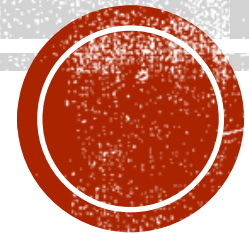


بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

— IN THE NAME OF ALLAH —

DEGENERATIVE PROCESS IN OTOLARYNGOLOGY

Nimim putri zahara



DEMOGRAFI PENDUDUK GERIATRI DI INDONESIA



DEMOGRAFI PENDUDUK GERIATRI DI INDONESIA



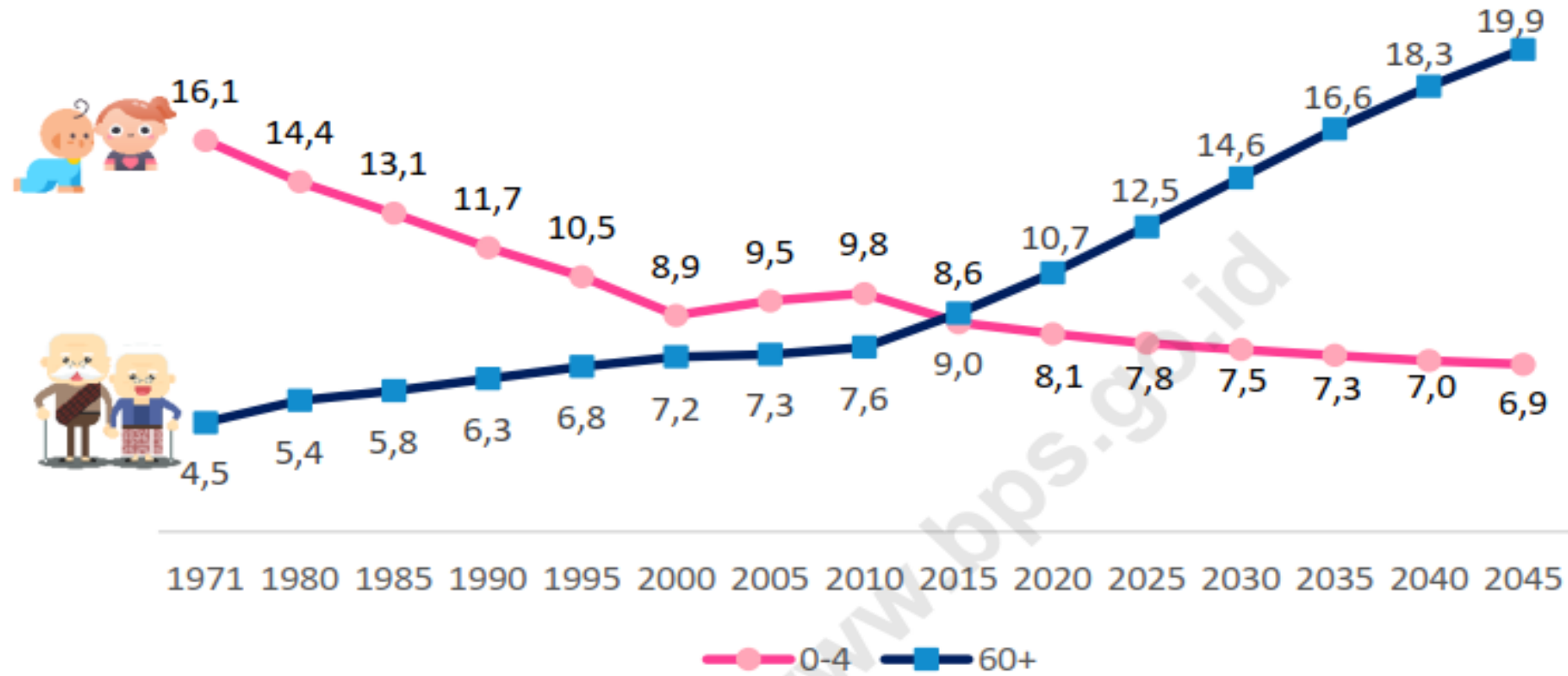
Lansia adalah seseorang yang telah mencapai usia 60 (enam puluh) tahun ke atas

UU Nomor 13 Tahun 1998

DEMOGRAFI PENDUDUK GERIATRI DI INDONESIA



DEMOGRAFI PENDUDUK GERIATRI DI INDONESIA



HEALTH BEHAVIOR

OVERESTIMATING → EXPLAINING AWAY

UNDERREPORT

NO BIG DEAL → DELAY

NOTHING CAN BE DONE ABOUT IT

DON'T WANT TO BOTHER PEOPLE

GERIATRIC SYNDROME

FALLS

CONFUSION

INCONTINENCE

DIZZINESS

FAILURE TO THRIVE

PRACTICAL APPROACH TO THE OFFICE VISIT

- **OBTAINING THE HISTORY → RELIABLE OR NOT**
- **SOCIAL HISTORY → FAMILY, HOUSING, ACTIVITY, FINANCE**
- **NUTRITION → UNDERNUTRITION**
- **ALCOHOL, TOBACCO AND DRUG USE DISORDERS**
- **FUNCTIONAL STATUS → BADL QUESTIONNAIRE**
- **END OF LIFE**



PHYSICAL EXAMINATION

- VITAL SIGN--> INCL: HEIGHT, WEIGHT, BMI, BP, PULSE, TEMPERATURE
- GENERAL APPEARANCE → DRESS, HYGIENE,
- SKIN



HEAD AND NECK

- SKIN → PREMALIGNANT AND MALIGNANT CONDITIONS.
- VISUAL ACUITY
- THE WHISPERED VOICE → HEARING LOSS
- THE EAR CANAL AND DRUM → CERUMENT IMPACTION
- ORAL EXAMINATION → DENTURES
- THE NECK EXAMINATION → TYROID, CAROTID BRUITS AND LYMPHADENOPATHY



