KMC 2024 PAPER K - SOLVED

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1. Question: A 33-year-old female with ovarian cancer was started on chemotherapy. After taking the first dose of the chemotherapy cocktail, she presents with severe vomiting. A specific group of drugs is considered the drug of choice for chemotherapy-induced vomiting. What is the mechanism of action of this drug among the following?

Answer Choices:

- A) Block H1 receptors in the brain
- B) Block 5HT3 receptors in the brain
- C) Decrease acetylcholine secretion in the stomach
- D) Increase acetylcholine secretion in the stomach
- E) Stimulate D2 receptors in the stomach

Correct Answer: B) Block 5HT3 receptors in the brain

Explanation:

- **Key Clue**: Chemotherapy-induced vomiting is often managed with **5HT3 antagonists** such as ondansetron. 5HT3 receptors are involved in nausea and vomiting, particularly in the brainstem and gastrointestinal tract.
- **5HT3 antagonists** work by blocking serotonin receptors in the chemoreceptor trigger zone (CTZ) and the GI tract, both of which are activated during chemotherapy.
- **Why Other Options Are Incorrect**:
    - **A) Block H1 receptors in the brain**: H1 blockers like diphenhydramine are used for motion sickness or allergic reactions but are less effective for chemotherapy-induced vomiting.
    - **C) Decrease acetylcholine secretion in the stomach**: This mechanism is typically seen with **anticholinergic drugs** like scopolamine, which are not first-line for chemotherapy-induced vomiting.

- **D) Increase acetylcholine secretion in the stomach**: This would exacerbate nausea and vomiting.
- **E) Stimulate D2 receptors in the stomach**: D2 receptor agonists are used for certain conditions like gastroparesis, but not for chemotherapy-induced vomiting.

Clinical Application:

- **Next Steps**: Administer an **antiemetic** like ondansetron (5HT3 antagonist) for acute chemotherapy-induced nausea and vomiting. Consider adding corticosteroids or NK1 inhibitors for more severe cases.

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2. Question: A lesion was removed from a 60-year-old male during gastric surgery, and it shows that the muscular layer of the stomach is infiltrated with atypical cells forming irregular tubular and gland-like structures. Which of the following is the most likely diagnosis?

Answer Choices:

- A) Adenocarcinoma
- B) Autoimmune gastritis
- C) Helicobacter pylori-related gastritis
- D) Peptic ulcer
- E) Hyperplastic gastropathy

Correct Answer: A) Adenocarcinoma

Explanation:

- **Key Clue**: **Infiltration of the muscular layer** with **atypical cells** and **irregular gland-like structures** points to **gastric adenocarcinoma**, which is the most common form of stomach cancer.
- Gastric adenocarcinoma often infiltrates the **muscularis propria** and may form glandular or tubular structures.
- **Why Other Options Are Incorrect**:
  - **B) Autoimmune gastritis**: Characterized by **chronic inflammation** leading to atrophy of the gastric mucosa, not atypical cell infiltration in the muscular layer.
  - **C) Helicobacter pylori-related gastritis**: Typically causes chronic inflammation and ulcers but not infiltration of the muscular layer.
  - **D) Peptic ulcer**: Peptic ulcers usually involve the mucosal layer, not the muscular layer, and present with different pathology.
  - **E) Hyperplastic gastropathy**: This involves benign glandular proliferation but does not involve atypical cells infiltrating the muscular layer.

Clinical Application:

- **Next Steps**: If adenocarcinoma is suspected, refer the patient for further staging (e.g., CT scan, EUS) and consider surgical resection or chemotherapy.

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3. Question: A 4-year-old child was brought to the pediatrician with complaints of irritability, sleep disorders, and anal pruritis. Direct microscopy of the fecal specimen revealed characteristic spherical and colorless eggs with a thin outer membrane and a thick inner embryophore that enclosed an oncosphere with 3 pairs of lancet-shaped hooklets. What is the most likely parasite responsible for this condition?

Answer Choices:

- A) Diphyllobothrium latum
- B) Echinococcus granulosus
- C) Echinococcus multilocularis
- D) Hymenolepis nana
- E) Taenia saginata

Correct Answer: D) Hymenolepis nana

Explanation:

- **Key Clue**: The **characteristic eggs** with **3 pairs of lancet-shaped hooklets** are diagnostic for **Hymenolepis nana**, the **dwarf tapeworm**, which is the most common cause of **intestinal tapeworm infection** in children.
- **Hymenolepis nana** infection often presents with **irritability, anal pruritis**, and occasionally **sleep disturbances** in children, making it a common diagnosis in pediatric settings.
- **Why Other Options Are Incorrect**:
    - **A) Diphyllobothrium latum**: This tapeworm causes **megaloblastic anemia** due to vitamin B12 deficiency and does not have the same egg characteristics.
    - **B) Echinococcus granulosus**: This causes **hydatid disease** and has **large cysts** rather than the described eggs.
    - **C) Echinococcus multilocularis**: Causes alveolar hydatid disease, characterized by cystic lesions in the liver or lungs.
    - **E) Taenia saginata**: This tapeworm is larger and causes **mild gastrointestinal symptoms**, with eggs that are different in appearance.

Clinical Application:

- **Next Steps**: Treat with **praziquantel** for **Hymenolepis nana**. Educate the family on hygiene and sanitation practices to prevent reinfection.

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4. Question: In a local urban slum, there are repeated outbreaks of hepatitis A and E. The health education officer wants to give an awareness session for the prevention of the disease. While educating the community, what will he tell them about the mode of spread of these two viruses?

Answer Choices:

- A) Droplet
- B) Bloodborne
- C) Airborne
- D) Fecal/oral
- E) Sexually transmitted

Correct Answer: D) Fecal/oral

Explanation:

- **Key Clue**: Both **hepatitis A** and **hepatitis E** are primarily spread through the **fecal/oral route**, typically via contaminated food or water.
- Emphasize **sanitation** and **hand hygiene** in areas with poor access to clean water, as this is the key preventive strategy.
- **Why Other Options Are Incorrect**:
    - **A) Droplet**: Hepatitis A and E are not transmitted by respiratory droplets.
    - **B) Bloodborne**: This is true for hepatitis B and C but not A or E.
    - **C) Airborne**: Hepatitis viruses are not transmitted through the air.
    - **E) Sexually transmitted**: Hepatitis A and E can be sexually transmitted in rare cases, but the primary mode of transmission is fecal/oral.

Clinical Application:

- **Next Steps**: Educate the community on proper hygiene, water sanitation, and the importance of vaccination for hepatitis A.

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5. Question: A histopathologist, while examining a biopsy for carcinoma of the esophagus, can expect the following features on gross examination except which of the following?

Answer Choices:

- A) Diffuse narrowing of esophageal lumen

- B) Flat induration of the mucosa
- C) Linitis plastica
- D) Polypoid exophytic lesion
- E) Volcano-like excavated lesion

Correct Answer: D) Polypoid exophytic lesion

Explanation:

- **Key Clue**: **Esophageal carcinoma**, particularly **squamous cell carcinoma**, typically presents as **narrowing** or **induration** of the esophageal lumen, and can show features like **linitis plastica** (thickening and stiffening of the wall).
- **Polypoid exophytic lesions** are more characteristic of **gastric cancer** or **colorectal cancer**, not esophageal carcinoma.
- **Why Other Options Are Incorrect**:
  - **A) Diffuse narrowing of the esophageal lumen**: This is typical of esophageal carcinoma.
  - **B) Flat induration of the mucosa**: Common in esophageal cancer due to local tissue invasion.
  - **C) Linitis plastica**: This refers to **stomach cancer**, but can occasionally be seen in esophageal adenocarcinoma.
  - **E) Volcano-like excavated lesion**: Characteristic of **gastric cancer**, but not a typical feature for esophageal carcinoma.

Clinical Application:

- **Next Steps**: If esophageal carcinoma is suspected, proceed with staging investigations (e.g., CT scan, endoscopy) and consider surgery or chemotherapy depending on the stage.

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6. Question: You are working as an Institutional Medical Officer in the emergency department of a tertiary care hospital. A washerman presents with irritation, itching, and painful blisters. There were eczematous eruptions on the surrounding skin resembling a bruise. What is the most likely causative agent in this case?

Answer Choices:

- A) Abrus precatorius
- B) Calotropis procera
- C) Croton tiglium
- D) Plumbago rosea

- E) Semecarpus anacardium

Correct Answer: E) Semecarpus anacardium

Explanation:

- **Key Clue**: The **eczematous eruptions**, **painful blisters**, and **irritation** resembling a **bruise** point to exposure to **Semecarpus anacardium**, commonly known as **marking nut** or **bangles nut**, which is known to cause **contact dermatitis** and **skin irritation**.
- **Semecarpus anacardium** contains compounds that cause severe skin reactions, including **blistering**, and often occurs due to direct contact with the skin.
- **Why Other Options Are Incorrect**:
    - **A) Abrus precatorius**: Known for poisoning effects (e.g., accidental ingestion of seeds), but not typically associated with dermatitis or blistering.
    - **B) Calotropis procera**: Can cause skin irritation and toxicity but typically causes **blistering** more commonly in mucosal areas, not presenting in this specific pattern.
    - **C) Croton tiglium**: Often associated with **topical irritant dermatitis** but not typically causing the described presentation.
    - **D) Plumbago rosea**: While it can cause dermatitis, it does not present with the **bruising** pattern and **painful blisters** seen with Semecarpus.

Clinical Application:

- **Next Steps**: Treatment involves symptomatic management of **contact dermatitis**. Topical corticosteroids may be used to reduce inflammation, and pain relief can be managed with antihistamines or analgesics.
- Educate the patient to avoid contact with **Semecarpus anacardium** and use protective measures like gloves.

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7. Question: A 15-year-old girl presents with altered gait and abnormal body movements of more than 2 years' duration. She has a family history of such illness. Her ultrasound of the liver reveals early features of cirrhosis, and there are abnormal signals in the extrapyramidal system on MRI of the brain. Abnormality in which part of the eye is expected in this patient?

