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Summary and MCQS for Midterm lectures

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Summary of lecture 1

- **Reflux esophagitis is return of gastric juices into the esophagus and exceeding the normal level, most common in people who're more than 40 years.**
- **Pathophysiology of GERD: either abnormal lower esophageal sphincter or increased abdominal pressure and each has different causes.**
- **The most important typical symptoms are: Heartburn (retrosternal burning sensation), Regurgitation of food without the need of effort.**
- **Microscopic features: hyperemic mucosa (redness), inflammatory cells, Basal zone hyperplasia, elongation of lamina propria papillae.**
- **The most common complication of GERD are: Mucosal erosion, Strictures, Barrett's Esophagus (intestinal metaplasia) which could progress to dysplasia and adenocarcinoma.**

Summary of lecture 2

- **Peptic ulcer is a breach in the mucosa of the alimentary tract, can be acute or chronic.**
- **Pathophysiology: imbalance between aggressive (Most common is H.pylori) and defensive factors.**
- **Acute gastric ulcer can be a part of acute gastritis or due to severe stress or hyperacidity (Zollinger-Ellison syndrome), appears as Small multiple hemorrhagic and mostly superficial lesions.**
- **Chronic peptic ulcer can be duodenal (More common) or gastric.**
- **In chronic gastric ulcers, breakdown of mucosal defense is much more important than excessive acid production.**
- **Duodenal ulcer is usually caused by gastric metaplasia due to acid exposure and further H.pylori invasion of duodenal mucosa.**
- **Most common manifestation is epigastric pain that worsens 2 hours after meal (If duodenal) and immediately after meal (If gastric).**

Summary of lecture 3

- **Pancreatitis can be acute (reversible) or chronic (irreversible), most common causes in both are biliary stones and alcoholism.**
- **Pathogenesis: autodigestion of pancreatic tissue due to activation of trypsinogen. Therefore, loss of exocrine functions (in both) and endocrine functions (in late stages of chronic pancreatitis).**
- **Most common manifestation is epigastric pain that may radiate to upper back and disseminated intravascular coagulation.**
- **Laboratory investigations could show elevation of Amylase within 24 hours.**
- **Morphological findings in acute: edema, fat necrosis, acute inflammatory reactions and hemorrhage.**
- **Morphological findings in chronic: Fibrosis, chronic inflammatory cells, ductal dilatation and reduction in the number of acini.**
- **Complications of acute can be fatal (e.g.Acute respiratory distress syndrome and acute renal failure). However, patient may recover completely.**
- **Most common complications of chronic pancreatitis are exocrine insufficiency and further malabsorption, Diabetes mellitus and pancreatic pseudocyst.**

Summary of lecture 4

- **Diarrhea is defined as passing 3 or more loose or liquid stools per day.**
- **Normally, as stool leaves the colon, fecal osmolality = serum osmolality.**
- **Types: Secretory/Osmotic/Exudative/Motility-related.**
- **Fecal osmotic gap is used to differentiate between osmotic and secretory.**
- **Secretory diarrhea has low osmotic gap, usually in massive amounts, not improved by fasting and caused by toxins.**
- **Osmotic diarrhea has high osmotic gap, usually normal amounts, improved by fasting and caused by malabsorption/laxatives.**
- **Motility-related diarrhea: hypermotility of food through the intestine (caused by IBS).**
- **Exudative diarrhea is characterized by presence of blood and pus in the stool and Caused by invasion of microorganisms or IBD.**
- **Major complications are dehydration and malnutrition.**
- **Investigation is used to determine the type of diarrhea.**

Summary of lecture 5

- **Malabsorption is a condition when the intestine is not able to absorb nutrient adequately into the bloodstream.**
- **Pathophysiology includes either inadequate digestion (e.g. Pancreas problems) or intestinal abnormalities (e.g. celiac disease).**
- **Clinical features are: Steatorrhea (fat in stool) and failure to thrive.**
- **Deficiency may include proteins, Vit B12 and folic acid, Vit D, Vit K…etc.**
- **Diagnosis is done by stool examination and Endoscopy.**
- **Celiac disease is an autoimmune disorder, caused by ingestion of food containing the protein Gluten in some people, characterized by marked mucosal atrophy and intraepithelial lymphocytosis (may progress to T-cell lymphoma).**
- **Lactose intolerance is a condition when the enzyme Lactase is deficient, it could be inherited or acquired (due to any condition causes mucosal injury e.g. infections).**
- **Clinical features in this disorder are abdominal discomfort and bloating (Flatulence).**
- **Diagnosis is usually performed by Hydrogen breath test.**

MCQs

1-Which one of the following is not a complication of GERD?