GERIATRIC OTOLARYNGOLOGY

COMMUNICATION
DISORDER

ALLERGIES AND
SINUSITIS

HEAD AND NECK
MALIGNANCIES



OUTLINE

AUDITORY SYSTEM

VESTIBULAR SYSTEM

THE NOSE AND SINUSES

TONGUE/ ORAL CAVITY AND SWALLOWING

LARYNX



AUDITORY SYSTEM



EPIDEMIOLOGY

- MOST COMMON DISABILITY → HEARING LOSS
- WOMEN EQUAL TO MEN
- MEN STARTED WORSE
- TWO MAIN PATTERN OF HEARING DEGENERATION →
 - THE LOW FREQ → AGE DEPENDENT, WOMEN HAS WORSE THRESHOLD → STRIA VASCULARIS DISORDER
 - THE HIGH FREQ → THE THRESHOLD CHANGE DECREASED WITH AGE → HAIR CELL DISORDER



Helix and tragus

- Hairs grow

Pinna

- Enlarges with age

Ear canal

- Potential for collapse
- Earwax accumulates, with associated hearing loss

EXTERNAL EAR

MIDDLE EAR

INNER EAR

Vestibular apparatus: semi-circular canals and otolith organs

- Hair cells are lost and otoliths degenerate, negatively affecting balance

Cochlea

- Outer and inner hair cells degenerate, causing presbycusis

Eustachian tube
Muscles atrophy

Ossicles

Joints between bones calcify and become thinner

Tympanic membrane

- Becomes less vascular
- Elasticity and compliance decrease



DISEASE OF THE PINNA AND EXTERNAL AUDITORY CANAL

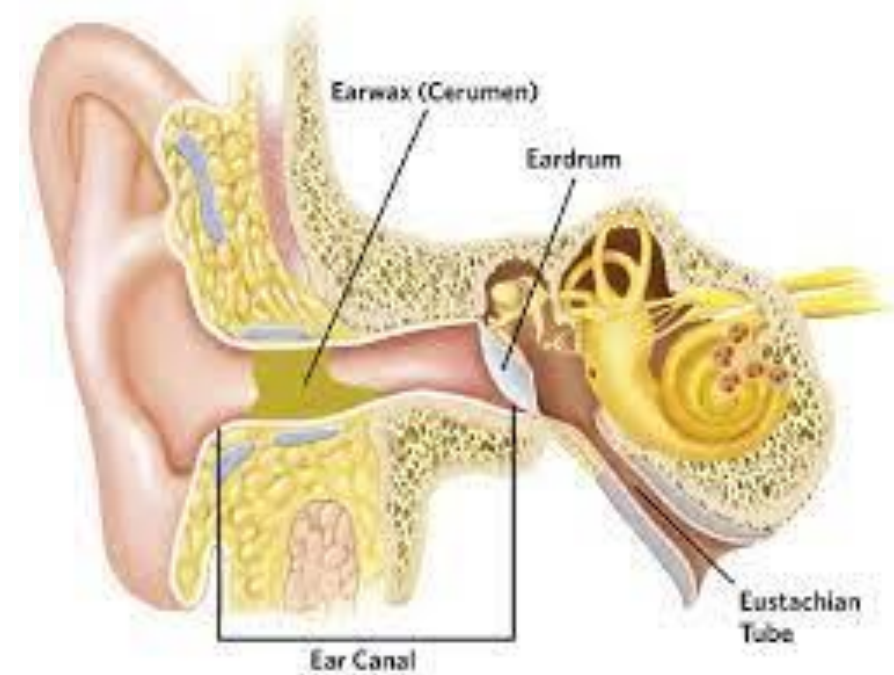
LARGER PINNA

EXTERNAL HAIR >>>

CERUMINOUS GLAND << → DRY MAE,
PRONE TO INFECTION

ELASTICITY << → EAR CANAL COLLAPS

CERUMEN ACCUMULATION →
OBSTRUCTIVE → CHL



DISEASE OF THE TYMPANIC MEMBRANE AND THE MIDDLE EAR

TM → Less vasc → thin and stiffen

TM Perforation → surgery

EUSTACHIAN TUBE DYSFUNCTION → calcification of cartilage and atrophy of tensor veli palatini



