

1. Which of the following are the main parts of the stomach?

- a) Cardia, ileum, jejunum, pylorus
- b) Cardia, fundus, body, antrum (pylorus)
- c) Duodenum, fundus, body, colon
- d) Esophagus, cardia, liver, antrum

Answer: b) Cardia, fundus, body, antrum (pylorus)

2. Which type of cells are predominantly found in the cardia of the stomach?

- a) Parietal cells
- b) Chief cells
- c) G cells
- d) Mucin secretory foveolar cells

Answer: d) Mucin secretory faviolar cells

3. What is the main function of parietal cells in the stomach?

- a) Secrete pepsinogen
- b) Secrete hydrochloric acid (HCl)
- c) Secrete gastrin
- d) Secrete mucus

Answer: b) Secrete hydrochloric acid (HCl)

4. Which condition is characterized by mucosal injury and the presence of neutrophils in the stomach?

- a) Chronic gastritis
- b) Acute gastric ulcer
- c) Chronic peptic ulcer
- d) Acute gastritis

Answer: d) Acute gastritis

5. What are the main causes of gastropathy and acute gastritis?

- a) Helicobacter pylori infection
- b) Chronic NSAID use
- c) Alcohol consumption
- d) All of the above

Answer: d) All of the above

6. Which defense mechanisms are stimulated by prostaglandins E2 and I2 in the stomach?

- a) Mucus and bicarbonate secretion
- b) Gastrin production
- c) Acid hypersecretion
- d) Neutrophil activation

Answer: a) Mucus and bicarbonate secretion

7. Stress ulcers are most commonly seen in which group of patients?

- a) Children
- b) Elderly individuals
- c) Critically ill patients
- d) Athletes

Answer: c) Critically ill patients

8. What is the main factor contributing to stress-related mucosal disease?

- a) High gastric acid production
- b) Systemic hypotension
- c) Bacterial infection
- d) Autoimmune response

Answer: b) Systemic hypotension

9. What is the typical morphology of acute ulcers in stress-related mucosal disease?

- a) Deep and irregular ulcers
- b) Superficial erosions
- c) Rounded ulcers < 1 cm in size
- d) Ulcers with scarring and fibrosis

Answer: c) Rounded ulcers < 1 cm in size

10. What is the most common cause of chronic gastritis?

- a) Helicobacter pylori infection
- b) Autoimmune response
- c) Chronic NSAID use
- d) Alcohol consumption

Answer: a) Helicobacter pylori infection

12. What is the main diagnostic test for Helicobacter pylori infection?

- A) Serologic test for antibodies
- B) Stool test for bacterial DNA
- C) Urea breath test
- D) Gastric antral biopsy

Answer: D) Gastric antral biopsy

13. Which type of gastritis is characterized by the presence of neutrophils and active inflammation?

- A) Acute gastritis
- B) Chronic gastritis
- C) Acute gastric ulcer
- D) Chronic peptic ulcer

Answer: A) Acute gastritis

14. What are the main causes of gastropathy?

- A) Helicobacter pylori infection and autoimmune response
- B) Chronic use of nonsteroidal anti-inflammatory drugs (NSAIDs) and alcohol consumption
- C) Genetic predisposition and aging
- D) Stress-induced factors and bile reflux
- E) D&B

Answer: E)

15. Which condition is characterized by shallow to deep ulcers with a brown to black ulcer base?

- A) Acute gastritis
- B) Chronic gastritis
- C) Acute gastric ulcer
- D) Chronic peptic ulcer

Answer: C) Acute gastric ulcer

16. What is the main risk factor for stress-related mucosal disease?

- A) Trauma
- B) Chronic NSAID use
- C) Systemic acidosis
- D) Aging

Answer: A) Trauma

17. Which type of ulcers occur in critically ill patients with shock, sepsis, or severe trauma?

- A) Stress ulcers
- B) Curling ulcers
- C) Cushing ulcers
- D) Chronic peptic ulcers

Answer: A) Stress ulcers

18. What is the main cause of autoimmune atrophic gastritis?

- A) Helicobacter pylori infection
- B) Chronic use of nonsteroidal anti-inflammatory drugs (NSAIDs)
- C) Autoimmune response against gastric cells
- D) Chronic bile reflux

Answer: C) Autoimmune response against gastric cells

20. What is the potential consequence of severe Helicobacter pylori infection, including atrophy of parietal cells and intestinal metaplasia?

- A) Gastric cancer
- B) Acute gastritis
- C) Chronic gastritis
- D) Acute gastric ulcer

Answer: A) Gastric cancer

Q: What are the main parts of the stomach?

A: are the cardia, fundus, body, and antrum (pylorus).

Q: What types of cells are found in the cardia of the stomach?

A: mucin-secreting foveolar cells.