Answer Choices:

- A) Cornea
- B) Conjunctiva
- C) Retina
- D) Vitreous

- E) Optic nerve

Correct Answer: A) Cornea

Explanation:

- **Key Clue**: The combination of **extrapyramidal symptoms** (abnormal movements) and **early cirrhosis** with a **family history** suggests **Wilson's disease** (hepatolenticular degeneration). A classic feature of **Wilson's disease** is the presence of **Kayser-Fleischer rings** in the **cornea**.
- **Kayser-Fleischer rings**, which are copper deposits in the cornea, are pathognomonic for Wilson's disease. These rings are best seen on slit-lamp examination.
- **Why Other Options Are Incorrect**:
    - **B) Conjunctiva**: The conjunctiva is not involved in Wilson's disease; the rings are located in the **cornea**.
    - **C) Retina**: Wilson's disease does not affect the retina.
    - **D) Vitreous**: Vitreous changes are not a feature of Wilson's disease.
    - **E) Optic nerve**: The optic nerve is not typically affected in Wilson's disease.

Clinical Application:

- **Next Steps**: Diagnosis of Wilson's disease is confirmed through **serum ceruloplasmin** levels, **24-hour urinary copper excretion**, and **Slit-lamp examination** for Kayser-Fleischer rings.
- **Management**: Treatment involves **chelating agents** (like **penicillamine**) to remove excess copper from the body and may require liver transplantation in advanced cases.

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8. Question: A 5-year-old boy is brought to you with complaints of loose motions, not gaining weight and height for the last 4 years. On examination, he is severely wasted with no subcutaneous fat and grossly reduced muscle mass. His height is 90 cm and weight is 11 kg. His liver is palpable 3 cm below the right costal margin, and the spleen tip is also palpable. His stool R/E shows mucus ++, pus cells +, and fat globules. His serum electrolyte, CBC, RFTs, LFTs, and urine R/E are normal. What investigation will you advise?

Answer Choices:

- A) Stool R/E and Culture
- B) Ultrasound abdomen
- C) Chest X-ray and Montoux Test
- D) Anti-TTG IgA and serum total IgA
- E) Gastric Aspirate for Gene X-pert

Correct Answer: D) Anti-TTG IgA and serum total IgA

Explanation:

- **Key Clue**: The child's **malnutrition**, **stunted growth**, **steatorrhea** (fat globules in stool), and **hepatosplenomegaly** are suggestive of **celiac disease**, an autoimmune disorder triggered by **gluten** consumption.
- The definitive test for celiac disease is the detection of **anti-tissue transglutaminase (TTG) IgA** antibodies. **Serum total IgA** is checked to rule out IgA deficiency, which can cause false negatives for the TTG test.
- **Why Other Options Are Incorrect**:
    - **A) Stool R/E and Culture**: Stool analysis is useful for infectious causes but will not diagnose celiac disease.
    - **B) Ultrasound abdomen**: While ultrasound may show hepatosplenomegaly, it is not diagnostic for celiac disease.
    - **C) Chest X-ray and Montoux Test**: These are not relevant in this case as tuberculosis is not indicated by the symptoms.
    - **E) Gastric Aspirate for Gene X-pert**: This test is used for detecting **helicobacter pylori** but is not helpful for diagnosing celiac disease.

Clinical Application:

- **Next Steps**: **Anti-TTG IgA** levels should be measured. If positive, a **duodenal biopsy** is indicated to confirm the diagnosis of celiac disease by showing **villous atrophy**.
- **Management**: A **gluten-free diet** is the cornerstone of treatment, which usually leads to resolution of symptoms and improvement in growth and development.

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10. Question: A 10-year-old male, from a family in the industry, ingested some powder accidentally. All were reported to the emergency department, wherein two were severely symptomatic with headache, agitation, arrhythmias, tachypnea, and cherry red appearance, while the third person had mild symptoms only. What could be the functional abnormality in the third person leading to mild symptoms only?

Answer Choices:

- A) Anemia
- B) Hypernatremia
- C) Hypochlorhydria
- D) Hypokalemia
- E) Hyponatremia

Correct Answer: C) Hypochlorhydria

Explanation:

- **Key Clue**: The symptoms described, such as **cherry-red appearance** (indicative of **carbon monoxide poisoning**), and **severe toxicity** in two individuals suggest exposure to a toxic substance, likely **carbon monoxide** or **cyanide**.
- **Hypochlorhydria** (low stomach acid) can affect **gastric detoxification mechanisms**, potentially leading to **milder toxicity** in individuals with this condition compared to others who may not have this functional deficiency.
- **Why Other Options Are Incorrect**:
    - **A) Anemia**: Anemia could be a secondary finding, but it doesn't specifically explain the differential severity of symptoms in this scenario.
    - **B) Hypernatremia**: Hypernatremia doesn't explain the cherry-red appearance or the pattern of poisoning symptoms.
    - **D) Hypokalemia**: This would not account for the symptoms of cyanide or carbon monoxide toxicity.
    - **E) Hyponatremia**: While electrolyte imbalances may occur with poisoning, it doesn't explain the mild symptoms in this context.

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11. Question: In SGD (Sustainable Development Goals), what does the 1st goal indicate?

Answer Choices:

- A) End poverty
- B) Environmental sustainability
- C) Good health and well-being
- D) Gender Equality
- E) Zero Hunger

Correct Answer: A) End poverty

Explanation:

- The **1st goal of SGD** is focused on **ending poverty in all its forms everywhere** by 2030.

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12. Question: A 25-year-old lady with 2 months of gestational amenorrhea presents with severe vomiting. Which one of the following will be the best drug to treat her vomiting?

Answer Choices:

- A) Domperidone

- B) Itopride
- C) Metoclopramide
- D) Meclizine
- E) Prochlorperazine

Correct Answer: A) Domperidone

Explanation:

- **Key Clue**: **Domperidone** is a **prokinetic agent** that is **safe during pregnancy** for managing **nausea and vomiting** (including in cases of **morning sickness**).
- **Why Other Options Are Incorrect**:
    - **B) Itopride**: Less commonly used in pregnancy.
    - **C) Metoclopramide**: Although effective, it can have side effects like **extrapyramidal symptoms**, which are undesirable in pregnancy.
    - **D) Meclizine**: It is an **antihistamine**, but **Domperidone** is more specific for pregnancy-related vomiting.
    - **E) Prochlorperazine**: A **dopamine antagonist**, but **Domperidone** is preferred for pregnancy-related vomiting due to its safety profile.

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13. Question: A 35-year-old male came to the OPD complaining of nausea, vomiting, indigestion, and black tarry stools. He was diagnosed with Autoimmune Atrophic Gastritis with pernicious anemia on investigations. Which other condition is most often associated with autoimmune gastritis?

Answer Choices:

- A) Hashimoto thyroiditis
- B) Helicobacter pylori infection
- C) Ménétrier disease
- D) Peptic ulceration of the duodenum
- E) Trichobezoars

Correct Answer: A) Hashimoto thyroiditis

Explanation:

- **Key Clue**: **Autoimmune gastritis** is commonly associated with other **autoimmune disorders**, especially **Hashimoto thyroiditis**, a condition where the thyroid is attacked by the immune system.
- **Why Other Options Are Incorrect**:

- **B) Helicobacter pylori infection**: Although H. pylori is associated with gastric conditions, it is not typically linked to autoimmune gastritis.
- **C) Ménétrier disease**: This is a rare condition causing gastric mucosal hypertrophy, but not related to autoimmune gastritis.
- **D) Peptic ulceration of the duodenum**: Not typically linked to autoimmune gastritis.
- **E) Trichobezoars**: Hairballs that can cause gastric obstruction, unrelated to autoimmune gastritis.

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14. Question: A 40-year-old farmer presents with a history of right hypochondrium pain for the last 1 month. Investigations show a hydatid cyst involving the right lobe of the liver. Which organism is responsible for causing this condition?

Answer Choices:

- A) Ascaris lumbricoides
- B) Echinococcus granulosis
- C) Entamoeba histolytica
- D) Enterobius vermicularis
- E) Wuchereria bancrofti

Correct Answer: B) Echinococcus granulosis

Explanation:

- **Key Clue**: **Hydatid disease** (or **echinococcosis**) is caused by the parasitic tapeworm **Echinococcus granulosus**. It commonly affects the liver, leading to the formation of hydatid cysts.
- **Why Other Options Are Incorrect**:
  - **A) Ascaris lumbricoides**: Causes **ascariasis**, a different condition.
  - **C) Entamoeba histolytica**: Causes **amoebic liver abscess**, not hydatid cysts.
  - **D) Enterobius vermicularis**: Causes **pinworm infection**, not hydatid disease.
  - **E) Wuchereria bancrofti**: Causes **filariasis**, a parasitic infection affecting lymphatics.

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15. Question: Dermatitis herpetiformis is a chronic, intensely itchy, blistering skin manifestation of gluten-sensitive enteropathy, commonly known as celiac disease. Pathogenesis of dermatitis herpetiformis frequently involves the formation of an antibody to epidermal tissue transglutaminase. Which is the most likely immunoglobulin that triggers immunologic reactions resulting in lesion formation?

Answer Choices:

- A) IgA
- B) IgM
- C) IgG
- D) IgD
- E) IgE

Correct Answer: A) IgA

Explanation:

- **Key Clue**: **Dermatitis herpetiformis** is strongly associated with **IgA** antibodies directed against **tissue transglutaminase** (tTG), which are involved in the development of the skin lesions.
- **Why Other Options Are Incorrect**:
  - **B) IgM**: IgM is not typically involved in celiac disease or dermatitis herpetiformis.
  - **C) IgG**: IgG antibodies are involved in **celiac disease** but not typically in the direct formation of dermatitis herpetiformis lesions.
  - **D) IgD**: This immunoglobulin is not typically involved in allergic or autoimmune skin reactions.
  - **E) IgE**: IgE is associated with **allergic reactions**, not with dermatitis herpetiformis.

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16. Question: A 45-year-old lady was diagnosed with chronic gastritis and was taking antacids for the last one month. Before starting antacids, her bowel habits were normal, but now she presented with constipation and wanted to change her medication. Of the following, what is the most appropriate antacid for this patient?

Answer Choices:

- A) Aluminum-containing antacid
- B) Combination of aluminum and magnesium-containing antacid
- C) Sodium-containing antacid
- D) Magnesium-containing antacid
- E) Sodium-containing antacids

Correct Answer: B) Combination of aluminum and magnesium-containing antacid

Explanation:

- **Key Clue**: **Aluminum-containing antacids** can cause **constipation**, and **magnesium-containing antacids** can cause **diarrhea**. A **combination of aluminum and magnesium** antacids balances these effects, preventing both constipation and diarrhea.
- **Why Other Options Are Incorrect**:
    - **A) Aluminum-containing antacid**: Can worsen constipation, which the patient is already experiencing.
    - **C) Sodium-containing antacid**: Can cause fluid retention and increased sodium load.
    - **D) Magnesium-containing antacid**: May cause diarrhea, which is not helpful here.
    - **E) Sodium-containing antacids**: Sodium is generally not preferred for chronic use due to risk of fluid retention.