DISEASE OF THE TYMPANIC MEMBRANE AND MIDDLE EAR

>65 no impact
on graft

No significant
increase in
surgical
complication

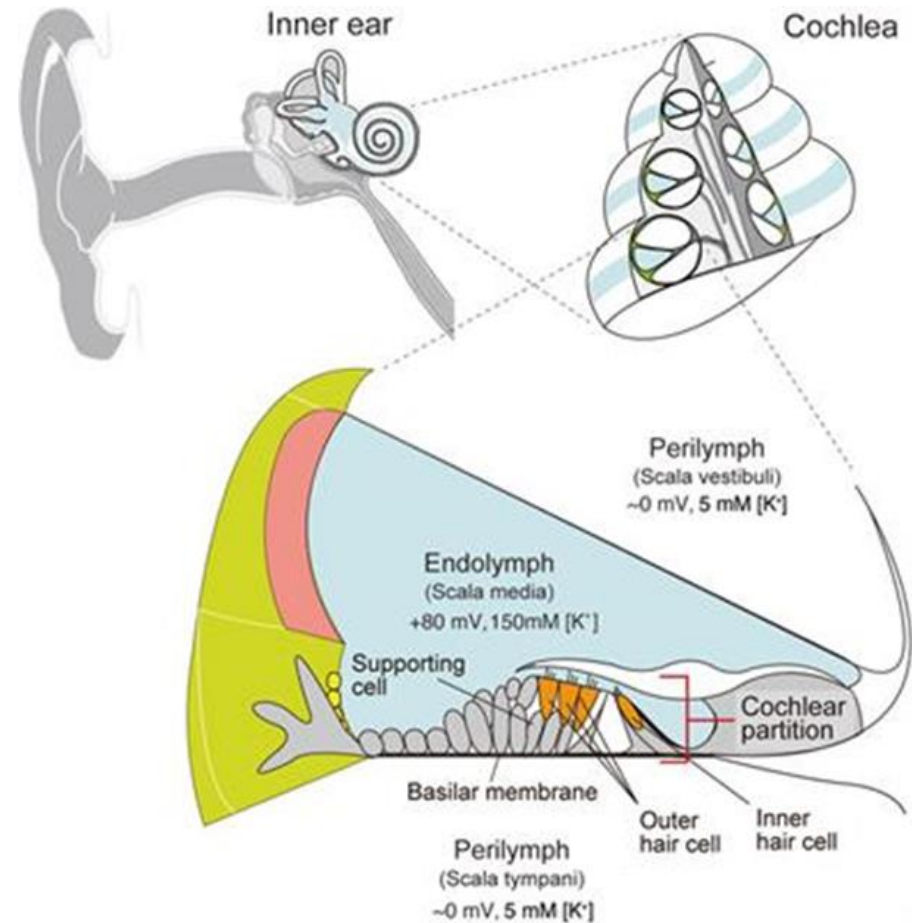
Not Contra
Indication in
middle ear
surgery

No data surgery
QOL after
surgery vs
hearing aid



INNER EAR CHANGES

- CONSIST OF:
 - COCHLEAR → DETECT SOUND
 - VESTIBULE AND SEMICIRCULAR CANAL → FOR BALANCE
- COCHLEAR IS A FLUID-FILLED, SPIRAL-SHAPED ORGAN RECEIVED SOUND WAVES DIRECTLY FROM STIRRUP DETECTED BY HAIR CELLS



PRESBYCUSIS

- AGE RELATING HEARING DETERIORATION, SYMMETRICAL, PROGRESSIVE
- NO PREVENTING, NO REVERSING
- ASSOCIATED W/ PROGRESSIVE DEGENERATION OF THE HAIR CELLS AND NEURONES IN THE COCHLEA
- DECLINING ABILITY TO HEAR HIGH FREQ WHICH IMPORTANT FOR SPEECH → DIFFICULTIES IN JOINING CONVERSATION
- MAN > WOMAN, > 65 YO



PRESBYCUSIS

- DEGENERATION → AUDITORY HAIR CELLS, AUDITORY NEURONS, AND STRIAE VASCULARIS
- Schuknecht and Gacek → HISTOLOGY → SENSORY CELL DEG, NEURAL DEG, STRIAL ATROPHY AND COCHLEAR CONDUCTIVE LOSS
- CENTRAL PRESBYCUSIS → ABR EXAMINATION FROM COCHLEA TO INFERIOR COLLICULUS.



IMPACT OF PRESBYCUSIS IN QOL

- SENTENCE IDENTIFICATION → COMMUNICATION DISABILITY → FEELING OF ISOLATION AND DEPRESSION
- SENSORY DEPRIVATION → SOCIAL INTERACTION
- DECREASED INDEPENDENCE



TREATMENT OF PRESBYCUSIS

- HEARING AIDS FOR MODERATELY IMPAIRED
- COCHLEAR IMPLANTATION FOR VERY POOR SPEECH DISCRIMINATION
- ASSISTING LISTENING DEVICES



TINNITUS

- HEARING OF A NOISE IN THE ABSENCE OF ANY EXTERNAL SOUND
- VARIETY CAUSES: CHANGES IN BLOOD FLOW IN THE EAR, DRUG TOXICITY, MUSCULAR SPASM, LOSS OF HAIR CELLS



VESTIBULAR SYSTEM



ETIOLOGY OF DIZZINESS

- VISUAL SYSTEM DISTURBANCE
- PROPRIOCEPTIVE DISORDER
- METABOLIC OR STRUCTURAL LESION OF BRAINSTEM
- LIGHT-HEADEDNESS AND SYNCOPE → CARDIOVASCULAR ETIOLOGY
- MOST COMMON IS BPPV CAUSED BY FALLS, DEPRESSION AND LOW ACTIVITY



