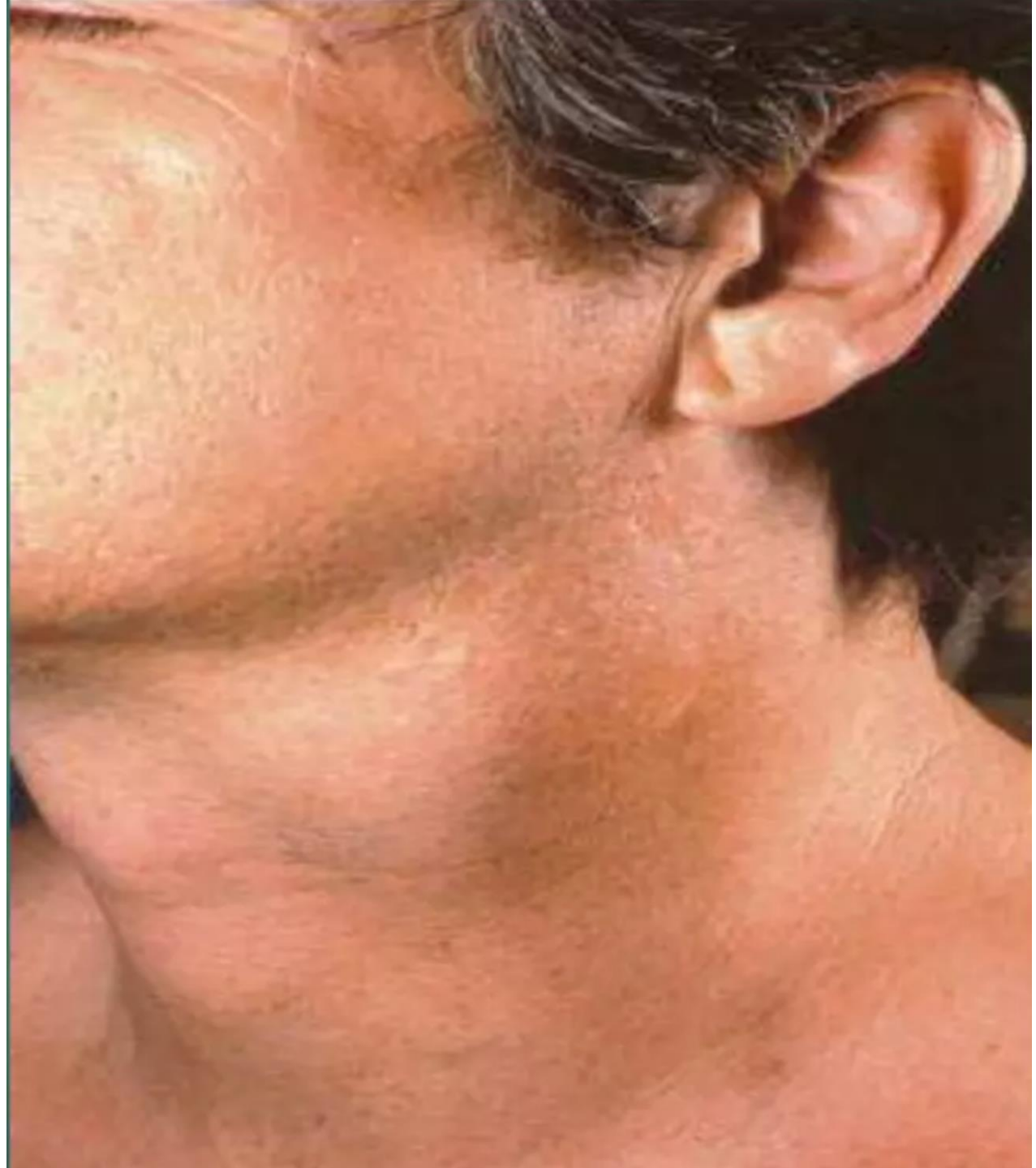
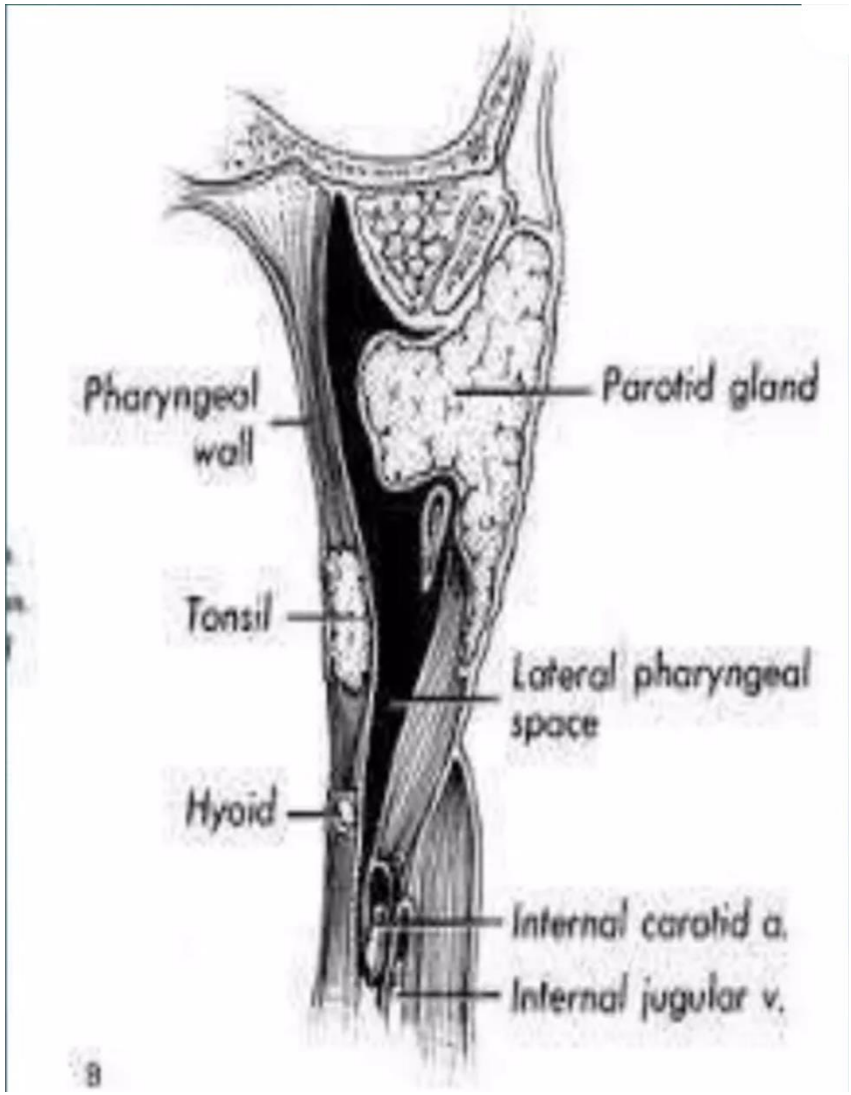
