Normal and Abnormal Findings in Rhinoscopy

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No Disclosures

Learning Objectives

• Maximize diagnostic yield by understanding best technique for Rhinoscopy
• Identify normal anatomy and variants of normal anatomy visualized in Rhinoscopy
• Identify abnormal findings visualized in Rhinoscopy
Anterior rhinoscopy

Nasopharynx
Mucosa Intact

Ehab Zayyan MD, PhD

Anterior Rhinoscopy

Non-Dominant Hand. Index Finger on Nasal Tip. Keep open until fully removed to avoid pulling hairs. Headlight illumination

Nasal Septum: deviation, perforation, stigmata of recent or active bleeding

Inferior Turbinates: color of mucosa, congestion, secretions

Internal Nasal Valve: Septum, floor, caudal border of upper lateral cartilage, anterior head of inferior turbinate, narrowed part of nasal airway

Middle Turbinates
Mucosa
Flexible Nasal Endoscopy: Technique

- Topical decongestant/anesthetic
- Two hands required to drive scope
- Thumb drive or index finger drive
- May add lubricant to leading edge of scope
- Improved image quality with digital flexible endoscopes
- Generally smaller diameter and well tolerated even in tight areas
- Flexible end allows wide range of visualization
- Can easily pass into NP and visualize pharynx and larynx
- Poor tool for obtaining culture or biopsy
Rigid Nasal Endoscopy

- One hand to drive scope
- Second hand available for:
  1. culture
  2. debridement
  3. epistaxis
  4. biopsy

- Superior illumination & image quality
- Identify pathology in 40% of patients with normal anterior rhinoscopy
- Generally 0, 30, 45, 70 degree angles
- 2.7mm and 4.0mm
- Uncomfortable if contacts septum, middle turbinate and sphenoethmoidal recess

Nasal Endoscopy: Indications

Sinonasal symptoms (congestion, drainage, pain, anosmia)
Response to Medical Tx
Unilateral dz or nasal mass
Unilateral middle ear effusion in adult - Nasopharynx and ET orifice
Complicated sinusitis (orbit, CNS, skin)
Culture, Biopsy, Epistaxis, Removal FB
Debridement post FESS and surveillance
CSF Rhinorrhea

Nasal Endoscopy: Relative Contraindications

Bleeding disorder, anticoagulants
Anxious patient
Nasal Endoscopy

- 3 Passes of Endoscope
- Low - Nasal floor to Nasopharynx
- Mid - Middle turbinate/M. Meatus to SER
- High - Cribiform fossa

Diagnostic Nasal Endoscopy

Insert Nasal Endoscopy with view of Inferior, Middle and Superior Meatus - discuss what drains in each
Lund-Kennedy Endoscopic Scoring System

- Quantifies bilateral sinonasal pathology (0-20 score)
- Initial evaluation, Pre-op, Post-op
- High interrater agreement

A. Polyps
B. Discharge
C. Mucosal Edema
D. Scarring or Adhesions
E. Crusting

Lund-Kennedy Scoring: Polyps

- 0 - No polyps (absent)
- 1 - Polyp in Middle Meatus
- 2 - Polyp Beyond Middle Meatus
Lund-Kennedy Scoring: Discharge

0 - No discharge
1 - Thin discharge
2 - Thick or purulent discharge

Lund-Kennedy: Mucosal Edema

Sinusitis

Normal

Inflammation
Obstruction

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Lund-Kennedy:
Scarring

0 - No scarring
1 - Mild scarring
2 - Severe scarring

No edema
Mild edema
Severe edema

No scarring
Mild scarring
Severe scarring
Lund-Kennedy: Crusting

0 - No crusting
1 - Mild crusting
2 - Severe crusting

Nasal Septum
Sinonasal Malignancy

Tumors of the Cribriform Fossa: Meningioma

Tumors of the Cribriform Fossa: Esthesioneuroblastoma
Adenoid Hypertrophy

Nasopharyngeal Cysts

Juvenile Nasopharyngeal Angiofibroma (JNA)
Nasopharyngeal Carcinoma

Unilateral Serous OM

Questions?