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Gastroenterology & Hepatology
Advanced Practice Providers

2020 Third Annual National Conference

November 19-21, 2020

Red Rock Hotel – Las Vegas, NV



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Eosinophilic Esophagitis

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Disclosures

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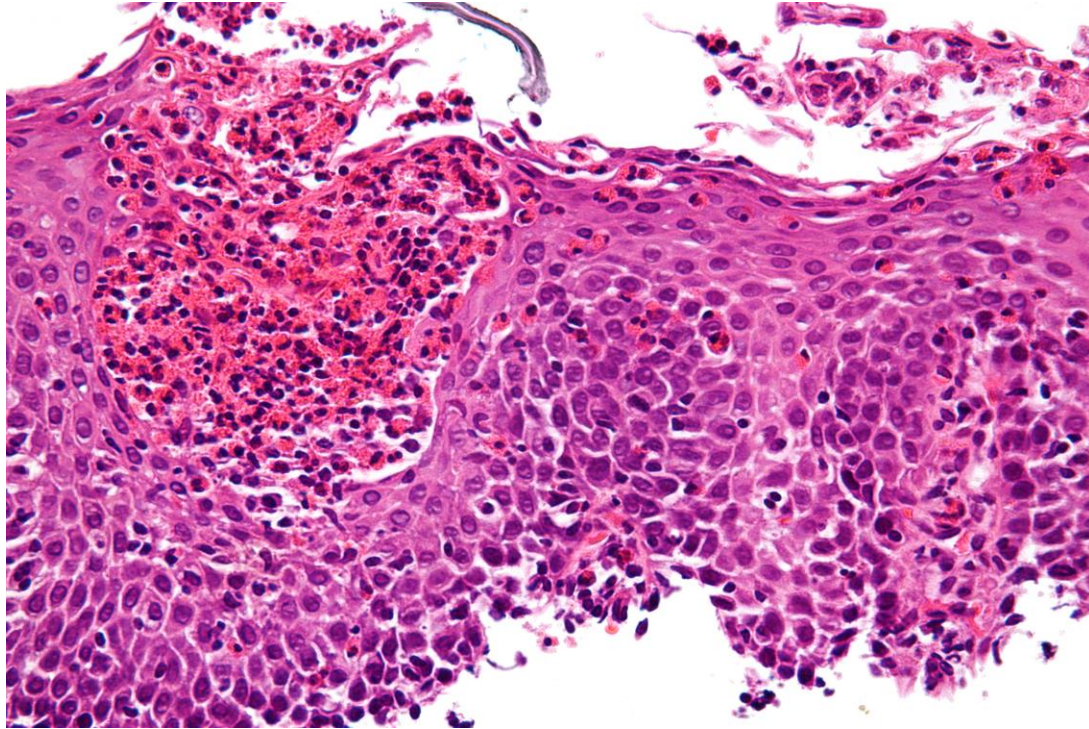
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- No financial relationships to disclose.