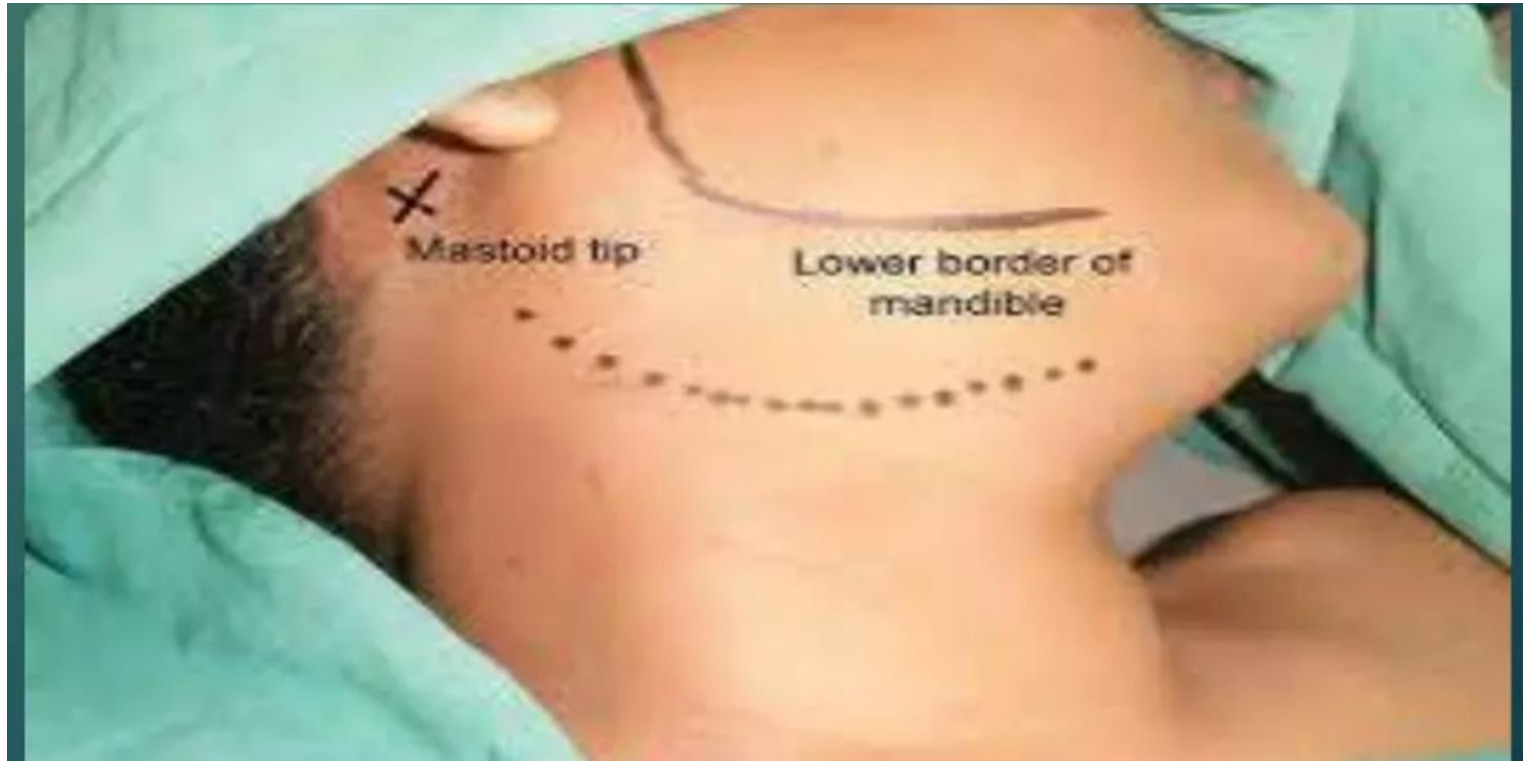


