DYSPHAGIA

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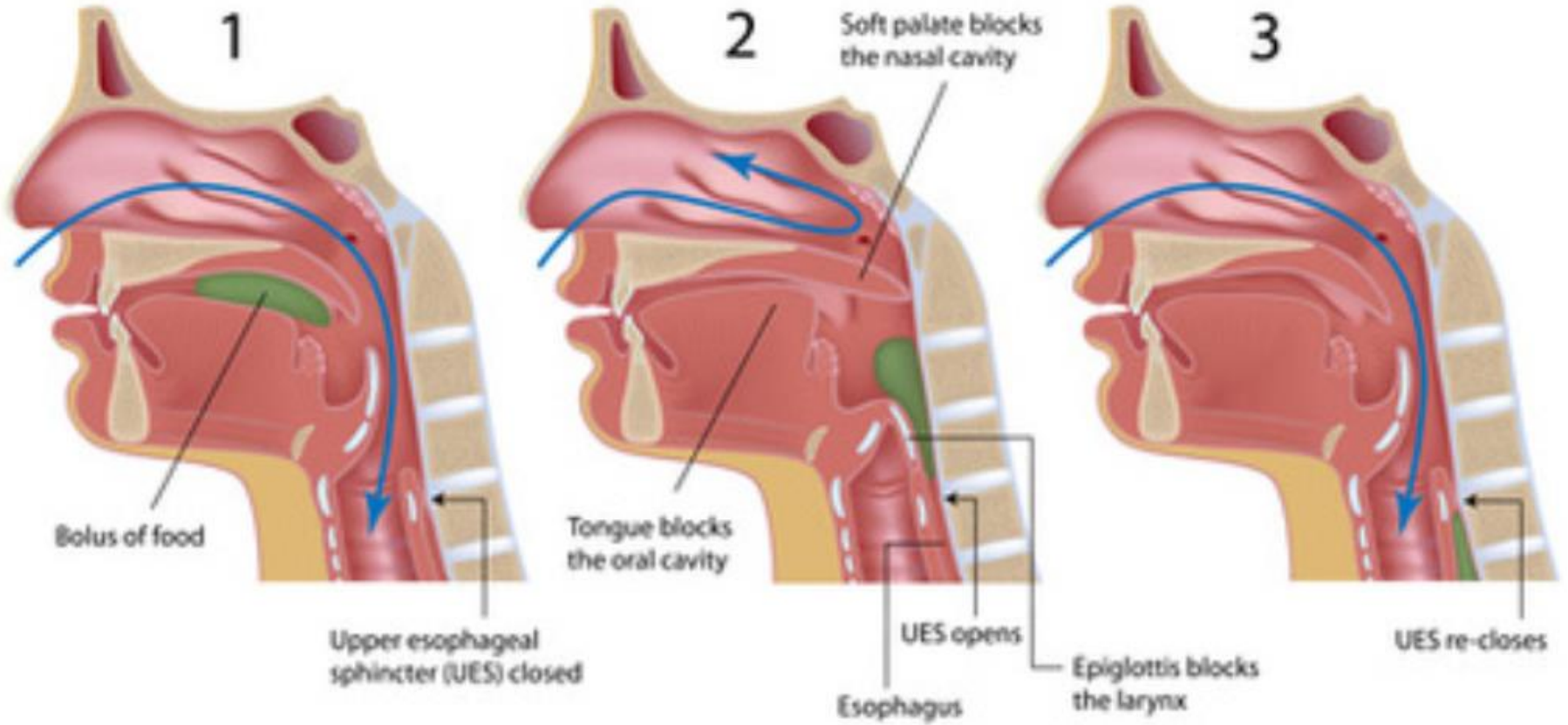
U.S. Department of Veterans Affairs

Banner University Medical Center Phoenix

Swallowing


1
2
3
Soft palate blocks the nasal cavity
Bolus of food
Tongue blocks the oral cavity
Upper esophageal sphincter (UES) closed
UES opens
Esophagus
Epiglottis blocks the larynx
UES re-closes

Dysphagia = difficulty swallowing; a *subjective sensation*

Odynophagia = pain with swallowing

“What happens when you swallow?”

“Food gets stuck in my throat”

“Food gets stuck up here”

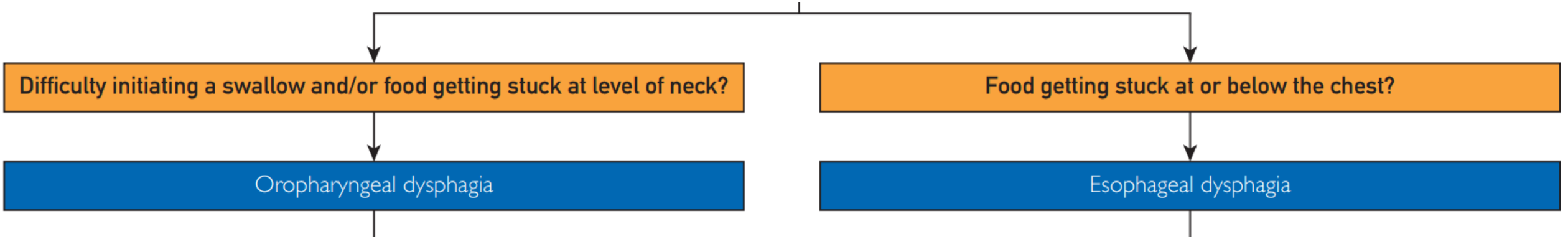
“Food doesn’t move out of my mouth”

“I have trouble getting food down/initiating a swallow”

“Food gets stuck in my chest”

“Something feels stuck in my chest”

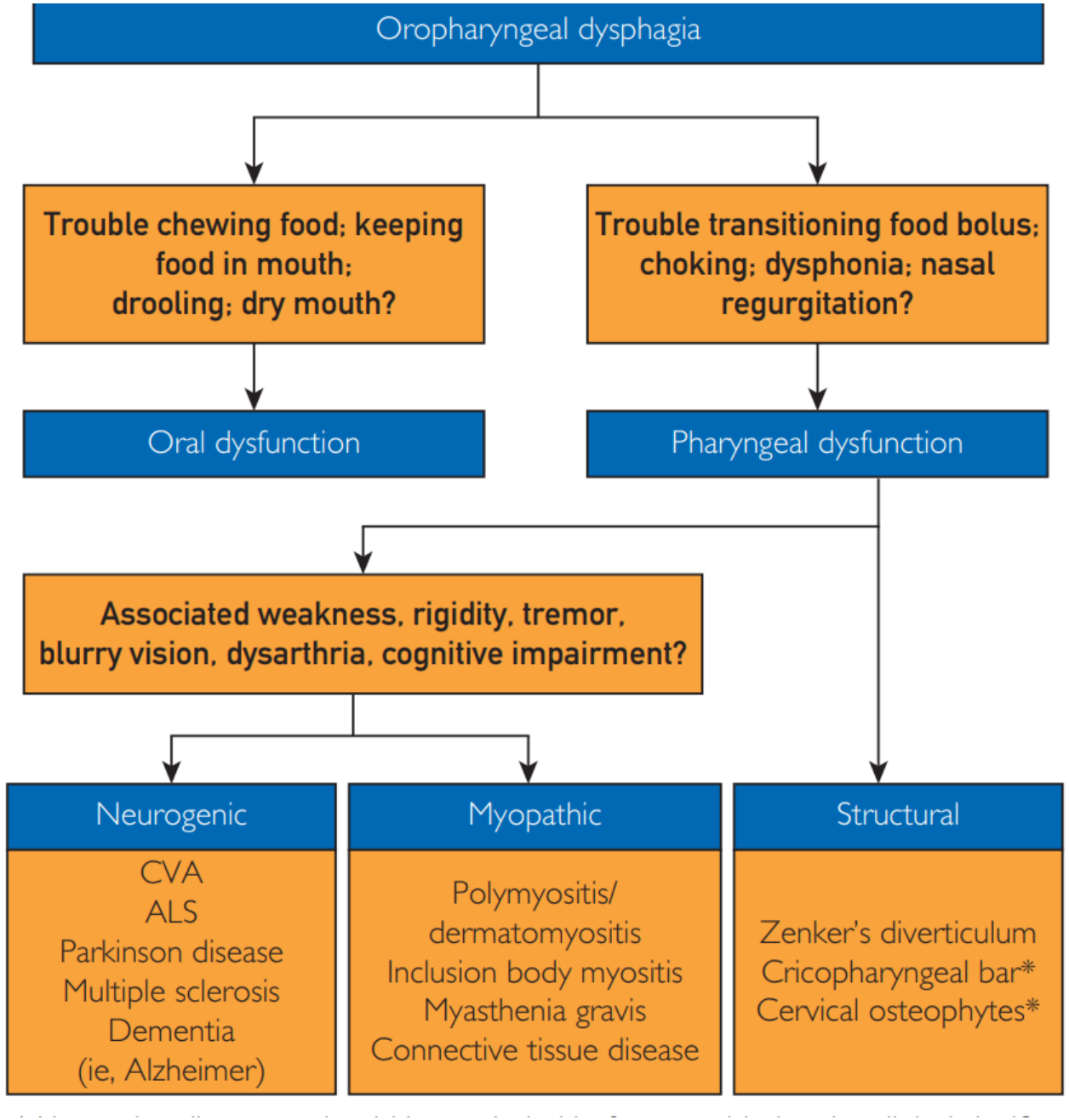
“Feels tight in my chest/stomach when I try to swallow”



Oropharyngeal Dysphag

"Difficulty initiating swallow" or "Food s

- Ask about concurrent symptoms
  - Aspiration, recurrent pneumonia
  - Nasopharyngeal regurgitation
  - Sensation of residual food in pharynx
  - Coughing, choking
  - Drooling
  - Trouble chewing
  - Dry mouth
  - Dysarthria, dysphonia
  - Neck fullness



Esophageal Dysphagia

"Food gets stuck in my chest/upper abdomen"

"What can you swallow?" "When do you have trouble swallowing"