Q: Which cells are present in the body and fundus of the stomach?

A: contain parietal cells (secreting hydrochloric acid) and chief cells (secreting pepsin).

Q: What type of cells are found in the antrum of the stomach?

A: contains neuroendocrine G cells that secrete gastrin.

Q: What are the different types of inflammatory conditions that can affect the stomach?

A: are acute gastritis, chronic gastritis, acute gastric ulcer, and chronic peptic ulcer.

Q: What causes acute gastritis and gastropathy?

A: Acute gastritis is caused by mucosal injury, often with the presence of neutrophils. Gastropathy, on the other hand, is a regenerative condition with no or rare inflammation and can be caused by factors such as NSAIDs, alcohol, bile, and stress.

Q: What are the clinical features of acute gastritis?

A: The clinical features of acute gastritis can vary from being asymptomatic to presenting with symptoms such as epigastric pain, nausea, vomiting, erosions, ulcers, hematemesis (vomiting blood), and melena (black, tarry stools).

Q: What are the main causes of gastropathy, acute and chronic gastritis?

A: NSAIDs (COX1 and COX2 inhibitors), alcohol, bile, stress, uremic conditions, H. pylori infection, aging, hypoxia, harsh chemicals, radiation therapy, and certain medications like chemotherapy.

Q: What are prostaglandins E2 and I2 and what is their role in gastric defense mechanisms?

A: Prostaglandins E2 and I2 are substances that stimulate various defense mechanisms in the stomach, including mucus and bicarbonate secretion, mucosal blood flow, and epithelial restitution (repair).

Q: What are the morphological characteristics of acute gastritis?

A: characterized by hyperemia (redness), edema, slight vascular congestion, and the presence of neutrophils. In more severe cases, it can lead to acute erosive hemorrhagic gastritis with advanced ulceration.

Q: What is stress-related mucosal disease?

A: disease refers to mucosal damage in the stomach that occurs under conditions of severe physiological stress, such as trauma, burns, intracranial disease, major surgery, serious medical diseases, or critical illness.

Q: What are stress ulcers, Curling ulcers, and Cushing ulcers?

A: Stress ulcers are ulcers that develop in critically ill patients with conditions such as shock, sepsis, or severe trauma. Curling ulcers occur in the proximal duodenum and are associated with severe burns or trauma. Cushing ulcers can develop in the stomach, duodenum, or esophagus and are associated with central nervous system (CNS) injury, such as stroke. Cushing ulcers have a high risk of perforation.

Q: What are the main factors contributing to stress-related mucosal disease?

A: Stress-related mucosal disease is mostly caused by local ischemia resulting from systemic hypotension, decreased blood flow (splanchnic vasoconstriction), systemic acidosis (lower intracellular pH), and direct mucosal damage due to factors like acid hypersecretion or vagal stimulation.

Q: What are the morphological characteristics of stress ulcers?

A: vary in depth, ranging from shallow to deep. Acute ulcers are rounded and typically less than 1 cm in size. The base of the ulcer appears brown to black. Multiple stress ulcers can occur anywhere in the stomach, and there is usually normal adjacent mucosa. Scarring is absent, and healing with complete epithelialization occurs within days or weeks after the removal of injurious factors.

Q: What are the clinical features of stress ulcers?

A: include nausea, vomiting, melena (black, tarry stools), coffee-ground hematemesis (vomiting blood with a coffee-ground appearance), and the potential complication of perforation. Prophylaxis with proton pump inhibitors is often used, and the outcome depends on the severity of the underlying cause.

Q: What are the causes of chronic gastritis?

A: include Helicobacter pylori infection (most common), autoimmune atrophic gastritis, chronic NSAID use, radiation injury, and chronic bile reflux.

Q: What are the clinical features of chronic gastritis?

A: can include nausea, upper-abdominal discomfort, vomiting, and uncommonly, hematemesis (vomiting blood). The symptoms of chronic gastritis are generally less severe but more prolonged compared to acute gastritis.

Q: What is the association between Helicobacter pylori and gastritis?

A: Helicobacter pylori is strongly associated with gastritis. It is a spiral or curved, Gram-negative bacterium that is found in almost all duodenal ulcers and the majority of gastric ulcers or cases of chronic gastritis. The infection is acquired in childhood, often persists into adult life, and is more prevalent in populations with poverty and poor sanitation.

Q: What is the pathogenesis of Helicobacter pylori gastritis?

A: Helicobacter pylori is a non-invasive bacterium that adapts to live in the mucus layer of the stomach. It possesses flagella that allow it to move through the mucus. The bacterium produces urease, which converts urea into ammonia, providing a favorable environment for its survival. H. pylori infection is typically subclinical during the acute phase.