ILLUSTRATION BY DAVE KLEMM

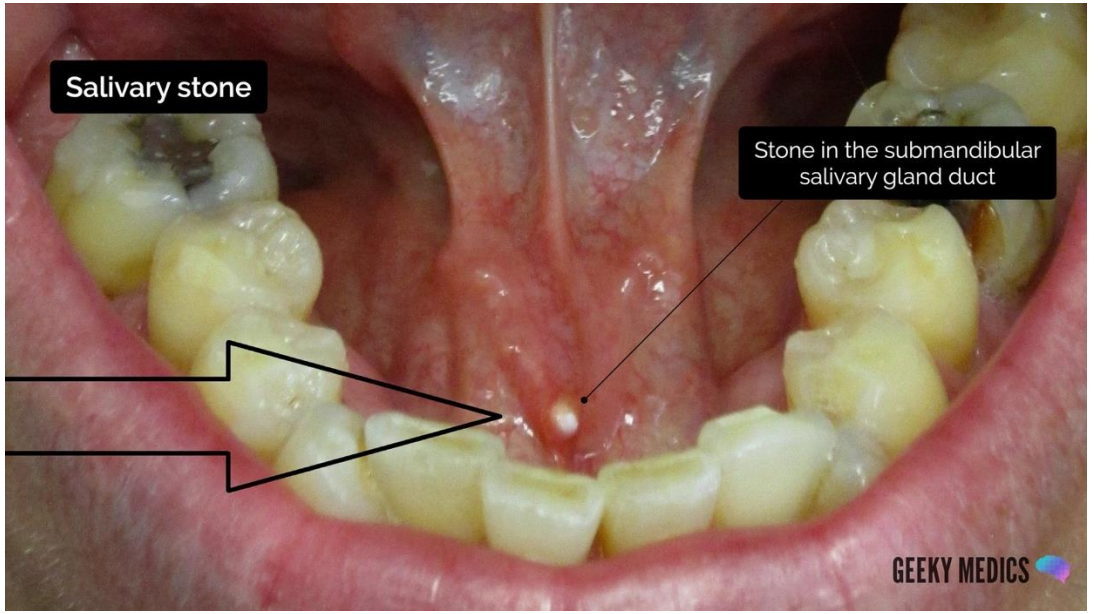

I
II
III
IV
V
VI

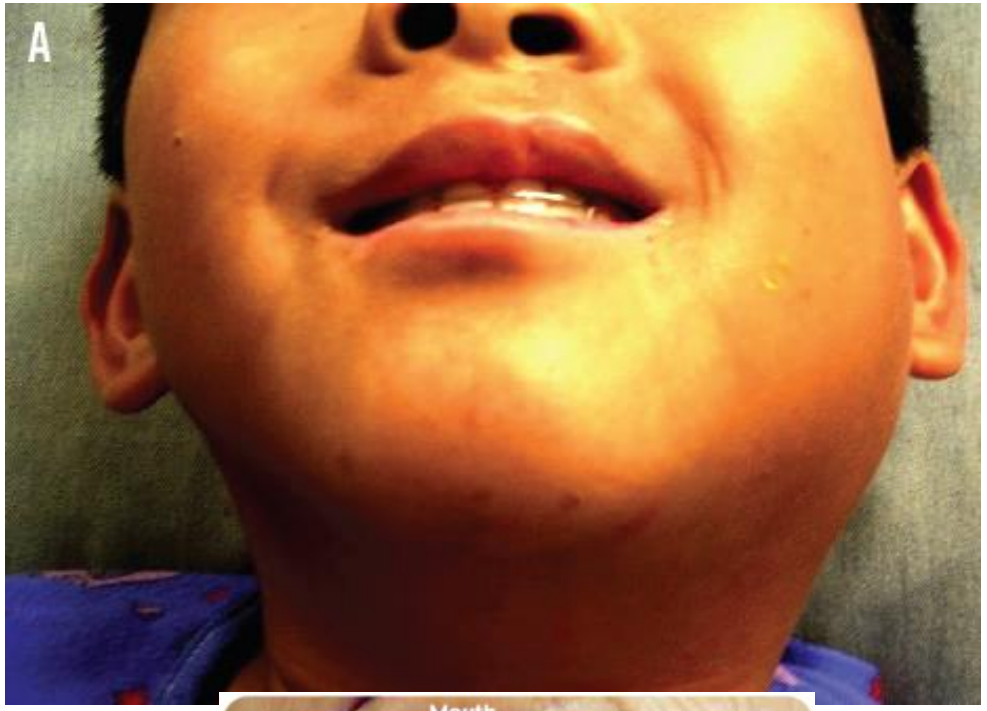


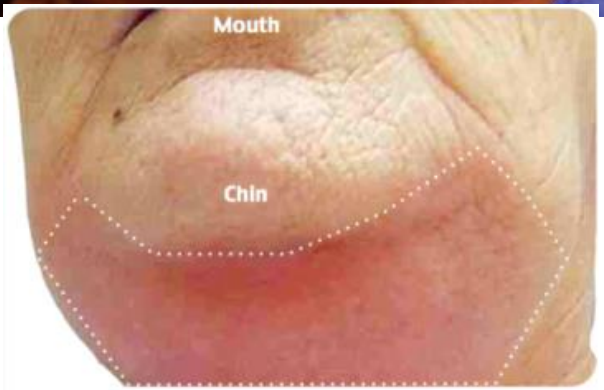

Pharyngeal wall
Parotid gland
Tonsil
Lateral pharyngeal space
Hyoid
Internal carotid a.
Internal jugular v.