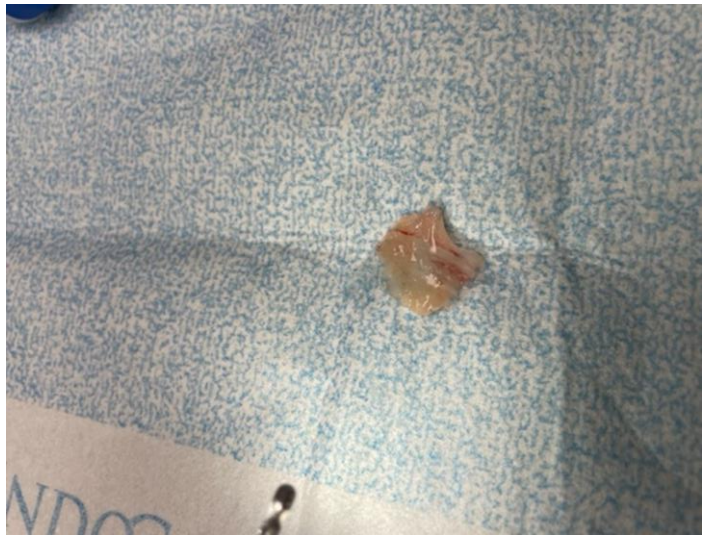
- Solid dysphagia +/- dysphagia early when eating → **Mechanical**
- Dysphagia to solids & liquids +/- dysphagia mid or late meal → **Motility**

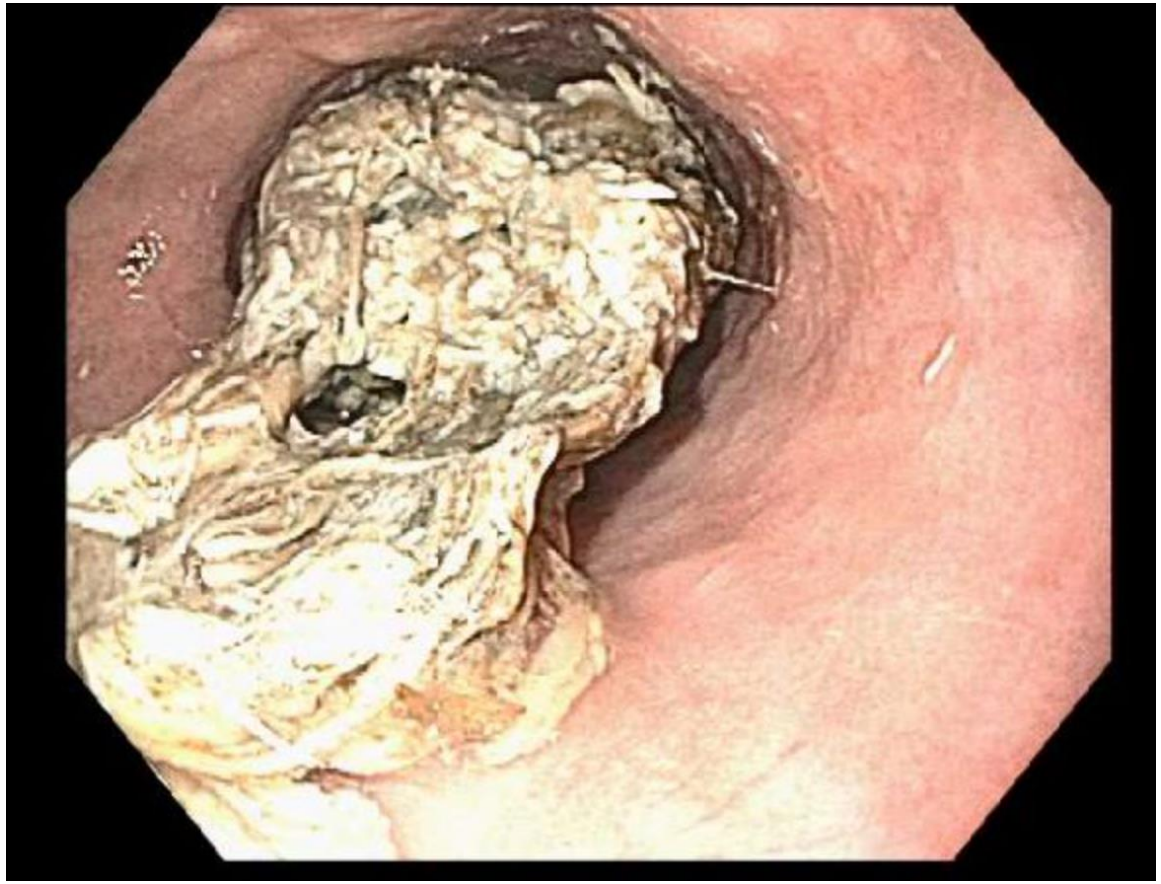
Next – determine duration of symptoms

Acute onset dysphagia

- Sudden onset
- Inability to handle secretions

Foreign body in the esophagus until proven otherwise!

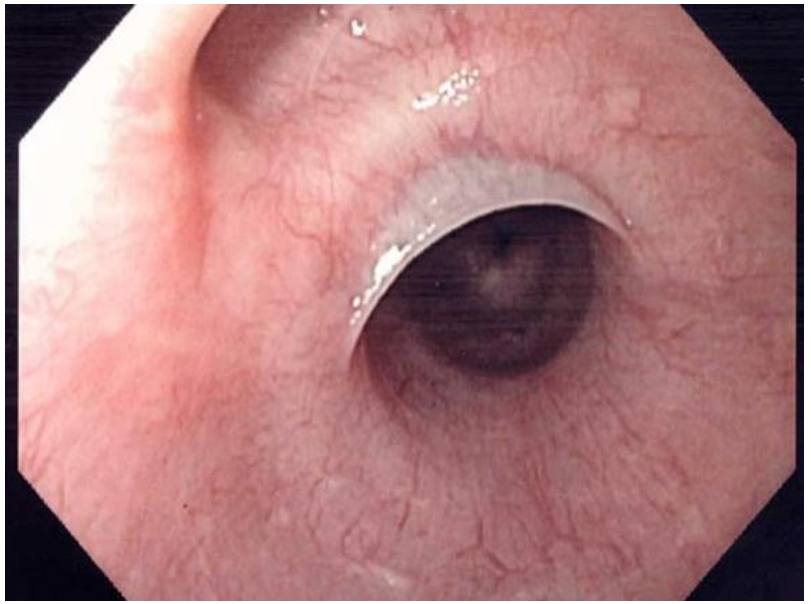




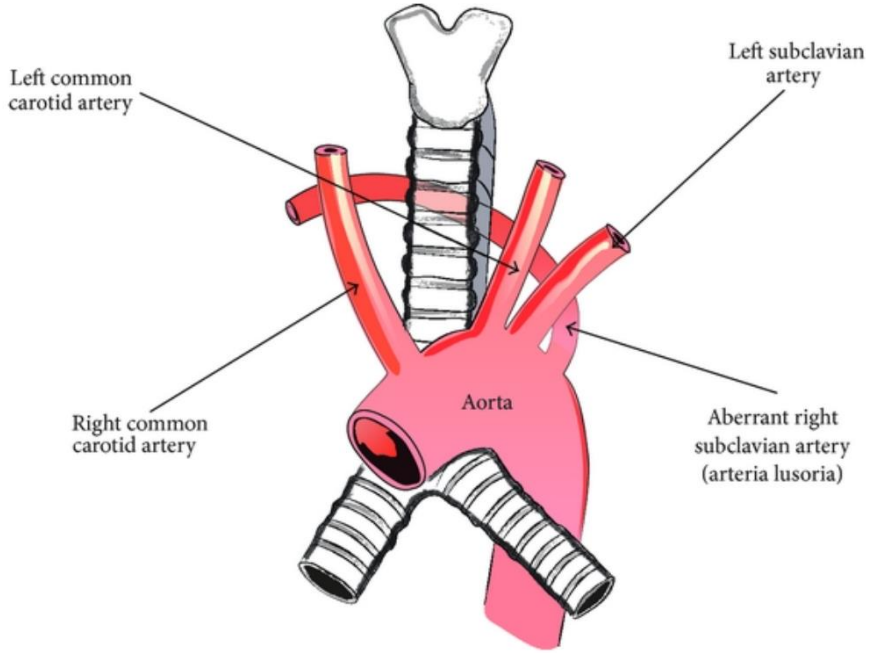
Merck Manual. Zubair Malik MD, Esophageal Foreign Bodies.

Dysphagia to solids: chronic

- Likely mechanical obstruction
- Usually non-progressive/chronic

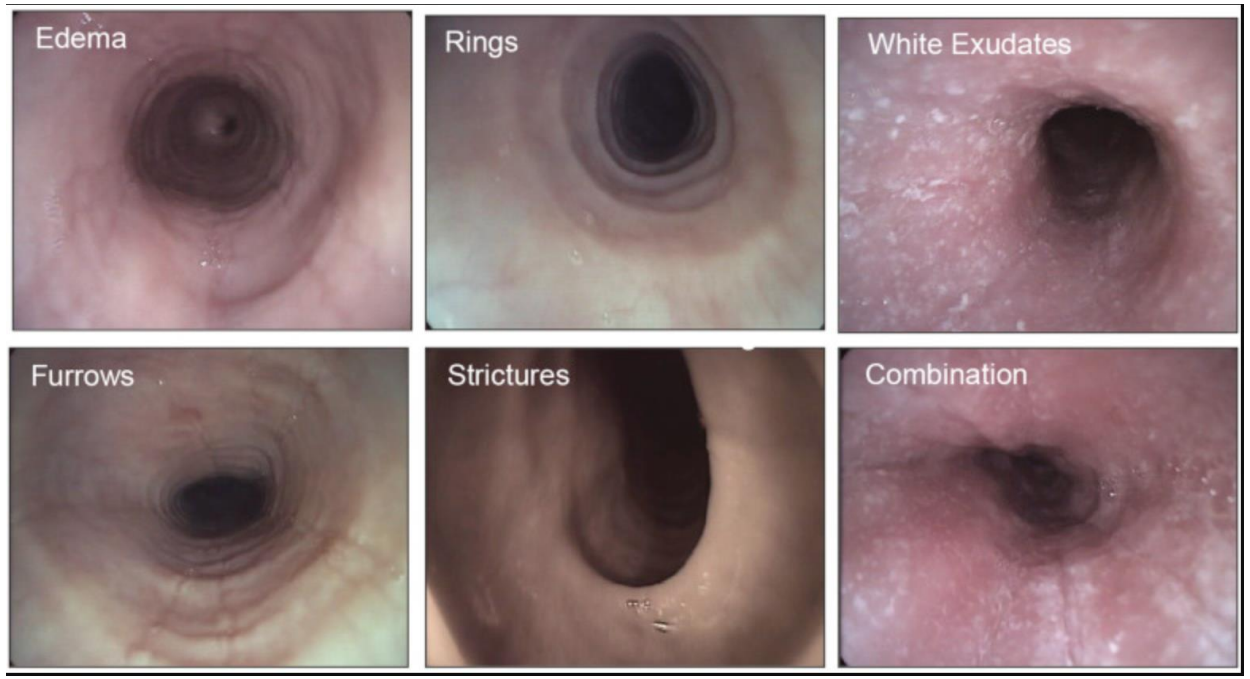


- Esophageal web/ring
- EOE
- Radiation strictures
- Caustic ingestion
- Vascular abnormality in chest



