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Eosinophilic Esophagitis

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Gwen Cassidy, MSN, APN

- No financial relationships to disclose.
Eosinophilic Esophagitis

- Eosinophils building up in the lining of the esophagus
- Likely caused by allergy to food
- Seen more frequently in atopic individuals
- Defined histologically as >15 eosinophils per hpf on EGD biopsy
- Main clinical manifestation is dysphagia
Case Study #1

- 62-year-old man with 1-year history of dysphagia for solid food, chest pain, and sensation of food impaction that resolves after ingestion of fluids. Symptoms have worsened over the past 6 months. His PCP prescribed pantoprazole 40 mg/day for 3 months with no symptom relief. What is your next step in evaluating this patient? What are the key disorders in your differential diagnosis?
Dysphagia Workup

- Timed barium esophagram
- Endoscopy
- FLIP
- Manometry
Differential Diagnosis

- Benign stricture
- Achalasia
- Other motility disorders
- EOE
- Esophagitis
- Web and rings
- Esophageal CA
Results of Tests/Labs
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- EGD revealed stricture, dilated to 15 mm
- No esophagitis found
- Random bx taken throughout esophagus
- EREFS: 10001
Endoscopic Reference Score – EREFS

Major Criteria

**Edema** (loss vascular markings)
- Grade 0: Distinct vascularity
- Grade 1: Decreased
- Grade 2: Absent

**Rings** (trachealization)
- Grade 0: None
- Grade 1: Mild (ridges)
- Grade 2: Moderate (distinct rings)
- Grade 3: Severe (not pass scope)

**Exudate** (white plaques)
- Grade 0: None
- Grade 1: Mild (<10% surface area)
- Grade 2: Severe (>10% surface area)

**Furrows** (vertical lines)
- Grade 0: None
- Grade 1: Mild
- Grade 2: Severe (depth)

**Stricture**
- Grade 0: Absent
- Grade 1: Present
Results of Tests/Labs

• Path: No pathologic tissue found

Diagnosis??
PPI Responsive EOE
Diagnosis: PPI Responsive EOE

- Similar clinical and histological findings to EOE
  - >15 eosinophils per high powered field
  - Generally presents as dysphagia or food impaction
    - Can also present as CP, odynophagia, GERD-like sx, slow eater

- Complete remission with Proton Pump Inhibitor

- Approx 1/3 of patients respond to PPI treatment
OR?
Benign Peptic Stricture?
Diagnosis: Benign Peptic Stricture

• Narrowing of the esophagus
• 2/2 acid or other irritant damaging the lining of esophagus
• Leads to inflammation and stricture
Are We Able to Differentiate?

Do We Need to?
GERD Component of EOE

• Both GERD and EOE can cause eosinophilia

• True allergy VS GERD component
  – Acid itself causing eos
  – Acid weakening esophageal wall to allow for worsening allergy
Further Workup

• Endoscopy OFF PPI medications could definitively rule in or out PPI-REE

• Could also do pH testing if normal
  – Either impedance or probe
  – Could be on or off medication
Treatment Options

• Continue pantoprazole 40 mg 30-60 minutes before a meal
  – Omeprazole 40 mg qd, lansoprazole 30 mg pd, esomeprazole 40 mg qd

• Serial dilation to 18mm
  – Can be on or off meds

• Could consider SFED should pt wish to come off PPI medication
  – Only if PPI-REE is completely confirmed
Heartburn drugs tied to increased risk of early death, study says

By Susan Scislo, CNN

Heartburn drugs have been tied to an increased risk of early death, according to a new study.

The study, published in the journal Gastroenterology, found that people who took proton pump inhibitors (PPIs) had a higher risk of death from cardiovascular disease, cancer, and other causes.

The researchers analyzed data from over 2 million patients in the UK and found that those who took PPIs had a 10% increased risk of early death compared to those who did not.