Mastoid tip
Lower border of mandible


Branchial Cyst


Salivary stone
Stone in the submandibular salivary gland duct
GEEKY MEDICS





Clinical

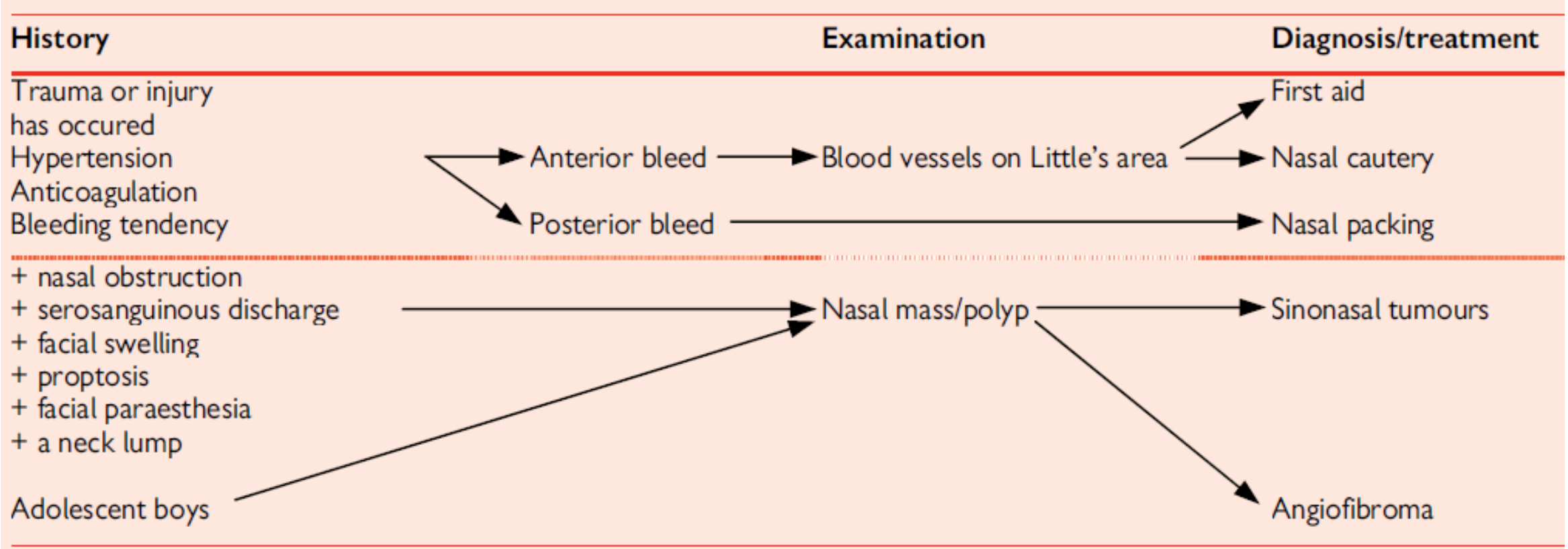
- Pain, drooling, dysphonia
- Brawny neck edema
- Bilateral submandibular swelling
- Tongue protrusion or elevation

Management

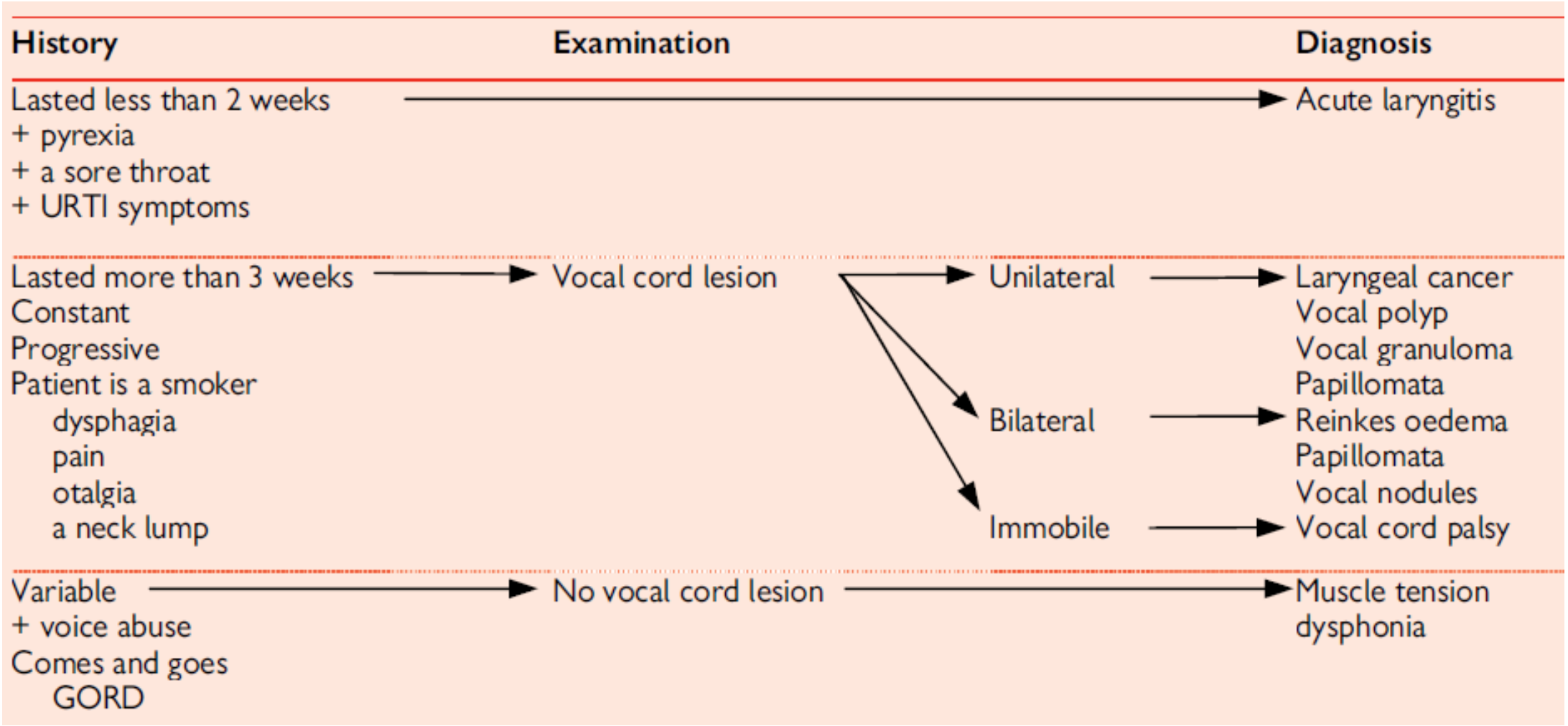
- Emergent ENT/Oral surgery consultation
- Broad spectrum ABX and airway management