DEVELOPMENT IN VESTIBULAR TESTING

- POSTUROGRAPHY →
 - INCREASE IN SWAY VELOCITY



TREATMENT

- PHYSICAL THERAPY

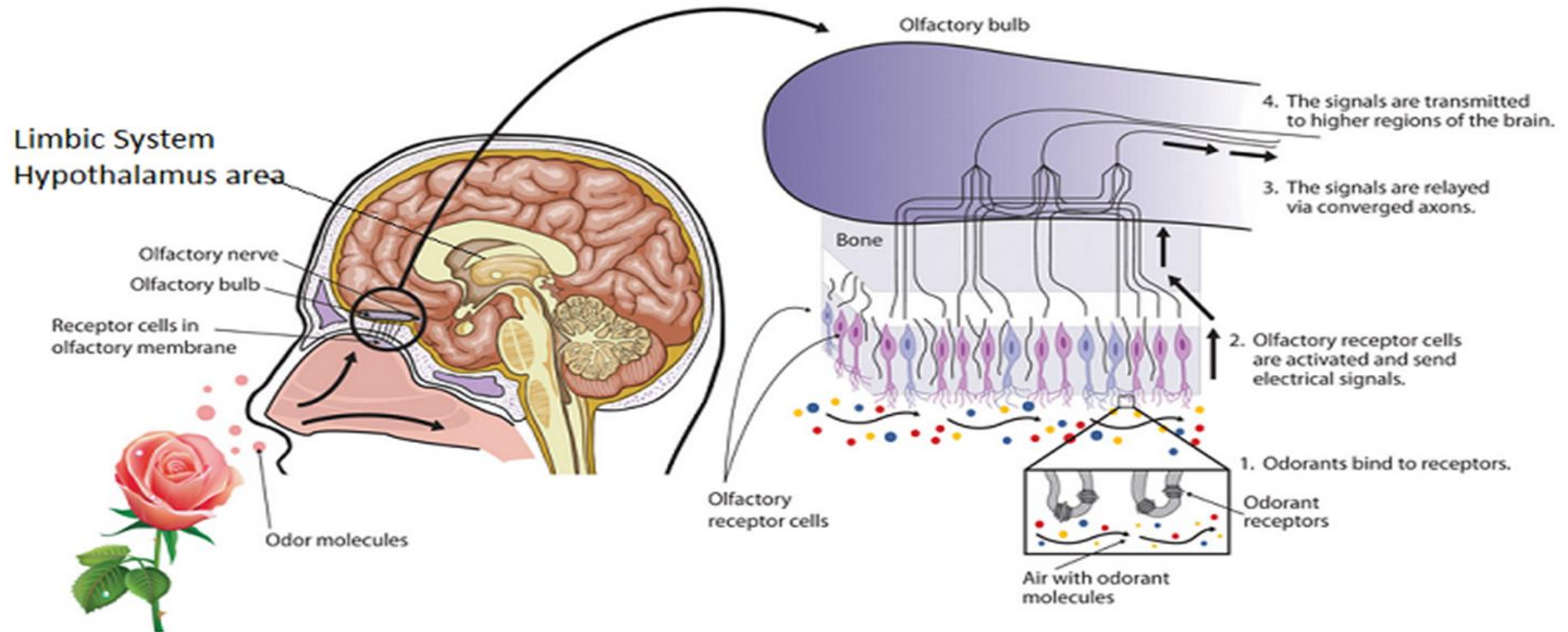


THE NOSE AND SINUSES



OLFACTORY LOSS

- OLFACTORY SENSITIVITY DECLINE → DEGENERATION OF PERIPHERAL AND CENTRAL OLFACTORY PATHWAYS.



TERMINATION

ANOSMIA

HYPOSMIA

DYSOSMIA

- PAROSMIA
- PHANTOSMIA

HYPEROSMIA



PATIENT EVALUATION

History

Sacred seven

Degree

Ageusia

Physical Examination

Anterior Rhinoscopy

Nasal endoscopy

Chemosensory testing

UPSIT

Sniffin stick

Radiological Evaluation

CT-Scan,
MRI

Treatment Counseling

With family



GERIATRIC RHINITIS



**Anatomical
Changes**

**Collagen,
fibrous and
elastin loss**

**Decreasing
nasal airflow →
nasal blockage**

**Physiological
Changes**

**Mucosal
epithelial
atrophy → dry
nose → rhinorea**

**Slower
Mucociliary
clearance**



CLASSIFICATION

Allergic Rhinitis

- Allergic forms of rhinitis are caused by reactions to various allergens that are mediated by IgE. The most common triggers include pollen, mold, dust mites, and pet dander.

Atrophic Rhinitis

- It is a form of rhinitis that is more common in older adults. Reduced blood flow to the mucous lining of the nasal cavity can cause the nasal tissues to shrink and dry out, causing nasal congestion.

Vasomotor Rhinitis

- Symptoms can be triggered by changes in temperature, humidity, and exposure to irritating chemicals, odors, or certain drugs with reactions that are NOT affected by IgE.