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17. Question: A 4-year-old child is brought to the ER after accidentally ingesting a tablet that his father bought for killing rodents. After ingestion, the child develops nausea, vomiting, abdominal pain, and dyspnea. ECG shows arrhythmias. ABGs show metabolic acidosis. What is the most likely cause of his condition?

**Answer Choices

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- A) Aluminium phosphide
- B) Arsenic
- C) Lead
- D) Mercury
- E) Phosphorus

Correct Answer: A) Aluminium phosphide

Explanation:

- **Key Clue**: **Aluminium phosphide** is commonly used in **rodenticide** and causes severe symptoms such as **metabolic acidosis**, **arrhythmias**, and **dyspnea** after ingestion.
- **Why Other Options Are Incorrect**:
    - **B) Arsenic**: Causes poisoning with different symptoms, typically gastrointestinal, but not commonly associated with rodenticide.
    - **C) Lead**: Lead poisoning has a different symptom complex, including **neurocognitive issues**.
    - **D) Mercury**: Mercury poisoning generally causes **neurological** and **gastrointestinal** symptoms but not metabolic acidosis.

- **E) Phosphorus**: Causes a different type of poisoning, typically affecting the liver and causing **hepatic necrosis**.

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18. Question: A 30-year-old female patient presented with a history of projectile vomiting for the last 1 week. She has a recent history of acid ingestion. What metabolic abnormality will you look for in this patient?

Answer Choices:

- A) Hypochloremic hypokalemic metabolic alkalosis
- B) Hyperchloremic metabolic acidosis
- C) Hypochloremic hyperkalemic metabolic alkalosis
- D) Hyperchloremic hyperkalemic metabolic alkalosis
- E) Hyperchloremic, hypokalemic metabolic acidosis

Correct Answer: A) Hypochloremic hypokalemic metabolic alkalosis

Explanation:

- **Key Clue**: **Projectile vomiting** and **acid ingestion** often lead to the loss of gastric acid, resulting in **metabolic alkalosis** with **hypokalemia** and **hypochloremia**.
- **Why Other Options Are Incorrect**:
  - **B) Hyperchloremic metabolic acidosis**: Not typical for vomiting-related conditions.
  - **C) Hypochloremic hyperkalemic metabolic alkalosis**: Hyperkalemia is not usually associated with vomiting-induced alkalosis.
  - **D) Hyperchloremic hyperkalemic metabolic alkalosis**: Unlikely in this scenario.
  - **E) Hyperchloremic, hypokalemic metabolic acidosis**: Not the typical finding in vomiting-induced conditions.

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19. Question: Millennium Development Goal 5 aims to substantially decrease maternal mortality rates by 2015. Pakistan showed considerable yet insufficient progress toward achieving the targets set for Maternal Mortality Ratio (MMR). What was the MMR target set for Pakistan?

Answer Choices:

- A) 50 per 100,000 live births
- B) 60 per 100,000 live births
- C) 70 per 100,000 live births
- D) 90 per 100,000 live births

- E) 30 per 100,000 live births

Correct Answer: C) 70 per 100,000 live births

Explanation:

- **Key Clue**: Pakistan's target for **Maternal Mortality Ratio** (MMR) under the **Millennium Development Goals** was **70 per 100,000 live births** by 2015.

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21. Question: A 10-year-old patient is brought to the hospital with a 3-day history of abdominal pain, vomiting, and a history of fever. On examination, he is ill-appearing and has abdominal tenderness. What is the most appropriate initial management for this patient?

Answer Choices:

- A) Admit and start IV metronidazole
- B) Admit and start IV antibiotics
- C) IV fluids and symptomatic treatment
- D) Symptomatic treatment with observation
- E) Refer to a tertiary care center

Correct Answer: B) Admit and start IV antibiotics

Explanation:

- The patient's presentation of **fever**, **abdominal tenderness**, and **vomiting** suggests an **infectious abdominal condition**, such as **peritonitis** or **severe gastroenteritis**, requiring **IV antibiotics** to manage potential infection.
- **Why Other Options Are Incorrect**:
    - **A) IV metronidazole** alone is not enough without broad-spectrum antibiotics.
    - **C) IV fluids and symptomatic treatment** are important but are not sufficient alone in this potentially severe case.
    - **D) Observation** is inadequate for a patient with these symptoms.
    - **E)** Referring to a tertiary center may be necessary if the condition doesn't improve with initial treatment, but immediate antibiotics are the first step.

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22. Question: A 58-year-old woman has progressively worsening abdominal pain. Colonoscopy reveals a 6 mm ulcer with mild inflammation, no malignancy. Stool culture shows infection with gram-negative bacilli. Which of the following is the most likely causative organism?

Answer Choices:

- A) E. coli
- B) Klebsiella
- C) Salmonella
- D) Shigella
- E) Helicobacter pylori

Correct Answer: A) E. coli

Explanation:

- **Key Clue**: **Gram-negative bacilli** and **abdominal pain** point toward an **enteric infection**. **E. coli** is the most common gram-negative bacterium causing gastrointestinal issues.
- **Why Other Options Are Incorrect**:
    - **B) Klebsiella**: Typically associated with **respiratory infections** and **urinary tract infections**.
    - **C) Salmonella**: Can cause **gastroenteritis**, but it is less common than **E. coli** in this case.
    - **D) Shigella**: Causes **dysentery**, but the stool culture points more toward **E. coli**.
    - **E) Helicobacter pylori**: Generally affects the **stomach**, not typically causing infections with **gram-negative bacilli** in stool.

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23. Question: A 21-year-old male presents with painful, bloody diarrhea for 2 weeks. Sigmoidoscopy reveals erythema and pseudopolyps. Which drug used for ulcerative colitis has both anti-inflammatory and antibacterial properties?

Answer Choices:

- A) Azathioprine
- B) Cyclosporine
- C) Sulfasalazine
- D) Mesalamine
- E) Olsalazine

Correct Answer: C) Sulfasalazine

Explanation:

- **Key Clue**: **Sulfasalazine** is a **5-ASA compound** that has both **anti-inflammatory** and **antibacterial** effects. It is commonly used for **ulcerative colitis**.
- **Why Other Options Are Incorrect**:

- **A) Azathioprine**: An **immunosuppressant**, not an **anti-inflammatory** or **antibacterial** agent.
- **B) Cyclosporine**: Another **immunosuppressant** used in severe cases, but doesn't have **antibacterial** properties.
- **D) Mesalamine**: An **anti-inflammatory**, but without significant **antibacterial** properties.
- **E) Olsalazine**: Another **5-ASA compound**, but **sulfasalazine** is typically more potent in this context.

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24. Question: A healthy 33-year-old man is planning to visit North Africa and is concerned about traveler's diarrhea. Which of the following is the most suitable prophylactic drug for this condition?

Answer Choices:

- A) Bismuth subsalicylate
- B) Diphenoxylate
- C) Kaolin
- D) Loperamide
- E) Glucocorticoids

Correct Answer: A) Bismuth subsalicylate

Explanation:

- **Key Clue**: **Bismuth subsalicylate** is used as a **prophylactic** treatment for **traveler's diarrhea**. It has **antimicrobial** and **anti-inflammatory** properties.
- **Why Other Options Are Incorrect**:
  - **B) Diphenoxylate**: **Antidiarrheal**, but not suitable for prophylaxis.
  - **C) Kaolin**: **Absorbent** substance used for diarrhea but not a prophylactic treatment.
  - **D) Loperamide**: **Antidiarrheal**, but should not be used for prophylaxis.
  - **E) Glucocorticoids**: Not used for diarrhea prevention.

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25. Question: In health economics, the cost related to the loss to society due to a disease and its treatment is called:

Answer Choices:

- A) Catastrophic expenditure
- B) Direct cost

- C) Indirect cost
- D) Intangible cost
- E) Out-of-pocket expenditure

Correct Answer: C) Indirect cost

Explanation:

- **Key Clue**: **Indirect costs** refer to the loss of productivity or wages due to illness, or the societal cost of long-term disability, not just the direct expenses of treatment.
- **Why Other Options Are Incorrect**:
    - **A) Catastrophic expenditure**: Refers to **out-of-pocket costs** exceeding a certain percentage of income.
    - **B) Direct cost**: Refers to the actual expenses incurred in treating the illness (e.g., hospital stay, medications).
    - **D) Intangible cost**: Refers to the **quality of life** lost due to illness, but not the economic loss.
    - **E) Out-of-pocket expenditure**: Refers to personal expenses borne by the patient, not societal costs.

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26. Question: What is the most important flaw in the Health Management Information System (HMIS) in Pakistan?

Answer Choices:

- A) Lack of human resources
- B) Lack of trained personnel
- C) Poor data quality
- D) Poor management
- E) Lack of interest

Correct Answer: C) Poor data quality

Explanation:

- **Key Clue**: The biggest issue with **HMIS** in Pakistan is **poor data quality**, which leads to **inaccurate reporting** and **informed decision-making**.
- **Why Other Options Are Incorrect**:
    - **A) Lack of human resources**: While a problem, **data quality** is often a more critical issue in health information systems.

- **B) Lack of trained personnel**: This is important but does not affect data quality as significantly.
- **D) Poor management**: Effective management can improve **data quality**, so this is a related but not primary issue.
- **E) Lack of interest**: More of a cultural issue, but not the most fundamental flaw in the system.

---

27. Question: A 50-year-old man with a history of alcohol abuse is found to have elevated liver enzymes. A liver biopsy shows fatty change (steatosis). If the patient abstains from drinking, this condition will most likely evolve into which of the following?