https://doi.org/10.1155/2014/292734
https://en.wikipedia.org/wiki/Esophageal_web

Eosinophilic Esophagitis

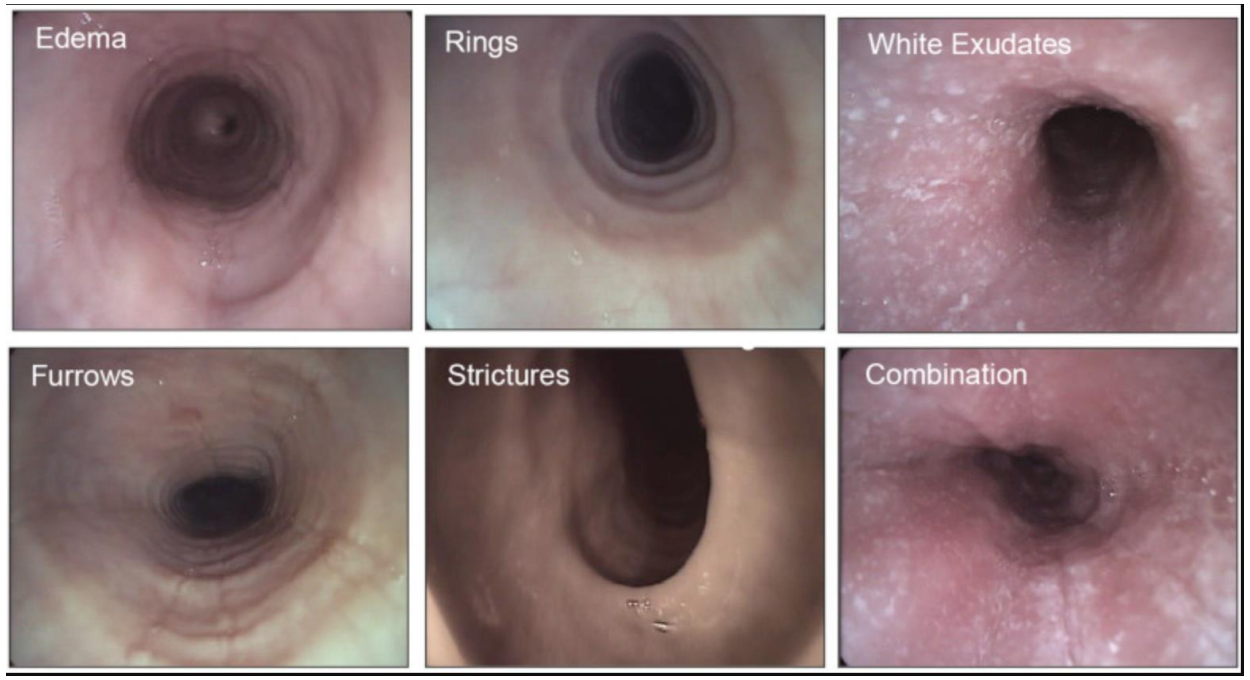


- Dysphagia, **food impaction**, heartburn, non-cardiac chest pain
- Allergen-driven inflammatory condition

- EGD:
  - Strictures
  - Transient vs fixed esophageal rings
  - Narrow esophagus
  - *Normal in 25%*

- Diagnosis = ≥15 eosinophils/HPF in the area of greatest inflammation

Eosinophilic Esophagitis



https://doi.org/10.1053/j.gastro.2017.05.066

Treatment:

- PPI
  - if response, continue chronic treatment
- Diet changes – elimination diet
  - Egg, soy, wheat, peanuts, cow's milk, fish/shellfish
- Swallowed aerosolized steroids
  - Fluticasone
  - Budesonide

QUESTION #1

30YO M is evaluated for ongoing symptoms of dysphagia. He was previously diagnosed with EOE on EGD and has completed an 8-week course of swallowed aerosolized fluticasone, which did not alleviate his symptoms. He takes no other medications.

On PE: Vitals normal. BMI 25. Exam unremarkable.

EGD shows an area of high-grade stenosis in the distal esophagus.

Which of the following is the most appropriate treatment?

A. Increase fluticasone
B. Endoscopy with dilation
C. Omeprazole
D. Oral prednisone

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QUESTION #2

72YO M is evaluated for 3-month history of progressive difficulty swallowing solid foods. He has lost 4.5 kg over the last 2 months. He has a 10-year history of heartburn which is controlled with daily PPI. His other medical problems include obesity (BMI 30) and 35-pack-year history of smoking.

On PE: Vitals normal. BMI 29. Remainder of exam unremarkable. Labs are normal.

Which of the following is the most appropriate next step in management?

A. CT chest
B. Esophageal manometry
C. pH study
D. Upper endoscopy

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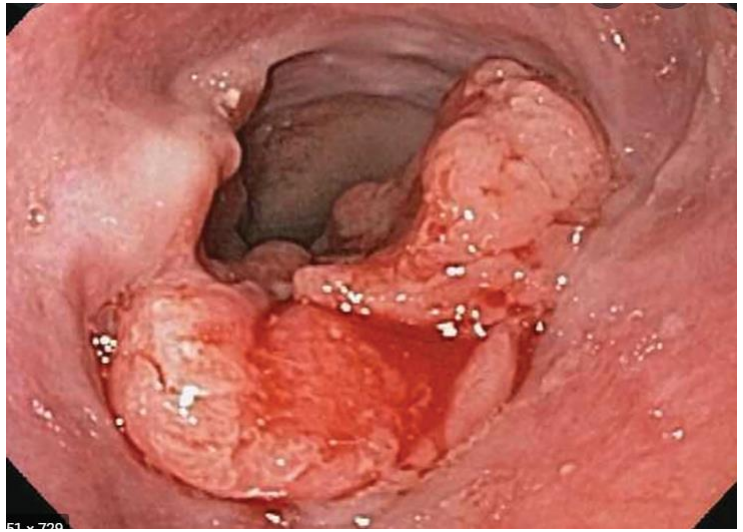
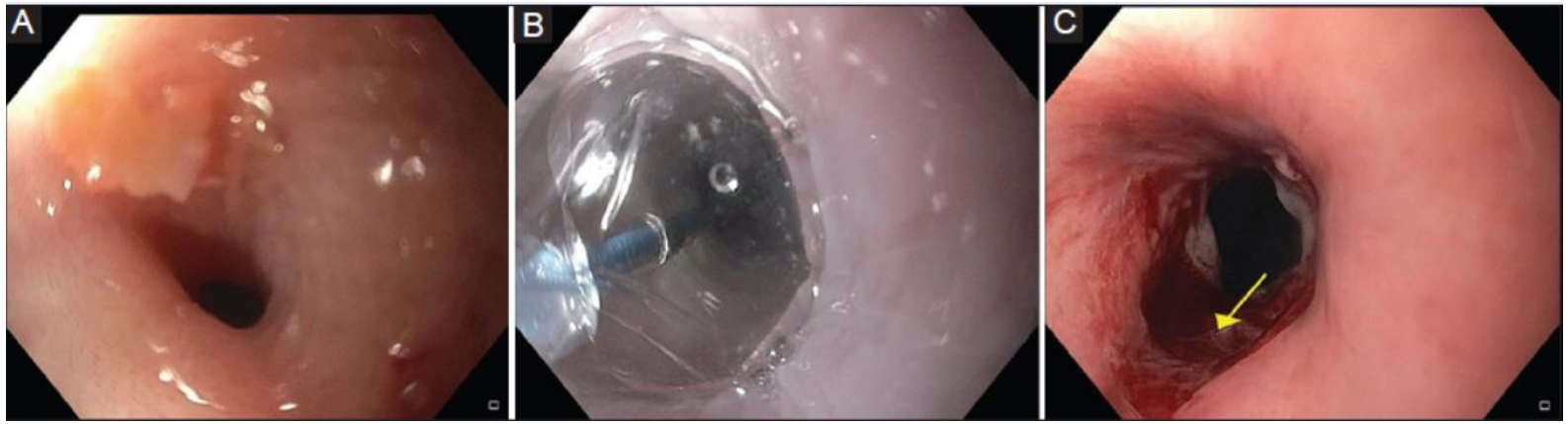
Dysphagia to solids: progressive

- Depends on associated symptoms
  - Heartburn then dysphagia → peptic stricture
  - Weight loss, anemia → cancer





Ann Gastroenterol 2021; 34 (3): 287-299

Dysphagia to solids & liquids

- Most likely **motility** disorder

- Chronicity:

