



Round : Major Surgery - The esophagus

Group no : B3

Done By : Johaineh Taha

هذا الملف يحتوي على نقاط اساسية مهمة للتمييز بين امراض المريء و بالختام صور للتشخيص لاختبار الميني اوسكي

The key features of esophageal disorders:-

1. Achalasia:

- progressive dysphagia, both Liquids + Solids.
- Chest pain + Regurgitation
- Barium Swallow: Bird's beak appearance
- Manometry: ↑ LES pressure and failure to relax.

2. GERD:

- Heart burn, acid regurg, Chest discomfort.
- Dysphagia, Chronic cough.
- Endoscope: esophageal mucosal inflammation + ulcers
- Complications:- Barret's esophagus.

3. Esophagitis :-

- Painful swallowing (odynophagia)
- Burning chest pain
- Caused by infections < ^{Candida} HSV or chemical injury
- Endoscopy: Redness, Swelling, ulcers

4. Esophageal Perforation

- sudden Severe chest pain
- subcutaneous emphysema (air under skin)
- follow forceful vomiting or trauma.
- CXR - CT scan: shows air in the mediastinum.

5. Mallory - Weiss Syndrome:

- repeated vomiting followed by hematemesis.
- Caused by a tear in esophageal mucosa at GE junction.
- Endoscopy: identify the tear.

6. Boerhaave Syndrome:

- severe chest pain after forceful vomiting
- full thickness rupture of esophagus.
- Signs of sepsis (fever, tachycardia) and mediastinal air.
- CXR - CT: air in mediastinum, pleural effusion.

7. Esophageal webs and rings :-

- Dysphagia to solids only
- Webs → upper esophagus
- Rings (Schatzki) → lower esophagus.
- Barium swallow → Narrowing

8. Diffuse esophageal Spasm:

- intermittent chest pain and dysphasia
- Chest pain mimic Angina
- Barium Swallow: Corkscrew esophagus appearance.
- Manometry: uncoordinated contractions.

9. Hiatal hernia:

- heartburn, post meal fullness, Chest pain, regurg.
- Barium swallow: herniated portion of stomach.
- Endoscopy: to confirm the diagnosis.

10. Esophageal Varices:-

- sudden massive hematemesis without a history of vomiting.
- No dysphagia
- underlying Liver disease
- Endoscopy: Dilated veins in the esophagus

11. Esophageal diverticula:

- Bad breath, regurg. of undigested food, dysphagia.
- Zenker's diverticula: upper esophagus, due to UES dysfunction.
- Traction diverticula: Mid esophagus, Asymptomatic
- Barium Swallow: outpouching

12. Scleroderma esophagus:

- weak esophageal motility and GERD symptoms
- Dysphagia (solid), weight loss
- Associated with systemic scleroderma.
- Manometry: ↓ motility and weak LES tone

13. Nutcracker esophagus:

- Severe chest pain, dysphagia for solids.
- Manometry: very strong but coordinated contractions.

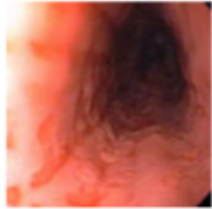
* Esophageal Cancers:-

- 1- progressive dysphagia
 - SCC: upper + middle
 - Adeno Carcinoma: lower
- 2- Unexplained weight loss.
- 3- Chest pain (burning)
4. Regurgitation, Vomiting → due to an obstruction
5. Cough, hoarseness of voice → adenocarcinoma
6. history of GERD or Barrett's esophagus → adenocarcinoma.
7. history of smoking + alcohol use → SCC
8. Biopsy:- irregular, disorganised growth, pleomorphism, mitotic figures
 - increasing in nuclear density.
 - dysplastic + atypical cells
 - abnormal production of mucus → adenocarcinoma.

Note SCC → squamous cells, more keratinized appearance
Adenocarcinoma → gland-like structure.

endoscopic pictures

HSV Esophagitis



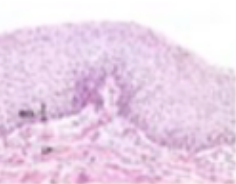
14 year old boy with odynophagia, dysphagia and chest pain

Normal Esophagus



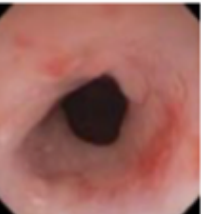
Endoscopic photograph of a normal esophagus taken from a 8 yo.