Answer Choices:

- A) Chronic hepatitis
- B) Acute hepatitis
- C) Complete regression
- D) Hyperplastic nodules
- E) Malignant degeneration

Correct Answer: C) Complete regression

Explanation:

- **Key Clue**: **Fatty liver** (steatosis) due to alcohol can **regress** completely if the patient stops drinking alcohol.
- **Why Other Options Are Incorrect**:
  - **A) Chronic hepatitis**: This could occur if the damage progresses, but with **abstinence** from alcohol, the liver can recover.
  - **B) Acute hepatitis**: Not likely to develop from fatty change in isolation.
  - **D) Hyperplastic nodules**: This is associated with cirrhosis, not fatty liver.
  - **E) Malignant degeneration**: Cancer is unlikely to develop directly from fatty liver without progression to cirrhosis.

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28. Question: An 18-year-old female patient is admitted for an elective splenectomy. What type of vaccine prophylaxis is recommended?

Answer Choices:

- A) Meningococcal, Pneumococcal, Hemophilus influenza type B

- B) Meningococcal, Pneumococcal, Diphtheria
- C) Meningococcal, Pneumococcal, Hepatitis B
- D) Meningococcal, Pne

umococcal, Typhoid

- E) Meningococcal, Pneumococcal, Hepatitis B, Hib

Correct Answer: A) Meningococcal, Pneumococcal, Hemophilus influenza type B

Explanation:

- **Key Clue**: **Splenectomy** increases the risk of infections, particularly with **encapsulated organisms** like **Meningococcus**, **Pneumococcus**, and **Haemophilus influenza type B**.
- **Why Other Options Are Incorrect**:
  - **B)** Diphtheria is not necessary for **splenectomy** prophylaxis.
  - **C)** Hepatitis B vaccination is not routinely recommended in this context.
  - **D)** Typhoid vaccination is not relevant for **splenectomy**.
  - **E)** Includes **Hepatitis B**, but **Hib** is more relevant for **splenectomy**.

---

29. Question: A 20-year-old male presents with right lower abdominal pain, nausea, and vomiting for one day. On examination, there is tenderness in the right iliac fossa. What is the most likely diagnosis?

Answer Choices:

- A) Acute appendicitis
- B) Acute cholecystitis
- C) Intestinal obstruction
- D) Right ureter calculus
- E) Renal colic

Correct Answer: A) Acute appendicitis

Explanation:

- **Key Clue**: **Right iliac fossa** tenderness, associated with nausea and vomiting, is characteristic of **acute appendicitis**.

---

30. Question: A 14-year-old boy returned from a scout backpack trip with a history of foul-smelling watery diarrhea. He admitted consuming water from a mountain brook without boiling it. Stool

examination confirmed Giardia lamblia infection. Which of the following is the most suitable drug to treat this infection?

Answer Choices:

- A) Chloroquine
- B) Dihydroemetine
- C) Mebendazole
- D) Thiabendazole
- E) Metronidazole

Correct Answer: E) Metronidazole

Explanation:

- **Key Clue**: **Giardia lamblia** infection is commonly treated with **Metronidazole**, which is effective against protozoan infections.
- **Why Other Options Are Incorrect**:
  - **A) Chloroquine**: This is used for **malaria** and not for Giardia.
  - **B) Dihydroemetine**: This is used for **amoebiasis**, not for Giardia.
  - **C) Mebendazole**: Effective against **roundworms** but not Giardia.
  - **D) Thiabendazole**: Used for certain parasitic infections but not for Giardia.

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31. Question: A 5-year-old child presents with fever, anorexia, and vomiting for the last 3 days. Seven days ago, his older brother had similar symptoms. His CBC is normal, but his liver function tests show ALT = 2000, ALP = 450, and bilirubin = 8. On examination, he is febrile, jaundiced, and has hepatomegaly. What is the most likely etiological factor for his condition?

Answer Choices:

- A) Hepatitis A
- B) Hepatitis B
- C) Hepatitis C
- D) Hepatitis E
- E) Hepatitis D

Correct Answer: A) Hepatitis A

Explanation:

- **Key Clue**: The **high ALT**, **fever**, **jaundice**, and **hepatomegaly**, along with the **history of family exposure**, suggest **Hepatitis A**, which is commonly transmitted through contaminated food or water.
- **Why Other Options Are Incorrect**:
    - **B) Hepatitis B**: Often transmitted through **blood or sexual contact**, not as commonly through family contact.
    - **C) Hepatitis C**: More commonly transmitted via **blood transfusion** or **needles**.
    - **D) Hepatitis E**: Less common in children and usually associated with **contaminated water**, but Hepatitis A is more likely.
    - **E) Hepatitis D**: Requires **Hepatitis B** for co-infection, and this child's presentation is more suggestive of **Hepatitis A**.

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32. Question: The Lady Health Workers Program has been operating in Pakistan since 1994, covering many aspects of primary healthcare. This program fits into the health system as:

Answer Choices:

- A) Horizontal program
- B) Private healthcare program
- C) Social healthcare program
- D) Vertical program
- E) Vaccination program

Correct Answer: A) Horizontal program

Explanation:

- **Key Clue**: The **Lady Health Workers Program** is a **horizontal program**, meaning it provides **integrated** healthcare services across multiple aspects (maternal, child, family planning, etc.) rather than focusing on a single vertical area like vaccination.
- **Why Other Options Are Incorrect**:
    - **B) Private healthcare program**: This program is not private but a **public health initiative**.
    - **C) Social healthcare program**: Although it has a social focus, it is primarily a **public health** initiative that spans across various areas.
    - **D) Vertical program**: A **vertical program** focuses on a single health issue (e.g., **vaccination** or **malaria control**).
    - **E) Vaccination program**: While it may include vaccinations, the program's broader scope categorizes it as **horizontal** rather than vertical.

NEXT SET OF QUESTIONS

1. Question: A group of hikers discovered a lady dead in her tent at a campsite. The crime scene shows that she was in a closed space and some plastic was burning nearby. The fatal period was recorded as 2 to 10 minutes, and the phenomena associated with death was Cytotoxic Anoxia. Which specimen would be considered the best heat sample for confirming the poison?

Answer Choices:

- A) Blood
- B) Liver
- C) Lungs
- D) Spleen
- E) Urine

Correct Answer: A) Blood

Explanation:

- **Key Clue**: **Cytotoxic anoxia** suggests poisoning due to **carbon monoxide** or similar toxins, which impair cellular oxygen use. Blood is the most appropriate specimen for detecting carbon monoxide or toxins responsible for anoxia.
- **Why Other Options Are Incorrect**:
    - **B) Liver**: While the liver is a major organ for toxin metabolism, blood would be better for detecting acute poisoning.
    - **C) Lungs**: While the lungs may show signs of inhaled toxins, blood will provide the most accurate information about systemic poisoning.
    - **D) Spleen**: Not typically useful for confirming poisoning.
    - **E) Urine**: Urine may be tested for metabolic byproducts but isn't ideal for immediate detection of poisons causing cytotoxic anoxia.

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2. Question: A group of young men on a hiking tour developed watery, non-bloody, foul-smelling diarrhea for the last week, accompanied by nausea, anorexia, flatulence, and abdominal cramps. There was no fever, and they reported drinking untreated stream water. Stool examination revealed a flagellated protozoan. Which organism is most likely the cause?

Answer Choices:

- A) **Entamoeba histolytica**

- B) **Escherichia coli**
- C) **Clostridium difficile**
- D) **Giardia lamblia**
- E) **Vibrio cholerae**

Correct Answer: D) **Giardia lamblia**

Explanation:

- **Key Clue**: **Giardia lamblia** is a **flagellated protozoan** commonly associated with **watery diarrhea** and **contaminated water**. The lack of fever and the presence of abdominal cramps and flatulence strongly point to **Giardia**.
- **Why Other Options Are Incorrect**:
  - **A) Entamoeba histolytica**: Typically causes **dysentery** with bloody stools.
  - **B) Escherichia coli**: While it can cause diarrhea, it usually presents with **bloody diarrhea** or is associated with **travel-related diarrhea**.
  - **C) Clostridium difficile**: Often associated with **antibiotic use** or **hospitalization**, causing severe diarrhea, often with colitis.
  - **E) Vibrio cholerae**: Causes **profuse watery diarrhea** but is typically associated with **fever** and **electrolyte imbalance**, and is less likely from untreated stream water.

---

3. Question: A dead body is brought to the autopsy room. The history provided by the police indicates poisoning. Upon examination, there is dark brown staining and a garlic odor in the stomach. What is the most likely poison in this condition?

Answer Choices:

- A) **Aniline dye**
- B) **Carbon dioxide**
- C) **Hydrochloric acid**
- D) **Phosphine**
- E) **Phosphorus**

Correct Answer: E) **Phosphorus**

Explanation:

- **Key Clue**: The **garlic odor** and **dark brown staining** of the stomach are classic signs of **phosphorus** poisoning, often associated with **insecticides** or **rodenticides**.
- **Why Other Options Are Incorrect**:

- **A) Aniline dye**: Typically causes **cyanosis**, not garlic odor or brown staining.
- **B) Carbon dioxide**: Would not leave a garlic odor or dark staining.
- **C) Hydrochloric acid**: Could cause burns and damage, but not garlic odor or brown staining.
- **D) Phosphine**: A gas used in rodenticides but is not typically associated with garlic odor or brown staining.

---

4. Question: A 70-year-old psychiatric patient presents with postprandial fullness, nausea, and vomiting. Endoscopic biopsy of a mass in the stomach reveals an irregular surface, which is black in color. What is the most likely cause of these symptoms and findings?

Answer Choices:

- A) **Persimmon bezoars**
- B) **Pharmacobezoars**
- C) **Lactobezoars**
- D) **Phytobezoars**
- E) **Trichobezoars**

Correct Answer: A) **Persimmon bezoars**

Explanation:

- **Key Clue**: **Persimmon bezoars** are known to cause **gastric obstruction** and are commonly found in patients with a history of consuming **unripe persimmons**. They often present with **postprandial fullness, nausea, and vomiting**. The **black color** is due to tannin accumulation from the fruit.
- **Why Other Options Are Incorrect**:
  - **B) Pharmacobezoars**: These are typically caused by **medication** or **drug-induced bezoars** but don't specifically present with black masses.
  - **C) Lactobezoars**: Usually seen in **infants**, caused by undigested milk.
  - **D) Phytobezoars**: Made from **vegetable fibers**, not typically associated with the black color or psychiatric history.
  - **E) Trichobezoars**: Made from **hair** but don't cause the same clinical presentation.