-If progressive,

In setting of chronic GERD → possibly scleroderma

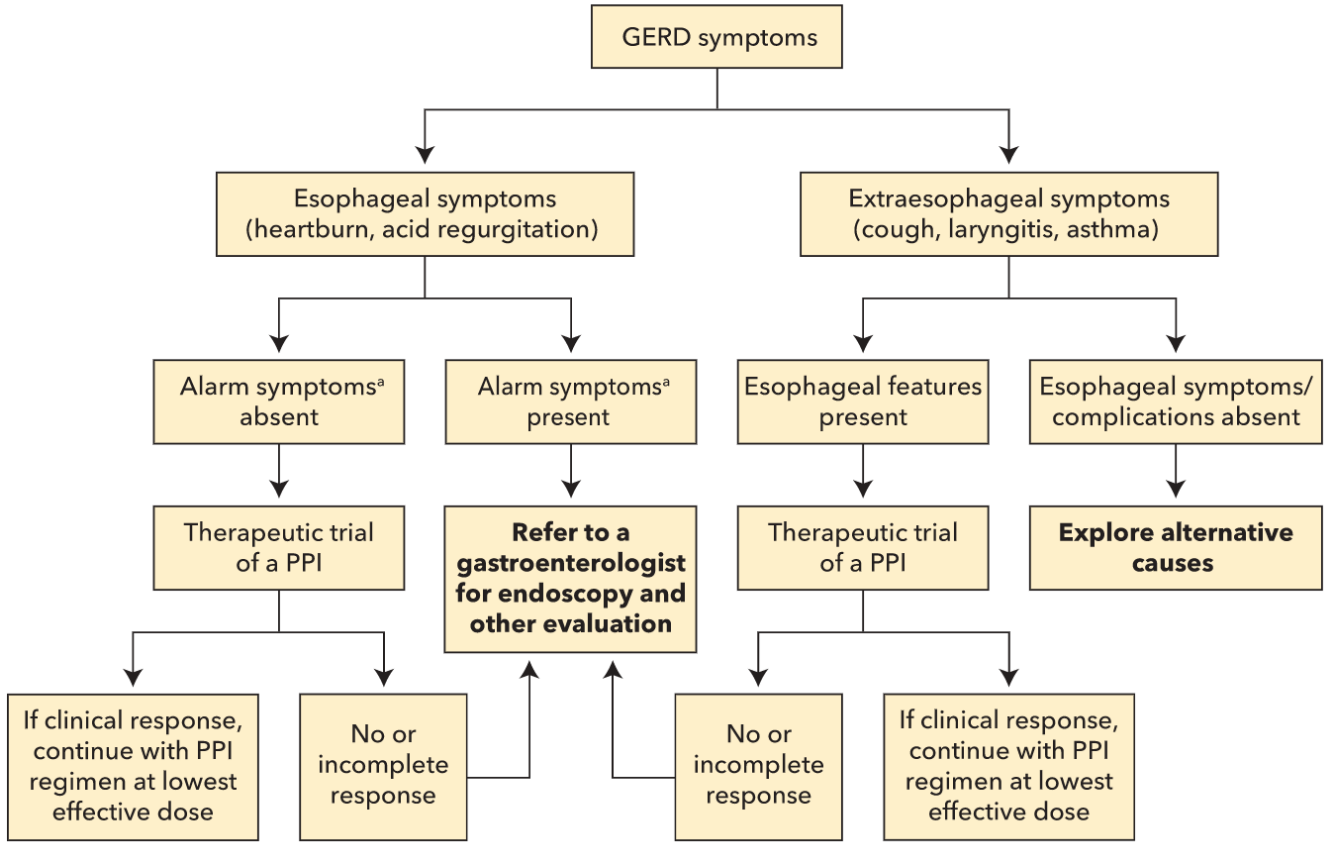
In setting of regurgitation +/- weight loss or respiratory symptoms → achalasia

-If intermittent

Primary or secondary motility disorder

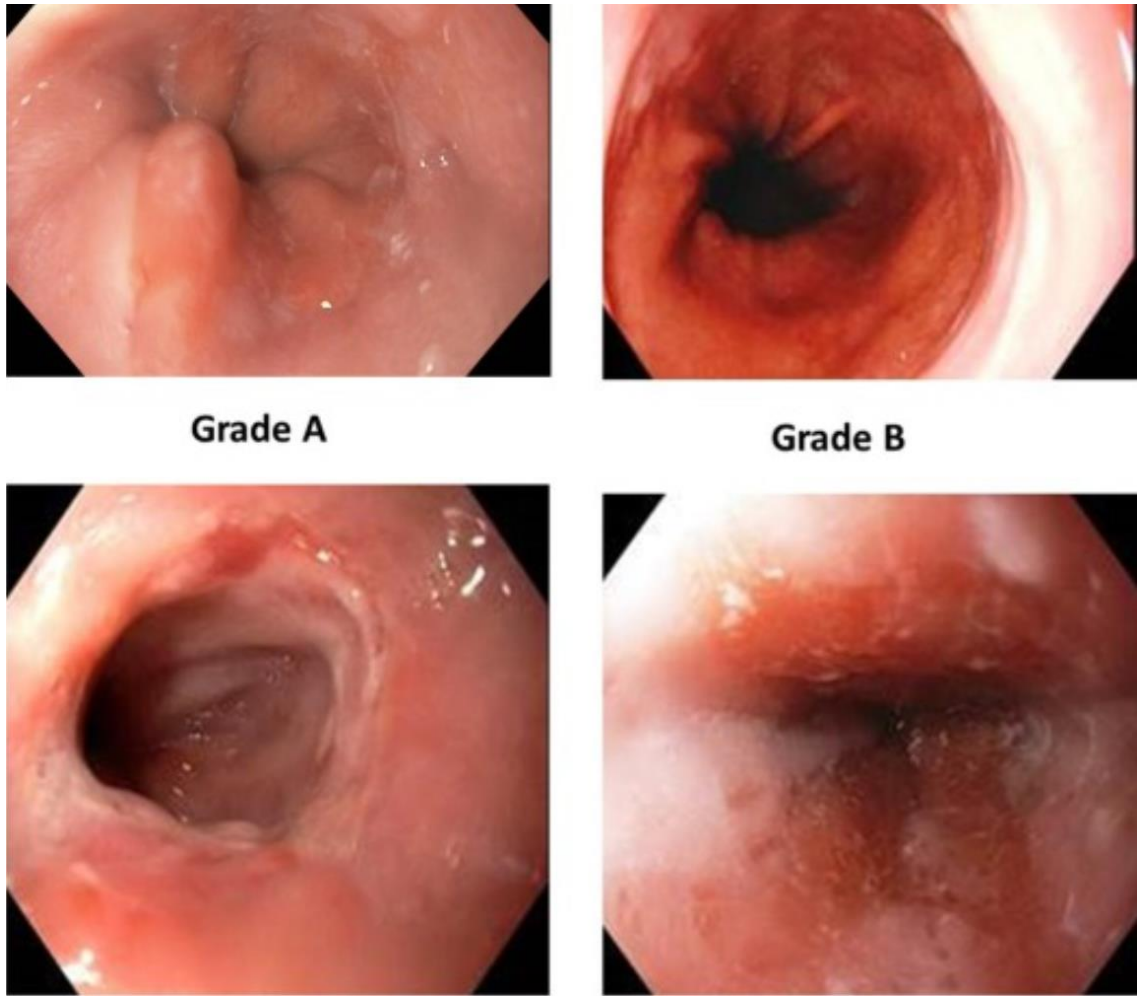
GERD

- Symptoms can vary:
  - Heartburn
  - Acid regurgitation
  - Chest pain
  - Cough
- Scope if alarm symptoms!
  - Unintentional weight loss
  - Age > 50
  - Hematemesis/melena or anemia
  - Persistent symptoms despite appropriate therapy
  - Dysphagia



MKSAP 18

GERD



- GERD → dysphagia
  - Peptic stricture
  - Hernia causing EGJOO
  - Motility disorder
  - Esophagitis (severe)

https://doi.org/10.1016/j.pathophys.2017.09.001

Diagnostics

- *H&P*
- *PE*
- Barium study
- EGD
- Esophageal manometry

QUESTION #3

78YO M is evaluated for symptoms of dysphagia that began 3 weeks ago. When he eats, he starts coughing after the first bite of food and occasionally has nasal regurgitation.

On PE: BP 135/90, HR 78, RR 12. Left-sided weakness is noted in both extremities, upper greater than lower.

Which of the following is the most appropriate diagnostic test to evaluate this patient's dysphagia?

A. Barium swallow
B. Esophageal manometry
C. EGD
D. Video fluoroscopy

QUESTION #3

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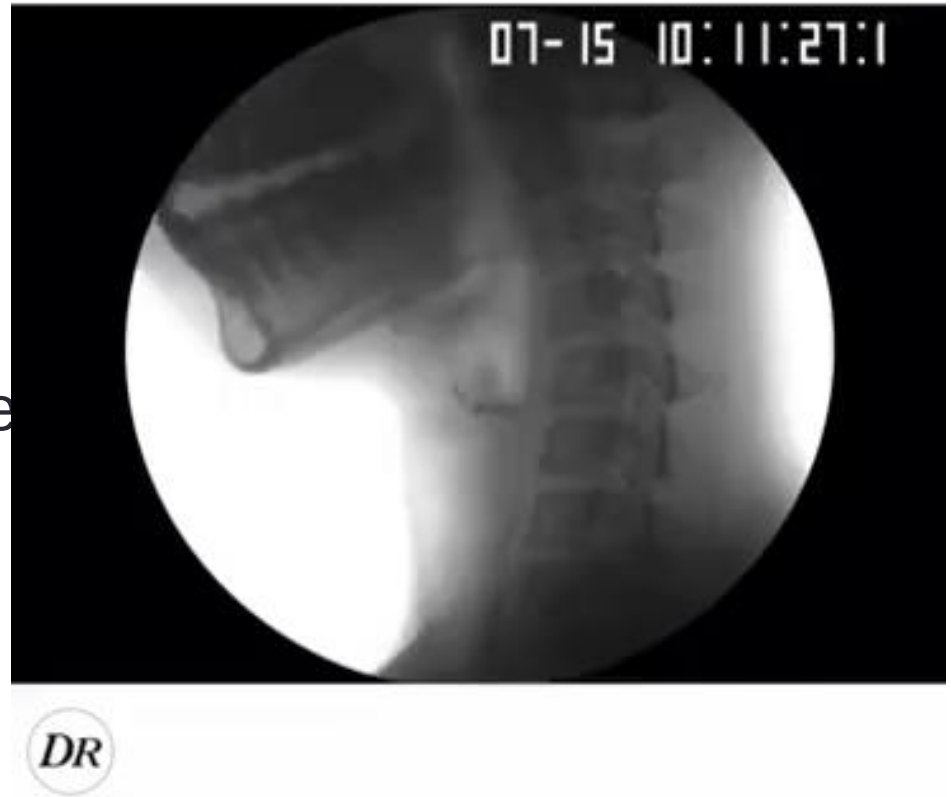
A. Barium swallow
B. Esophageal manometry
C. EGD
D. Video fluoroscopy = MBS