DIAGNOSIS



Anamnesis

- Allergic Rhinitis
- Vasomotor Rhinitis
- Atrophic Rhinitis



Physical Examination

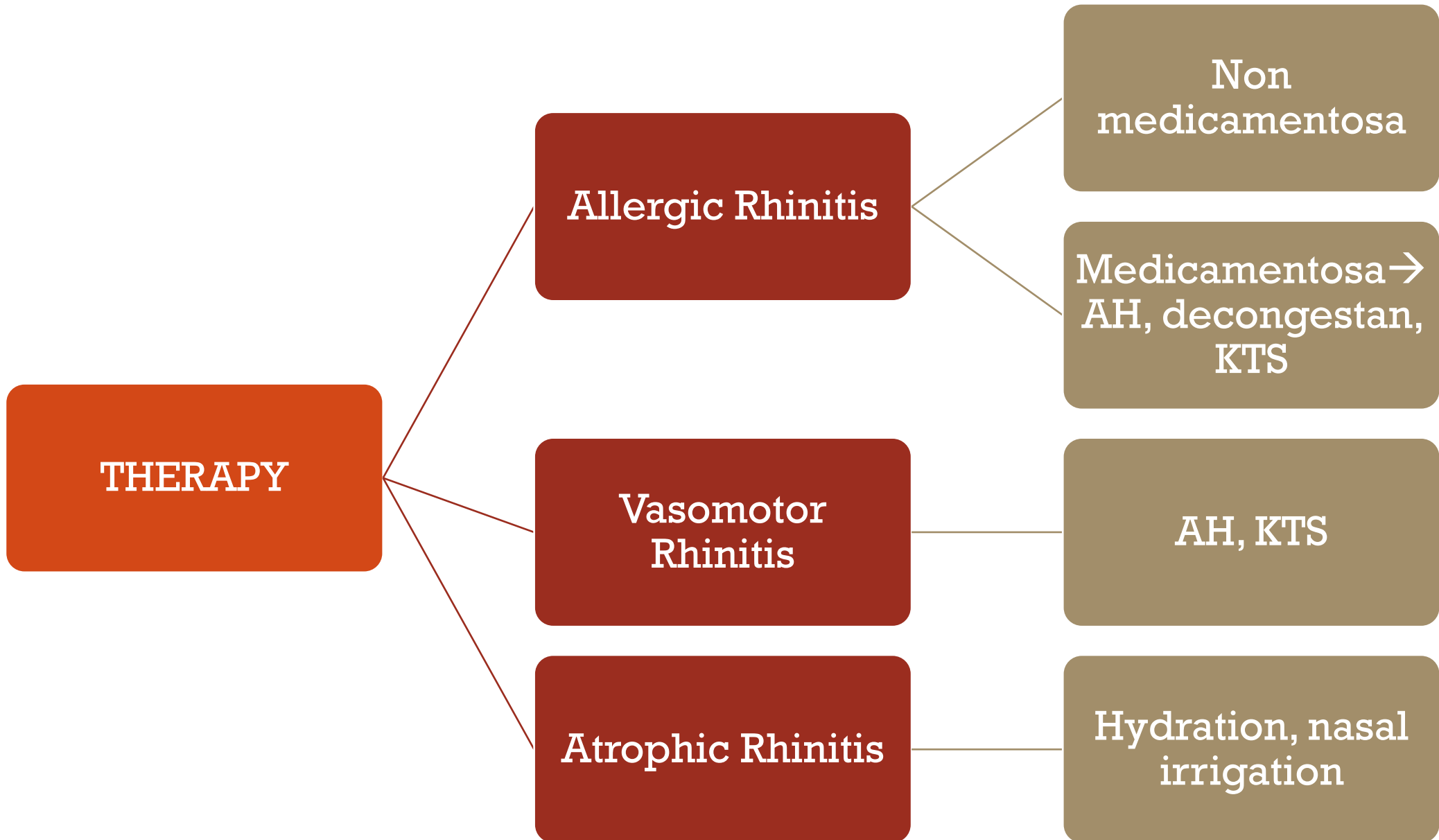
AR → Inferior turbinate, nasal mucosa, secrete