Common Methods of Presentation Summary

Epistaxis


History
Examination
Diagnosis/treatment
Trauma or injury
has occured
Hypertension
Anticoagulation
Bleeding tendency
Anterior bleed
Posterior bleed
Blood vessels on Little's area
First aid
Nasal cautery
Nasal packing
+ nasal obstruction
+ serosanguinous discharge
+ facial swelling
+ proptosis
+ facial paraesthesia
+ a neck lump
Adolescent boys
Nasal mass/polyp
Sinonasal tumours
Angiofibroma

Hoarseness of Voice



Dysphagia

History	Examination	Diagnosis
Constant Progressive Solids worse than liquids Pain Otalgia Neck lump	a neck lump → Carcinoma Endoscopy—lesion seen → Post-cricoid web Endoscopy—pooling of saliva → Achalasia	
Constant Progressive Regurgitation Halitosis	→ Pharyngeal pouch	
Liquids worse than solids	→ + neurology/cranial nerve palsies →	Neurological dysphagia
Intermittent Saliva worse than solids or liquids Variable With or without variable voice problems Heartburn Feeling of a lump in the throat Mucus in the throat	→ Normal →	Globus` GORD

Feeling a Lump in the Throat

History	Examination	Diagnosis
Constant Same site Worse with solids Unilateral pain otalgia neck lump hoarse voice Patient is a smoker	→ Lesion seen on examination Palpable neck lump	→ Carcinoma of pharynx Carcinoma of oesophagus
Variable site Comes and goes Worse with saliva No true dysphagia Central in the neck Variable voice problems Anxiety Patient has a cancer phobia Heartburn/GORD	→ Examination normal	→ Globus

Lump in the Neck

History	Examination	Diagnosis
Short history (weeks/months) Lump is enlarging Unilateral nasal obstruction Otalgia Sore throat Patient is a smoker Hoarse voice Swallowing problems	→ Laterally placed Firm/hard Single/multiple	→ Malignant lymphadenopathy ENT primary
Weight loss Night sweats Anorexia Fever	→ Multiple Rubbery Groin/axillary nodes	→ Malignant lymphoma Glandular fever/toxoplasma
Foreign travel		→ Tuberculosis
Previous/recent URTI	→ Multiple/single	→ Reactive lymphadenopathy
Long history (months/years) No associated symptoms	Single and lateral	→ Branchial cyst
	Single and midline Rises on swallowing Rises on tongue protrusion No relation to swallowing	→ Thyroid lump → Thyroglossal cyst → Dermoid cyst Lymph node
	Parotid region No facial weakness Facial weakness and pain	→ Benign parotid tumour → Malignant parotid tumour
	Submandibular region	→ Submandibular gland tumour
Changes with eating	Parotid Submandibular	→ Parotid stone/parotiitis → Submandibular stone/sialadenitis

Mouth/Tongue Ulcer

History	Examination	Diagnosis
Trauma or injury Poor fitting denture Sharp tooth Pain	Lateral tongue Buccal mucosa	Traumatic ulcer
Patient is a smoker Alcohol Betel nut chewer Progressive Pain Neck mass Otalgia	Lateral tongue Floor of mouth Tonsil Firm/hard ulcer Neck nodes	Malignant ulcer (SCC)
Normal immune function Recurrent	Multiple ulcers Tongue tip/lateral border	Aphthous ulcers
Dietary insufficiency	Angular stomatitis Skin lesions	Dietary/blood disorders