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?**

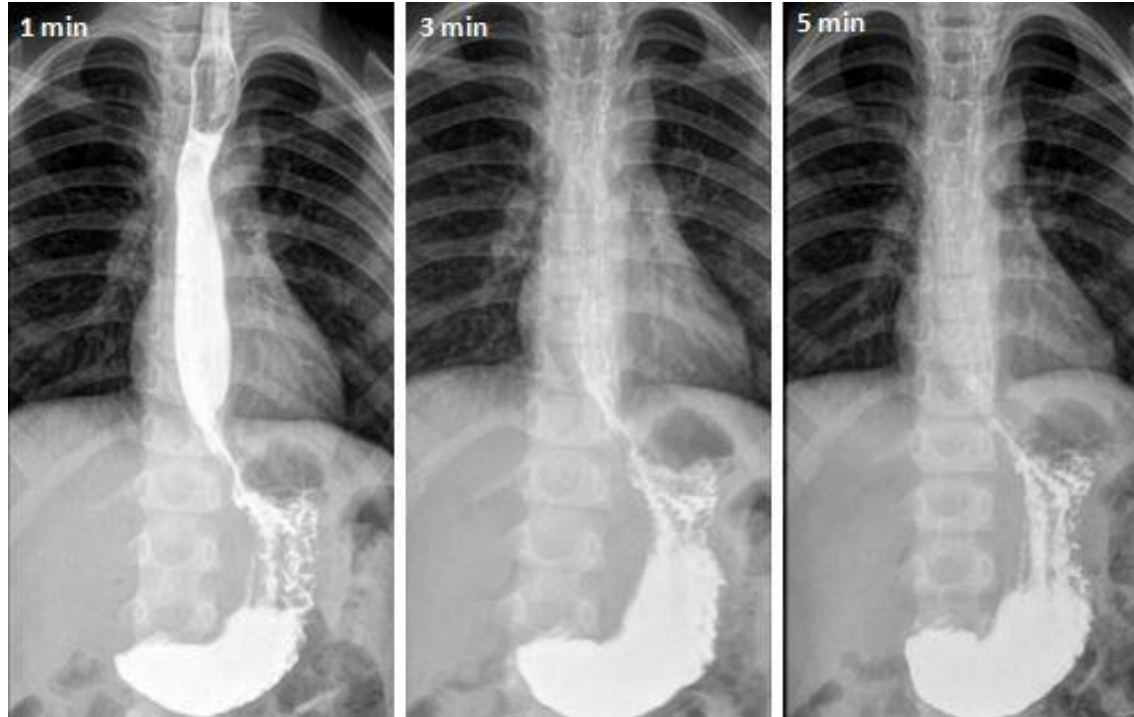
Dysphagia Workup

- Timed barium esophagram
- Endoscopy
- FLIP
- Manometry

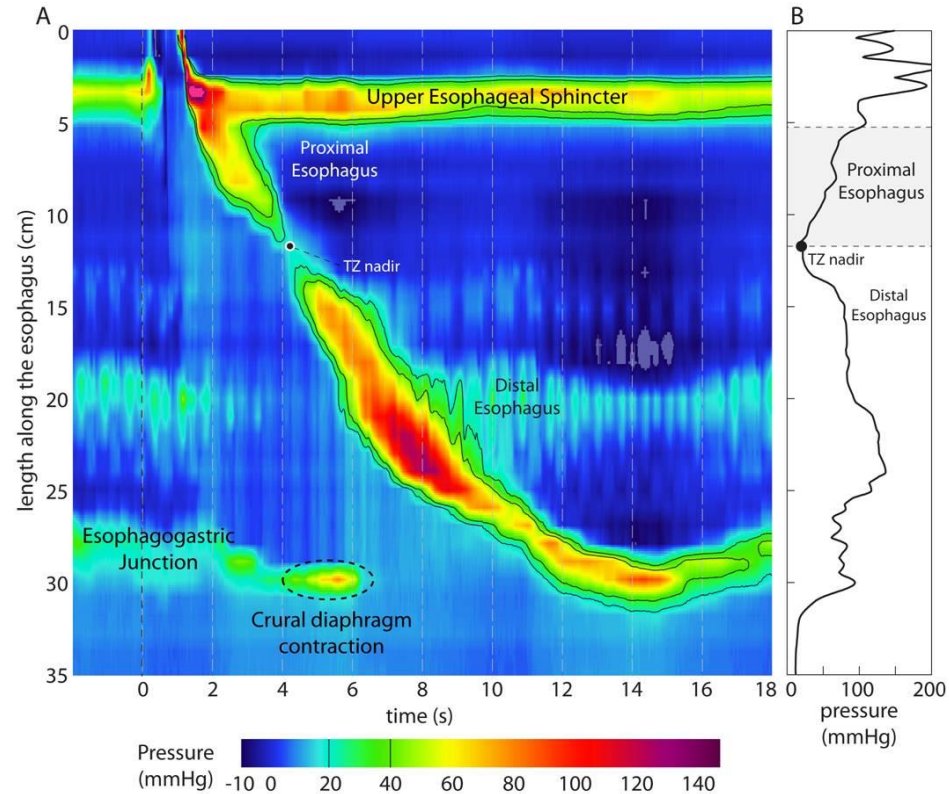
Differential Diagnosis

- Benign stricture
- Achalasia
- Other motility disorders
- EOE
- Esophagitis
- Web and rings
- Esophageal CA

