*Transmural means all layers of esophagus.

*Catastophy happen when the repture reaches serosa

cerations are *Mallory- Weiss*

صعوبة التنفس

with severe retching or

nown

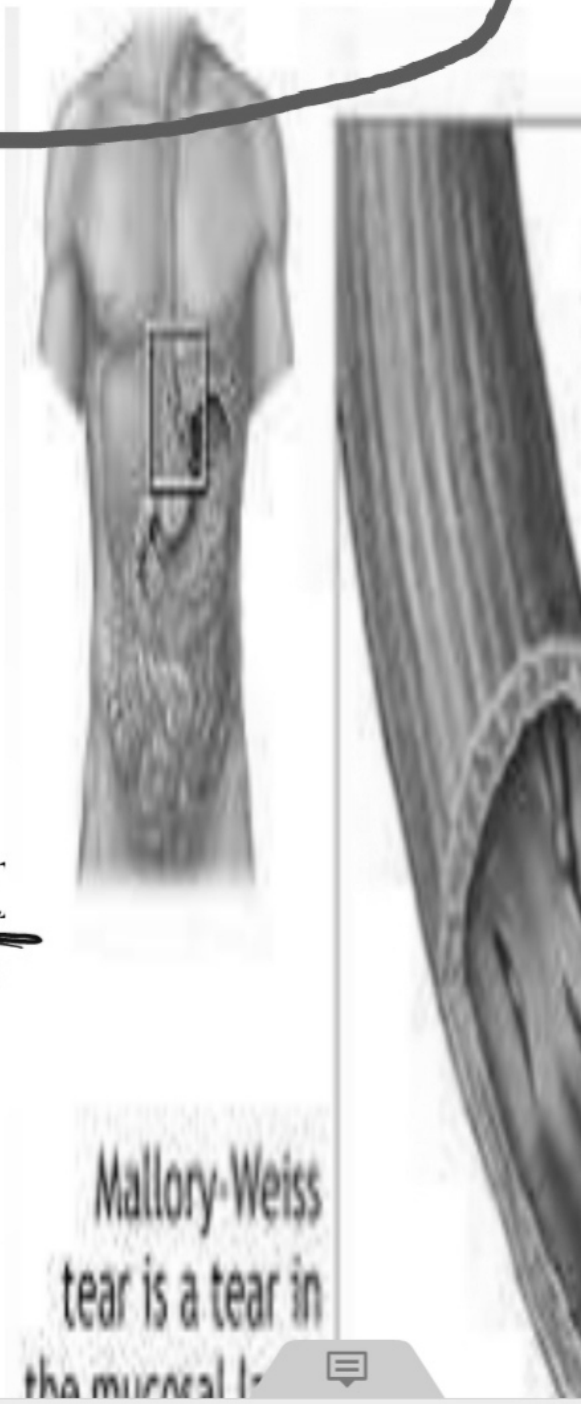
كل طول الجدار

ne, characterized by transmura

تتضمن كل الطبقات

occurs rarely and is a

ons longitudinally oriented,



ESOPHAGITIS

1- Chemical and Infectious Esophagitis

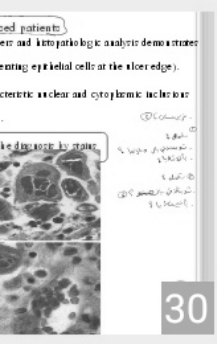
- Medicinal pills may lodge and dissolve in the esophagus, rather than passing in intact, resulting in a condition termed *pill-induced esophagitis*.
- Esophagitis due to chemical injury generally causes only

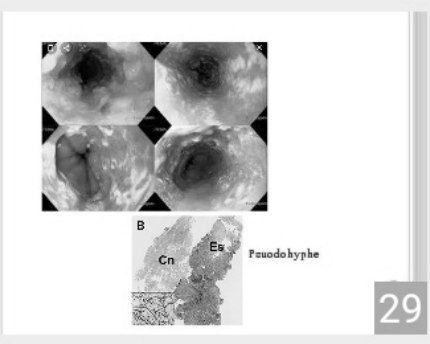
self-limited pain, particularly *odynophagia* (pain with swallowing). Hemorrhage, s perforation may occur in severe cases.

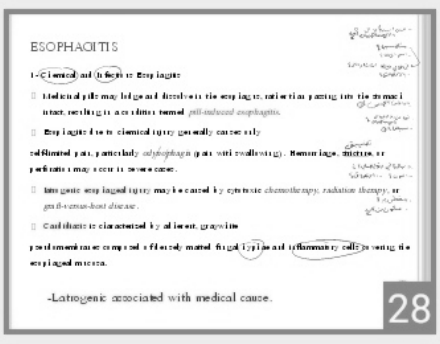
- Iatrogenic esophageal injury may be caused by cytotoxic *chemotherapy, radiati graft-versus-host disease*.
- Candidiasis is characterized by adherent, graywhite