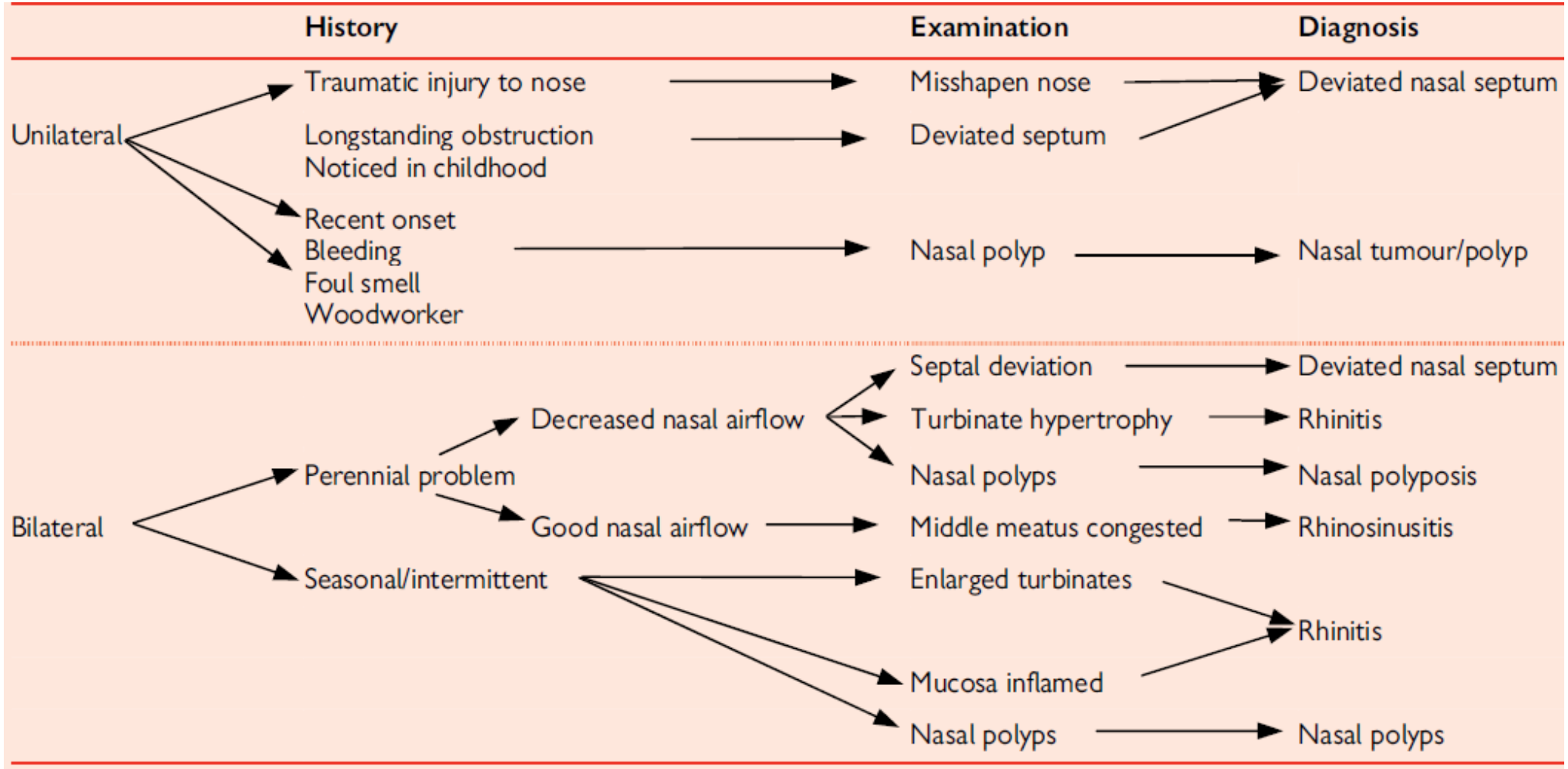
Stridor

History	Examination	Diagnosis
Neonate Feeding problems Failure to thrive Abnormal cry	Positional	Laryngomalacia Tracheomalacia Vocal cord lesion/palsy
	Biphasic stridor	Subglottic stenosis
Child Preceding URTI Rapid onset Malaise Voice muffled/changed	Drooling Pyrexia Toxic	Croup Epiglottitis
Short history Previously well child Short lived coughing fit	Inspiratory/mixed stridor Expiratory wheeze	Foreign body
Adult Normal voice Recent surgery (thyroid/chest)	Inspiratory stridor	Bilateral cord palsy
Preceding URTI Malaise Swallowing difficulty Sore throat	Inspiratory stridor Pyrexia Drooling	Supraglottitis
Long standing hoarse voice Pain Patient is a smoker	Inspiratory stridor Neck node	Laryngeal carcinoma

Facial Nerve Palsy

History	Examination	Diagnosis
Recent trauma Haemotympanum	Head injury Trauma to ear canal/drum CSF from ear/nose	Fractured Temporal bone
Rapid onset Other weakness	Forehead unaffected Abnormal neurological exam	Cerebro Vascular Accident(CVA)
Rapid onset Isolated weakness	Forehead affected	Bell's palsy
Otalgia	Vesicles in ear	Ramsay Hunt
Gradual onset Other weakness	Abnormal neurological exam	Multiple Sclerosis (MS) Motor neurone disease
Gradual onset Facial pain	Parotid lump	Parotid carcinoma
Hearing loss Balance disturbance	Sensorineural hearing loss ataxia	Cerebello Pontine Angle (CPA) tumour
Ear discharge	Conductive hearing loss	Cholesteatoma