A. Erosive esophagitis

B. Barrett's Esophagus

C. Iron deficiency anemia

D. Esophageal stricture

2-Which one of the following is a histological feature in GERD?

A. hyperemia

B. necrosis

C. hemorrhage

D. mucosal changes

3-What is the most common symptom that a patient with GERD usually comes with?

A. chest pain

B. coughing

C. Heartburn

D. nausea

4-A patient who didn't respond to medication, what is the best diagnostic method for him?

A. signs and symptoms

B. Esophagogastroduodenoscopy

C. 24-hour pH monitoring

5-GERD due to increased abdominal pressure can occur in?

A. Pregnant

B. gastric hemorrhage

C. Increased gastric volume

D. A&C

6-A 45 year old male has dysphagia, heart burn, and regurgitation of sour tasting gastric contents. The treatment with proton pump inhibitors provide symptomatic relief. What do you expect to see under the microscope?

A. **Basal zone hyperplasia**

B. **Shrinking of lamina propria**

C. **1&2**

7-Hiatal hernia can be:

A. **Congenital**

B. **Acquired**

C. **Both**

8-All of the following are complications of reflux esophagitis except:

A. **Barrett esophagus**

B. **Adenocarcinoma**

C. **Squamous cell carcinoma**

9-Which of the following is preinvasive lesion:

A. **Adenocarcinoma**

B. **Barrett's esophagitis**

C. **Squamous cell carcinoma**

10-Which of the following is definitive feature of Barrett's esophagus:

A. **Simple hyperemia**

B. **Basal zone hyperplasia**

C. **Goblet cell**

11-In the previous question what else can beside the histological feature can assist the diagnosis:

A. **MRI**

B. **Endoscopy**

C. **CBC**

12-Pathologist find out a mass in the middle 1\3 of the esophagus (moderate to well-differentiated), spread into the mediastinal lymph nodes. Which of the following secretions can be produced by this tumor?

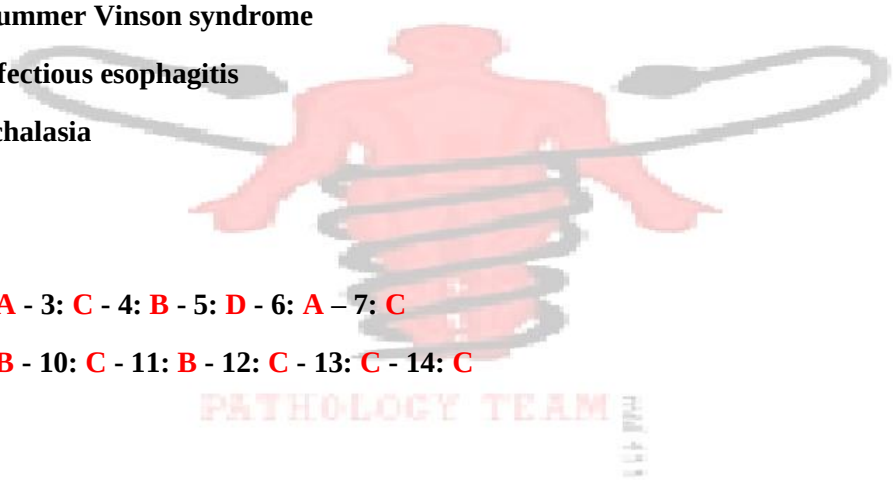
A. **VIP**
B. **Gastrin**
C. **Mucin**

13-What is the prognosis of the previous tumor?