Laboratory finding

- Nasal sitology
- Perifer Eosinofil count
- Total Ig E
- SPT/ SET
- NE



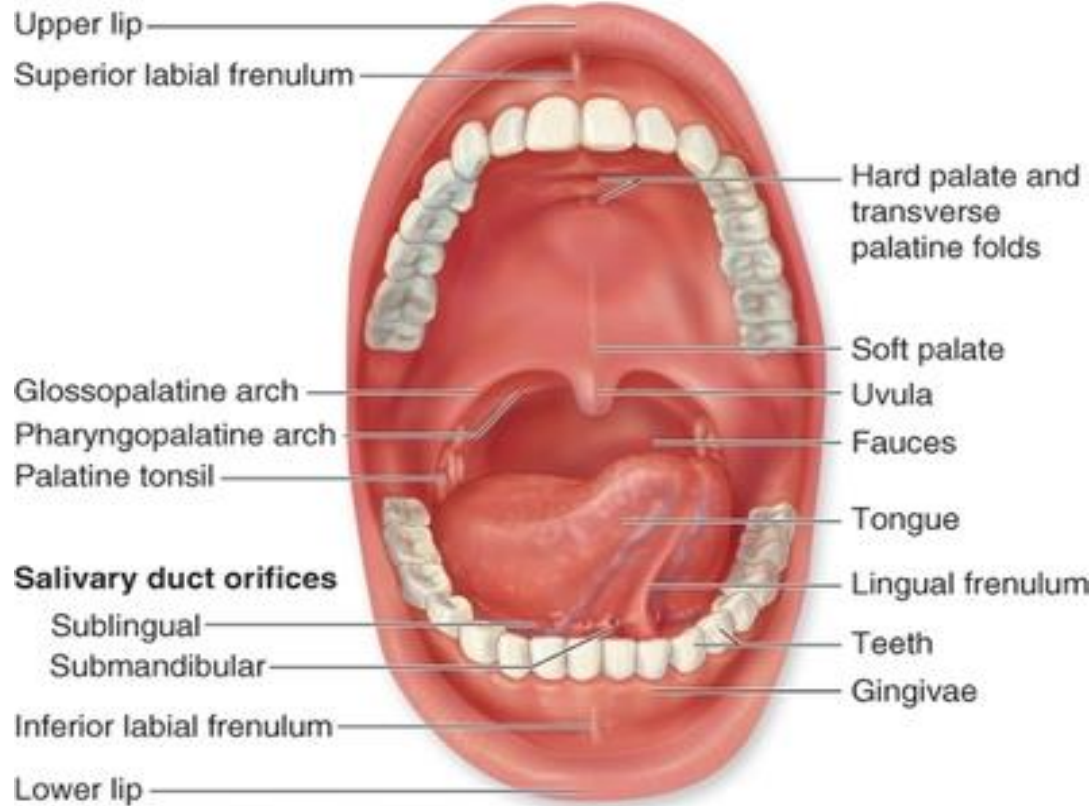


TONGUE/ ORAL CAVITY AND SWALLOWING

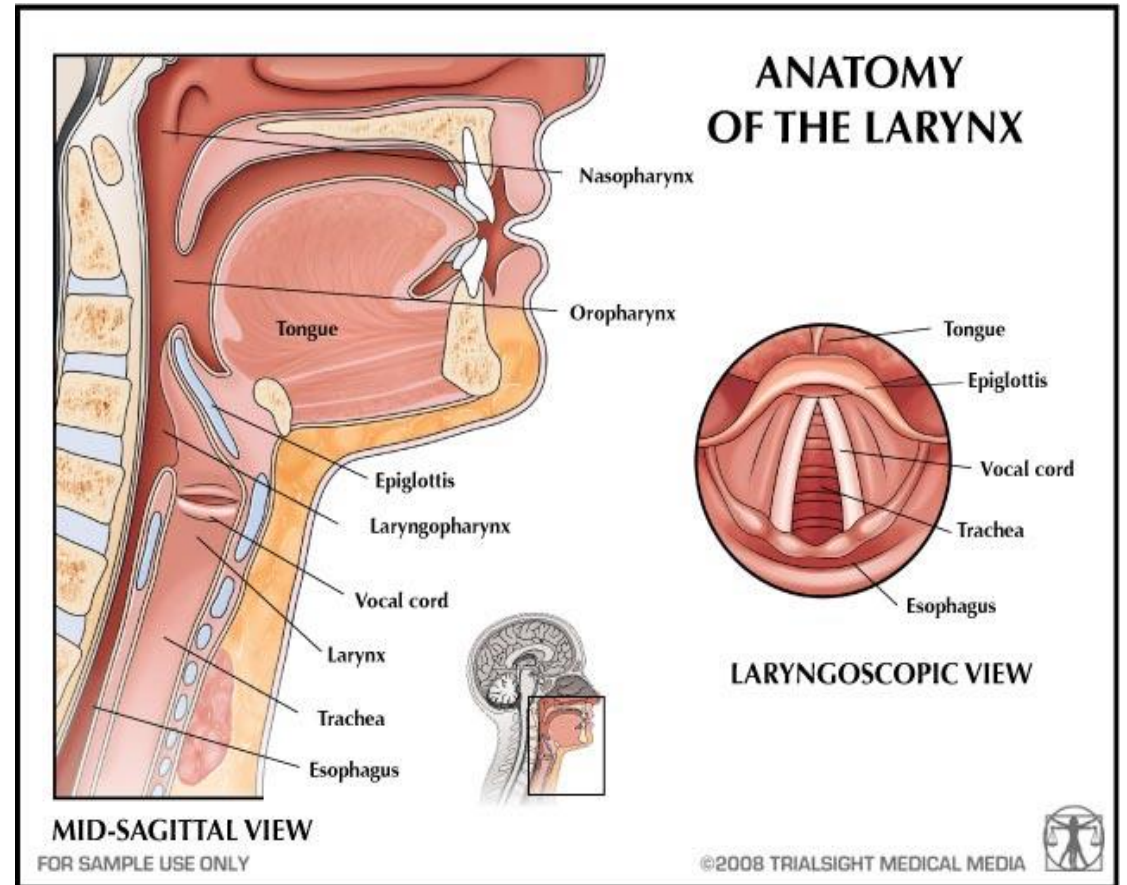


ANATOMY

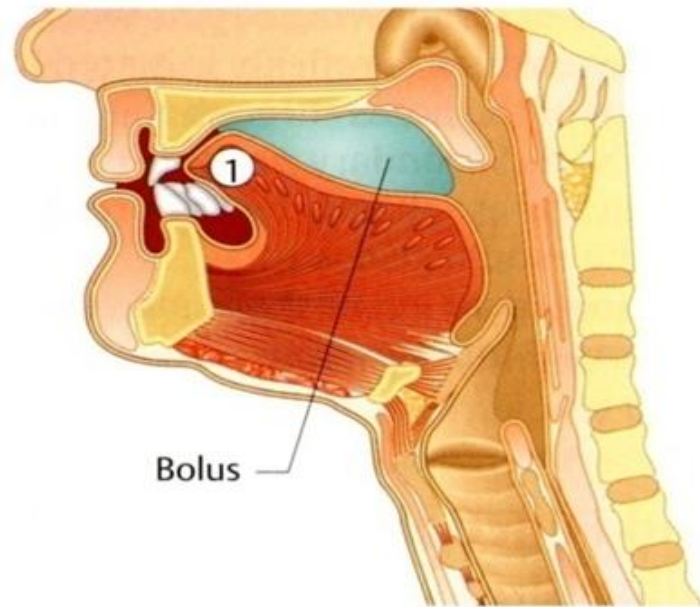
Copyright © The McGraw-Hill Companies, Inc. Permission required for reproduction or display.