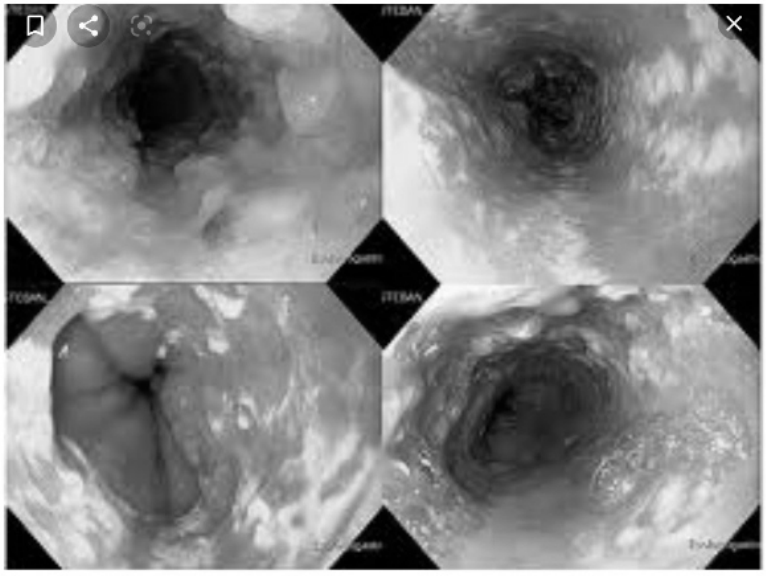
pseudomembranes composed of densely matted fungal hyphae and inflammatory c esophageal mucosa.

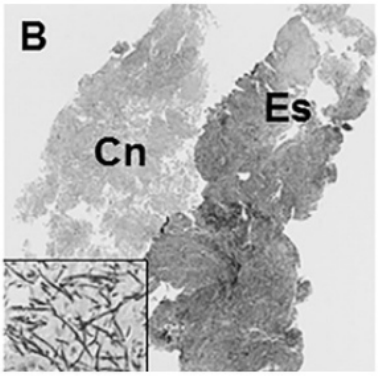
-Latrogenic associated with medical cause.











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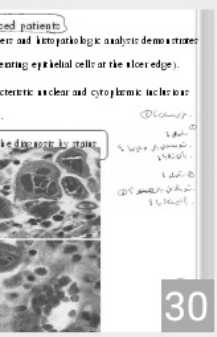
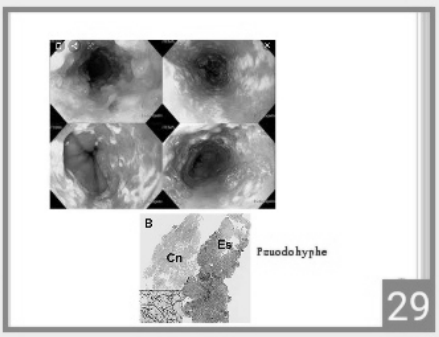
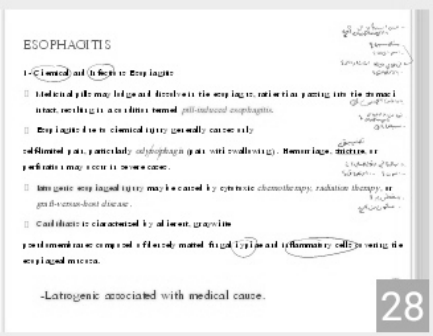
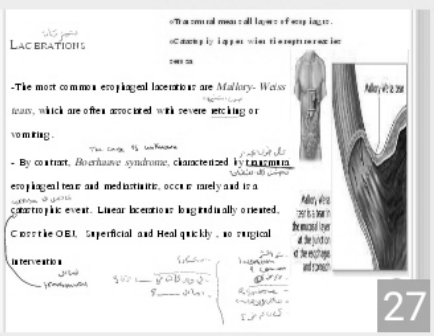








They occur mostly in Immunocompresed patients

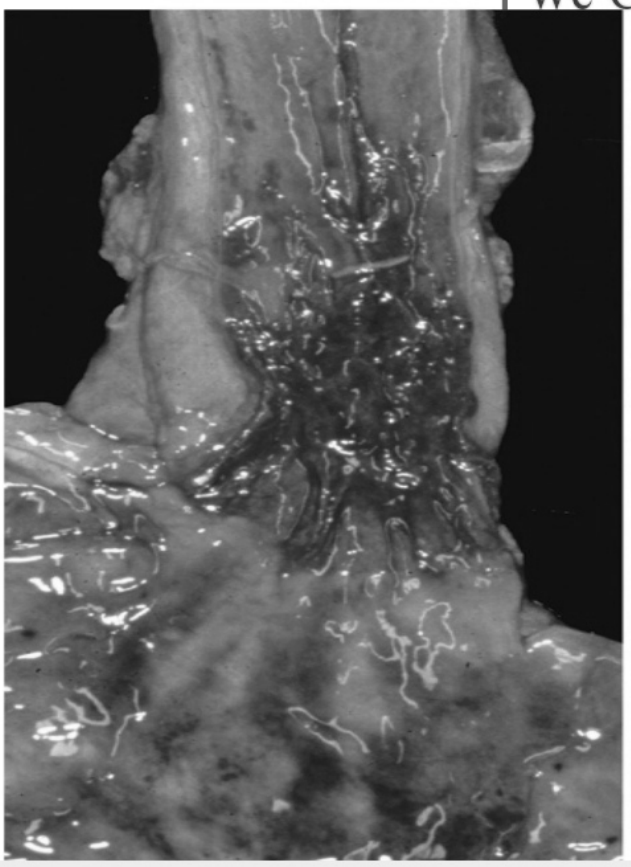
Herpesviruses typically cause punched-out ulcers and histopathologic analys

