



GIT BLock midterm QUESTIONS



DONE BY : HUSSAIN AL-KAFF & REEM LABANI

QUESTIONS

what the major causes of reflux esophagitis?

Reflux of gastric contents is the major cause of reflux esophagitis. Many factors play a role:

- The presence of a sliding hiatal hernia is the most common. - Heavy alcohol, tobacco use.
- Increased gastric volume.
- Decreased efficacy of LES.
- Pregnancy.
- CNS depressants.
- Hypothyroidism.

what are other causes of esophagitis?

Ingestion of irritants (e.g. alcohol, corrosive acids); infections in immunosuppressed hosts by fungi (e.g. Candida) or viruses (e.g. CMV, herpes); uremia; radiation therapy; graft-versus-host disease; and cytotoxic anticancer therapy.

what are the major complications of reflux esophagitis?

The potential complications of severe reflux esophagitis are (a) ulcer; (b) bleeding; (c) development of stricture; (d) development of Barrett esophagus.

- A 57-year-old presents with a history of a retrosternal burning sensation, particularly after large meals, and often on retiring to bed at night. Treatment with antacids has had little effect and he has been referred by his GP for endoscopy.

- Upper gastrointestinal tract endoscopy reveals reddening of the lower esophageal mucosa from the level of the gastroesophageal junction to a point 32 cm from the incisors. There is no evidence of a hiatus hernia. The proximal border of the reddened area is irregular, and this area is biopsied. The biopsy shows gastric and intestinal-type glandular mucosa.

What is the likely cause of the symptoms?

- The symptoms of 'heartburn' are suggestive of gastroesophageal reflux disease (GORD), with or without the presence of a hiatus hernia.

- Other important causes of retrosternal pain should not be overlooked, including cardiovascular causes, especially myocardial ischaemia, as well as other rarer causes including pneumothorax and musculoskeletal pain.

What is the final diagnosis?

The endoscopic and biopsy appearances confirm a Barrett's oesophagus. This is a metaplastic process which develops as a result of persistent reflux of gastric contents into the esophagus, the normal squamous mucosa being replaced by glandular mucosa of gastric or intestinal type.

A 49-year-old secretary presents to medical outpatients with a 7-month history of epigastric pain. She had been widowed in the last year, her husband having died of cancer. The patient had been left to support two children. She had recently become a vegetarian to cut down on meat costs. She smokes five cigarettes per day but does not drink alcohol. She has been treated with antacids by her GP, but this has not controlled the symptoms. In the clinic, she complains of epigastric pains which are sharp and burning and radiate her subcostal margin to the right. The pain is worse at night and is relieved by food. On examination, there is epigastric tenderness and clinical signs of anemia.

What are the possible causes of this clinical presentation?

Stress-related duodenal ulcer that is not responding to existing treatment. Ulcer repair is compromised by the high levels of stress, poor diet and cigarette smoking. The differential diagnosis includes gastric ulceration with or without reflux esophagitis and, although atypical, biliary disease should be considered.

What are the predisposing causes?

Duodenal ulceration is thought to be a consequence of an imbalance between damaging effects of acid and pepsin attack on the mucosal defenses of the duodenum.

- 1- The pH of the duodenal lumen is decreased.
- 2- Patients also empty food from their stomachs at a greater rate, so that after a meal there is less food available to buffer the secreted acid as it passes into the lumen of the duodenum
- 3- NSAIDs.
- 4- Stress.
- 5- Smoking and Alcohol intake.
- 6- There are four **major factors** that account for the tendency of duodenal ulcer patients to hypersecrete acid and pepsin:

1. Increased parietal cell mass.
2. Increased stimulation of acid secretion.
3. Increased parietal cell sensitivity to stimulants.
4. Loss of inhibitory control of acid secretion.

What investigations should be performed?

