UNIT-4
Assessment of Nose, Mouth, & Pharynx.

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Objectives

• By the end of this unit, learners will be able to:
• Review the anatomy & physiology
• Describe the component of health history that should be elicited during the assessment of nose, mouth & pharynx.
• Identify the structural landmarks of the nose, mouth & pharynx.
• Describe specific assessment to be made during the physical examination of the above systems.
• Practice assessment skills of nose, mouth & pharynx.
• Documents findings.
Structure and function of Nose

• Nose and paranasal sinuses are first segment of the respiratory system

• Responsible for receiving, filtering, warming, and moistening inhaled air

• Sensory organ for smell, because cranial nerve I (Olfactory) located in it.

• Nose consists of two portions.
  – External and Internal
• **Nose anatomy**
  – *Bridge* is the superior part (nasal bone)
  – Tip is the anterior part of nose (cartilage)
  – Hair – Filter coarse matter from entering nasal cavity
  – Ciliated mucous membrane filters dust and bacteria. The rich blood supply warms and humidifies the air
  – Turbinates (conchae) increase the surface area of the nasal cavity so that more air is filtered, warmed, and humidified
External parts

• Covered with Skin, and composed of bone and cartilage & is lined with mucous membrane.
• Bridge
• Tip
• Nares
• Vestibule -nares widen in to vestibule
• Columella divides the nares
• Ala –lateral outside wing of the nose bilaterally
• Upper 1/3 nose is bone; rest is cartilage
Internal parts

• Nasal cavity, extends back over the roof of the mouth

• Nasal hair, ciliated mucous membrane – red due to ↑ bld. supply

• Septum-divides cavity into 2 passages
  – Kiesselbach’s area, most common site of nasal bleeding.
Internal

- Superior, middle, inferior turbinates - 3 parallel bony projections on lateral walls of each cavity

- Meatus - cleft underlying each turbinate. The sinuses drain into the middle, tears from the nasolacrimal duct drain into the inferior
Sinuses

- Paranasal sinuses - air-filled pockets in the cranium
- Purpose
  - ↓ wt. of the skull
  - Serve as resonators for sound
  - Provide mucous for the nasal cavity

- Primary site of infection because they can easily become blocked & develop inflammation/sinusitis.
  - Frontal
  - Maxillary
  - Ethmoid
  - Sphenoid

Accessible during examination

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Paranasal Sinuses

Frontal Sinus

Ethmoid Sinuses

Maxillary Sinus

Sphenoid Sinus

Frontal sinuses

Ethmoid sinuses

Maxillary sinuses

Frontal sinus

Ethmoid sinuses

Sphenoid sinus

Frontal sinus

Ethmoid sinuses

Sphenoid sinus

Maxillary sinus

Maxillary sinus

Maxillary sinus

ADULT

CHILD

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Assessing the Sinuses

• Palpation
  – Using thumbs, palpate the frontal and maxillary sinuses
    • Tenderness in persons with sinusitis or allergies

• Transillumination
  – Using a pen light in a darkened room, place light under the superior orbital ridge, inferior to the frontal sinuses
    • Clear sinuses should transilluminate
Inspection of Nose

Internal (Nasal Cavity):

• Mucosa:
  – Color
  – Condition swelling, exudates, bleed

• Septum:
  – Deviation, Perforation exudates.

• Turbinate:
  – Color, Swelling, Discharge, Polyp.
Subjective data Nose

• Discharge
• Frequent colds
• Sinus pain
• Trauma
• Epistaxis
• Allergies
• Altered smell
Mouth

- Mouth and throat (pharynx), first segment of the digestive system

- Responsible for receiving food (ingestion), taste, preparing food for digestion, & aiding in speech.

