PEDiatric esophageal disease

Jennifer Setlur, MD
Outline

• Defining reflux disease
• Manifestations
• Diagnosis
• Treatment
• Eosinophilic esophagitis
Definitions

• GER vs. GERD

• Laryngopharyngeal reflux vs. Extra-esophageal reflux disease

• Acidic vs. non-acidic reflux
Symptoms

• Infants
  • Burping, emesis, back arching

• More worrisome
  • FTT, anemia, hematemesis, pneumonias

• Older children
  • Pain, discomfort, nausea
Airway Problems

• Laryngomalacia
  • GERD role unclear
  • More negative intrathoracic pressures
  • Mucosal changes
Airway Problems

• Vocal cord nodules
  • Poorly studied
  • Few have true GERD

• Chronic laryngitis
  • Well-defined association
  • Mucosal edema
Airway Problems

- Subglottic stenosis
- Chronic cough
  - Worse when supine
- Lower airway disease
  - Asthma
  - Inflammation
- ALTEs
Diagnosis

• History
• Empiric therapy
• Testing for refractory cases
• Secure airway first
Diagnosis

• Barium swallow
• Upper GI series
• pH probe
• Impedance monitoring
• Endoscopy
pH Probe

- Delayed reflux
- Gold standard
- Dual-channel, 24 hours
- False negative rate 20%
- Short episodes of reflux
Bravo

• 24-96 hours
• Placed endoscopically
• Normal activities
• No dual probe
Impedance Testing

• 6 channel probe
• Transnasal
• Reflux vs. swallowing
• Non-acid reflux
• Lack of standardization
Difficult to Diagnose

• Direct laryngoscopy and bronchoscopy
  • Mucosal edema of larynx and hypopharynx
  • Cobblestoning

• Flexible bronchoscopy
  • Dynamic changes
  • Lipid-laden macrophages

• EGD
  • Mucosal ulceration
  • Biopsies
Treatment

• Lifestyle changes
  • Diet modification
  • Positioning
  • Weight loss if obese

• Medical therapy
  • PPIs (adult data): 3-6 months
  • Non-acid reflux
  • Motility agents
Treatment

• Surgical intervention
  • Failed medical management
  • Fundoplication

• Non-acid reflux
  • Effect unclear
Eosinophilic Esophagitis

- GERD symptoms no response to treatment
- 3 criteria
  - Symptoms of esophageal dysfunction
  - Esophageal biopsy >15 eos per HPF
  - Exclusion of other causes
EoE

• 1:10,000 per year
• M>F
• 8 years

• Heartburn, regurgitation
• Food impaction, emesis, pain
• Food refusal
• EGD findings
  • Trachealization
  • Linear furrows
  • White plaques
  • Strictures

• pH probe, imaging, impedance
  • Rule out other upper GI problems
Treatment

• No EoE specific medications
  • Off-label use
  • Normalize mucosa

• Adult studies

• Chronic condition

• Diet modification
  • Food allergy testing
Conclusions

• Unified upper aerodigestive tract
• Difficult to diagnose and treat
• Airway symptoms
• Team approach