Normal Esophagus Histology



Histologic view of a normal esophagus consisting of stratified squamous epithelium.

Esophageal Stricture



Esophageal Stricture

Eosinophilic Esophagitis



3 1/2 yo male with child diagnosed with Eosinophilic Esophagitis

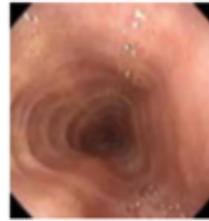
Glycogenic Acanthosis

Endoscopic photograph of glycogenic acanthosis in the distal esophagus, as characterized by multiple small, raised pale nodules. These are generally benign mucosal lesions.



Eosinophilic Esophagitis Rings

Endoscopic photograph of concentric esophageal rings, also known as "trachealization", in a 14 yo with Eosinophilic Esophagitis.



Esophageal Sutures



Esophageal Sutures

Cricopharyngeus

4 yo female who had a coin lodged in the cricopharyngeus for 24 hours.



Esophageal Esophagitis - Abscess



Endoscopic photograph of esophageal plaques in a 10 yo with symptoms of gastroesophageal reflux diagnosed with Eosinophilic Esophagitis

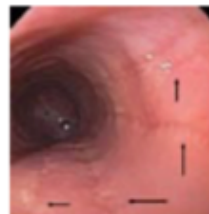
Esophageal Polyp

Endoscopic photograph of an inflammatory polyp in a 15 yo with chronic gastroesophageal reflux disease.



Eosinophilic Esophagitis - Furrows

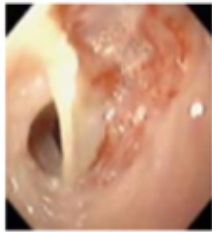
Endoscopic photograph of linear esophageal corrugated, furrows in an 11 yo with Eosinophilic Esophagitis.



endoscopic pictures

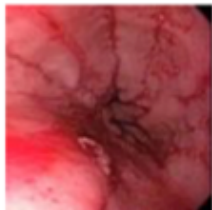
Esophageal Web

Endoscopic photograph of an esophageal web in a 6 yo who presented with dysphagia and a food impaction.



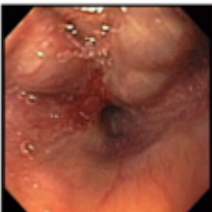
Esophageal Crohn's disease

15 yo female with known Crohn's disease presented in hypovolemic shock following massive hematemesis



Esophageal Varices

15 month-old male with short bowel syndrome and cholestatic liver disease who presented with hematemesis.



Eosinophilic Esophagitis



Eosinophilic Esophagitis

Esophageal Varices



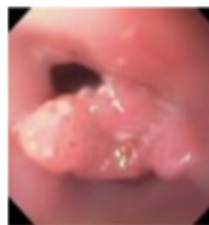
Esophageal varices

Esophageal varix after band ligation



Esophageal varix after band ligation

Esophageal Polyp



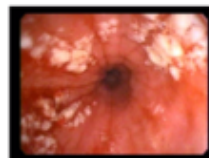
Esophageal Polyp

Normal Gastroesophageal Junction

Wireless capsule endoscopy of 10 year old girl with chronic abdominal pain



Candidal Esophagitis



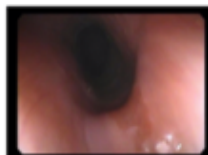
Candidal Esophagitis

Distal Esophageal Polyp



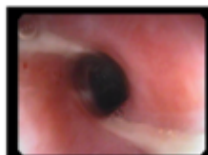
Distal Esophageal Polyp

Gastric Inlet Patch



Indication: 16 y/o with chronic vomiting Findings: Flat salmon pink mucosal lesion at the proximal esophagus surrounded by endoscopically normal appearing mucosa, suggestive of gastric inlet patch. Biopsy confirmed heterotrophic gastric mucosa.

Esophagus with Bullae



- View of the remaining esophagus through the balloon with final image demonstrating the post-dilation.