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5. Question: A 44-year-old patient with Hepatitis C (recent PCR negative for both HCV and HBV) and diabetes presents with the following liver function tests (LFTs):

- Total Bilirubin: 0.7 mg/dL
- ALT: 94 U/L (Normal: <42)
- ALP: 145 U/L (Normal: 85-307)
- Albumin: 46 g/L (Normal: 35-50)

What is the most likely diagnosis?

Answer Choices:

- A) **Primary Biliary Cirrhosis**
- B) **Primary Sclerosing Cholangitis**
- C) **Hemochromatosis**
- D) **Non-alcoholic fatty liver disease**
- E) **Wilson's disease**

Correct Answer: D) **Non-alcoholic fatty liver disease**

Explanation:

- **Key Clue**: The patient has **elevated ALT** levels but **normal bilirubin and albumin**. This pattern is consistent with **Non-alcoholic fatty liver disease (NAFLD)**, which is often seen in patients with **Hepatitis C** and **diabetes**.
- **Why Other Options Are Incorrect**:
    - **A) Primary Biliary Cirrhosis**: Would typically show **elevated alkaline phosphatase (ALP)** and **bilirubin**.
    - **B) Primary Sclerosing Cholangitis**: Would show **elevated ALP** and **cholestasis**, not characteristic of this patient's LFTs.
    - **C) Hemochromatosis**: Would typically present with elevated **ferritin** and **iron studies**, not just ALT.
    - **E) Wilson's disease**: Would show **low serum copper** levels and **elevated urinary copper**, not this specific LFT pattern.

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6. Question: A 55-year-old patient suffering from HCV-related liver cirrhosis presents with abdominal distention, pain, fever, and altered consciousness. His ALT is 59 IU/mL, and PT is 30 seconds. Ultrasound reveals tense ascites and the presence of hepatocellular carcinoma. Which of the following is the best management strategy for massive ascites?

Answer Choices:

- A) **Large volume paracentesis only**

- B) **Intravenous ceftriaxone**
- C) **Therapeutic paracentesis & IV antibiotics**
- D) **Portosystemic shunt surgery**
- E) **Intravenous mannitol and IV antibiotics**

Correct Answer: C) **Therapeutic paracentesis & IV antibiotics**

Explanation:

- **Key Clue**: **HCV-related cirrhosis** with **ascites** and **hepatocellular carcinoma** suggests **spontaneous bacterial peritonitis (SBP)**, which requires **paracentesis** to remove fluid and **IV antibiotics** to prevent infection.
- **Why Other Options Are Incorrect**:
  - **A) Large volume paracentesis only**: Paracentesis alone is not sufficient if infection is suspected.
  - **B) Intravenous ceftriaxone**: Appropriate for infection but not the full treatment plan.
  - **D) Portosystemic shunt surgery**: Can be considered for portal hypertension but does not directly address the ascites in this case.
  - **E) Intravenous mannitol and IV antibiotics**: Mannitol is not effective for ascites caused by cirrhosis.

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7. Question: The term "Hospital Administration" covers a large number of activities, including management of staff, financial matters, and technical services. Who coined the acronym POSTCoRB in the field of management and public administration?

Answer Choices:

- A) **Edward Jenner**
- B) **John Snow**
- C) **Luther H. Gulick**
- D) **Mary Typhoid**
- E) **Stephen King**

Correct Answer: C) **Luther H. Gulick**

Explanation:

- **Key Clue**: **POSTCoRB** is a well-known acronym in public administration and management, particularly in the study of hospital administration. **Luther Gulick** is credited with coining this

acronym. It stands for **Planning, Organizing, Staffing, Training, Coordinating, Reporting, and Budgeting**.

- **Why Other Options Are Incorrect**:
    - **A) Edward Jenner**: Famous for his work in immunization, not hospital administration.
    - **B) John Snow**: Known for his work in epidemiology and public health, not administration.
    - **D) Mary Typhoid**: Not related to hospital administration.
    - **E) Stephen King**: A famous author, not a figure in hospital management.

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8. Question: You are posted as a Casualty Medical Officer (CMO) in a District Headquarter Hospital. A patient is received with a headache as the only symptom. He brought some samples of a poison, which was identified to be potassium cyanide. Cyanide is ineffective in which of the following conditions?

Answer Choices:

- A) **Have low acid in stomach**
- B) **Have hyperacidity**
- C) **Low dose**
- D) **No acid in stomach (achlorhydria)**
- E) **Obese person**

Correct Answer: D) **No acid in stomach (achlorhydria)**

Explanation:

- **Key Clue**: **Cyanide** works by inhibiting cellular respiration, and its toxicity is **reduced** in **achlorhydria** (lack of stomach acid). In the absence of stomach acid, cyanide may not be effectively liberated from its precursor compounds, thus decreasing its toxicity.
- **Why Other Options Are Incorrect**:
    - **A) Have low acid in stomach**: Cyanide can still be active in conditions of low stomach acid, though it's more effective with normal acid levels.
    - **B) Have hyperacidity**: Cyanide can still be toxic in hyperacidic conditions.
    - **C) Low dose**: Low doses of cyanide would still be toxic, just less so.
    - **E) Obese person**: Cyanide's effect is not dependent on body mass.

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9. Question: In designing HMIS (Health Management Information System), what is the most important first phase of HMIS development in an organization?

Answer Choices:

- A) **Evaluation**
- B) **Development of software**
- C) **Monitoring**
- D) **Planning and designing phase**
- E) **Process improvement**

Correct Answer: D) **Planning and designing phase**

Explanation:

- **Key Clue**: The **planning and designing phase** is the first and most critical step in developing an HMIS system. This phase involves understanding the organization's needs, objectives, and processes, and designing a system that can meet those needs effectively.
- **Why Other Options Are Incorrect**:
  - **A) Evaluation**: Evaluation happens after implementation, not at the start.
  - **B) Development of software**: Development comes after planning and designing.
  - **C) Monitoring**: Monitoring is ongoing after the system is implemented.
  - **E) Process improvement**: This comes after the system is in place and functioning.

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10. Question: A 45-year-old female was diagnosed with primary biliary cirrhosis and presented with troublesome pruritus to a physician. What is the best treatment option for this purpose?

Answer Choices:

- A) **Antihistamine**
- B) **Corticosteroids**
- C) **Cholestyramine**
- D) **Rifampicin**
- E) **Ursodeoxycholic acid**

Correct Answer: C) **Cholestyramine**

Explanation:

- **Key Clue**: **Primary biliary cirrhosis** (PBC) is often associated with **pruritus** due to cholestasis (bile accumulation). **Cholestyramine** is an **anion-exchange resin** that helps relieve pruritus by binding bile acids in the intestine, preventing their reabsorption.

- **Why Other Options Are Incorrect**:
    - **A) Antihistamine**: While antihistamines may provide some relief, they are less effective for the cholestatic pruritus seen in PBC.
    - **B) Corticosteroids**: Not typically used to treat pruritus in PBC.
    - **D) Rifampicin**: Rifampicin may have some benefit in severe cases but is generally not first-line for pruritus.
    - **E) Ursodeoxycholic acid**: This is the main treatment for PBC itself, improving liver function, but does not specifically target pruritus.

NEXT SET

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1. Question: A 15-year-old male reports to the OPD with fever and constipation. The fever pattern is singlet, and on examination, tender abdomen, enlarged spleen, and rose spots on the abdomen are noted. What is the route of transmission of the causative organism?

Answer Choices:

- A) **Fecal-oral route**
- B) **Shoe, hand**
- C) **Transplacental**
- D) **Sexual contact**

Correct Answer: A) **Fecal-oral route**

Explanation:

- **Key Clue**: The description of **rose spots** (small, red spots on the abdomen) is characteristic of **typhoid fever**, which is caused by *Salmonella typhi*. The primary transmission route of this organism is the **fecal-oral route**.
- **Why Other Options Are Incorrect**:
    - **B) Shoe, hand**: Incorrect. While hygiene may play a role, **fecal-oral** is the primary transmission route.
    - **C) Transplacental**: Not relevant to typhoid fever.
    - **D) Sexual contact**: Not a typical route for typhoid fever.

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2. Question: Sustainable development goals (SDGs) were started by the United Nations in 2015. How many goals and targets are there in SDGs?

Answer Choices:

- A) 1 and 129
- B) 16 and 149
- C) 17 and 169
- D) 18 and 189
- E) 19 and 190

Correct Answer: C) **17 and 169**

Explanation:

- **Key Clue**: The **United Nations SDGs** include **17 goals** and **169 targets** to address global issues like poverty, health, education, and climate change.
- **Why Other Options Are Incorrect**:
  - **A) 1 and 129**: Incorrect. There are **17 goals**, not 1.
  - **B) 16 and 149**: Incorrect number of targets.
  - **D) 18 and 189**: Incorrect.
  - **E) 19 and 190**: Incorrect.

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3. Question: A 30-year-old male with ulcerative colitis presents with an exacerbation of bloody diarrhea. He is febrile and there are no features of intestinal obstruction. Which of the following treatment options should be considered?

Answer Choices:

- A) **Corticosteroids and sulfasalazine**
- B) **Intravenous fluids and analgesics only**
- C) **Intravenous corticosteroids only**
- D) **Per rectal corticosteroids only**
- E) **Sulfasalazine therapy only**

Correct Answer: A) **Corticosteroids and sulfasalazine**

Explanation:

- **Key Clue**: For **ulcerative colitis** exacerbations with bloody diarrhea, **corticosteroids** are commonly used to reduce inflammation. **Sulfasalazine** is an anti-inflammatory drug commonly used for maintenance therapy in ulcerative colitis.

- **Why Other Options Are Incorrect**:
    - **B) Intravenous fluids and analgesics only**: Fluids are important, but they are not enough on their own in treating an exacerbation.
    - **C) Intravenous corticosteroids only**: Typically combined with other agents like sulfasalazine.
    - **D) Per rectal corticosteroids only**: Not sufficient alone in a severe exacerbation.
    - **E) Sulfasalazine therapy only**: Not enough for an acute flare.

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4. Question: After a leakage in a storage at a fertilizer factory, a body of the deceased worker was brought to the autopsy at the forensic medicine department. According to his co-workers, he was gasping and then collapsed. Nitric acid poisoning was suspected. What will be the remarkable autopsy finding in this case?