- Fiberoptic endoscopy is the investigation of choice (as it allows any ulcer observed to be biopsied to exclude neoplastic disease and to confirm or refute the presence of *Helicobacter pylori*).
- Blood counts (to exclude anemia from previous bleeding).

Are acute gastric ulcers associated with *Helicobacter pylori*?

No

Do chronic peptic ulcers of duodenum undergo malignant transformation?

No

What are the complications of chronic peptic ulcers?

(1) Bleeding; (2) Perforation; (3) Penetration into an adjacent viscus; (4) Obstruction from edema or from scarring of the pylorus or duodenum; (5) Intractable pain.

Malignant transformation does not occur in duodenal ulcers and is extremely rare in gastric ulcers.

What effect does this process have on the surface area available for absorption?

Flattening of the villi greatly decreases the surface area available for absorption.

Exposure to what dietary antigen is thought to be the cause of these changes?

Gluten (specifically, the gliadin constituent of this protein)

Will these histologic changes resolve with dietary modification?

Yes

A 16-year-old girl complains of chronic abdominal distention, flatulence, and diarrhea after drinking milk. Elimination of milk and other dairy products from the patient's diet relieves these symptoms. This example of malabsorption is caused by a functional deficiency of which of the following enzymes associated with the intestinal brush border membrane?

- (A) Disaccharidase.
- (B) Glycogen Phosphorylase.
- (C) Hyaluronidase.
- (D) Mannosidase.
- (E) Sphingomyelinase.

(A)

A 4-year-old girl is brought to the physician because her parents noticed that she has been having pale, fatty, foul-smelling stools. The patient is at the 50th percentile for height and 10th percentile for weight. Her symptoms respond dramatically to a gluten-free diet. Which of the following is the most likely diagnosis?

- (A) Celiac Sprue
- (B) Cystic fibrosis of the
- (C) M n trier disease
- (D) Tropical Sprue
- (E) Whipple Disease

(A)

What types of diarrhea these symptom and sign indicate? Osmotic, Exudative (Inflammatory), Motility related or secretory?

- 1- Fasting improve the condition ----- [osmotic]
- 2- Inflammatory bowel diseases -----[Exudative]
- 3- High stool output ----- [secretory]
- 4- Presence of WBC in stool ----- [Exudative]
- 5- Irritable bowel syndrome ----- [Motility related]
- 6- Bacterial toxin ----- [Secretory]
- 7- Malabsorption ----- [Osmotic]
- 8- High fecal osmotic gap ----- [Osmotic]

What types of diarrhea these symptom and sign indicate? Acute or chronic?

- 1- Irritable bowel syndrome ----- [Chronic]
- 2- Giardia lamblia -----[Chronic]
- 3- Viral gastroenteritis ----- [Acute]
- 4- Inflammatory bowel disease ----- [Chronic]
- 5- Food poisoning ----- [Acute]
- 6- Antibiotic-Associated Diarrheas ----- [Acute]
- 7- Malabsorption ----- [Chronic]

What are complications of diarrhea?

- Dehydration
- Electrolytes imbalance
- Metabolic acidosis
- Malnutrition

A 30-year-old woman presents with 2 days of abdominal cramping and diarrhea. Her temperature is 38°C (101°F), respirations are 32 per minute, and blood pressure is 100/65 mm Hg. Stool culture shows a toxigenic Escherichia coli infection. Which of the following best explains the pathogenicity of this organism in this patient?

- (A) Destruction of Peyer's patches
 - (B) Invasion of the mucosa of the colon
 - (C) Invasion of the mucosa of the ileum
 - (D) Stimulation of acute inflammation in the superficial bowel mucosa
 - (E) Stimulation of fluid transport into the lumen of the intestine
- (E)**

A 1-year-old girl is brought to the emergency room by her par-ents who report that she had a fever and diarrhea for 3 days. The child's temperature is 38°C (101°F). The CBC shows a normal WBC count and increased hematocrit. Which of the following microorganisms is the most likely cause of diarrhea in this young child?