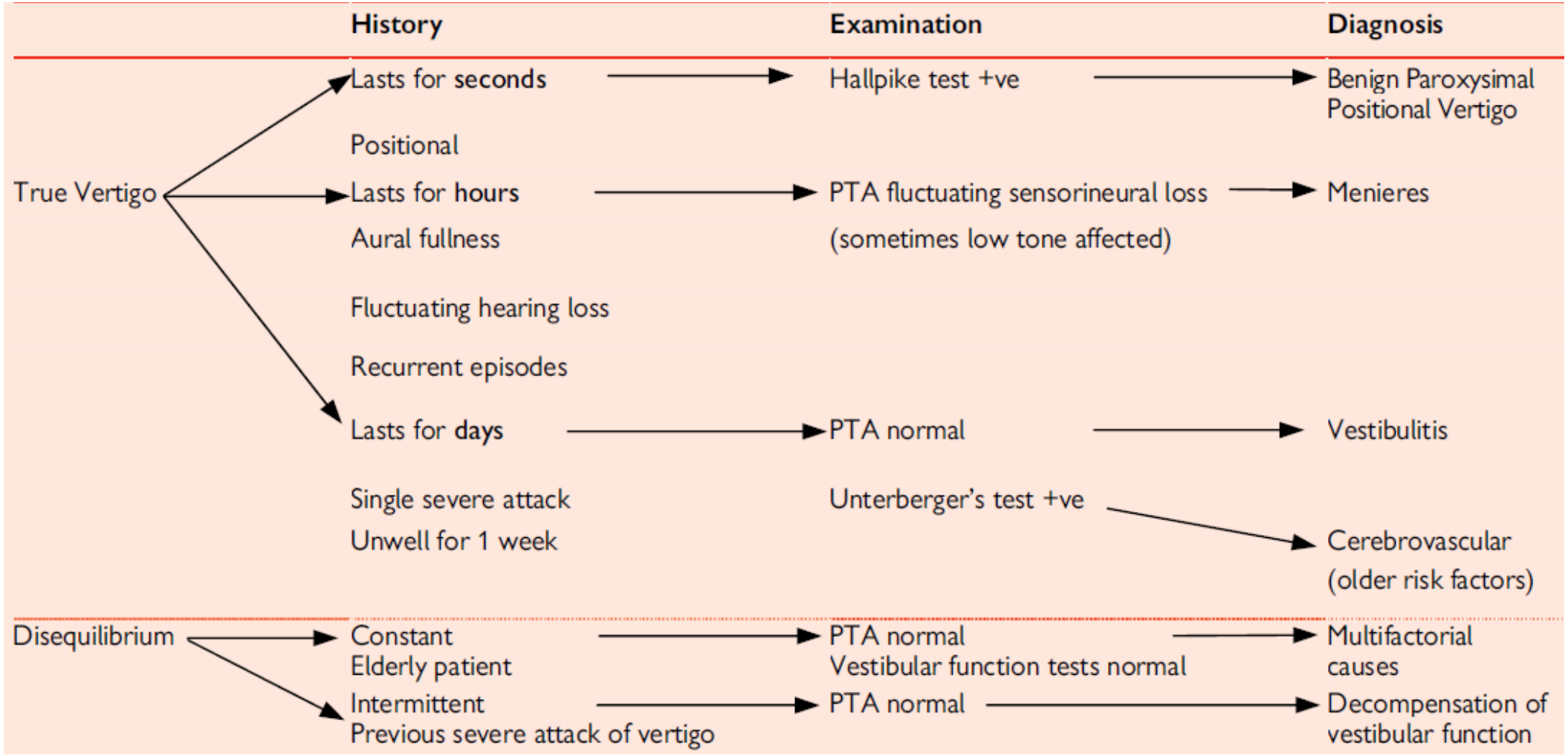
Nasal Obstruction



Ear Discharge

History	Examination	Diagnosis
No pain	External Audiotory Canal (EAC) appears normal and the Tympasnic membrane (TM) appears to have attic retraction/keratin	Cholesteatoma
	External Audiotory Canal (EAC) appears normal and the TM is perforated or has grommets	Chronic Supurative Otitis Media(CSOM)/infected grommet
Pain before discharge	Normal External Audiotory Canal (EAC) with a bulging TM	Acute otitis media
	Granulations in floor of External Audiotory Canal (EAC) with a normal TM	Necrotising otitis externa
Pain after discharge	Narrow oedematous External Audiotory Canal (EAC) when the TM is normal or not seen	Otitis externa