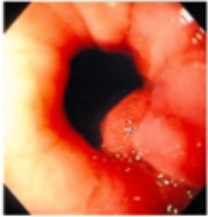
endoscopic pictures

Eosinophilic esophagitis



Eosinophilic esophagitis. Endoscopic view of a furrowed esophagus in an 11-year-old atopic child who presented with dysphagia. Esophageal biopsy showed >40 eosinophils per HPF

Esophageal inflammatory polyp-fold complex



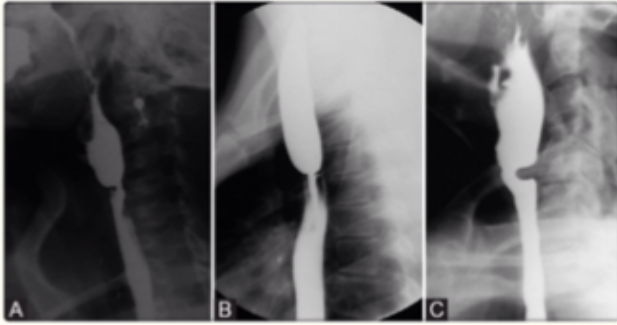
Esophageal inflammatory polyp-fold complex. Endoscopic view of an esophageal inflammatory polyp-fold complex in an 8-year-old with recalcitrant gastroesophageal reflux

Esophageal Polyp

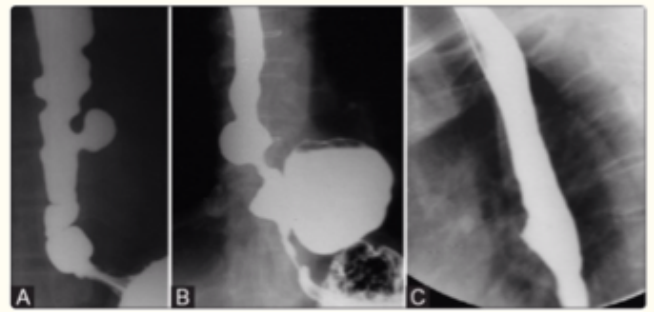
Endoscopic photograph of an inflammatory poly in a 15 yo with chronic gastroesophageal reflux disease.



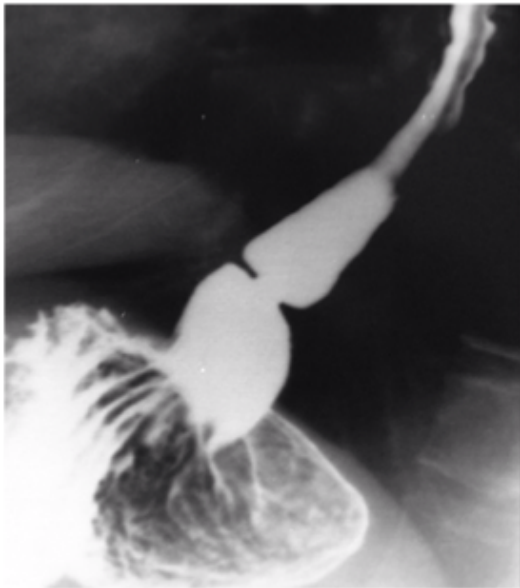
Barium Swallow



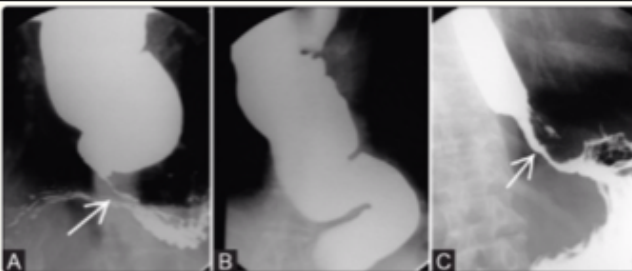
(A) Upright LPO view of single-contrast barium swallow demonstrates a shelf-like filling defect along the anterior wall of hypopharynx, at pharyngoesophageal junction s/o web. (B) Jet phenomenon associated with cervical web, usually seen in cases of partial obstruction. (C) Prominent cricopharyngeus muscle may mimic a web. However, it is seen along the posterior wall