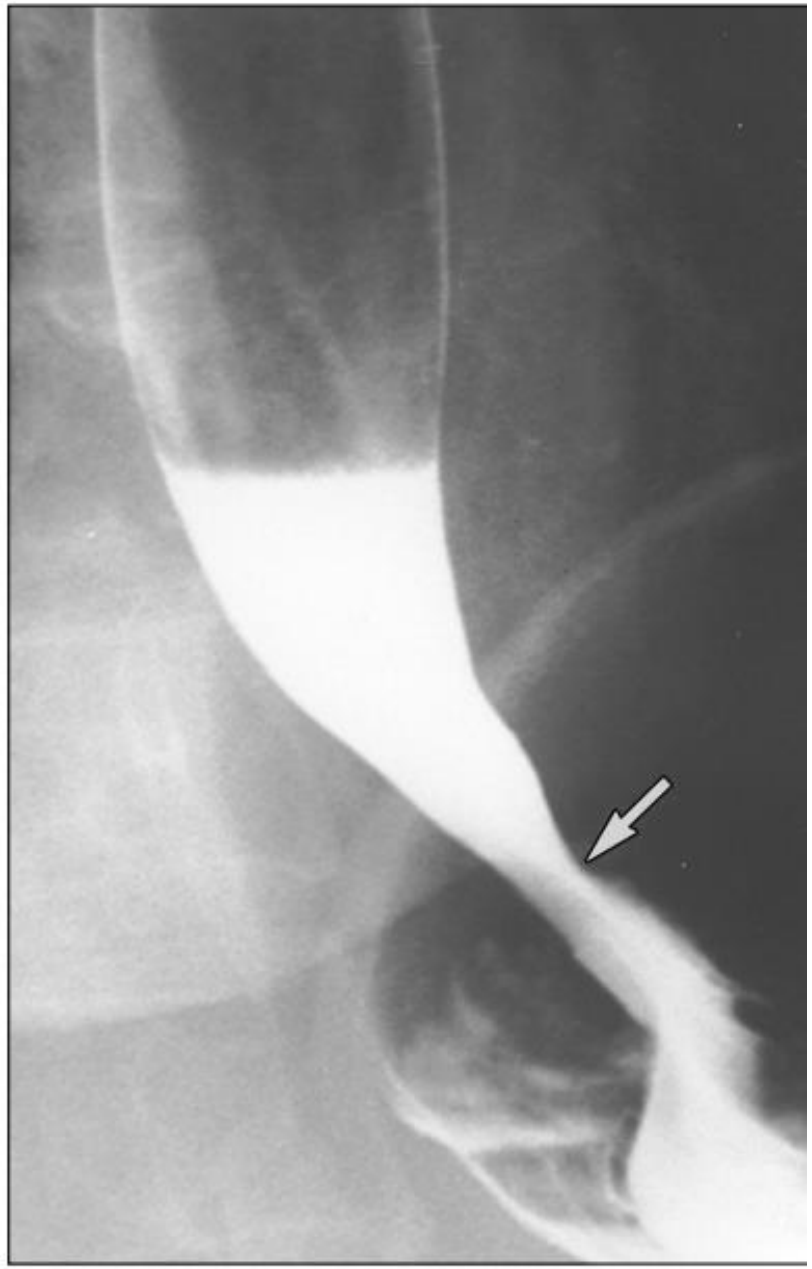


Barium Esophagram

- Patient swallows 1-2 cups of barium liquids lying down and standing up
- Performed by a radiologist

When to obtain?

- More sensitive for strictures
- Allows for planning during EGD
- Less invasive than EGD
- If concerned about fistula or perforation (use Gastrografin)



Gupta et. al. AJR:180, March 2003

QUESTION #4

52YO M is evaluated for 3 months of dysphagia. He reports regurgitating undigested food soon after eating solid food, occasional coughing and choking after swallowing, and chronic halitosis. No weight loss or chest pain. Drinks 2 beers weekly, no tobacco use.

On PE: Vitals normal. BMI 25. Exam normal.

Which of the following is the most appropriate next step?

A. Barium esophagram
B. Esophageal manometry
C. 24-hr esophageal pH monitoring
D. EGD

QUESTION #4

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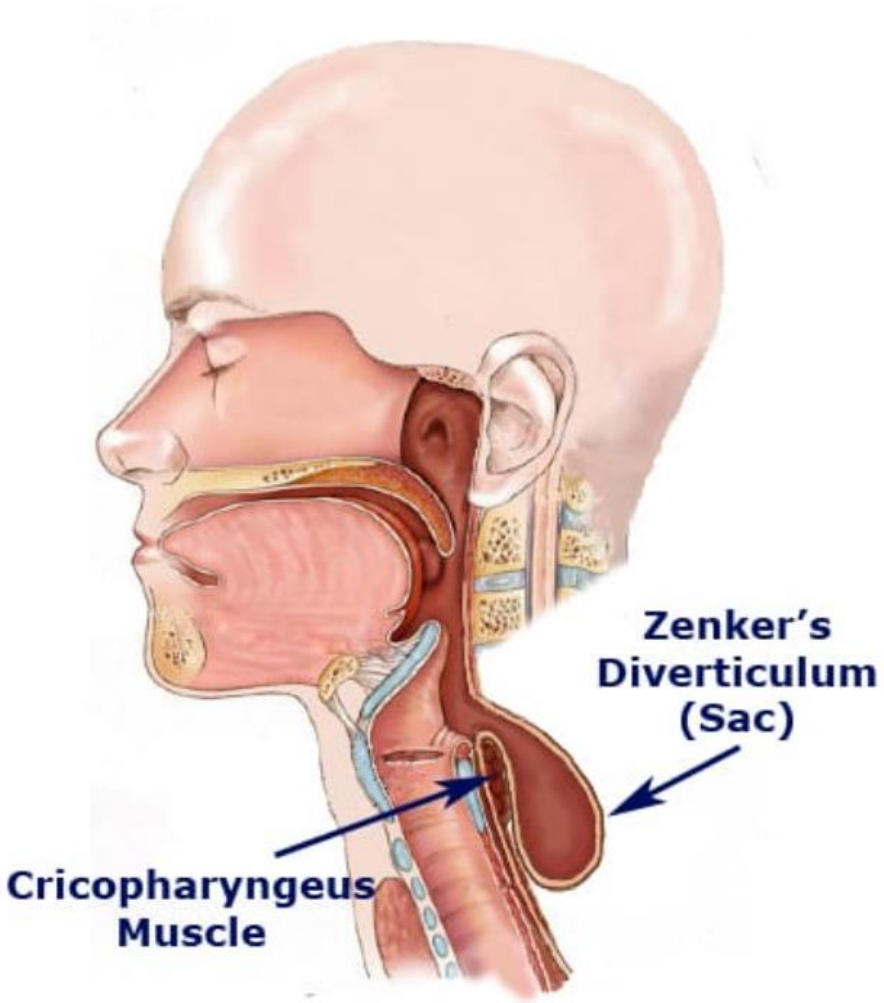
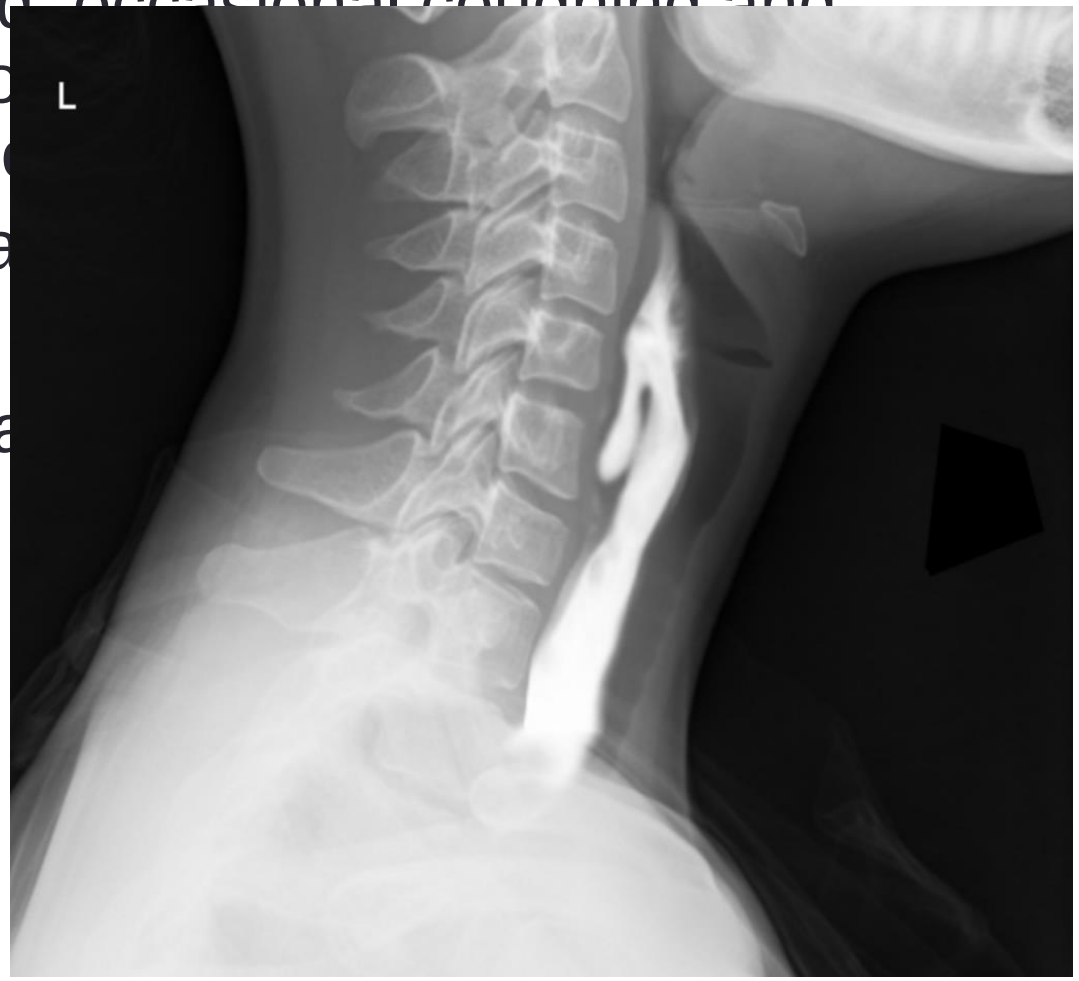
On PE: Vit na