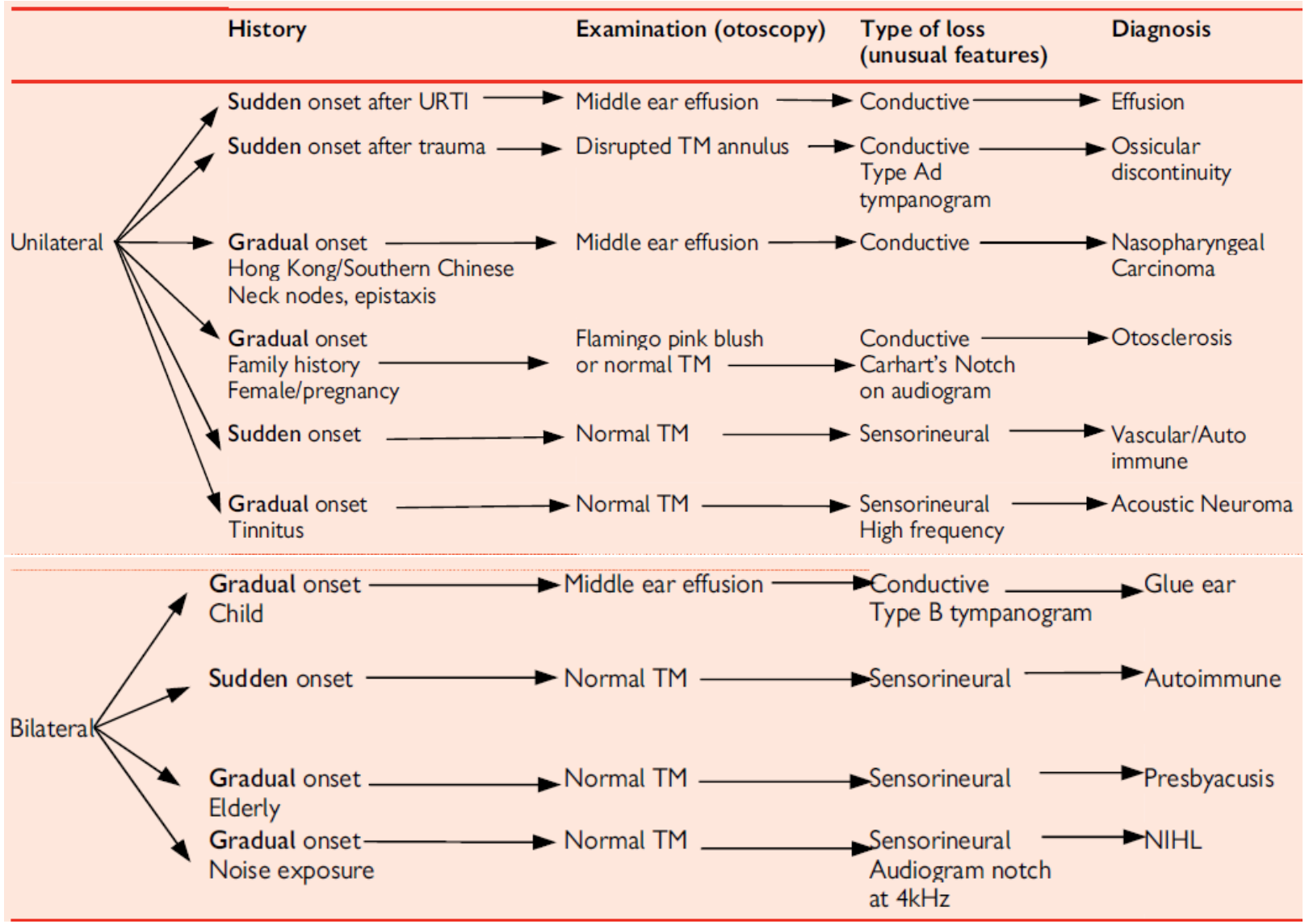
Dizziness & Vertigo



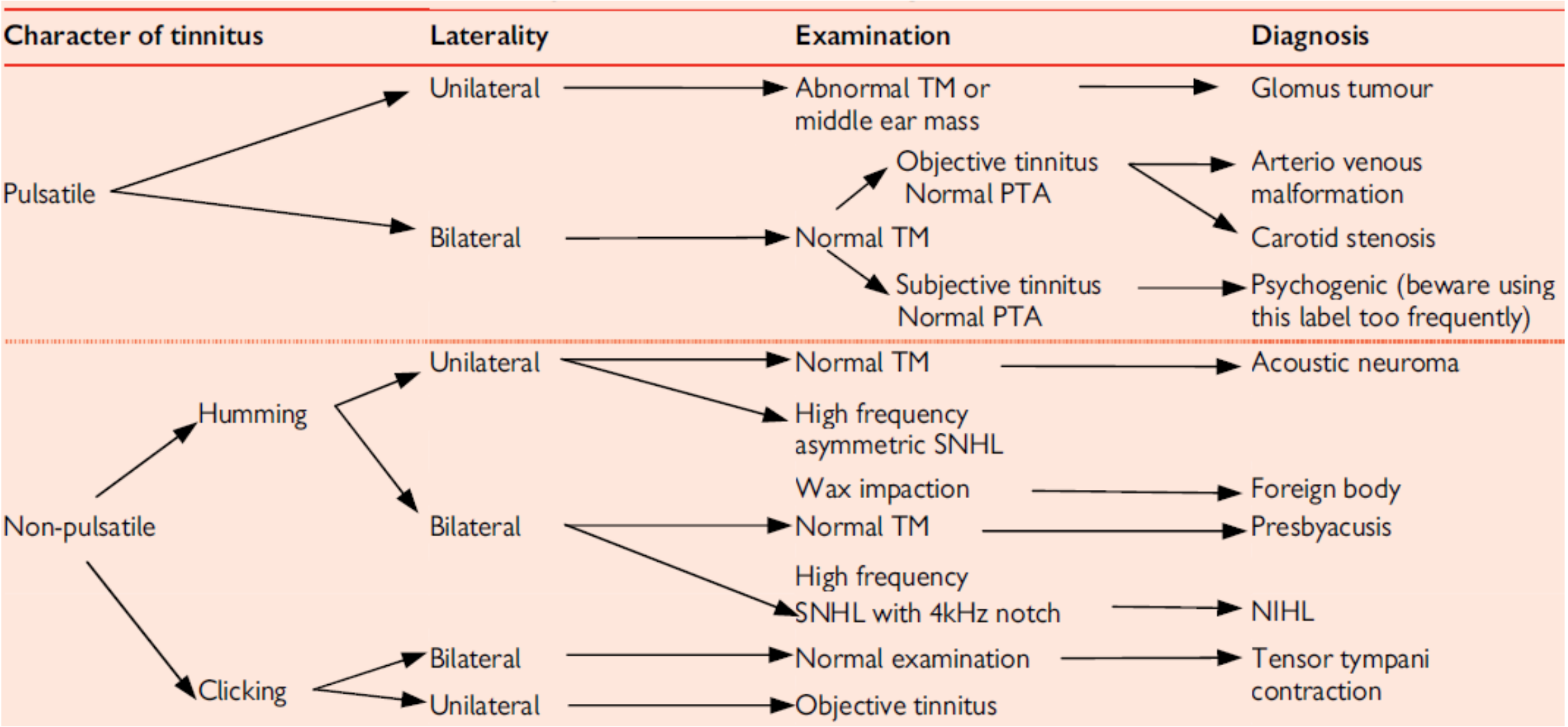
Otalgia

History	Examination (using an otoscope)	Diagnosis
Severe pain Child/preceding URTI Very painful	Erythema—a bulging drum A high temperature Distressed patient	Acute otitis media
Severe pain Preceding itch Longstanding Surfer/swimmer	Not diabetic → Narrow EAC Mucopus	Otitis externa
Severe pain Elderly	Diabetic → EAC floor granulated Patient unwell Cranial nerve palsies	Necrotising otitis externa
Intermittent severe pain At night time Known glue ear	Middle ear effusion	Glue ear
Severe pain Anterior to tragus Worse with eating	Normal TM Tender over TMJ Malaligned bite	TMJ dysfunction
Moderate/severe pain	Normal TM Tumour head and neck region	Referred pain

Hearing Loss



Tinnitus


Character of tinnitus
Laterality
Examination
Diagnosis
Pulsatile
Unilateral
Abnormal TM or middle ear mass
Glomus tumour
Bilateral
Objective tinnitus Normal PTA
Arterio venous malformation
Normal TM
Carotid stenosis
Subjective tinnitus Normal PTA
Psychogenic (beware using this label too frequently)
Non-pulsatile
Humming
Unilateral
Normal TM
Acoustic neuroma
High frequency asymmetric SNHL
Wax impaction
Foreign body
Bilateral
Normal TM
Presbyacusis
High frequency SNHL with 4kHz notch
NIHL
Clicking
Bilateral
Normal examination
Tensor tympani contraction
Unilateral
Objective tinnitus

Facial Pain

History	Examination	Diagnosis
Severe acute pain Pain periorbital/cheeks Provoked by URTI Nasal obstruction Temperature	Pus/polyps in middle meatus	Acute sinusitis
Chronic fullness Worse bending over Nasal obstruction	Middle meatus occluded/ narrowed	Chronic sinusitis
Severe pain Localized to specific site No nasal obstruction No rhinitic symptoms	Normal nasal examination Normal nasendoscopy	Atypical facial pain
Intermittent pain Worse on eating Radiates to ear	Normal nasal examination Normal nasendoscopy Tendernes over TMJ	TMJ dysfunction

Thank you