A. **Good**
B. **Moderate**
C. **Poor**

14-Incomplete LES relaxation, increase in LES tone, esophageal a peristalsis is definition of:

A. **Plummer Vinson syndrome**
B. **Infectious esophagitis**
C. **Achalasia**



Answers:

1: C - 2: A - 3: C - 4: B - 5: D - 6: A – 7: C

8: C - 9: B - 10: C - 11: B - 12: C - 13: C - 14: C

1-A 52-year-old male presents with epigastric pain that improves with meals. Endoscopy demonstrates a 2 Cm ulcerated area located 3 cm distal to the pyloric junction. Which of the following is most likely to have made the strongest contribution to the development of this disease?

A. **Aspirin use**

B. **Chronic antacid use**

C. **Drinking alcohol**

D. **Helicobacter pylori infection**

E. **Smoking**

2-All of the following are causes of acute peptic ulcer except

A. **Severe burns**

B. **Helicobacter pylori infection**

C. **Major trauma**

D. **Zollinger-Ellison syndrome**

3-All of the following are Defensive Factors against gastric ulcer development except

A. **Mucus**

B. **Bicarbonate**

C. **Bile salts**

D. **Prostaglandins**

E. **Phospholipid**

4-Which of the following is the commonest causes of duodenal peptic ulcer?

A. **Duodeno-gastric reflux**

B. **H pylori infection**

C. **Acute pancreatitis**

D. **NSAIDs**

5-A round oval, sharply punched- out defect are characteristics of?

A. **Classic peptic ulcer**

B. **Carcinoma**

C. **Psuodocycts**

D. **Abscesses**

6-Chronic peptic ulcers usually develop in?

A. **Pancreas**
B. **Stomach**
C. **Duodenum**
D. **Spleen**

7-Duodeno-Gastric reflux can cause?

A. **Duodenal ulcer**
B. **Gastric ulcer**
C. **Acute pancreatitis**

8-A breach extend only through the epithelium of the mucosa

A. **erosion**
B. **Ulcer**
C. **Fistula**

9-Patient came to the ER with sever burn, he developed acute peptic ulcer proximal to duodenum, what is the name of his ulcer?

A. **Cushing ulcer**
B. **Curling ulcer**
C. **Hyperacidity ulcer (ZE syndrome)**

10-Breakdown of mucosal deafness is the most important cause of which type of ulcers?

A. **gastric ulcer**
B. **Duodenal ulcer**

11-What is the most important pathogenesis of duodenal gastric ulcer?

A. **breakdown of defensive factor,**
B. **Increase acid production**

12-Malignancy as a complication peptic ulcer is usually?

A. **multiple, small, superficial**
B. **Solitary, deep, sharply punches out defect**
C. **Solitary, deep, heaped up margin**

13-Zollinger-Ellison syndrome can cause?

A. **chronic ulcer**
B. **Acute peptic ulcer**
C. **Both a and b**

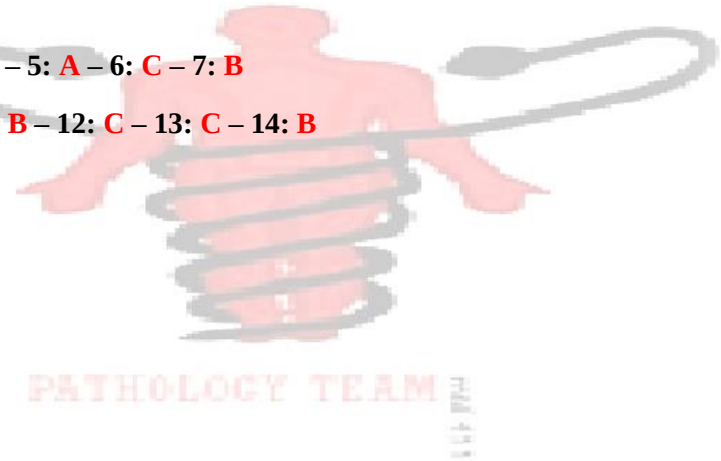
14-Pain in gastric ulcer usually occur?

A. **2-3 hour after meal**
B. **Shortly after meal**
C. **Before meal**

Answers:

1: D – 2: B – 3: C – 4: B – 5: A – 6: C – 7: B

8: A – 9: B – 10: A – 11: B – 12: C – 13: C – 14: B



1-The following are causes of acute pancreatitis except?

