Common Voice Disorders

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Hoarseness

- Changes to the quality of the voice is dysphonia
  - Usually a vocal cord problem
- Changes in the ability to articulate is considered dysarthria
  - Central process or difficulty with tongue motion
- Memory impairment inhibiting voice production is aphasia
Clinical Anatomy

- Supraglottic
- Glottic
- Subglottic

Normal Voice Production

- Airflow produces a wave across the surface of the true folds
- The frequency of vibration is the pitch
- The volume is dependent on the subglottic pressure
Polyps

- Acquired lesion due to trauma/injury
- Several types based on:
  - Shape
    - Sessile
    - Pedunculated
  - Color/content
    - Hemorrhagic
    - Angiomatous
    - Hyaline
**Sessile Polyp**

- Medial edge swelling
- Treat with voice rest and therapy
- Surgery if no improvement

**Pedunculated Polyp**

- Less responsive to therapy and rest
Polyp Surgery

- Conventional
  - General anesthesia – knife or laser
- Fiberoptic
  - Awake with local anesthesia – laser

Vocal Misuse/Trauma

- Causes injury at the junction of the anterior and middle third of the true fold
- Produces a hemorrhagic lesion
### Nodules

- Due to repeated voice misuse
- Bilateral and symmetric
- Primary treatment is therapy

### Cyst

- Similar to a polyp
- Do not respond to therapy
- Need to remove to improve the voice
### Cancer

- More common in smokers
- Reflux may be a factor
- Anyone with hoarseness over 2 weeks needs a laryngeal exam

### Cancer

- Warning signs
  - Progressive dysphonia (can be mild)
  - Otalgia with normal exam
  - Do not need: throat pain or swallowing complaints
### Vocal cord paralysis

- **Etiologies**
  - Iatrogenic (60%)
  - Idiopathic (20%)
  - Neoplastic (10%)
  - Traumatic (5%)
  - Infectious (5%)

- **Testing**
  - Imaging course of vagus nerve

### Paralysis/Paresis

- **Treatment options**
- **Therapy**
- **Injection laryngoplasty**
- **Medialization laryngoplasty**
### Neurologic Disorders

- Spasmodic dysphonia
- Essential tremor
- Treatment = Botox

### Papilloma

- HPV (type 6 and 11)
- Primary treatment is surgical
- Cancer risk
Candidiasis

- Common with steroid inhalers
  - 25% of inhaler users develop hoarseness
- Following oral steroids or antibiotic use
- Can have without oral involvement

Conclusion

- Any patient with voice changes over 2 weeks should have a laryngeal exam
- Acquired voice disorders (polyps and nodules) need therapy as part of treatment
- Multiple therapeutic options available and most voice disorders can be treated with good results
- More procedures are performed without general anesthesia
Common Voice Disorders

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Common Voice Pathologies

• Vocal fold lesions:
  – Polyps, nodules, cysts
• Vocal fold neoplasms:
  – Papilloma, leukoplakia, carcinoma
• Inflammatory conditions:
  – Laryngopharyngeal reflux, sicca, granuloma, edema
• Neurogenic conditions:
  – Vocal fold paralysis/paresis, presbylarynx
## Assessment of the Larynx

- Listen
- Indirect mirror laryngoscopy
- Flexible/rigid laryngoscopy
- Direct microlaryngoscopy

## Videolaryngostroboscopy

![Image of larynx](image-url)
High Speed Videolaryngoscopy

Inflammatory Conditions of the Larynx

- Laryngopharyngeal reflux
- Vocal fold granuloma
- Polypoid corditis (Reinke’s edema)
- Laryngeal sicca
Laryngopharyngeal Reflux

- Different clinical entity from Gastroesophageal Reflux
- Symptoms of globus, throat pain, throat clearing, dry cough, sticky pharyngeal mucous, dysphonia, dysphagia, postnasal drainage
- Heartburn and indigestion present in 40%

Diagnosis of LPR

- History
- Laryngoscopy
- EGD/Transnasal awake esophagoscopy
- Barium esophagram
- pH probe/impedence testing
LPR Findings on Laryngoscopy

- Vocal fold edema/erythema
- Pseudosulcus
- Postcricoid edema
- Interarytenoid mucosal thickening (pachydermia)
- Dry mucous in piriform sinuses/larynx

Laryngopharyngeal Reflux
Laryngopharyngeal Reflux

Treatment of LPR

- H2 blockers
- Proton Pump Inhibitors
- Mucosal protectants: Carafate
- Avoidance of late night meals
- Daily hydration
- Dietary modification
- Surgical interventions
Vocal Fold Granuloma

- Etiologies:
  - Intubation, Laryngopharyngeal reflux, throat clearing and cough
- Exam findings:
  - Fleshy mass at vocal process
- Symptoms:
  - Dysphonia, globus, throat pain, dyspnea
Vocal Fold Granuloma

- Treatment:
  - Proton Pump Inhibitor
  - Cough suppressant
  - Vocal rest
  - Surgery:
    - Laryngoscopy with excision
    - Awake LASER treatment
    - Steroid injection
# Polypoid Corditis

- **Edema of superficial lamina propria**
  - Reinke’s edema

- **Causes:**
  - Tobacco abuse
  - Inhaled medication effects
  - Inhalant injury
  - Metabolic disorders: Hypothyroidism
  - Untreated Obstructive Sleep Apnea
Polypoid Corditis

![Image of Polypoid Corditis]

Polypoid Corditis

![Image of Polypoid Corditis]
**Polypoid Corditis**

- Etiology
  - Tobacco abuse, Medication Drying Side Effects, Inhaled Steroid use, Dehydration, Autoimmune

**Laryngeal Sicca**

- Etiology
  - Tobacco abuse, Medication Drying Side Effects, Inhaled Steroid use, Dehydration, Autoimmune

- Laryngeal Findings
  - Thick/sticky secretions, laryngeal crusting, fungal overgrowth, vocal fold edema/erythema
Laryngeal Sicca

Treatment:
- Improving hydration
- Tobacco cessation
- Minimizing medication use
- Sialogogues: Evoxac or Salagen
- Diflucan
- Laryngeal debridement and culture
Paradoxical Vocal Fold Dysfunction

• Primarily a breathing disorder
  – Vocal fold adduction during respiration
  – Dyspnea at rest, exertion, exposure to chemicals/perfumes
• Other symptoms
  – Cough, dysphonia, globus, throat pain
  – Stridor/wheezing
  – Laryngeal tightness
### Paradoxical Vocal Fold Dysfunction

**Treatment:**
- Rule out other respiratory disorders
- Treat concurrent laryngeal irritants:
  - Allergy, reflux, postnasal drainage, sicca
- Laryngeal control therapy
- Manage concurrent psychosocial stressors
- Avoidance of triggers
- Biofeedback exercises

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**Biofeedback Cues**

**Kinesthetic**
Low abdominal breathing can be felt by placing a book on the abdomen while laying down and breathing or placing your hands on your abdomen while breathing.

**Visual**
Low abdominal breathing can be visualized by looking at your hands or looking at the book placed on the abdomen.