Answer Choices:

- A) **Brownish discoloration**
- B) **Corrosion of the skin and mucous membranes of the oral cavity**
- C) **Perforated stomach**
- D) **Parchmentization**
- E) **Yellowish discoloration of the skin, mouth, lungs, and liver**

Correct Answer: B) **Corrosion of the skin and mucous membranes of the oral cavity**

Explanation:

- **Key Clue**: **Nitric acid poisoning** often causes **corrosion** of the skin and mucous membranes, including the oral cavity, due to its highly corrosive nature.
- **Why Other Options Are Incorrect**:
    - **A) Brownish discoloration**: Not a common finding with nitric acid poisoning.
    - **C) Perforated stomach**: Likely in cases of **caustic** or **acid** poisoning, but typically seen with **strong acids** like sulfuric acid.
    - **D) Parchmentization**: Seen in **phosphorus poisoning**.
    - **E) Yellowish discoloration**: More common in **arsenic** or **lead** poisoning.

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5. Question: The community health worker visits her local community and covers around 100 households. The sole purpose of her community visits is to limit the incidence of disease by controlling causes and risk factors. This comes under which type of prevention?

Answer Choices:

- A) **Primordial prevention**
- B) **Rehabilitation**
- C) **Primary prevention**
- D) **Secondary prevention**
- E) **Tertiary prevention**

Correct Answer: A) **Primordial prevention**

Explanation:

- **Key Clue**: **Primordial prevention** focuses on preventing the development of risk factors and promoting healthy lifestyles to prevent disease before it even arises. This involves interventions aimed at controlling causes and risk factors in the community.
- **Why Other Options Are Incorrect**:
  - **B) Rehabilitation**: Focuses on recovery and improving quality of life after illness.
  - **C) Primary prevention**: Aimed at preventing the onset of disease but after risk factors have already developed.
  - **D) Secondary prevention**: Involves early detection and treatment to prevent progression.
  - **E) Tertiary prevention**: Focuses on managing and minimizing complications after disease has occurred.

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6. Question: A 24-year-old man presents with acute watery diarrhea and abdominal pain. One of the drugs given to this patient along with antibiotics was diphenoxylate. How could diphenoxylate help this patient?

Answer Choices:

- A) **Antimicrobial effects**
- B) **Blocks TNF-a signaling**
- C) **Inhibition of dihydrofolate reductase**
- D) **Inhibition of phospholipase A2**
- E) **Slow peristalsis**

Correct Answer: E) **Slow peristalsis**

Explanation:

- **Key Clue**: **Diphenoxylate** is an **anti-diarrheal** agent that works by **slowing peristalsis** in the intestines, which reduces the frequency and urgency of diarrhea.
- **Why Other Options Are Incorrect**:
    - **A) Antimicrobial effects**: Diphenoxylate is not an antimicrobial.
    - **B) Blocks TNF-a signaling**: This is not the mechanism of action for diphenoxylate.
    - **C) Inhibition of dihydrofolate reductase**: Not relevant to diphenoxylate.
    - **D) Inhibition of phospholipase A2**: Not related to diphenoxylate.

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7. Question: A dead body of an adult male was brought by police to the mortuary for determination of cause of death. The face was cyanosed, the jaws were tightly clenched, and froth was seen at the mouth. The smell of bitter almonds was noticed from the mouth of the deceased. What can be the suspected poison?

Answer Choices:

- A) **Carbolic acid**
- B) **Cyanide**
- C) **Inebriant poisons**
- D) **Oxalic acid**
- E) **Sulfuric acid**

Correct Answer: B) **Cyanide**

Explanation:

- **Key Clue**: **Cyanide poisoning** can cause **cyanosis**, **frothing at the mouth**, and the characteristic **bitter almond smell**. Cyanide affects the body's ability to use oxygen, leading to these signs.
- **Why Other Options Are Incorrect**:
    - **A) Carbolic acid**: Does not typically present with the "bitter almond" odor.
    - **C) Inebriant poisons**: Not typically associated with the described symptoms.
    - **D) Oxalic acid**: Causes different symptoms.
    - **E) Sulfuric acid**: Causes severe burns and not the described symptoms.

---

8. Question: Inflammatory bowel disease is a group of disorders that cause chronic inflammation in the intestines. Which of the following morphological features is most likely to distinguish ulcerative colitis from Crohn's disease?

Answer Choices:

- A) **Crypt Abscesses**
- B) **Diffuse distribution of pseudopolyps**
- C) **Lymphoid aggregates in the mucosa**
- D) **Mucosal edema**
- E) **Neutrophilic infiltrate**

Correct Answer: A) **Crypt Abscesses**

Explanation:

- **Key Clue**: **Crypt abscesses** are a hallmark feature of **ulcerative colitis**. These are collections of neutrophils in the crypts of the colonic mucosa, a typical finding in ulcerative colitis.
- **Why Other Options Are Incorrect**:
    - **B) Diffuse distribution of pseudopolyps**: Pseudopolyps can be seen in both conditions, but they are more prominent in **ulcerative colitis**.
    - **C) Lymphoid aggregates in the mucosa**: Found in **Crohn's disease**, not in ulcerative colitis.
    - **D) Mucosal edema**: Seen in both diseases, but not as specific.
    - **E) Neutrophilic infiltrate**: Present in both conditions but does not differentiate them.

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9. Question: A 5-year-old male child is brought to OPD with low-grade fever, myalgia, anorexia, and tender bilateral swelling in front of the ears. What would be the most common complication in such a condition?

Answer Choices:

- A) **Conjunctivitis**
- B) **Meningitis**
- C) **Myocarditis**
- D) **Orchitis**
- E) **Uveitis**

Correct Answer: D) **Orchitis**

Explanation:

- **Key Clue**: The child presents with **bilateral parotid gland swelling**, which is characteristic of **mumps**. One of the most common complications of mumps is **orchitis** (inflammation of the testes), especially in post-pubertal males.
- **Why Other Options Are Incorrect**:
    - **A) Conjunctivitis**: Not a common complication of mumps.
    - **B) Meningitis**: Can occur in mumps, but it is less common than orchitis.
    - **C) Myocarditis**: Rare complication of mumps.
    - **E) Uveitis**: Not typically associated with mumps.

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10. Question: A 25-year-old female patient presented with a 1-week history of constipation and bleeding per rectum. Digital rectal examination was painful, and anal tone was increased. What is the most probable diagnosis?

Answer Choices:

- A) **Anal Fissure**
- B) **Hemorrhoids**
- C) **Fistula in Ano**
- D) **Rectal Polyp**
- E) **Rectal Cancer**

Correct Answer: A) **Anal Fissure**

Explanation:

- **Key Clue**: **Anal fissures** are common causes of painful defecation, rectal bleeding, and increased anal tone. They are usually associated with constipation and can cause severe pain during or after bowel movements.
- **Why Other Options Are Incorrect**:
    - **B) Hemorrhoids**: Can cause rectal bleeding but are less likely to cause increased anal tone or significant pain during examination.
    - **C) Fistula in Ano**: Typically causes drainage and not significant bleeding.
    - **D) Rectal Polyp**: Unlikely to present with the described acute symptoms.
    - **E) Rectal Cancer**: More likely in older patients and typically presents with symptoms like weight loss, change in bowel habits, and less likely with painful defecation.

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11. Question: The dead body of a young male was brought to the forensic department of Khyber Medical College. Autopsy was performed, and there was pallor of skin, conjunctivae, and mucosa. There was emaciation and a Burtonian line (bluish-green discoloration) on the gums. Which of the poisons listed below could have caused this?

Answer Choices:

- A) **Arsenic**
- B) **Copper**
- C) **Iron**
- D) **Lead**
- E) **Mercury**

Correct Answer: D) **Lead**

Explanation:

- **Key Clue**: **Burtonian line** is a characteristic finding in **lead poisoning**, where a bluish-green discoloration appears along the gums due to the accumulation of lead.
- **Why Other Options Are Incorrect**:
    - **A) Arsenic**: Does not typically present with Burtonian line.
    - **B) Copper**: Copper toxicity leads to other symptoms, but not Burtonian line.
    - **C) Iron**: Iron poisoning causes different symptoms and does not lead to Burtonian line.
    - **E) Mercury**: Causes other symptoms, but not the Burtonian line.

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12. Question: A 55-year-old diabetic man with a history of ischemic heart disease and hypertension was on NSAIDs for pain relief. To prevent NSAID-induced peptic ulcer, which of the following PPIs will be the drug of choice, keeping in view the drug-drug interaction of PPIs with antiplatelet drugs?

Answer Choices:

- A) **Esomeprazole**
- B) **Lansoprazole**
- C) **Omeprazole**
- D) **Pantoprazole**
- E) **Rabeprazole**

Correct Answer: D) **Pantoprazole**

Explanation:

- **Key Clue**: **Pantoprazole** is preferred because it has the least **drug-drug interaction** with **antiplatelet drugs**, particularly **clopidogrel**, compared to other PPIs like **omeprazole** or **esomeprazole**.
- **Why Other Options Are Incorrect**:
    - **A) Esomeprazole**: Inhibits the enzyme that activates **clopidogrel** more strongly, leading to less efficacy of the antiplatelet effect.
    - **B) Lansoprazole**: Similar to **esomeprazole**, it can interact with clopidogrel.
    - **C) Omeprazole**: Inhibits the activation of **clopidogrel** and may reduce its efficacy.
    - **E) Rabeprazole**: Also interacts with **clopidogrel**, although less so than **omeprazole** and **esomeprazole**.

NEXT SET

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1. Question: The dead body of an elderly male was brought to you for autopsy at the forensic medicine department. The history indicates some poison ingestion. On initial examination, there was corrosion of the skin at the angle of the mouth and chin, which was brownish in color. The tongue was white and swollen. The body had typical changes, and a specific smell was noted. What is the probable cause of death?

Answer Choices:

- A) **Carbolic acid**
- B) **Hydrochloric acid**
- C) **Oxalic acid**
- D) **Sulfuric acid**

Correct Answer: **B) Hydrochloric acid**

Explanation:

- **Key Clue**: The **brown discoloration** at the angle of the mouth and **swollen tongue** points to **hydrochloric acid** poisoning. Hydrochloric acid ingestion often causes corrosive burns on mucous membranes, with characteristic white swelling of the tongue and mouth.
- **Why Other Options Are Incorrect**:
    - **A) Carbolic acid**: This can cause burns but doesn't typically present with the same discoloration and corrosion pattern.
    - **C) Oxalic acid**: This typically causes systemic symptoms like kidney failure and doesn't cause similar mouth corrosion.