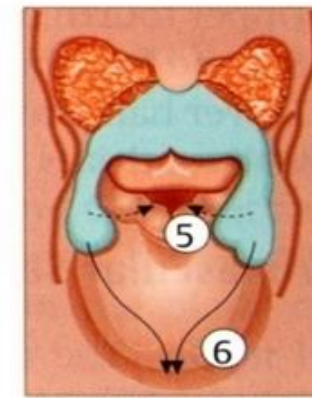
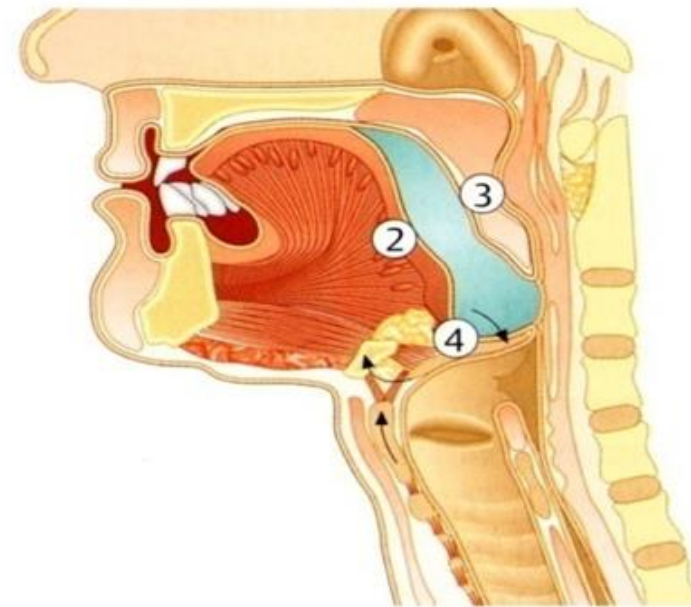
(a)



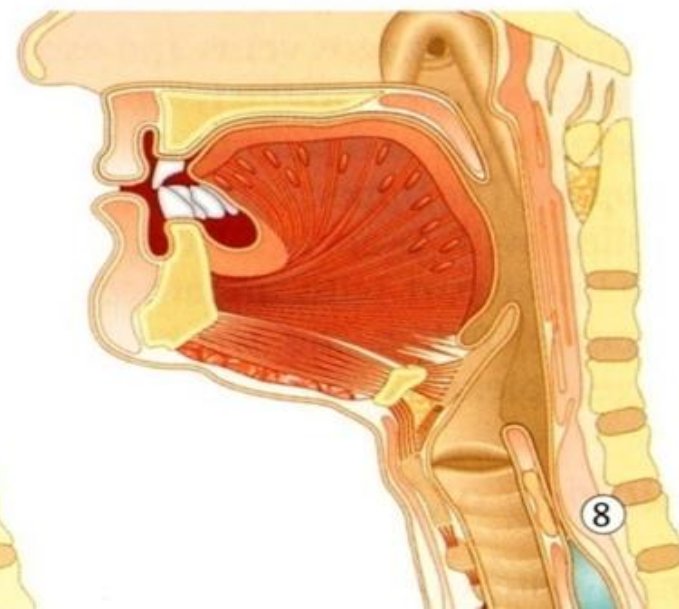
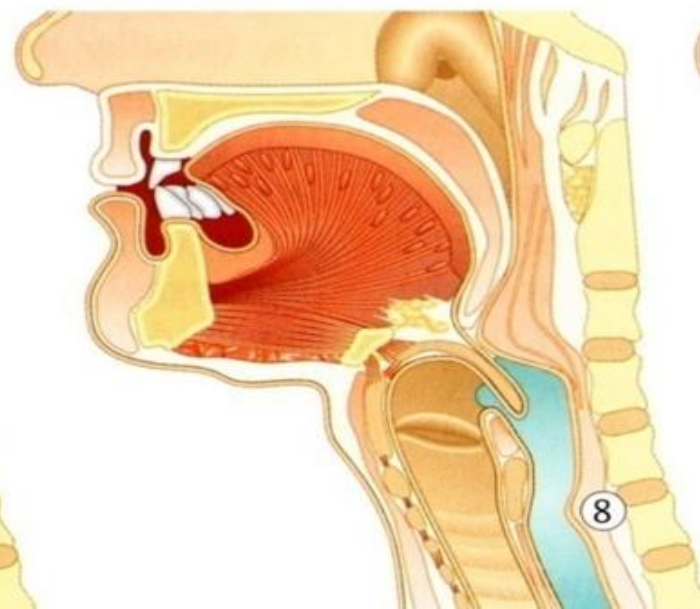
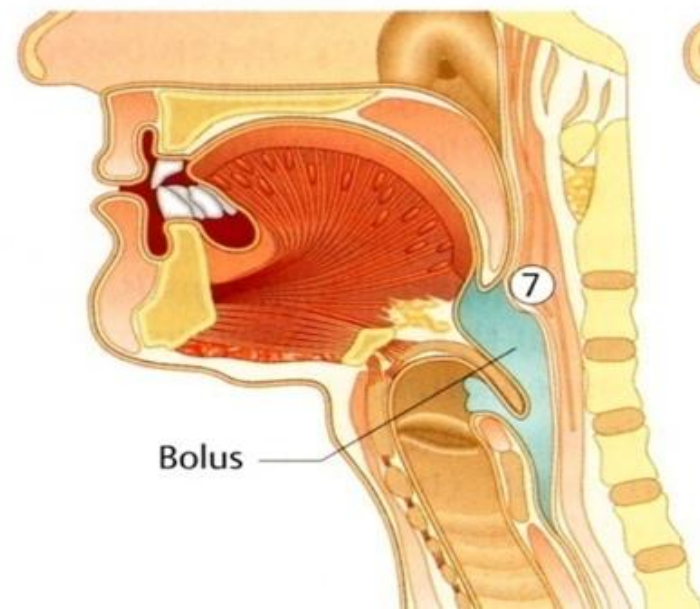
a Oral phase



b Pharyngeal phase



c Esophageal phase



PRESBIPHAGY

ORAL

- Teeth, mastication disturbance, saliva reduction, muscle of the tongue and palate
- Oral dysphagia