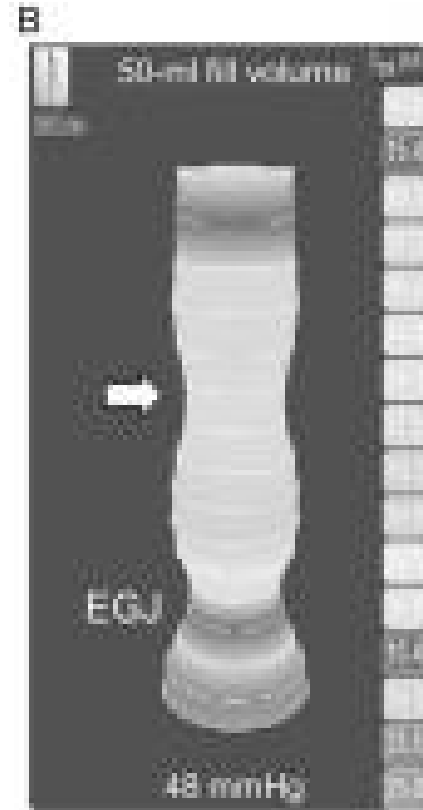
Results of Tests/Labs



Results of Tests/Labs



Results of Tests/Labs



Results of Tests/Labs

- EGD revealed stricture, dilated to 15 mm
- No esophagitis found
- Random bx taken throughout esophagus
- EREFS: 10001

Slide courtesy of Dr. Hirano

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 ($\leq 10\%$ surface area)
Grade 2: Severe ($>10\%$ surface area)



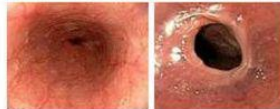
Furrows (vertical lines)

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??



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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



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OR?



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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



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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



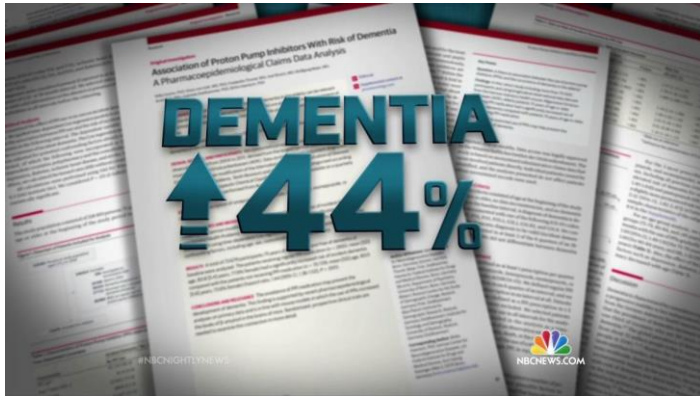
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Heartburn drugs tied to increased risk of early death, study says

By Susan Scutti, CNN

Updated 1859 GMT (0259 HKT) July 4, 2017



Proton Pump Inhibitors

WARNING



Serious PPI side effects include heart attack or heart failure



Proton Pump Inhibitor 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.



You may be entitled to
COMPENSATION!

NEXIUM - PRILOSEC - PREVACID
KIDNEY DISEASE LEGAL HELPLINE
CALL US NOW!

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

Testing

- 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

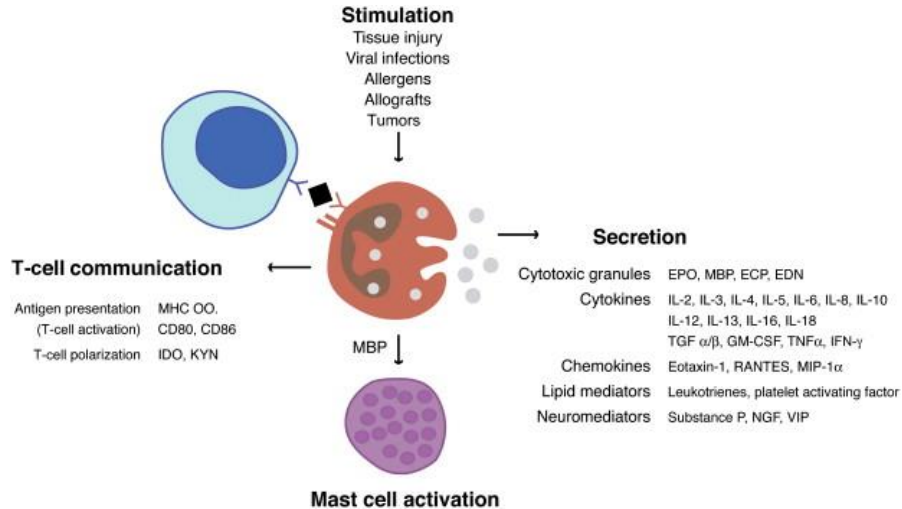


- **Active disease** is measured by number of eosinophils
 - >15 per hpf
- **Severity** is based on stricture

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 antagonis

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
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Conclusions

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



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Q&A