

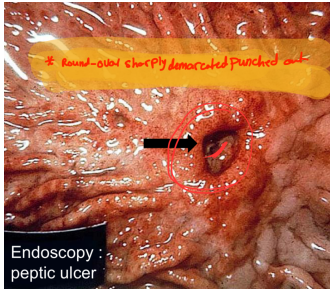


Round : General surgery

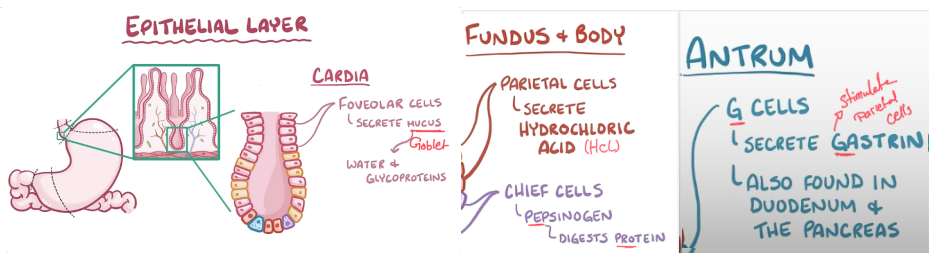
Group no : B3

Done By : Fatima abu assal

Peptic ulcer



- ✦✦ defect in the gastric or duodenal mucosa with a diameter of at least 0.5cm penetrating muscularis a mucosa
 - ✦✦ The base of peptic ulcers is smooth and clean as a result of peptic digestion of exudate
 - ✦✦ Gastric and duodenal(more common)ulcer
 - ✦✦ Male: female = (3- 4):1
 - ✦✦ PUD is the most common cause of upper GI bleeding(mostly caused by gastroduodenal artery)
 - ✦✦ Perforation is the most common complication of peptic ulcer.
 - ✦✦ (Indication of surgery for bleeding ulcer:)
- 1-A patient with hypovolemic shock due to bleeding.
 - 2-A patient who took three units of blood and the bleeding didn't stop.
 - 3-A patient after endoscopy with continuous bleeding.
 - 4-A patient after endoscopy stopped bleeding but rebleed after surgery
- ❓ A patient with slow bleeding (3 units of blood per day) you must do surgery.

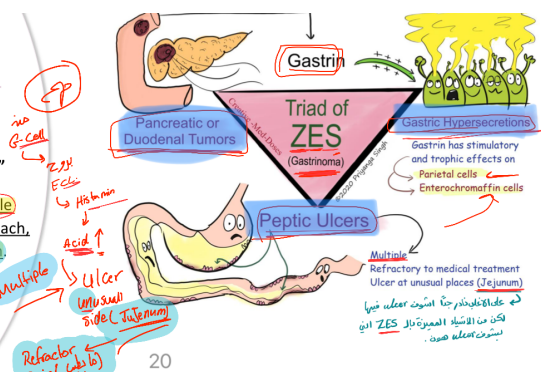


D cells

Somatostatin (inhibits acid secretion)

Zollinger-Ellison syndrome (ZES)

- Is an **uncontrolled** release of gastrin caused by a **gastrin-secreting tumor; Gastrinoma**
- ZES is characterized by **multiple** peptic ulcerations in the stomach, duodenum, and **even jejunum**.
- Gastrinomas usually occur in **multiple** **pancreas or duodenum**



Gastric ulcer :

- Epigastric pain worse with food
- Mostly will heal ... if not 5%-10% chance to be malignant
- 80% solitary
- Mostly related with malignancy
- Mostly in first part of duodenum then antrum

Duodenal ulcer: (Stabbing pain)

- Improve symptoms after meals
- mostly benign
- Some Surgical interventions:
 - 1-(partial gastrectomy (removing antrum and small part of duodenum and pylorus)):
 - Polya or billroth II ((Gastrojejunal anastomosis))
 - Billroth I (gastroduodenal anastomosis) this is better

2-Vagotomy:

Truncal vagotomy:

- Complete** vagal denervation of the stomach
- Must be done with pyloroplasty or gastroenterostomy to avoid gastric stasis
- Safer than partial gastrectomy

Selective vagotomy:

- Only the vagal fibers of the stomach are cut , (Attention here the nerve of laterjet or the posterior nerve of the lesser curvature is cut also)
- Must be done with pyloroplasty or gastroenterostomy to avoid gastric stasis.