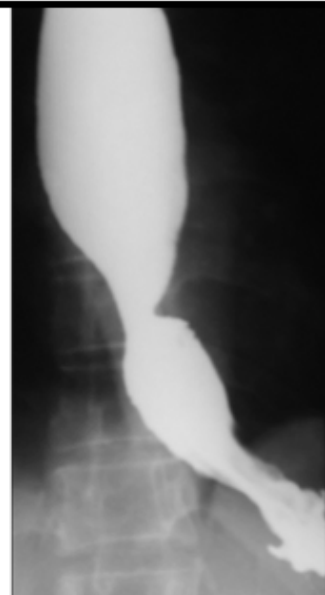
(A) Upright AP view of single-contrast barium swallow shows a pulsion diverticulum. Also, note multiple nonperistaltic contractions associated with motility dysfunction. (B) Upright AP view of single-contrast barium swallow showing a large epiphrenic diverticulum. (C) Upright lateral view of single-contrast barium swallow demonstrating a traction diverticulum arising from anterior wall of mid esophagus. Note the triangular appearance of traction diverticulum



Prone RAO view of single-contrast barium swallow demonstrating Schatzki ring



(A) Primary achlasia: Prone single-contrast barium swallow showing dilated esophagus with tapered beak-like narrowing at GE junction (arrow). On fluoroscopy, primary peristalsis in esophagus was absent. (B) Dilated and tortuous esophagus in a case of primary achlasia (C) Secondary achlasia: Prone RAO view showing mildly dilated esophagus with narrowing involving lower thoracic esophagus and GE junction, with mucosal irregularity (arrow). Note greater length of narrowed segment and less dilatation of esophagus in comparison to (A)



Upright single-contrast barium swallow in a patient of scleroderma showed dilated esophagus with absent primary peristalsis in mid and lower esophagus. Also GE junction was patulous with presence of reflux and sliding hiatus hernia (differentiating it from achalasia)

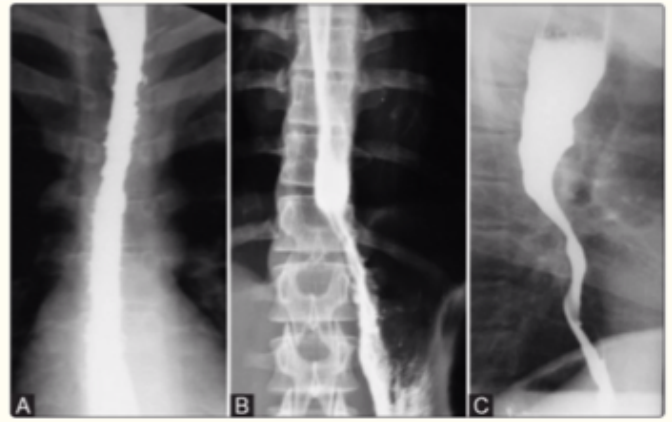


Diffuse esophageal spasm: upright single-contrast barium swallow image showing multiple nonperistaltic contractions in esophagus giving classic "corkscrew appearance"

Barium Swallow



Peptic stricture (arrow) in a patient with long standing history of gastroesophageal reflux. Upright double-contrast barium swallow shows sliding hiatus hernia with segment of smooth, concentric narrowing in lower esophagus. Also note proximal hold up of the barium



Caustic esophagitis: Upright frontal (A and B) and lateral (C) single contrast barium swallow images demonstrating long segment stricture involving distal esophagus in a patient with history of accidental lye ingestion. Also note presence of intramural pseudodiverticulae associated with the stricture (B)



Barrett's esophagus: Upright LPO image of double-contrast barium swallow showing mild narrowing (arrow) and reticular pattern in columnar epithelium at mid thoracic esophagus. Gastroesophageal reflux was also present in the same patient. Endoscopic biopsy revealed columnar metaplasia



Drug-induced esophagitis: Upright barium swallow image demonstrating ulceration (arrow) in mid esophagus with esophageal spasm. The esophagitis was related to intake of doxycycline



Stricture secondary to radiation: Case of squamous cell carcinoma of mid esophagus, postradiotherapy status. Barium swallow done 9 months after the completion of radiotherapy revealed long segment of concentric smooth narrowing involving distal esophagus



Leiomyosarcoma: Prone RAO double-contrast barium swallow image showing semilunar filling defect (arrow) in distal thoracic esophagus s/o submucosal mass. Endoscopic biopsy revealed leiomyosarcoma

Barium Swallow

Leiomyomas are most common benign tumor of esophagus as well as most common mesenchymal tumor of esophagus.[56] Leiomyomas on barium swallow appear as smooth semilunar filling defect [Figure 13], forming right angle or slightly obtuse angle with esophageal wall.[57] On barium studies, these lesions are indistinguishable from other mesenchymal tumors of esophagus (like fibroma, neurofibromas, and hemangiomas).