- (A) Cytomegalovirus
- (B) Rotavirus
- (C) Salmonella typhi
- (D) Shigella dysenteriae

(B)

A 53-year-old woman complains of acute diarrhea and severe abdominal pain. She was recently treated with broad-spectrum antibiotics for community-acquired pneumonia. A CBC shows a WBC count of 24,000/ μ L. The patient subsequently develops septic shock and dies. A portion of her colon is shown at autopsy. These findings are typical of which of the following gastrointestinal diseases?

- (A) Crohn disease
- (B) Diverticulitis
- (C) Ischemic colitis
- (D) Pseudomembranous colitis

(D)

A 42-year-old obese women (BMI = 32 kg/m²) presents with severe abdominal pain that radiates to the back. There is no history of alcohol or drug abuse. The blood pressure is 90/45 mmHg, respirations are 32 per minute, and pulse is 100 per minute. Physical examination shows abdominal tenderness, guarding, and rigidity. An X-ray film of the chest shows a left pleural effusion. Laboratory studies reveal elevated serum amylase (850U/L) and lipase (675U/L), and hypocalcemia (7.8mg/dL). Which of the following is the most likely diagnosis?

- (A) Acute cholecystitis
- (B) Acute pancreatitis
- (C) Alcoholic hepatitis
- (D) Chronic calcifying pancreatitis

(B)

A 60-year-old alcoholic man presents with a 6-month history of recurrent epigastric pain, progressive weight loss, and foul-smelling diarrhea. The abdominal pain is now almost constant and intractable. An X-ray film of the abdomen reveals multiple areas of calcification in the mid-abdomen. Which of the

following is the most likely diagnosis?

- (A) Carcinoid syndrome
 - (B) Chronic pancreatitis
 - (C) Crohn disease
 - (D) Miliary tuberculosis
- (B)**

Which of the following findings is most likely to be encountered in the patient described in Question above?

- (A) Achlorhydria
 - (B) Hypoglycemia
 - (C) Melena
 - (D) Steatorrhea
- (D)**
-

A 52 year old male present to the accident and emergency complaining of a severe abdominal pain radiating to the back. The patient is known alcoholic . He is found to have increased serum amylase. What is the most likely diagnosis in this case?

- (A) Chronic pancreatitis
 - (B) Acute pancreatitis
 - (C) Perforated colon
 - (D) Acute appendicitis
- (B)**

A 67 year old male is operated for removal of a pancreatic lesion. The patient history includes an episode of acute pancreatitis 2 years ago. The most likely histological feature on microscopic examination is the presence of a:

- (A) Serous cyst
 - (B) Mucinous cyst
 - (C) Pancreatic pseudocyst
 - (D) Choledocal cyst
- (C)**

Fibrosis, cystic dilatation of the ducts, loss of the pancreatic acini and lymphocytic infiltration of the pancreas are most likely seen in:

- (A) Chronic pancreatitis
 - (B) Infiltrating ductal carcinoma of the pancreas
 - (C) Acute pancreatitis
 - (D) Solid pseudopapillary tumor of the pancreas
- (A)**

Patients with acute pancreatitis may develop:

- (A) Loss of the islets of Langerhans and the onset of diabetes.
 - (B) Acinar cell carcinoma secondary to the inflammation
 - (C) Cushing syndrome with hypercortisolemia
 - (D) Solid pseudopapillary tumor of the pancreas
- (A)**

The most frequent cause of acute pancreatitis is:

- (A) Ascariasis lumbricoides
 - (B) Periampullary tumor
 - (C) Gallbladder stones
 - (D) Medications
- (C)**

What are the most frequent laboratory findings in patients with acute pancreatitis?

- (A) Elevation of serum lipase followed by elevation of amylase.
 - (B) Normal amylase level with elevation of lipase level only.
 - (C) Normal lipase level with elevation of amylase level only
 - (D) Elevation of amylase levels followed by a rising of lipase.
- (D)**

Good Luck!