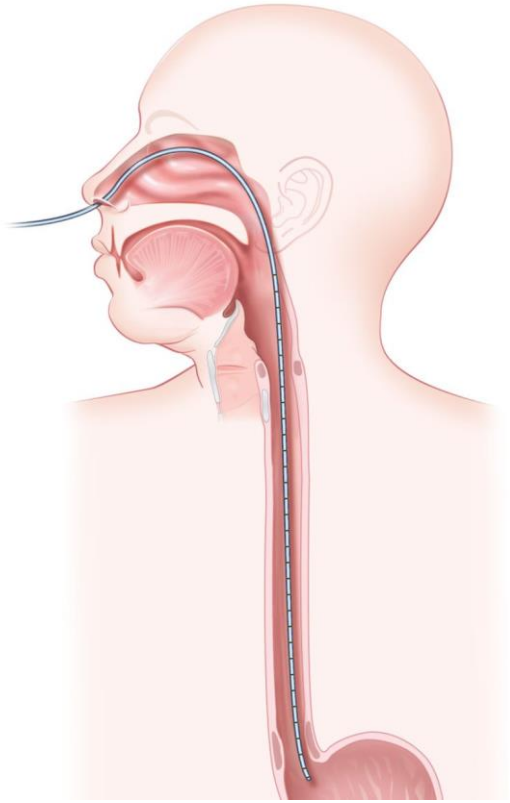
Which of t ria

A. Barium
B. Esopha
C. 24-hr e
D. EGD



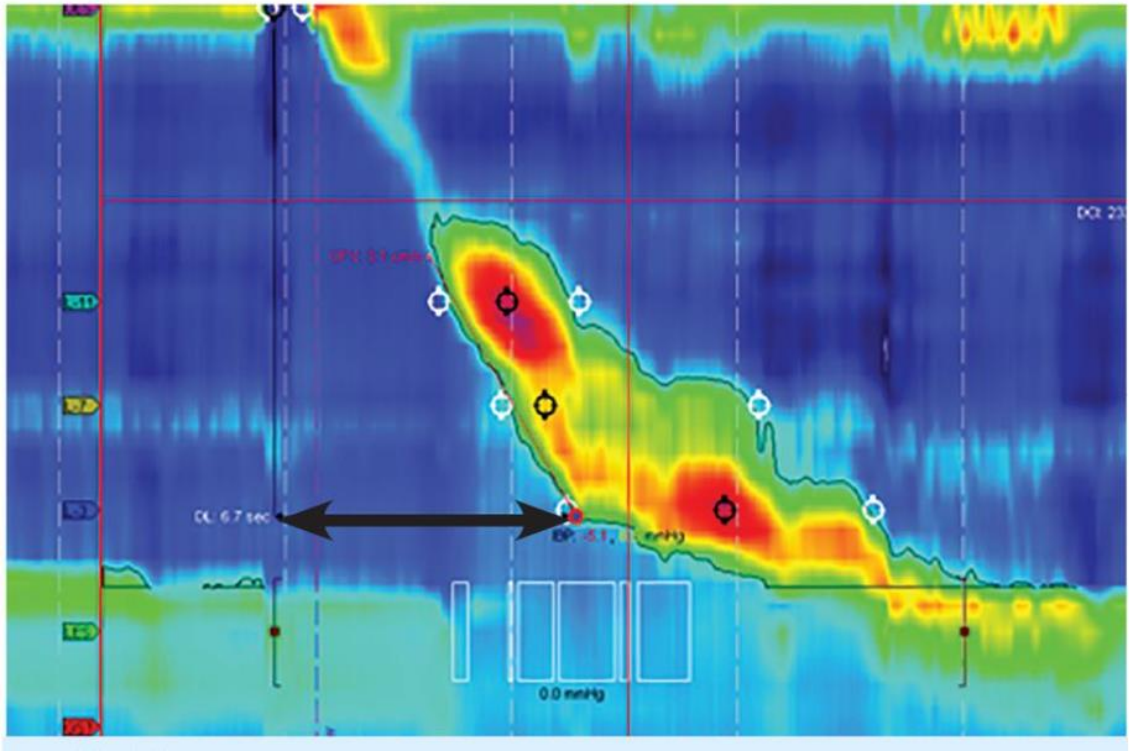


High resolution esophageal manometry



Chicago Classification 3.0

- Disorders of EGJ outflow obstruction
- Major disorders of peristalsis
- Minor disorders of peristalsis



Cleveland Clinic Journal of Medicine June 2017, 84 (6) 443-449; DOI: https://doi.org/10.3949/ccjm.84a.16055

Achalasia

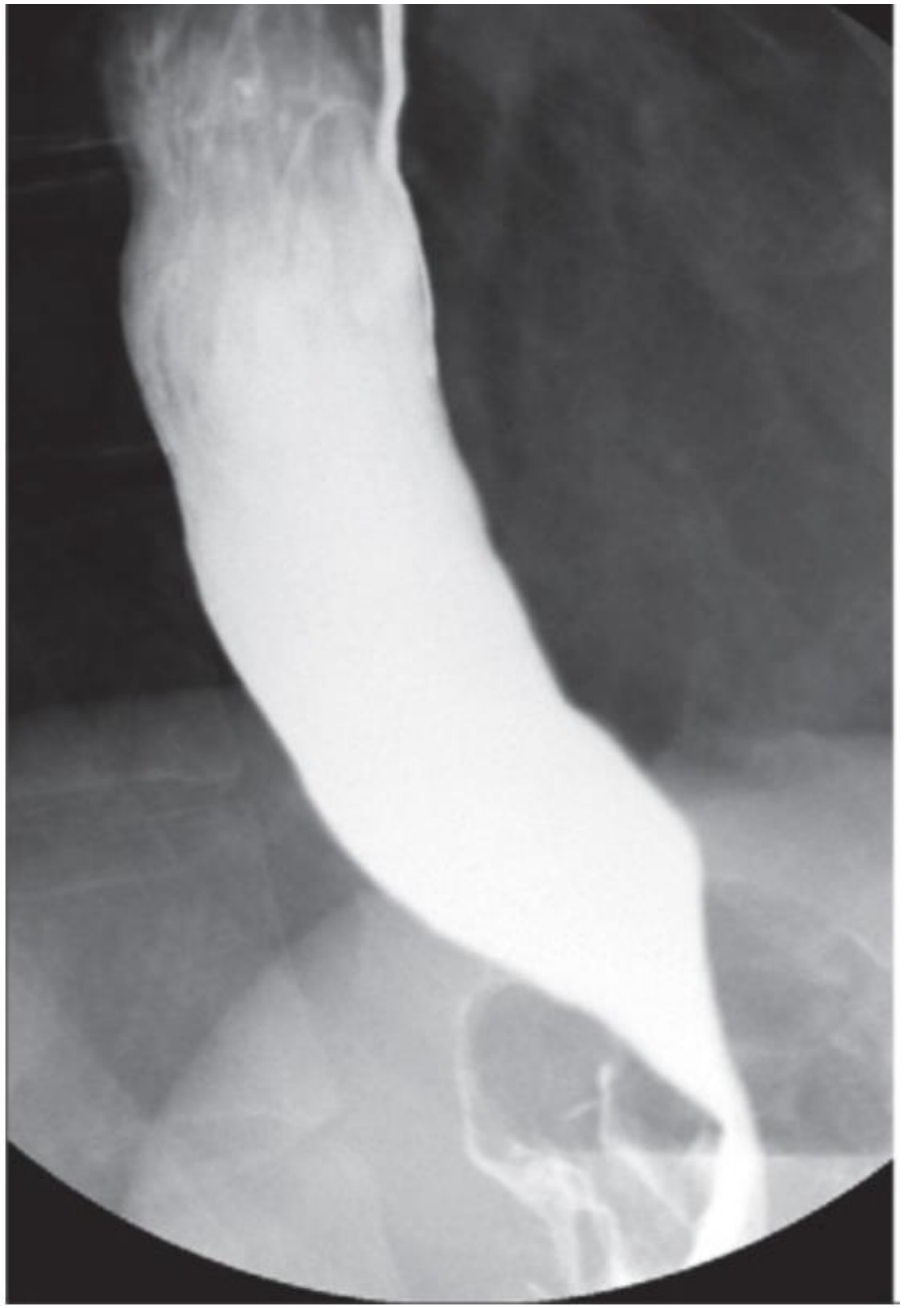
Failure of the LES to relax following a swallow + absence of normal peristalsis

- Type I: 100% failed peristalsis
- Type II: 100% failed peristalsis + PEP
- Type III: >20% premature contractions

