The Basic Esophageal Endoscopic Exam

Felice Schnoll-Sussman  MD FACG AGAF
Associate Clinical Professor of Medicine
Jay Monahan Center, Director
Weill Cornell Medical Center
What is the most important part of performing an EGD?

1. Take your time
2. Look twice (or 3 or 4 times) and biopsy once
3. Your first biopsy is the most important (everything after is affected by blood)
4. Remember: The concept of a ‘high quality’ exam is not reserved for the colon
Definition of esophageal landmarks by EGD is an important issue in pts with GERD and BE

Forward view
1. Identification of esophagitis
2. Identification and biopsy of columnar mucosa looking for BE
3. Biopsy and dilation of any stenosis

Retroflexed view (cardia)
1. Presence and size of hernia
2. Estimate of competence of the LES
The EGJ

There are 4 anatomical-endoscopic benchmarks to be included in a complete examination

1. Proximal margin of the LES (if it is demonstrable)
2. Squamocolumnar mucosal junction
3. The level of disappearance of the linear mucosal palisade veins
4. Proximal margin of the gastric folds

The Los Angeles Classification

- Provides the best standardized description of reflux
- Defines erosions as indicative markers of esophagitis
- 4 grades of erosive esophagitis depending upon the number and extent of breaks in esophageal mucosa (Grade A-D)
Los Angeles System of Grading Esophagitis

What are the landmarks we can use in endoscopic assessment of a HH?

- Difficult to standardize the measurement of a small sliding HH, ≤ 2cm
- Best approach is to assess EGJ from retroflexed position, look for:
  - Hiatal integrity
  - Axial displacement of SCJ

Hill.Gastrointestinal Endosc. 44:541-547
4 Hiatal Hernias
Hiatal Hernia Recognition

• Grade I: Ridge of muscular tissue closely approximated to shaft of retroflexed endoscope
• Grade II: Ridge less defined; slight oral displacement of SCJ
• Grade III: Ridge barely present; incomplete luminal closure around endoscope
• Grade IV: No muscular ridge; EGJ stays open all the time; Squamous epithelium of distal esophagus seen in retroflexion
Recognition of Barrett’s

- Initial step...accurate endoscopic recognition of columnar lined esophagus
- Then recognize anatomic landmarks
- Followed by histologic sampling of columnar-lined epithelium
The ZAP (Z-Line appearance)

- Strict definition of normal-appearing Z-line as sharp and circular or wave-line due to mucosal folds
- No narrow linear extensions (tongues) or islands which before had been considered normal

Is this Barrett’s?
Is this Barrett’s
Is this Barrett’s?
Identification of Barrett’s

• Identification of gastric folds likely better because their presence is:
  – Independent of BE
  – Independent of concomitant HH
  – Independent of changes in gastric mucosa

**Palisade vessels are also not always visible using standard endoscopy**
Prague C&M Classification

- Most reliable and validated classification of Barrett’s
  - $C =$ length of esophagus lined circumferentially
  - $M =$ maximal length of esophagus involved at any point
Prague Classification
Biopsy Protocol

• Four quadrant biopsy every 2 cm of Barrett’s mucosa
• Samples from any visible abnormalities
• Biopsies from each segment should be submitted in separate containers
• Erosive esophagitis should be healed before biopsy to increase yield and avoid missing short segments of columnar lining
Is this a nodule in Barrett’s?
Endomicroscopy and histology

- Single colonic crypt
- Goblet cell
- Epithelial cell
- Crypt lumen
intestinal metaplasia

adenocarcinoma

high grade dysplasia
If you're doing your best, you won't have time to worry about failure.

thingsweforget.blogspot.com