A. **Viral infection**
B. **Gallbladder stones**
C. **Trauma**
D. **Extreme hyperacidity**

2-The most specific blood test in diagnosing acute pancreatitis is:

A. **Serum amylase**
B. **Urinary amylase**
C. **Serum lipase**
D. **CA 19-9**

3-The most common presenting symptom of acute pancreatitis is:

A. **Fever**
B. **Pain**
C. **Diplopia**
D. **Cullen's sign**

4-Chronic pancreatitis (CP) differs from AP in that patients with CP are more likely to have:

A. **elevated serum amylase and lipase concentrations**
B. **malabsorption of fat and diabetes**
C. **liver failure and jaundice**
D. **hypotension and hypocalcemia**

5-Symptoms of chronic pancreatitis include all of the following except:

A. **Diabetes**
B. **Constipation**
C. **Diarrhea**
D. **Abdominal pain**

6-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 pseudo-papillary tumor of the pancreas**

7-Regarding to the chronic pancreatitis, which of the following is NOT true.

A. **Reversible usually.**
B. **Destruction of exocrine parenchyma first, then in late stages destruction of endocrine parenchyma.**
C. **Most common cause is alcohol abuse.**
D. **could be caused by hypercalcemia**

8-Which of the following etiologies is considered to be MAIN cause for pancreatitis?

A. **Hyperlipoproteinmia**
B. **Iatrogenic injury**
C. **Genetic**
D. **Gallstone**

9-Regarding to acute pancreatitis, which of the following is NOT considered as morphological feature:

A. **Fat necrosis**
B. **Parenchymal fibrosis**
C. **subsequent interstitial hemorrhage**
D. **edema**

10-An African-39-woman presented with repeated-attacks of abdominal pain. She has a high blood glucose (indicates Diabetes mellitus). A CT-scan shows pancreatic calcification. Her BMI is 15 (normal 18-24). She doesn't have any history of alcohol usage or any medication. The doctor excluded Gallstone.

What is the most appropriate etiology in this case from the following?

A. **Tropical pancreatitis**
B. **STD (Sexually transmitted diseases)**
C. **Idiopathic**
D. **Genetic**

11-regarding to the pseudocyst of pancreas. Which of the following is NOT true?

A. **lacks epithelium lining**
B. **arises AFTER acute OR chronic pancreatitis**
C. **May become infected.**
D. **Always painless and harmless.**

12-A 41-year-old male presented with very severe abdominal pain. The GP had done an ECG and he excluded myocardial infarction. Laboratory finding showed leukocytosis and normal level of lipase and high level of amylase.

The GP managed the case by indicating him to ICU but he didn't live long. What is the most likely cause of death in the case?

A. **Pain**
B. **Acute respiratory distress syndrome**
C. **Fluid sequestration**
D. **Misdiagnosis and bad management.**

13-From the same scenario in Q12, if the patient recovered and lived, what would be the most-prominent-morphologic feature?

A. **Obstruction of the pancreatic duct**
B. **recanalization of the blood vessels**
C. **Acute renal failure**
D. **Pseudocyst**

Answers:

1: D – 2: C – 3: B – 4: B – 5: B – 6: A – 7: A

8: D – 9: B – 10: A – 11: D – 12: B – 13: D

1-Diarrhea with visible reddish blood is called?

A. **Melena**
B. **Dysentery**
C. **Chronic diarrhea**
D. **Anti-biotic associated diarrhea**

2-Antibiotics aren't commonly used to treat diarrhea, this is due to the fact that?

A. **They have low distribution volume**
B. **Diarrhea is commonly caused by viruses**
C. **They are excreted by the biliary route.**
D. **All above**

3-34-year old male presented to the general practitioner complaining from altered bowel habits. He described his stool as loose but with normal amount.

He mentioned that he doesn't eat much because he feels relieving of his symptoms upon fasting. The most-likely diagnosis is?

A. **IBS**
B. **Inflammatory diarrhea**
C. **Osmotic diarrhea**
D. **Secretory diarrhea**

4-Based on the previous scenario, what is the main finding that is expected to be seen?

A. **Fecal leukocyte on stool smear**
B. **Growth of gram-negative bacilli on culture**
C. **High stool osmotic gap**
D. **Low stool osmotic gap**

5-The main complication of diarrhea is?