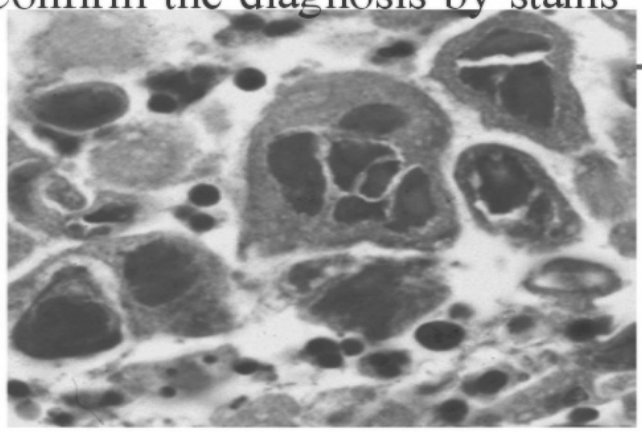
nuclear viral inclusions within a rim of degenerating epithelial cells at the u

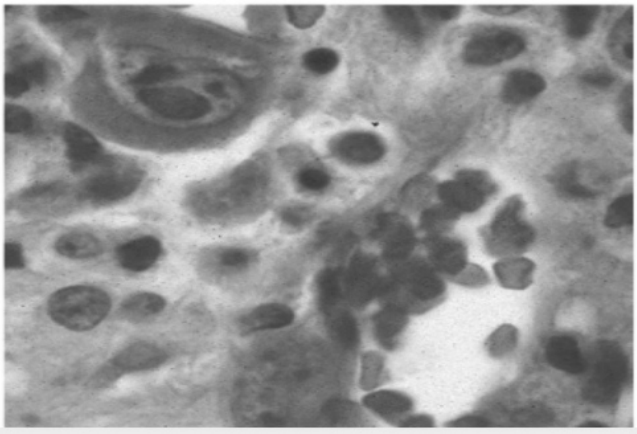
CMV causes shallower ulcerations and characteristic nuclear and cytoplasm

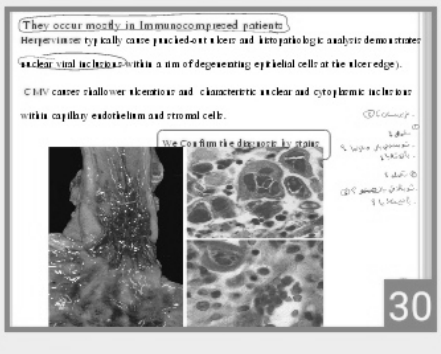
within capillary endothelium and stromal cells.

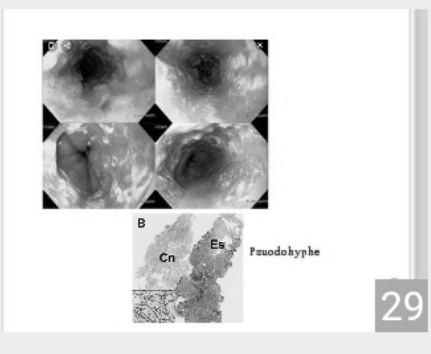
We Confirm the diagnosis by stains

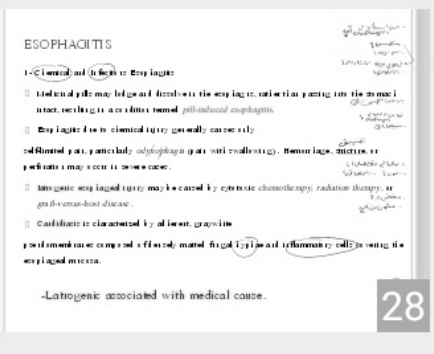


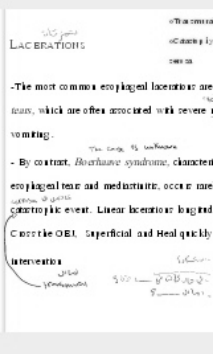












REFLUX ESOPHAGITIS AND *GASTROESOPHAGEAL REFLUX DISEASE* (GERD)

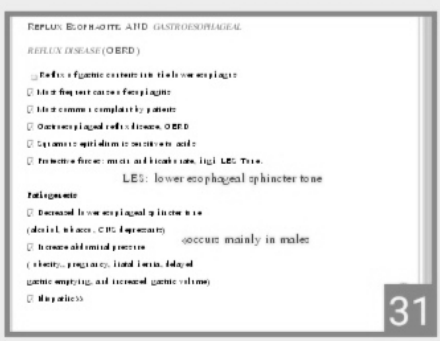
- Reflux of gastric contents into the lower esophagus
- Most frequent cause of esophagitis
- Most common complaint by patients
- Gastroesophageal reflux disease, GERD
- Squamous epithelium is sensitive to acids
- Protective forces: mucin and bicarbonate, high LES Tone.