First diagnostic test →

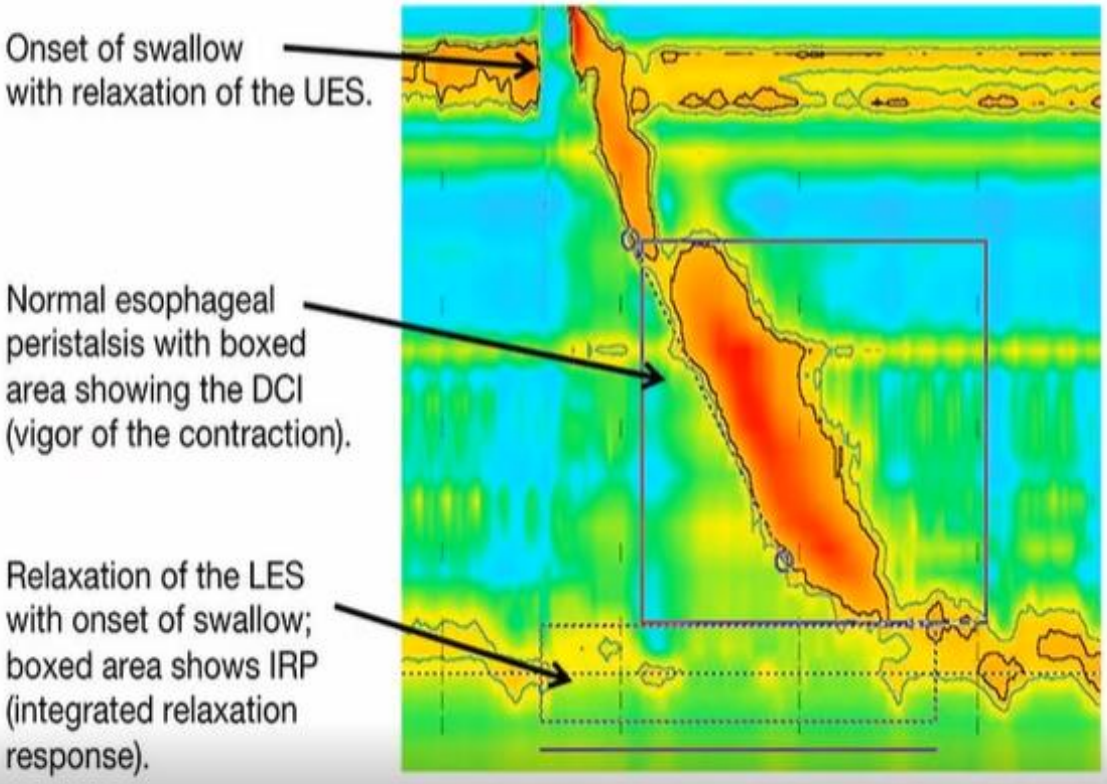
EGD to r/o mechanical obstruction

HRM to confirm diagnosis

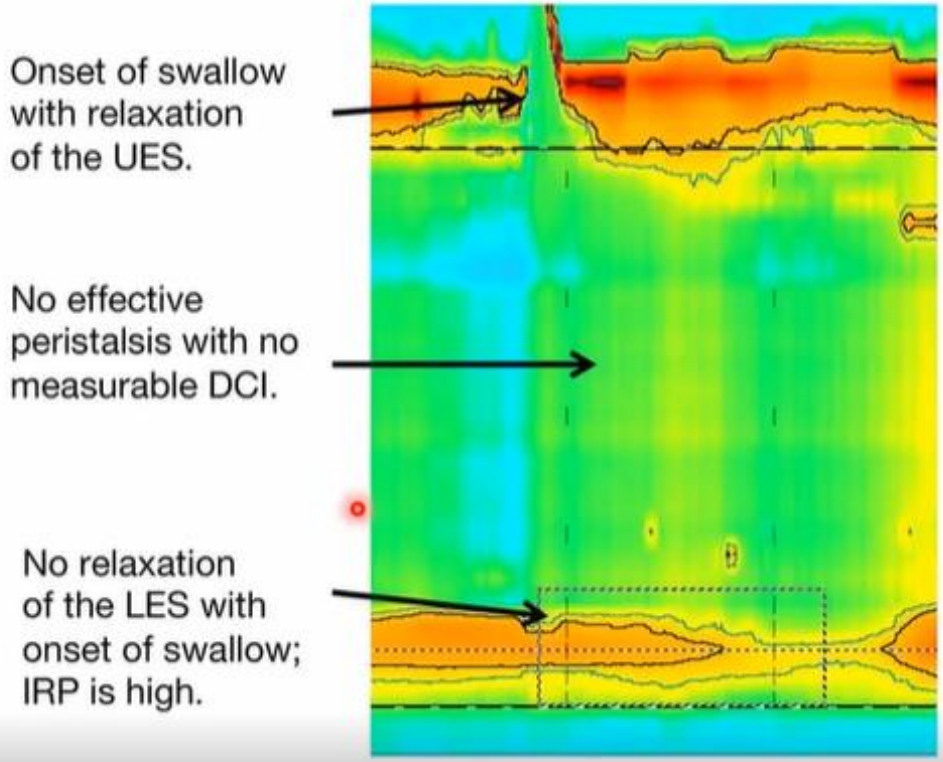


The Lancet. https://doi.org/10.1016/S0140-6736(13)60651-0

Achalasia



HRM: Normal swallow



HRM: Abnormal swallow — type 1 achalasia

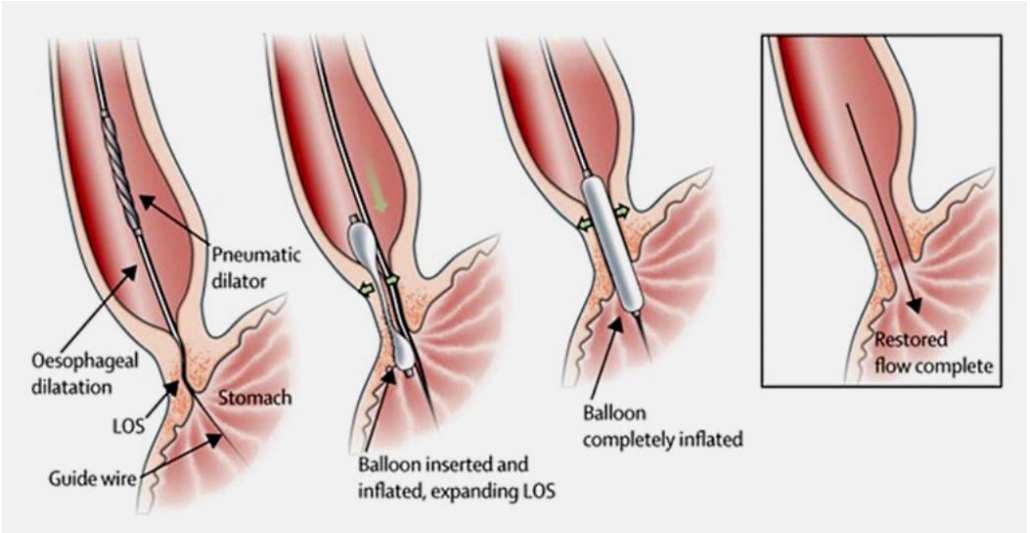
Achalasia: treatment

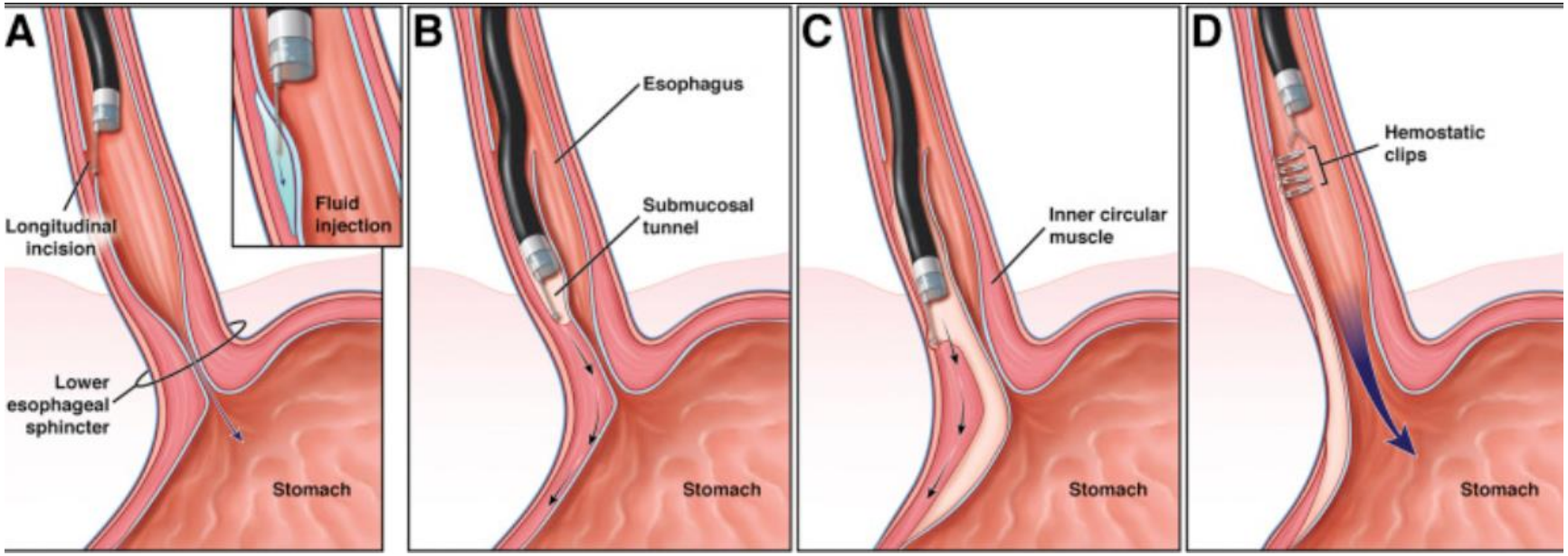
Goal = lowering LES pressure

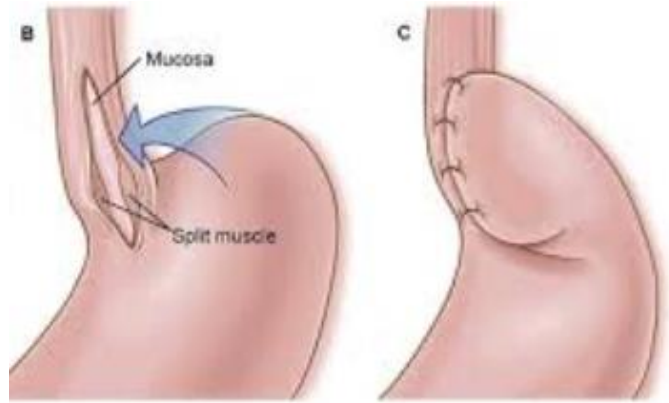
Modalities for LONG-TERM effect:

-Surgical

-Endoscopic







https://doi.org/10.1053/j.gastro.2019.09.001

QUESTION #5

65YO M is evaluated for progressive dysphagia to both solids and liquids for 2 years. PMH of cardiomyopathy EF 15%. Medications: pantoprazole, furosemide, valsartan, digoxin, metoprolol, low-dose aspirin, and amiodarone. He is unable to walk up two flights of stairs without stopping. No tobacco or ETOH use.

On PE: BP 100/65, HR 90, RR 22, BMI 32. Exam shows bibasilar crackles, S3, and 2+ B/L LE edema.

EGD: No masses. Barium esophagram followed by HRM confirms diagnosis of achalasia.

Which of the following is the most appropriate treatment?

A. Botulinum toxin injection
B. Calcium channel blockers
C. Endoscopic pneumatic dilation
D. Laparoscopic surgical myotomy

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EGD: No masses. Barium esophagram followed by HRM confirms diagnosis of achalasia.

Which of the following is the most appropriate treatment?