Pharyngeal

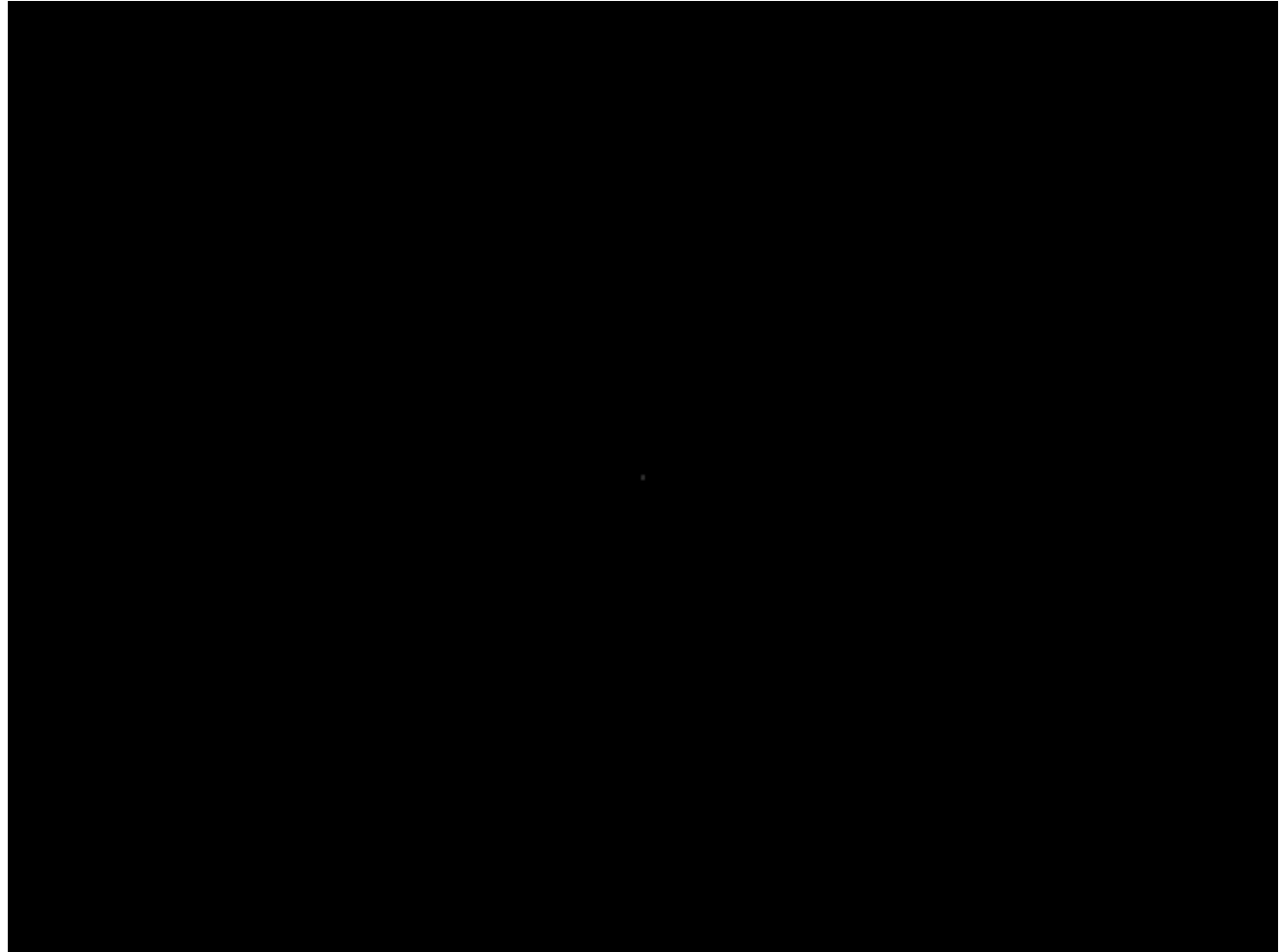
- Larger Pharyngeal space during deglutition
- Movement of the hyoid bone to remove the bolus from the airway and open the Upper Esophageal Sphincter

Esophageal

- Decreased peristaltic response, increased nonperistaltic response, slowed transit time or sphincter relaxation so that reflux can occur
- Altered innervation causes gastrointestinal disorders: dysphagia, gastroesophageal reflux

EXAMINATION

FLEXIBLE
ENDOSCOPIC
EVALUATION
OF
SWALLOWING



THERAPY

Comprehensive → Medic,
psycosocial and functional

Multidisciplinary Approach

Severe dysphagia → might need
hospitalization



LARYNX



VOICE

- VOICE PITCH AND INCREASED VARIABILITY IN PITCH
- FUNDAMENTAL FREQ → INCREASED IN MALE, DECREASED IN FEMALE
- INCREASED SUBGLOTTIC PRESSURE →
- HISTOLOGICAL CHANGES →
 - INCREASED IN FATTY DEG OF LARYNX MUSCLE
 - DECREASE IN FIBER DENSITY AND ELASTIN FIBER IN VOCAL FOLDS
 - INCREASING OF THE OSSIFICATION OF THE LARYNX
 - LOSS OF SULFATED GLYCOSAMINOGLYCANS IN THE VOCAL LIGAMENT TENDON → STIFFENING



PRESBILARYNGES

- DYSPHONIA → VOCAL FOLD BOWING AND BREATHINESS
- SPEECH THERAPY
- PHONOSURGERY



الحمد لله

ALHAMDULILLAH