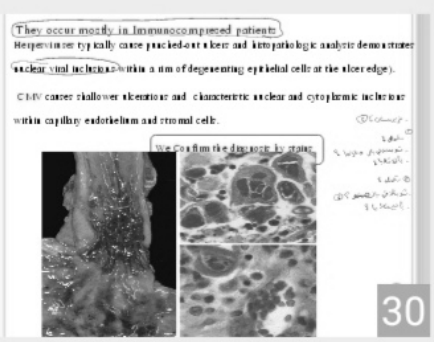
LES: lower esophageal sphincter ton

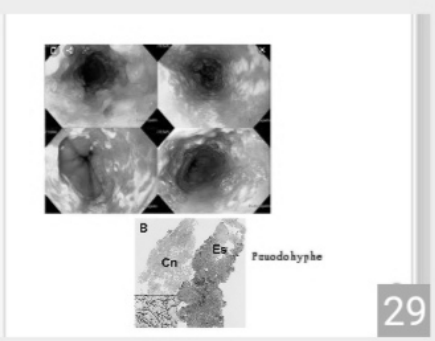
Pathogenesis

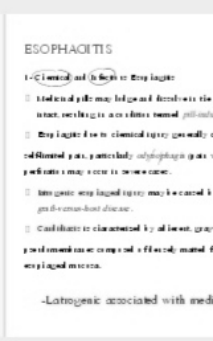
- Decreased lower esophageal sphincter tone (alcohol, tobacco, CNS depressants)
- Increase abdominal pressure (obesity,, pregnancy, hiatal hernia, delayed gastric emptying, and increased gastric volume)
- Idiopathic!!

occurs mainly in males







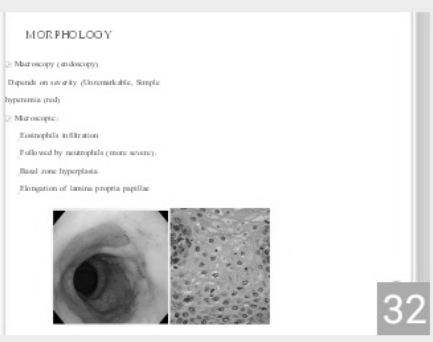


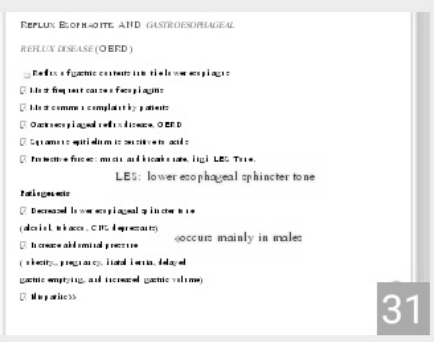
CLINICAL FEATURES

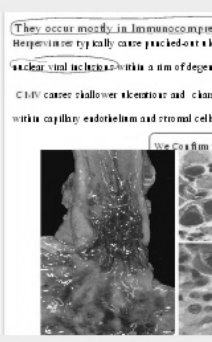
- Most common over 40 years.
- May occur in infants and children
- Heartburn , dysphagia,
- Regurgitation of sour-tasting gastric contents
- Rarely: Severe chest pain, mistaken for heart disease

*We must always think about heart disease first then about GERD

- Tx: proton pump inhibitors







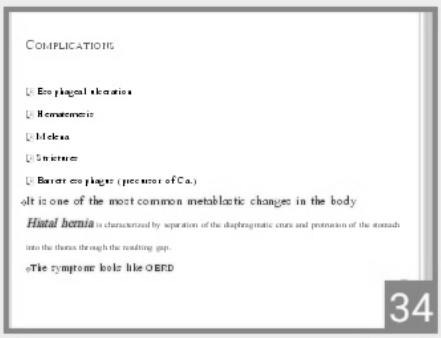
COMPLICATIONS

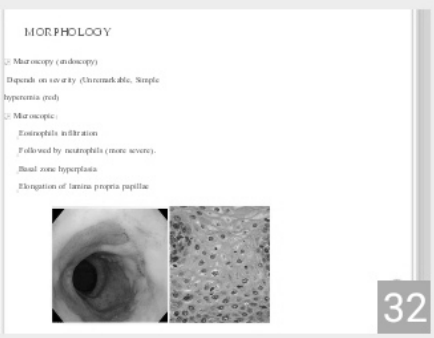
- Esophageal ulceration
- Hematemesis
- Melena
- Strictures
- Barrett esophagus (precursor of Ca.)

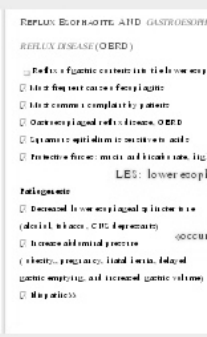
*It is one of the most common metablastic changes in the body

Hiatal hernia is characterized by separation of the diaphragmatic crura and protrusion of the stomach into the thorax through the resulting gap.