A. **Metabolic alkalosis**
B. **Edema**
C. **Loss of consciousness**
D. **Dehydration**

Answers: 1: B – 2: B – 3: C – 4: C – 5: D

1-Abnormalities in which one of these organs can lead to malabsorption?

A. **Esophagus**
B. **Large intestine**
C. **Small intestine**
D. **Spleen**

2-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. **Ménétrier disease**
C. **Tropical sprue**
D. **Whipple disease**

3-In the above case what was the result of investigations to diagnose the girl with this disease?

A. **Positive IgG serum to gliadin & presence of rosette formation in biopsy**
B. **Negative IgG serum to gliadin & presence of neutrophil + H.Pylori**
C. **Positive IgG serum to gliadin & presence of flat intestinal mucosa**
D. **Negative IgG serum to gliadin & presence of dysplasia**

4-Which one of these substances can't be absorbed in case of celiac disease?

A. **Glucose**
B. **Gliadin**
C. **lactose**
D. **Vit B12**

5-A 45yrs old lady came to the GP complaining from chronic diarrhea & weight loss, investigations result in presence of steatorrhea in stool sample & deficiency of vit12&folic acid, postsurgical history is showing gastrectomy 2yrs ago.
What is the cause of her symptoms?

A. **Malabsorption caused by small intestine abnormalities**
B. **autoimmune disease**
C. **IBS**
D. **Malabsorption caused by inadequate Digestion**

6-in the previous case what further clinical features might be seen in this patient?

A. **Anemia**
B. **Muscle cramp**
C. **Osteoporosis**
D. **Edema & swelling**

7-Positive hydrogen breath-test indicates?

A. **Celiac disease**
B. **Ulcers**
C. **Lactose intolerance**
D. **Acute pancreatitis**

8-Which one of these is the cause of malabsorption?

A. **Deficient bile salt**
B. **Splenectomy**
C. **Lymphatic obstruction**
D. **A&C**

9-In malabsorption deficiency of which one of these could result in muscle wasting?

A. **Vit D**
B. **Iron**
C. **Vit K**
D. **Proteins**

10-which one of the following antigens is highly associated with celiac disease?

A. **class II HLA DQ1**
B. **class II HLA DR1**
C. **Class II HLA DQ2**
D. **Class I HLA DQ3**

11-Malabsorption will appear as which one of these symptoms?

A. **Acute itching**
B. **Dysplasia**
C. **Chronic diarrhea**
D. **Chronic constipation**

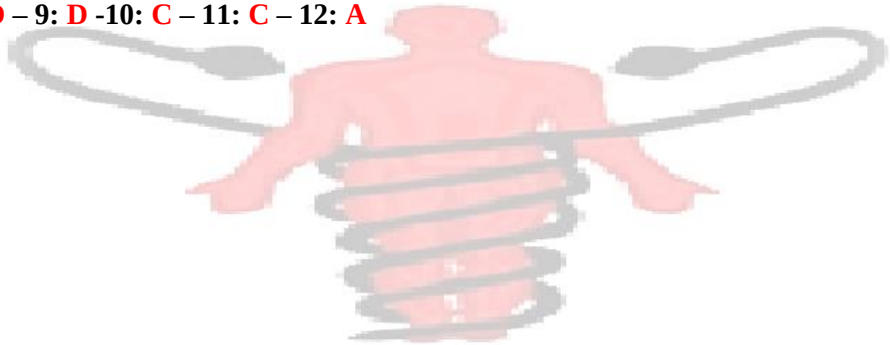
12-A 16-year-old girl complains of chronic abdominal distention, flatulence, and diarrhea after
drinking milk. Elimination of milk and other dairy products from the patient's diet relieves these symptoms. This example of malabsorption is caused by a functional deficiency of which one of the following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

A. **Disaccharidase.**
B. **Glycogenphosphorylase.**
C. **Hyaluronidase.**
D. **Mannosidase.**
E. **Sphingomyelinase**

Answers:

1: C – 2: A – 3: C – 4: B – 5: D – 6: A

7: C – 8: D – 9: D -10: C – 11: C – 12: A



Thank You