- **D) Sulfuric acid**: Would present with a stronger odor of sulfur and causes severe burns, but the presentation isn't as typical for this poison.

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2. Question: A 45-year-old lady diagnosed with breast cancer presents with severe vomiting after a scheduled chemotherapy session. Which of the following would be the most appropriate drug to treat her vomiting?

Answer Choices:

- A) **Domperidone**
- B) **Dimenhydrinate**
- C) **Itopride**
- D) **Meclizine**
- E) **Ondansetron**

Correct Answer: **E) Ondansetron**

Explanation:

- **Key Clue**: **Ondansetron** is a **serotonin antagonist** and is commonly used to manage chemotherapy-induced nausea and vomiting. It is one of the most effective antiemetic agents for such patients.
- **Why Other Options Are Incorrect**:
  - **A) Domperidone**: Although it can be used for nausea, it's not the first-line drug for chemotherapy-induced vomiting.
  - **B) Dimenhydrinate**: This is an antihistamine and is more commonly used for motion sickness.
  - **C) Itopride**: An antiemetic used for gastroparesis but not first-line for chemotherapy vomiting.
  - **D) Meclizine**: Used for motion sickness, not ideal for chemotherapy-induced vomiting.

---

3. Question: A 42-year-old woman presents with signs of jaundice and hepatic failure. Physical examination reveals that she has uncontrolled choreiform movements of the arms, and a rust-colored ring is seen at the periphery of both corneas. Which of the following is the most likely diagnosis?

Answer Choices:

- A) **Alpha 1 antitrypsin deficiency**
- B) **Wilson's disease**

- C) **Whipple's disease**
- D) **Primary biliary cirrhosis**

Correct Answer: **B) Wilson's disease**

Explanation:

- **Key Clue**: The **rust-colored ring** around the cornea (known as **Kayser-Fleischer rings**) is characteristic of **Wilson's disease**, which is a genetic disorder that leads to copper accumulation in the body, affecting the liver and brain.
- **Why Other Options Are Incorrect**:
    - **A) Alpha 1 antitrypsin deficiency**: Typically presents with liver disease but does not cause choreiform movements or Kayser-Fleischer rings.
    - **C) Whipple's disease**: A rare infection causing malabsorption, and doesn't lead to liver failure or Kayser-Fleischer rings.
    - **D) Primary biliary cirrhosis**: A liver autoimmune disorder, but it does not cause neurological symptoms or Kayser-Fleischer rings.

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4. Question: A child aged 6 years complained of perianal itching. On inquiry, it was noted that a similar problem was present in many of the children in the school. On scotch tape test, almond-shaped parasitic ova were detected. What is the causative agent?

Answer Choices:

- A) **Ascaris lumbricoides**
- B) **Ancylostoma duodenale**
- C) **Enterobius vermicularis**
- D) **Hymenolepis nana**
- E) **Taenia saginata**

Correct Answer: **C) Enterobius vermicularis**

Explanation:

- **Key Clue**: **Enterobius vermicularis** (pinworm) is the most common cause of **perianal itching** in children. The **almond-shaped eggs** detected on the scotch tape test are characteristic of pinworms.
- **Why Other Options Are Incorrect**:
    - **A) Ascaris lumbricoides**: Causes intestinal infection but does not cause perianal itching.

- **B) Ancylostoma duodenale**: Causes hookworm infection, typically presenting with gastrointestinal symptoms, not perianal itching.
- **D) Hymenolepis nana**: Causes **dwarf tapeworm** infection but does not cause perianal itching.
- **E) Taenia saginata**: Causes **beef tapeworm** infection, usually asymptomatic, and does not cause perianal itching.

---

5. Question: A 40-year-old patient presented with a 1-month history of bleeding per rectum. The patient noticed that something comes out of his anus. What is the most probable diagnosis?

Answer Choices:

- A) **Hemorrhoids**
- B) **Anal Carcinoma**
- C) **Anal Fissure**
- D) **Rectal Polyp**
- E) **Solitary rectal ulcer**

Correct Answer: **A) Hemorrhoids**

Explanation:

- **Key Clue**: **Hemorrhoids** are a common cause of **rectal bleeding**, and the sensation of something coming out of the anus (prolapse) is typical of **internal hemorrhoids**.
- **Why Other Options Are Incorrect**:
  - **B) Anal Carcinoma**: While it can present with rectal bleeding, it is less likely to cause the sensation of something prolapsing from the anus.
  - **C) Anal Fissure**: Causes painful defecation and bleeding but not prolapse.
  - **D) Rectal Polyp**: Causes bleeding but not typically prolapse.
  - **E) Solitary rectal ulcer**: Can cause bleeding but does not typically cause prolapse.

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6. Question: A 14-year-old boy presented to the emergency department after being bitten by an unknown creature on the right lower limb, just above the medial malleolus. He complained of upper abdominal pain, slurring of speech, increased salivation, excessive sweating, blurring of vision, priapism, nausea, and two episodes of vomiting. There was no history of bleeding. What is the most likely diagnosis?

Answer Choices:

- A) **Bee sting**
- B) **Poisonous grasshopper**
- C) **Scorpion bite**
- D) **Snake bite**
- E) **Spanish fly**

Correct Answer: **D) Snake bite**

Explanation:

- **Key Clue**: The combination of **increased salivation**, **excessive sweating**, **slurred speech**, **priapism**, and **blurring of vision** suggests **snake venom poisoning**, which affects the autonomic nervous system and may cause systemic symptoms like these.
- **Why Other Options Are Incorrect**:
    - **A) Bee sting**: Typically causes localized symptoms, not systemic ones like sweating, slurring speech, and priapism.
    - **B) Poisonous grasshopper**: Does not cause these systemic effects.
    - **C) Scorpion bite**: Can cause systemic symptoms, but **snake bites** are more likely given the symptoms presented.
    - **E) Spanish fly**: Causes irritation but not systemic effects like those described.

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7. Question: A middle-aged male patient was diagnosed with HBV-related liver cirrhosis and is on supportive therapy. What feature among the following will label this patient as a case of decompensation?

Answer Choices:

- A) **Ascites**
- B) **Esophageal varices**
- C) **Gynecomastia**
- D) **Spider angiomas**
- E) **Testicular atrophy**

Correct Answer: **A) Ascites**

Explanation:

- **Key Clue**: **Ascites** is a sign of **liver decompensation** in cirrhosis. It indicates that the liver is no longer able to maintain adequate fluid balance, leading to fluid accumulation in the abdomen.

- **Why Other Options Are Incorrect**:
    - **B) Esophageal varices**: While they are common in cirrhosis, they do not necessarily indicate decompensation.
    - **C) Gynecomastia**: Seen in cirrhosis due to hormonal imbalance but not a sign of decompensation.
    - **D) Spider angiomas**: Common in cirrhosis but are

not a direct sign of decompensation.

- **E) Testicular atrophy**: Also seen in cirrhosis but not a sign of decompensation.

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8. Question: A child was brought to the OPD with an itchy lesion on the foot. On examination, the foot showed a linear inflamed lesion. The child has a habit of walking barefoot. What is the most probable cause?

Answer Choices:

- A) **Ascariasis**
- B) **Ancylostoma duodenale**
- C) **Hymenolepis nana**
- D) **Taenia saginata**
- E) **Trichuris trichiura**

Correct Answer: **B) Ancylostoma duodenale**

Explanation:

- **Key Clue**: The **linear inflamed lesion** on the foot, combined with the habit of walking barefoot, suggests **hookworm** infection. **Ancylostoma duodenale** is a common hookworm that can penetrate the skin, typically through bare feet, leading to **cutaneous larva migrans**.
- **Why Other Options Are Incorrect**:
    - **A) Ascariasis**: This is caused by **Ascaris lumbricoides**, which doesn't typically result in cutaneous lesions.
    - **C) Hymenolepis nana**: This tapeworm usually causes gastrointestinal symptoms and is not associated with skin lesions.
    - **D) Taenia saginata**: Causes beef tapeworm infection, which doesn't present with skin lesions.

- **E) Trichuris trichiura**: Causes trichuriasis, typically presenting with gastrointestinal symptoms, not skin lesions.

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9. Question: A 30-year-old male patient presented to the ER with a 1-week history of high-grade fever. On examination, he was tender all over his abdomen. A diagnosis of enteric perforation is suspected. What investigation will you do next?

Answer Choices:

- A) **Abdominal X-ray (erect)**
- B) **Blood Culture**
- C) **Abdominal Scan**
- D) **Chest X-ray**
- E) **Ultrasound Abdomen**

Correct Answer: **A) Abdominal X-ray (erect)**

Explanation:

- **Key Clue**: **Enteric perforation** is suspected. The **erect abdominal X-ray** is the first diagnostic tool used to detect free air under the diaphragm, which is a hallmark of gastrointestinal perforation. This can confirm the diagnosis of a perforated viscus.
- **Why Other Options Are Incorrect**:
  - **B) Blood Culture**: This is useful for identifying sepsis or infections but doesn't diagnose perforation.
  - **C) Abdominal Scan**: A CT scan may be performed later but an X-ray is quicker for initial evaluation.
  - **D) Chest X-ray**: Not necessary for diagnosing abdominal perforation, though it might be used if pneumonia is suspected.
  - **E) Ultrasound Abdomen**: While useful in some abdominal conditions, it's not the first choice for suspected perforation.

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10. Question: The inaugural Millennium Summit held in New York announced rights-based global commitment, which was the dawn of Millennium Development Goals (MDGs). Which of the following time periods was set for MDGs?

Answer Choices:

- A) **1980-1995**
- B) **1990-2005**

- C) **2000-2015**
- D) **2010-2035**
- E) **2020-2035**

Correct Answer: **C) 2000-2015**

Explanation:

- **Key Clue**: The **Millennium Development Goals (MDGs)** were set by the United Nations to be achieved between **2000 and 2015**, focusing on global poverty and development.
- **Why Other Options Are Incorrect**:
  - **A) 1980-1995**: This time period predates the Millennium Summit.
  - **B) 1990-2005**: This was not the period set for the MDGs.
  - **D) 2010-2035**: This time frame is too late; it was the MDG era.
  - **E) 2020-2035**: These years are beyond the MDGs, more closely associated with the **Sustainable Development Goals (SDGs)** that replaced the MDGs.