- Airway for the respiratory system

- ORAL CAVITY
  - Lips, cheeks
  - Palate
    1. Hard
    2. Soft
    3. Uvula – hangs down from the soft palate
Mouth

• Cheeks- side walls of cavity

• Tongue
  1. Papillae- rough, bumpy elevations on dorsal
  2. Frenulum
  3. Taste buds

• Teeth – 32 permanent
Mouth

• Salivary glands
  1. Parotid - largest of the glands, located in the cheeks, front of the ear. Stenson’s duct opens in buccal mucosa
  2. Submandibular - walnut size, beneath the mandible at the angle of the jaw. Wharton’s duct either side of the frenulum
  3. Sublingual – smallest, almond shape, under tongue
Mouth & Pharynx

• Use gloves, tongue depressor, light
• Position & Equipments:
• Inspection & Palpation:
• LIPS:
  – Color
  – Shape, Symmetry
  – Condition, moist, cracks, edema.
  – Lesions. Lumps, ulcers or fissures (Herpes, Chancre, Cheilosis/ Angular stomatitis, Chelitis, Mucocele, Carcinoma)
• Throat
  – Oropharynx
  – Tonsils
  – Nasopharynx
Equipment for examination of Nose, Mouth and Throat

- Otoscope with short, wide-tipped nasal speculum
- Pen light
- Two tongue blades
- Cotton gauze pad
- Gloves
Inspection and palpation of nose

• **External nose**
  – Tenderness, discharge, trauma, bleeding, lesions, masses, swelling, asymmetry
  – Test patency of nostril

• **Inspection of internal nose**
  – Speculum or otoscope with nasal speculum
  – Nasal cavity
    Nasal septum
    Turbinates
  – Sinus areas - Palpate
    Frontal and maxillary sinuses
    Transillumination
• Normal findings
  – Located in midline of face
  – No swelling, bleeding, lesions, or masses
  – Both nostrils patent
  – Septum midline
  – Nasal mucosa is pink or dull red
• Abnormal findings
  – Broken, misshapen, swollen nose
  – Occluded nasal passages
  – Septum is deviated
  – Nasal mucosa is red and swollen
  – Purulent drainage
Assessment of the Sinuses

- Inspection *(Sinus Transillumination)*
- Palpation and percussion
- Normal findings
  - No discomfort during palpation or percussion
  - Resonance heard on percussion
Assessment of the Mouth

Inspect Mouth

– Lips
– Teeth and gums
– Tongue
– U-shaped areas under the tongue
– Buccal mucosa
– Uvula
– Hard and soft palate
Mouth inspection and palpation

• **LIPS** inspect for color, moisture, cracking, or lesions. Palpate lips, and face for mass and tenderness.

• **TEETH/gums** note any diseased absent, loose teeth gums should be pink, check for swelling, retraction of gum margins spongy, bleeding discolored gums.

• **TONGUE** color pink and even dorsal side roughened, ventral smooth, glistening, shows veins Inspect under tongue for nodules, lesions, ulcerations.
Cont…

• Buccal mucosa looks pink, smooth, moist, dark skinned people may have patchy hyperpigmentation.

• Uvula fleshy pendant midline uvula and soft palate rise with “ahhh” sound. anterior hard palate is white with irregular transverse rugae the posterior soft palate is pinker smooth, and upwardly movable.
• Normal findings of Mouth
  – Breath is fresh
  – Pink, moist lips
  – Tongue midline, symmetrical, with adequate movement
  – No pockets between gums and teeth
  – No bleeding
  – Smooth, white teeth; proper alignment, no dental caries
• Abnormal findings of Mouth
  – Lesions, growths
  – Dry, cracked lips
  – Vesicles or blisters
  – Red, tender, inflamed tongue, gums, buccal mucosa
  – Thrush
  – Coating on tongue
  – Red, tender, swollen gingiva
  – Bleeding gums
Inspection of the Throat

• Position, size, color, and general appearance of tonsils and uvula
• Gag reflex
• Color of oropharynx
• Presence of swelling, exudate, lesions
Assessment of tonsils

- Enlarged tonsils are graded

  • Grade 1 – wnl
  • Grade 2 – tonsils b/w pillars and uvula
  • Grade 3 – tonsils touching uvula
  • Grade 4 – tonsils touching each other (kissing tonsils)
References