*The symptoms looks like GERD







Eosinophilic Esophagitis

Chronic immune mediated disorder

ش Symptoms:

- Food impaction and dysphagia in adults

  Feeding intolerance or GERD-like symptoms in children

ش Endoscopy:

Rings in the upper and mid esophagus. (looks like trachea)

ش Microscopic:

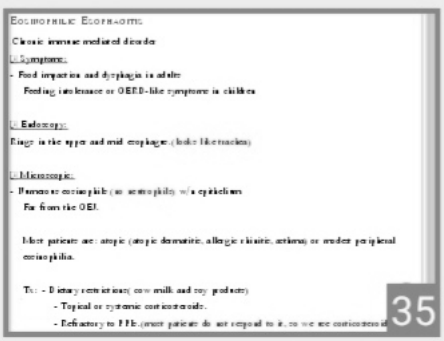
- Numerous eosinophils (no neutrophils) w/n epithelium

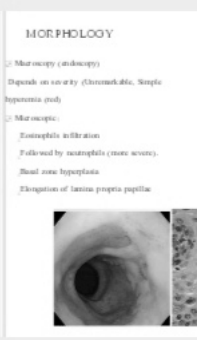
  Far from the GEJ.

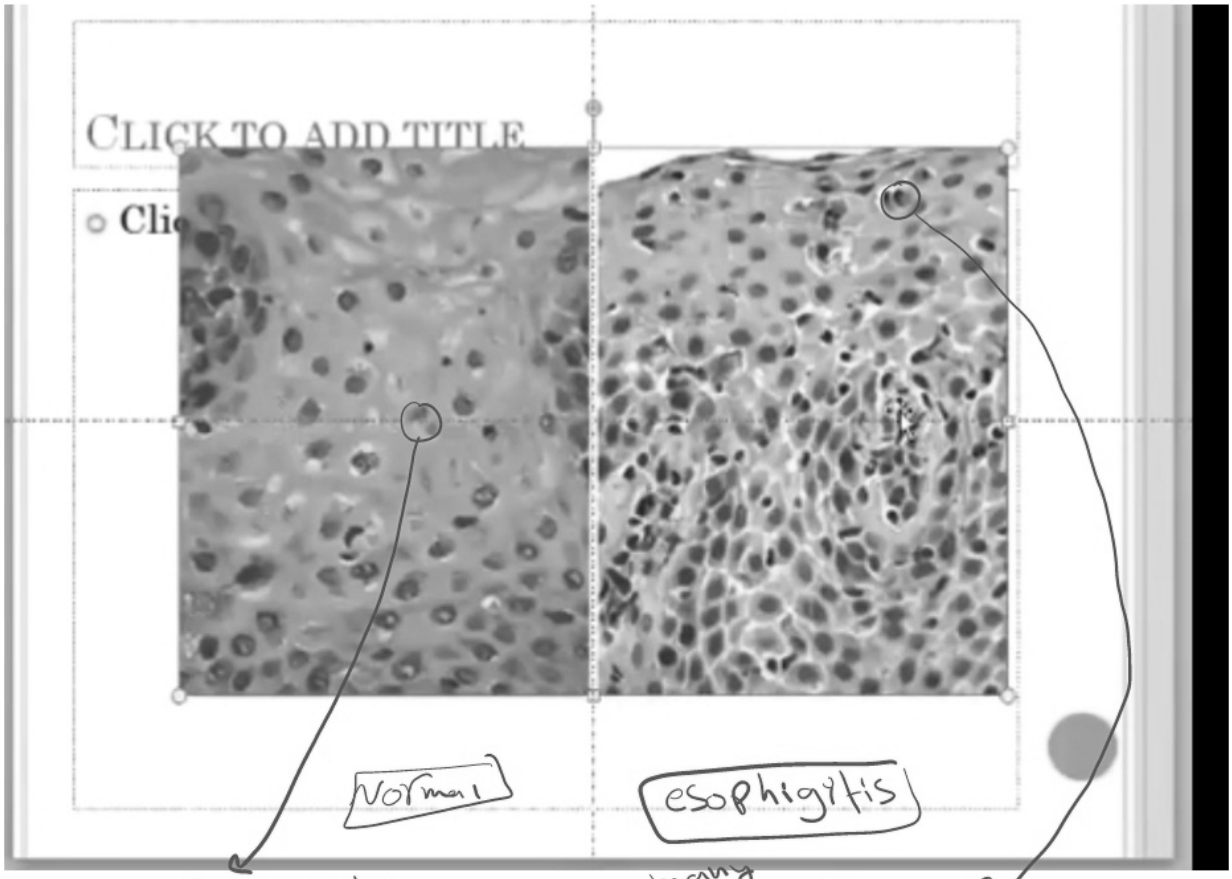
Most patients are: atopic (atopic dermatitis, allergic rhinitis, asthma) or modest peripheral eosinophilia.

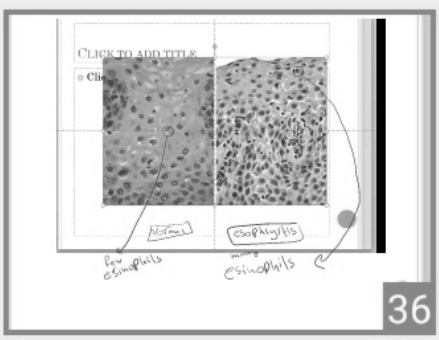
Tx: - Dietary restrictions(cow milk and soy products)

- Topical or systemic corticosteroids.
- Refractory to PPIs. (most patients do not respond to it, so we use corticosteroids)