However, the study did not find a link between PPI use and dementia, which was previously suggested by some studies.

The researchers said their findings suggest that PPI use may be associated with an increased risk of early death, but more research is needed to understand the underlying mechanisms.

The study was funded by the National Institute of Health and Care Excellence (NICE) in the UK.

NICE guidelines recommend using PPIs only when necessary and for the shortest possible time.

The study authors noted that their findings could have implications for healthcare policy and practice, particularly in areas with high rates of PPI use.
Controversy re: SE

- Safe medication for patients who need it.
- Many studies are retrospective and do not prove causation of side effects.
- This patient does have stricture, so will need to determine cause prior to taking off of medication.
- If peptic structure, would recommend staying on PPI 2/2 CA risk.
Treatment Options: SFED

- Milk
- Wheat
- Nuts
- Fish
- Soy
- Egg
Treatment Options: SFED

Endoscopy Schedule:

- Eliminate all 6 foods x 8 weeks, complete EGD
- Add egg and nut, repeat EGD
- Add soy and fish, repeat EGD
- Add milk, repeat EGD
- Add wheat, repeat EGD
Treatment Options: SFED

• One or more of these foods will cause reaction
  – Repeat endoscopy after 8 week washout
• Treatment will be food avoidance
• For this patient, if chooses to do SFED, can eliminate food, but use PPI to cover in “cheat” times
Treatment Options: SFED

• Pearls:
  – Warning patients it is a long process
  – Don’t start diet during holiday!
  – Most patients I’ve had who’ve done it have felt it was worth it
Patient Follow-Up

• Patient Care
  – Long-term plan
    • Will remain with GI practice indefinitely
    • Once stable on treatment (both histologically and clinically), can follow up yearly
    • EGD q 1-2 years to assess esophageal health
Case Study #2

- 54-year-old man newly diagnosed with eosinophilic esophagitis, currently receiving topical budesonide once daily, with partial relief of symptoms. How do you optimize topical corticosteroid therapy for this patient? What other treatment options do you consider?
Topical Steroids

- Very effective (90%) in treating EOE
- Often used concomitantly with PPI
- Less general steroid effects as it is taken topically
- No diet modifications on this medication
Topical Steroids

• Budesonide:
  – Taken 0.5-1 mg BID in a slurry
  – Mix with 2-3 packets of Splenda or honey
  – Nothing to eat or drink for 1 hour after

• Fluticasone:
  – 500 mcg BID in swallowed powder or swallowed inhaler
  – Nothing to eat or drink for 1 hour after
Workup

• EGD with dilation
• Is pt taking steroid as prescribed?
  – Difficulty with insurance can cause noncompliance
  – Studies for FDA approval
    • Swallowed budesonide
    • Dissolvable tablet
EGD revealed:
- Stricture at 13mm
- Unable to dilate 2/2 inflammation
- EREFS 13011

Path:
- >60 eos per hpf distally
- >20 eos per hpf proximally
Severity

- **Active disease** is measured by number of eosinophils
  - >15 per hpf
- **Severity** is based on stricture
Treatment Options

- Stress compliance
- Increase steroid or increase to different preparation
  - Oral inhaler can be less effective 2/2 human error
- Add PPI if not taking already
- Consider switching to SFED
  - If refractory, can also consider elemental diet
- Serial dilations to 18mm once inflammation is under control
Treatment Options – Under Investigation

- Prednisone
- Dupilumab (anti IL-4)
- Mepolizumab (anti IL-5)
- Anti IL-13
- Prostaglandin D2 receptor antagonists
Patient Follow-Up

• Patient Care
  – Long-term plan
    • Will remain with GI practice indefinitely
    • Once stable on treatment (both histologically and clinically), can follow up yearly
    • EGD q 1-2 years to assess esophageal health
Conclusions

• PPI should be 1st line of treatment for EOE.
• Topical steroids and SFED still gold standard.
• New treatments in development!
Q&A