A. **Botulinum toxin injection**

For patients who are poor candidates for endoscopic or surgical therapy → Medical therapy

-Botulinum toxin injection of LES

-Pharmacotherapy: nitrates, CCB, anticholinergics

QUESTION #6

56YO F is evaluated for chest discomfort after meals occurring intermittently over the preceding month. She describes a sensation of heaviness on her chest. Denies nausea or reflux. She has been taking H2 blocker with minimal symptom relief. She also takes atorvastatin for HLD. Smokes ½ pack of cigarettes daily.

On PE: BP 140/90, rest of vitals normal. BMI 34. No abdominal tenderness and remainder of exam is normal.

Which of the following is the most important next step in management?

A. Barium esophagram
B. ECG
C. Empiric PPI trial
D. EGD

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C. Empiric PPI trial
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Take Home Points

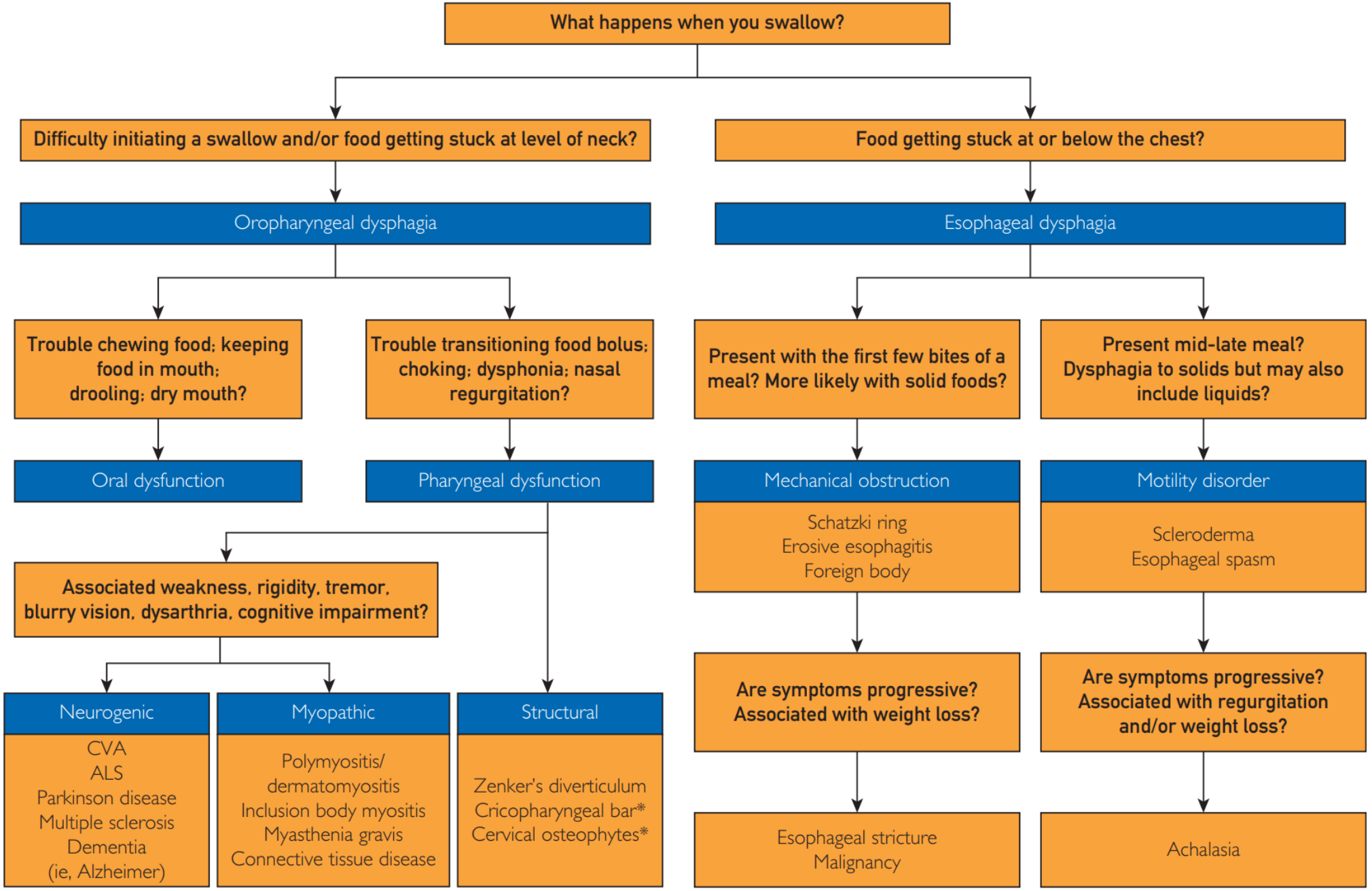
- Taking a good history of dysphagia is essential!
  - Oropharyngeal vs esophageal dysmotility
  - Mechanical vs functional etiology

- Oropharyngeal dysphagia: patient is unable to transfer the food bolus from the mouth into the upper esophagus by swallowing → evaluate with MBS

- Esophageal dysphagia with solids alone → mechanical obstruction, vs dysphagia with either liquids alone or liquids + solids → motility disorder

- Acute esophageal dysphagia → urgent intervention with EGD

- EGD is diagnostic and may be therapeutic for esophageal dysphagia


What happens when you swallow?
Difficulty initiating a swallow and/or food getting stuck at level of neck?
Food getting stuck at or below the chest?
Oropharyngeal dysphagia
Esophageal dysphagia
Trouble chewing food; keeping food in mouth; drooling; dry mouth?
Trouble transitioning food bolus; choking; dysphonia; nasal regurgitation?
Present with the first few bites of a meal? More likely with solid foods?
Present mid-late meal? Dysphagia to solids but may also include liquids?
Oral dysfunction
Pharyngeal dysfunction
Mechanical obstruction
Motility disorder
Schatzki ring
Erosive esophagitis
Foreign body
Scleroderma
Esophageal spasm
Associated weakness, rigidity, tremor, blurry vision, dysarthria, cognitive impairment?
Are symptoms progressive? Associated with weight loss?
Are symptoms progressive? Associated with regurgitation and/or weight loss?
Neurogenic
Myopathic
Structural
CVA
ALS
Parkinson disease
Multiple sclerosis
Dementia
(ie, Alzheimer)
Polymyositis/ dermatomyositis
Inclusion body myositis
Myasthenia gravis
Connective tissue disease
Zenker's diverticulum
Cricopharyngeal bar*
Cervical osteophytes*
Esophageal stricture
Malignancy
Achalasia

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QUESTIONS?

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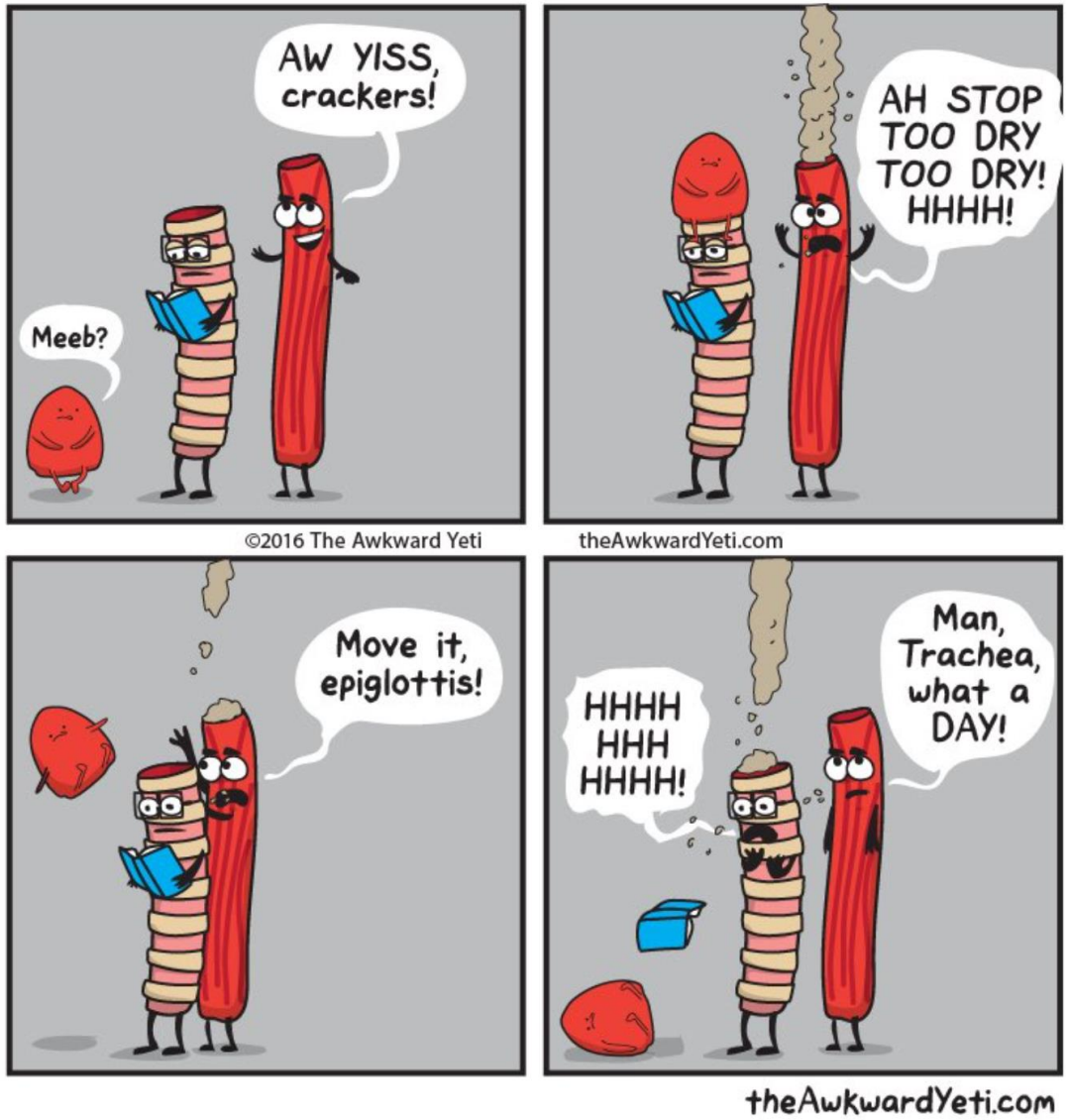
U.S. Department of Veterans Affairs

Banner University Medical Center Phoenix

THANK YOU!

Cell: 480-316-4766



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