CLICK TO ADD TITLE
Normal
esophigytis
few esinophils
many esinophils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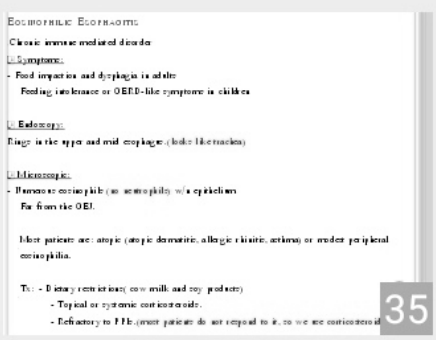
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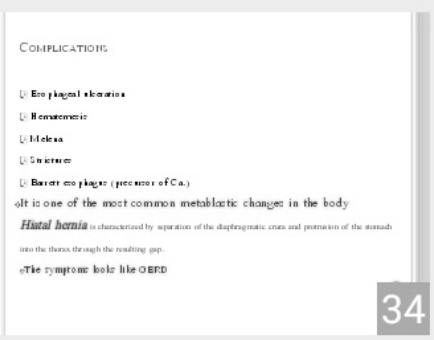
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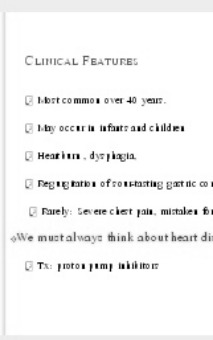
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BARRETT ESOPHAGUS

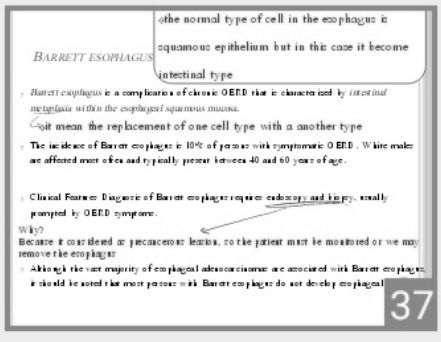
*the normal type of cell in the esophagus is squamous epithelium but in this case it become intestinal type

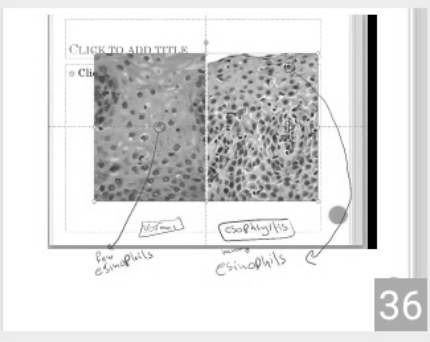
- *Barrett esophagus* is a complication of chronic GERD that is characterized by *intestinal metaplasia within the esophageal squamous mucosa.*
  - *it mean the replacement of one cell type with a another type*
- The incidence of Barrett esophagus is 10% of persons with symptomatic GERD. White males are affected most often and typically present between 40 and 60 years of age.

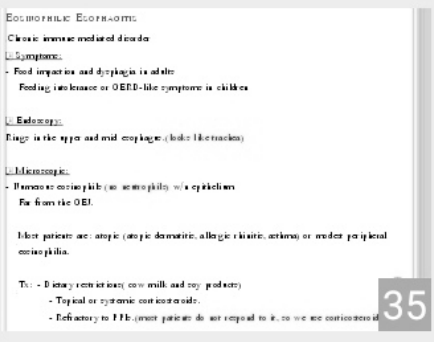
- Clinical Features Diagnosis of Barrett esophagus requires endoscopy and biopsy, usually prompted by GERD symptoms.

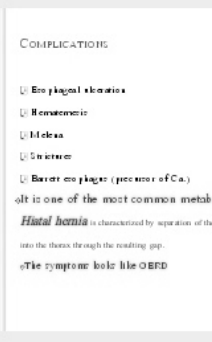
Why?
Because it considered as precancerous leasion, so the patient must be monitored or we may remove the esophagus

- Although the vast majority of esophageal adenocarcinomas are associated with Barrett esophagus, it should be noted that most persons with Barrett esophagus do not develop esophageal cancer.





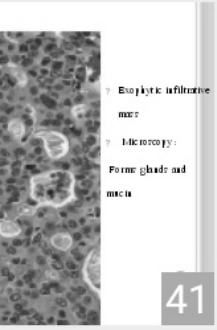




- Barrett esophagus is recognized endoscopically as tongues or patches of red, velvety mucosa extending upward from the gastroesophageal junction. Above it by 3 cm because (normally in the GEJ we can see the type of gastric cell and esophageal cells)

- Histologically : documented gastric or intestinal metaplasia for diagnosis of Barrett esophagus. **Goblet cells**, which have distinct mucous vacuoles that stain pale blue by H&E and impart the shape of a wine goblet to the remaining cytoplasm.

- Dysplasia is classified as low-grade or high-grade on the basis of morphologic criteria. Intramucosal carcinoma is characterized by invasion of neoplastic epithelial cells into the lamina propria.



- Exophytic infiltrative mass
- Microscopy: Forme glande and mucin

41

1- Esophageal adenocarcinoma typically arises in a background of Barrett esophagus and long-standing GERD.