1. Which bacterium is primarily associated with the development of peptic ulcer disease?

- a) Helicobacter pylori
- b) Escherichia coli
- c) Staphylococcus aureus
- d) Streptococcus pneumoniae

Answer: a) Helicobacter pylori

2. What is the most common cause of chronic gastritis?

- a) Helicobacter pylori infection
- b) Autoimmune response
- c) Excessive alcohol consumption
- d) Nonsteroidal anti-inflammatory drugs (NSAIDs) use

Answer: a) Helicobacter pylori infection

3. Which of the following medications is commonly associated with the development of gastric ulcers?

- a) Ibuprofen
- b) Acetaminophen
- c) Aspirin
- d) Prednisone

Answer: a) Ibuprofen

4. Which type of gastric cancer is characterized by the presence of signet ring cells?

- a) Intestinal type
- b) Diffuse type
- c) Neuroendocrine type
- d) Lymphoma

Answer: b) Diffuse type

5. What is the primary risk factor for the development of gastric adenocarcinoma?

- a) Helicobacter pylori infection
- b) Genetic mutations
- c) Obesity
- d) Smoking

Answer: a) Helicobacter pylori infection

6. Which imaging modality is commonly used for the detection and staging of gastric cancer?

- a) X-ray
- b) Magnetic resonance imaging (MRI)
- c) Computed tomography (CT) scan
- d) Ultrasound

Answer: c) Computed tomography (CT) scan

7. Which type of gastric polyps regress after the eradication of Helicobacter pylori infection?

- a) Inflammatory polyps
- b) Hyperplastic polyps
- c) Gastric adenomas
- d) Gastrointestinal stromal tumors (GISTs)

Answer: b) Hyperplastic polyps

8. What is the main treatment approach for early-stage gastric cancer?

- a) Chemotherapy
- b) Radiation therapy
- c) Surgical resection
- d) Targeted therapy

Answer: c) Surgical resection

9. Which of the following is a common symptom of Zollinger-Ellison syndrome?

- a) Diarrhea
- b) Constipation
- c) Abdominal pain
- d) Chest pain

Answer: c) Abdominal pain

10. What is the most common type of lymphoma involving the stomach?

- a) Diffuse large B-cell lymphoma
- b) Hodgkin lymphoma
- c) Mantle cell lymphoma
- d) MALT lymphoma

Answer: d) MALT lymphoma

11. Which genetic mutation is associated with familial diffuse-type gastric cancer?

- a) CDH1 (E-cadherin) mutation
- b) APC gene mutation
- c) BRCA1 mutation
- d) TP53 mutation

Answer: a) CDH1 (E-cadherin) mutation

12. Which type of gastric polyp is most commonly associated with chronic gastritis and H. pylori infection?

- a) Inflammatory polyp
- b) Hyperplastic polyp
- c) Adenomatous polyp
- d) Hamartomatous polyp

Answer: a) Inflammatory polyp

13. What is the primary cause of iron deficiency anemia in patients with gastric adenocarcinoma?

- a) Chronic blood loss
- b) Impaired iron absorption
- c) Autoimmune destruction of red blood cells
- d) Deficiency of erythropoietin production

Answer: a) Chronic blood loss

14. Which of the following is a characteristic feature of intestinal-type gastric adenocarcinoma?

- a) Infiltrative growth pattern
- b) Presence of signet ring cells
- c) Desmoplastic reaction
- d) Formation of glands

Answer: d) Formation of glands

15. What is the mainstay of treatment for Helicobacter pylori infection?

- a) Proton pump inhibitors (PPIs)
- b) Antibiotics
- c) H2 receptor antagonists
- d) Antacids

Answer: b) Antibiotics

16. Which of the following is a risk factor for the development of gastric adenomas?

- a) Chronic Helicobacter pylori infection
- b) Alcohol consumption
- c) Obesity
- d) Smoking

Answer: a) Chronic Helicobacter pylori infection

17. What is the primary mode of spread for gastric adenocarcinoma?

- a) Lymphatic spread
- b) Hematogenous spread
- c) Direct invasion
- d) Peritoneal seeding

Answer: a) Lymphatic spread

18. Which of the following is a potential complication of peptic ulcer disease?

- a) Hemorrhage
- b) Ascites
- c) Pulmonary embolism
- d) Renal failure

Answer: a) Hemorrhage

19. Which type of gastric cancer is associated with a higher risk of developing synchronous adenocarcinoma?

- a) Diffuse type
- b) Intestinal type
- c) Neuroendocrine type
- d) Lymphoma

Answer: b) Intestinal type

20. What is the primary mechanism of action of proton pump inhibitors (PPIs) in the treatment of gastric ulcers?

- a) Inhibition of acid secretion
- b) Enhancement of mucosal blood flow
- c) Neutralization of gastric acid
- d) Stimulation of mucosal repair

Answer: a) Inhibition of acid secretion