Highly selective vagotomy:

- only the nerves to the parietal cells are cut with sparing vagal fibers that supply pylorus and laterget , So NO need pyloroplasty or gastroenterostomy
- has the lowest recurrence rate of ulcers
- The only one that doesn't cause diarrhea
- The best

	Duodenal ulcer	Gastric ulcer
Age	Peak from 30 to 50 years of age	increases with age >50 y
Blood G	Common in group O	Common in group A
Cause	Associated with increased serum pepsinogen that is mostly caused by H.Pylori infection.	less related to H. pylori than duodenal ulcers (about 80%), but the use of NSAIDs increase the risk of gastric ulcers by three to four folds
MC site	first part of the duodenum	lesser curvature of the stomach.
Comp	- Anteriorly: perforation - Posteriorly: bleeding from gastroduodenal artery	- Perforation - Bleeding from left gastric artery
Pain		
Time site	Earlier presentation Above the umbilicus to the right side of the midline	Around the middle line in the epigastric region
time	Starts 2 - 3 hours after meal & persists until the next meal (hunger pain).	Usually starts 30m - 1 hour after meal. (related to food)
↑ ↓	Fasting	Food
Appetite	Antacids, Food	Fasting, vomiting, less relieved by antacid
Weight	good Weight gain	bad Weight loss → Sitophobia (cibophobia): fear of eating because it will cause pain (PYO)
N/V	Does not occur except if pyloric stenosis occurs	Very common as it relieves pain
10 - 20% of patients with a gastric ulcer have a concomitant duodenal ulcer		

Classification based on endoscopic findings (Forrest classification)

Grade	Ulcer appearance
Ia	Ulcer with spurting hemorrhage (High risk of bleeding)
Ib	Ulcer with oozing hemorrhage
IIa	Non-bleeding visible vessel
IIb	Adherent clot
IIc	Flat pigmented spot (low-risk lesions)
III	Clean ulcer base

🌸 The Mechanism by which H. Pylori causes ulcers:

- 1-produce large amounts of urease
- 2-Neutralize stomach acidity (around itself only)allowing H. pylori to thrive
- 3-increasing the acidic secretions of the stomach (an inhibitory effect on antral D cells that secrete somatostatin) so the will increase release of gastrin from antral G cells.
- 4-erode the mucosal lining directly
- 5-local alkalization of the antrum

🌸 treatment of choice is triple therapy for 14 days(proton pump inhibitor +clarithromycin + amoxicillin). If the patient had allergy to amoxicillin replaced by metronidazole.

Complications of post peptic ulcer surgeries:

- ✨ Early: failure of stomach to empty , intestinal obstruction , acute pancaratitis.
- ✨ Late: recurrent ulcerations , gastrojejunal fistula

Post gastric surgery syndromes and symptoms :

1-Dumping syndrome:

- ✨ Post gastric/esophagus surgeries syndrome
- ✨ Insufficient or absent pyloric sphincter
- 🌸 food (mainly sugar (hypertonic))moves too quickly from the stomach to the small intestine
- ✨ Symptoms:

Early dumping (10-30mins):

cramping, bloating, diarrhea, N/V, lightheadedness, fatigue , tachycardia

Late dumping :(1-3)hrs

🌸 Alimentary Hypoglycemia (sweating, tremors , weakness, confusion)

Diagnosis:

🌸 1-Modified oral glucose tolerance test :

Low blood sugar between 120-180 minutes after drinking the solution.

Increase in hematocrit >3% at 30mins

Rise in pulse rate >10beats/min after half hour

✨ 2-Gastric emptying scintigraphy test(confirmatory test)

✨ 3-upper GI endoscopy

✨ Complications:

Malnutrition +dehydration

Treatment:

🌸 Life style changing

eating smaller meals 5-6 meals through the day , delay liquid intake before and after meals for at least 30 minutes, increase intake of protein and complex carbs , avoid simple sugar and simple carbs, increase the thickness of food by adding pectin , lying down after eating , chewing thoroughly.

Medications:

(octreotide to slow gastric emptying +Acarbose in late dumping)

🌸 Surgical :reversing the previous surgery

2-Anemia (both macrocytic and microcytic)

3-weight loss (early satiety and loss of hunger hormone (ghrelin))

🌸 4-Bilious vomiting: (treat with baclofen(decreases LES relaxation))

1. A patient with gastric outlet obstruction and prolonged emesis has which electrolyte disturbance?

- a. Hyperchloremic, hyperkalemic metabolic acidosis
- b. Hyperchloremic, hypokalemic metabolic acidosis
- c. Hypochloremic, hyperkalemic metabolic alkalosis
- d. Hypochloremic, hypokalemic metabolic alkalosis**
- e. Hyponatremic, hypokalemic metabolic acidosis

3. What is the preferred surgical therapy for hemodynamically unstable patients with bleeding duodenal ulcers?

b. Duodenotomy and three-point ligation of the bleeding vessel