- Risk of adenocarcinoma is tobacco use, obesity, and previous radiation therapy. Conversely, reduced adenocarcinoma risk is associated with diets rich in fresh fruits and vegetables.
- Esophageal adenocarcinoma occurs most frequently in whites and shows a strong gender bias, being seven times more common in men than in women.
- Esophageal adenocarcinoma usually occurs in the distal third of the esophagus and may invade the adjacent gastric cardia. While early lesions may appear as flat or raised patches in otherwise intact mucosa, tumors may form large exophytic masses, infiltrate diffusely, or ulcerate and invade deeply.
- It manifests with pain or difficulty in swallowing, progressive weight loss, chest pain, or vomiting.

40

ESOPHAGEAL TUMORS

- ☑ Squamous cell carcinoma (most common worldwide)
- ☑ Adenocarcinoma (on the rise, half of cases

39

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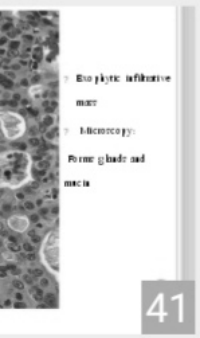

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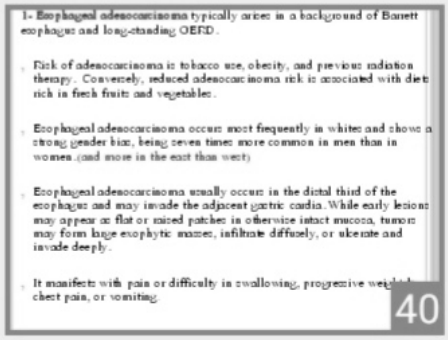

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2- squamous cell carcinoma of the esophagus

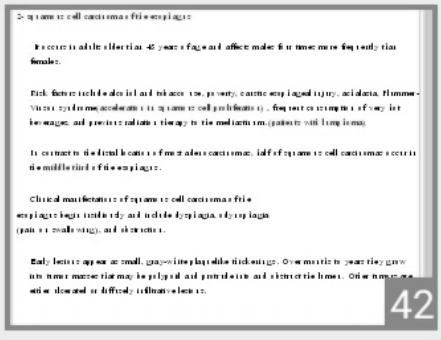
It occurs in adults older than 45 years of age and affects males four times more frequently than females.

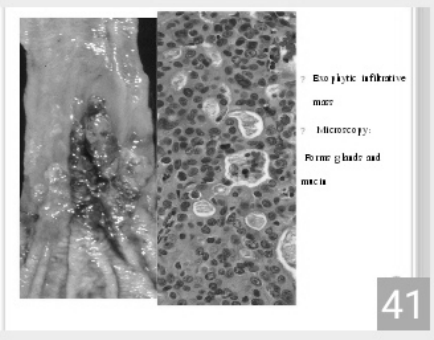
Risk factors include alcohol and tobacco use, poverty, caustic esophageal injury, achalasia, Plummer-Vinson syndrome(acceleration in squamous cell proliferation) , frequent consumption of very hot beverages, and previous radiation therapy to the mediastinum.(patients with lumphoma)

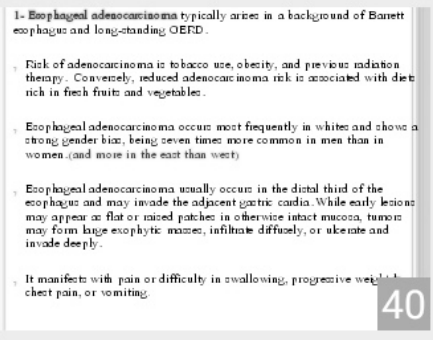
In contrast to the distal location of most adenocarcinomas, half of squamous cell carcinomas occur in the middle third of the esophagus.

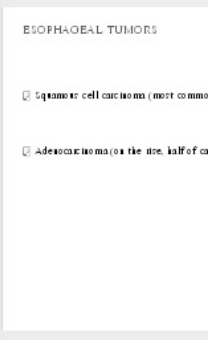
Clinical manifestations of squamous cell carcinoma of the esophagus begin insidiously and include dysphagia, odynophagia (pain on swallowing), and obstruction.

Early lesions appear as small, gray-white plaquelike thickenings. Over months to years they grow into tumor masses that may be polypoid and protrude into and obstruct the lumen. Other tumors are either ulcerated or diffusely infiltrative lesions.







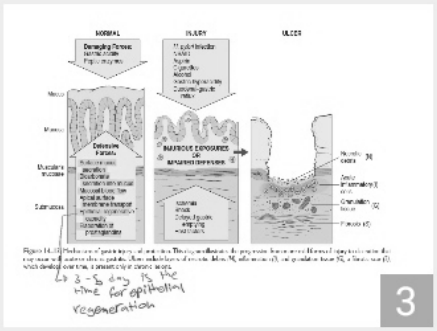


INFLAMMATORY DISEASE

OF THE STOMACH

- The gastric lumen is strongly acidic, with a pH close to one more than a million times more acidic than the blood.
- Multiple mechanisms have evolved to protect the gastric mucosa and disruption of any of these protective mechanisms will lead to Acute or chronic gastritis