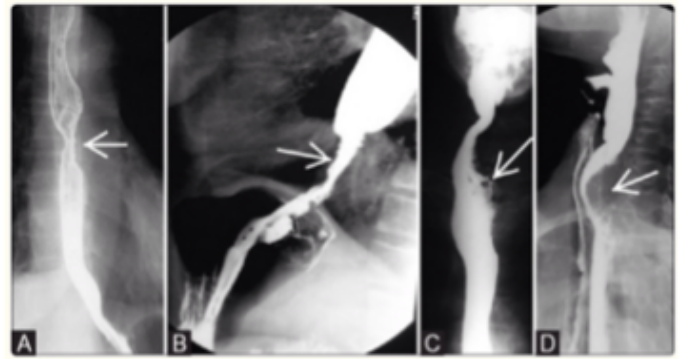


Leiomyoma: Upright double-contrast barium swallow image showing smooth crescentic filling defect in distal esophagus forming obtuse angle with esophageal wall (arrow) characteristic of a submucosal mass

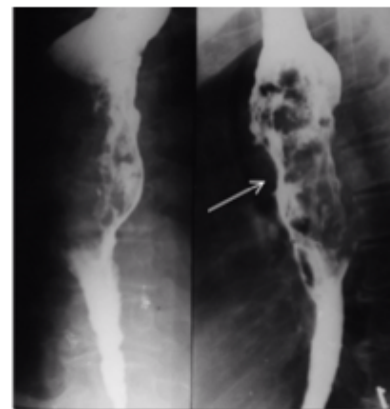


Fibrovascular polyp: Upright barium swallow image showing expansion of cervical and proximal thoracic esophagus with polypoidal filling defect (arrow)

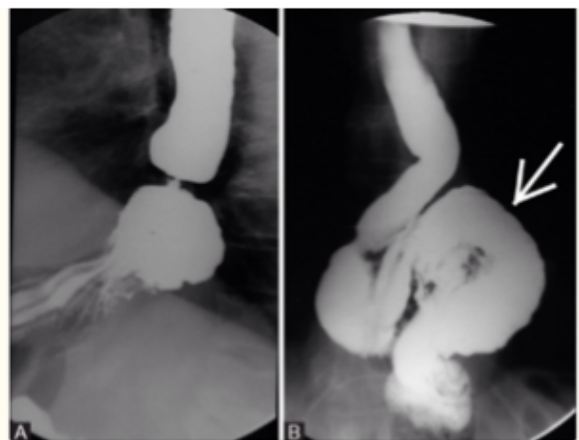
Fibrovascular polyps are rare benign tumors of esophagus, arising from cervical esophagus, near cricopharynx. These patients may give typical history of regurgitation of fleshy mass in mouth which may at times cause asphyxia and death if the mass occludes the larynx.[58] On barium swallow, they appear as a smooth, expansile sausage-shaped mass [Figure 14], arising from cervical esophagus.[58]



Esophageal carcinoma: (A) Early esophageal cancer seen as plaque-like lesion with mucosal irregularity and mild reduced distensibility (arrow) in mid-thoracic esophagus on double-contrast barium swallow. (B) Infiltrative lesion: Prone RAO barium swallow image showing irregular infiltrative lesion (arrow) with shouldering in distal esophagus extending till GE junction. Also note proximal dilatation of esophagus. Endoscopic biopsy revealed the lesion to be adenocarcinoma. (C) Ulcerative lesion: Upright single-contrast barium swallow image demonstrating irregular ulcerative lesion in upper esophagus (arrow) without significant luminal narrowing. (D) Polypoidal lesion: Upright lateral view of single-contrast barium swallow showing polypoidal filling defect in upper esophagus (arrow). Patient had severe dysphagia and aspirated small amount of barium during the procedure



Spindle cell carcinoma: Upright frontal and LPO images of barium swallow demonstrating irregular polypoidal filling defect (arrow) in mid-esophagus causing expansion of esophageal lumen



(A) Sliding hiatal hernia: Upward migration of GE junction with herniation of stomach into thoracic cavity. (B) Mixed hernia: Upright barium swallow image showing paraesophageal herniation of fundus and body of stomach (arrow). Also note higher position of GE junction