The most common benign tumor in esophagus is lyomyoma



Day 3-5 day is the time for epithelial regeneration

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STOMACH

Dr. Ibrahim Alfarsawek, MD

Anatomical pathology

Mutah University

School of Medicine- Department of Laboratory medicine

Pathology

GIT lectures 2021

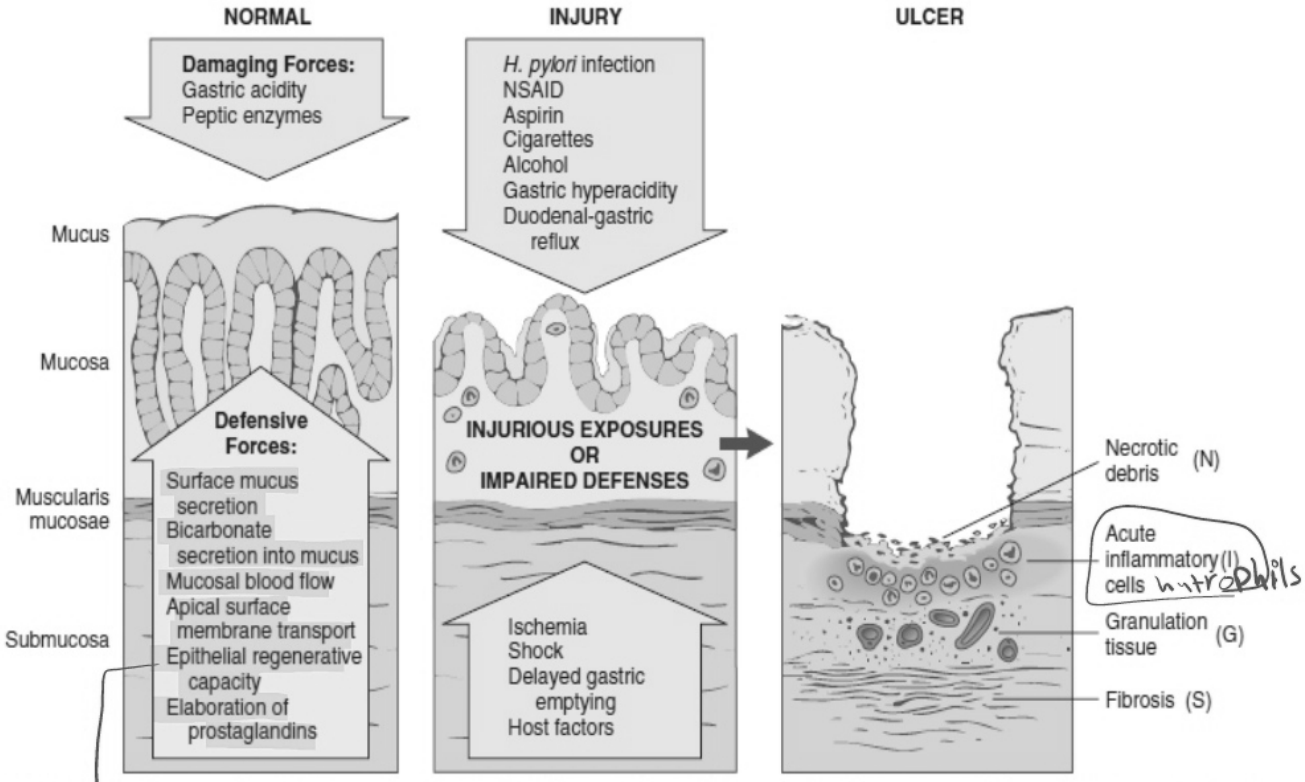


Figure 14–13 Mechanisms of gastric injury and protection. This diagram illustrates the progression from more mild forms of injury to ulceration that may occur with acute or chronic gastritis. Ulcers include layers of necrotic debris *(N)*, inflammation *(I)*, and granulation tissue *(G)*; a fibrotic scar *(S)*, which develops over time, is present only in chronic lesions.

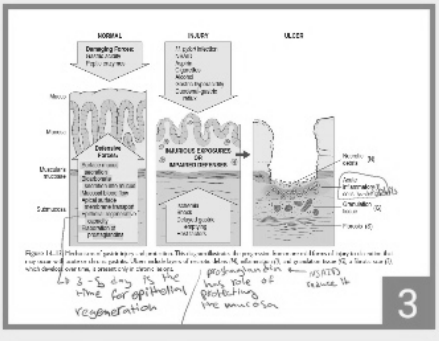
3-5 day is the time for epithelial regeneration

prostaglandin has role of protecting the mucosa ← NSAID reduce it

Acute Gastritis

- On histologic examination,. Lamina propria lymphocytes and plasma cells are prominent. The presence of neutrophils above the basement membrane—specifically, in direct contact with epithelial cells—is abnormal in all parts of the gastrointestinal tract and signifies **active inflammation.**

4



3

INFLAMMATORY DISEASE OF THE STOMACH

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The most common benign tumor in esophagus is leiomyoma

2

STOM

School of M

Acute Peptic Ulceration

- *Stress ulcers,* most commonly affecting critically ill patients with shock, sepsis, or severe trauma. ICU patient
- *Curling ulcers,* occurring in the proximal duodenum and associated with severe burns or trauma
- *Cushing ulcers,* arising in the stomach, duodenum, or esophagus of persons with intracranial disease, have a high incidence of perforation.

- Symptoms of gastric ulcers include nausea, vomiting, and coffee-ground hematemesis.