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11. Question: Microscopic examination of an esophageal biopsy revealed basal zone hyperplasia exceeding 20% of the thickness of the esophageal epithelium, accompanied by elongation of lamina propria papillae and by inflammatory infiltrates that contained eosinophils. What is the most likely diagnosis?

Answer Choices:

- A) **Barrett's esophagus**
- B) **Boerhaave syndrome**
- C) **Mallory-Weiss syndrome**
- D) **Reflux esophagitis**
- E) **Viral esophagitis**

Correct Answer: **D) Reflux esophagitis**

Explanation:

- **Key Clue**: The **eosinophilic infiltration** and **basal zone hyperplasia** (where the basal layer of the esophagus becomes thicker) are characteristic of **reflux esophagitis** caused by chronic gastroesophageal reflux disease (GERD). **Elongation of lamina propria papillae** is also a common finding in reflux esophagitis.
- **Why Other Options Are Incorrect**:

- **A) Barrett's esophagus**: This condition is characterized by metaplasia (the replacement of squamous epithelium by columnar epithelium) rather than inflammation and eosinophilic infiltration.
- **B) Boerhaave syndrome**: A rupture of the esophagus, usually caused by vomiting, is not associated with these biopsy findings.
- **C) Mallory-Weiss syndrome**: This involves tears in the esophagus, typically associated with hematemesis, not the histological findings described here.
- **E) Viral esophagitis**: Although viral esophagitis can cause inflammation, eosinophils are not typically a prominent feature.

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12. Question: During a flood disaster, the government wants to change the planning strategy for flood control. What will be the alternative plan?

Answer Choices:

- A) **Contingency plan**
- B) **Long term plan**
- C) **Operational plan**
- D) **Strategic plan**
- E) **Technical plan**

Correct Answer: **A) Contingency plan**

Explanation:

- **Key Clue**: In the context of a disaster, a **contingency plan** is developed to manage emergency situations and ensure that specific responses are in place. It is a plan for dealing with potential unexpected events, such as floods.
- **Why Other Options Are Incorrect**:
  - **B) Long term plan**: This plan is for long-term goals and outcomes, not for immediate disaster response.
  - **C) Operational plan**: This focuses on day-to-day operations, not specific disaster management.
  - **D) Strategic plan**: Focuses on overall strategic objectives, not immediate response during an emergency.
  - **E) Technical plan**: Involves technical details but not specific emergency response during a flood.

NEXT SET

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1. Question: An 18-year-old male presented with accidental ingestion of a corrosive substance. He was in ICU for five days, recovered well, and was transferred to a medical unit. There, he complained of retrosternal pain and odynophagia. This pain had been present since admission. What is the most likely diagnosis?

Answer Choices:

- A) **Acute myocardial infarction**
- B) **Gastric ulceration**
- C) **Esophagitis**
- D) **Pericarditis**
- E) **Pulmonary embolism**

Correct Answer: **C) Esophagitis**

Explanation:

- **Key Clue**: The patient has a history of **corrosive substance ingestion**, which can cause **esophagitis**, inflammation of the esophagus. Symptoms like **retro-sternal pain** and **odynophagia** (painful swallowing) are common in esophagitis, especially after corrosive injury.
- **Why Other Options Are Incorrect**:
    - **A) Acute myocardial infarction**: Chest pain from myocardial infarction is not usually relieved by sitting forwards, and the history of corrosive ingestion makes this less likely.
    - **B) Gastric ulceration**: While gastric ulcers can cause pain, they would not typically cause pain on swallowing (odynophagia).
    - **D) Pericarditis**: Pericarditis is characterized by pain that is sharp and pleuritic, often worse when lying down, but it is not typically related to swallowing.
    - **E) Pulmonary embolism**: Pulmonary embolism presents with chest pain, difficulty breathing, and other respiratory symptoms, not retrosternal pain and swallowing difficulty.

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2. Question: A 30-year-old lady presented with chronic diarrhea for many years, characterized by abdominal pain relieved by defecation, which usually happens after eating. There is no weight loss. Diarrhea is exclusively during the day. What is the most likely diagnosis?

Answer Choices:

- A) **Abdominal tuberculosis**
- B) **Bacterial enterocolitis**
- C) **Inflammatory bowel disease**
- D) **Thyrotoxicosis**
- E) **Irritable bowel syndrome (IBS)**

Correct Answer: **E) Irritable bowel syndrome (IBS)**

Explanation:

- **Key Clue**: The patient's chronic diarrhea with pain relieved by defecation and no weight loss suggests **irritable bowel syndrome (IBS)**. IBS is a functional gastrointestinal disorder often associated with changes in bowel habits, and pain relieved after bowel movements is a classic feature.
- **Why Other Options Are Incorrect**:
  - **A) Abdominal tuberculosis**: While it can cause chronic diarrhea, it would typically also be associated with weight loss, fever, and other systemic symptoms.
  - **B) Bacterial enterocolitis**: Typically presents with acute symptoms, often including fever, blood in stools, or other signs of infection.
  - **C) Inflammatory bowel disease (IBD)**: IBD (such as Crohn's disease or ulcerative colitis) would typically present with weight loss, bloody diarrhea, and more severe symptoms.
  - **D) Thyrotoxicosis**: Could cause diarrhea, but it would also likely present with other systemic symptoms like weight loss, tremors, and increased heart rate.

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3. Question: The life cycle of *Diphyllobothrium latum* involves two intermediate hosts, including copepods and fish, with humans as the definitive host. Which of the following infective stages of the parasite is responsible for initiating infection in the human host?

Answer Choices:

- A) **Coracidia**
- B) **Miracidium**
- C) **Plerocercoid larvae**
- D) **Procercoid larvae**
- E) **Cysticercoid**

Correct Answer: **C) Plerocercoid larvae**

Explanation:

- **Key Clue**: The **plerocercoid larvae** is the infective stage of *Diphyllobothrium latum* that is transmitted to humans. These larvae are ingested by humans after eating contaminated fish and mature into adult tapeworms in the intestines.
- **Why Other Options Are Incorrect**:
    - **A) Coracidia**: These are the larvae of the first intermediate host (copepods) and are not the infective stage for humans.
    - **B) Miracidium**: The miracidium is the larval stage that infects the first intermediate host, not humans.
    - **D) Procercoid larvae**: These are present in the second intermediate host (fish) and are not directly responsible for human infection.
    - **E) Cysticercoid**: This is a larval form in certain tapeworms but is not related to *Diphyllobothrium latum*.

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4. Question: A 43-year-old woman presents to OPD complaining of pruritus, mainly on the soles and palms, and fatigue. She has minimal jaundice and steatorrhea. Laboratory tests show a slightly elevated bilirubin, elevated alkaline phosphatase, and a positive IgG antimitochondrial antibody test. What is the likely diagnosis?

Answer Choices:

- A) **Alcoholic hepatitis**
- B) **Carcinoma of the liver**
- C) **Extrahepatic biliary tract obstruction**
- D) **Primary biliary cirrhosis**
- E) **Viral hepatitis**

Correct Answer: **D) Primary biliary cirrhosis (PBC)**

Explanation:

- **Key Clue**: **Positive IgG antimitochondrial antibodies** (AMA) are strongly suggestive of **primary biliary cirrhosis** (PBC), a chronic autoimmune disease that leads to destruction of intrahepatic bile ducts, causing cholestasis. The **pruritus** (itching), **fatigue**, and **jaundice** (with steatorrhea) are common features.
- **Why Other Options Are Incorrect**:
    - **A) Alcoholic hepatitis**: Typically presents with a history of alcohol consumption, and the lab findings are different.
    - **B) Carcinoma of the liver**: Would not typically present with a positive AMA, and the patient's history does not suggest malignancy.

- **C) Extrahepatic biliary tract obstruction**: Would typically show more pronounced jaundice and may not present with positive AMA.
- **E) Viral hepatitis**: Usually associated with elevated transaminases (ALT/AST), not elevated alkaline phosphatase and AMA positivity.

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5. Question: A 59-year-old male presents to you with sudden onset of epigastric pain that radiates to the back and is relieved by sitting forwards. The patient has epigastric tenderness, and bowel sounds are sluggish. Laboratory investigations reveal:

- Serum Bilirubin: 7.8 mg/dL (<1.1 mg/dL)
- ALT: 290 U/L (<40 U/L)
- Serum Amylase: 1100 IU/L (40 to 140 IU/L)
- Serum Lipase: 2110 IU/L (<160 IU/L)
- TLC: 16.7x10^9 (4 to 12x10^9)
- Serum Glucose: 260 mg/dL (<140 mg/dL)
- Serum LDH: 460 IU/L (140-280 IU/L) What is the most probable diagnosis?

Answer Choices:

- A) **Acute Cholecystitis**
- B) **Acute Pancreatitis**
- C) **Acute Viral Hepatitis**
- D) **Chronic Cholecystitis**
- E) **Pancreatic Pseudocyst**

Correct Answer: **B) Acute Pancreatitis**

Explanation:

- **Key Clue**: The elevated **serum amylase** and **lipase** are classic markers of **acute pancreatitis**. The patient also has **epigastric pain radiating to the back**, which is a hallmark of this condition. The elevated **serum glucose** and **LDH** further support this diagnosis.
- **Why Other Options Are Incorrect**:
  - **A) Acute Cholecystitis**: This typically presents with right upper quadrant pain and may not cause marked increases in amylase and lipase.
  - **C) Acute Viral Hepatitis**: This would show elevated ALT/AST and more marked liver dysfunction but not the increased amylase and lipase seen in pancreatitis.

- **D) Chronic Cholecystitis**: This condition is more likely to present with a history of recurrent gallstones and biliary colic, not with acute symptoms and lab findings.
- **E) Pancreatic Pseudocyst**: Typically presents later in the course of pancreatitis and would not show such high levels of amylase and lipase acutely.

NEXT SET

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1. Question: A 25-year-old obese male patient is complaining of heartburn (GERD) for the last 6 months. He has visited the doctor and was prescribed proton pump inhibitors (PPIs) for relief of his symptoms. Which condition can develop in this patient in the long run?

Answer Choices:

- A) **Achalasia**
- B) **Barrett's esophagus**
- C) **Carcinoma of the esophagus**
- D) **Esophageal web**
- E) **Esophageal tracheal fistula**

Correct Answer: **B) Barrett's esophagus**

Explanation:

- **Key Clue**: Chronic **GERD** can lead to **Barrett's esophagus**, a condition in which the normal squamous epithelium of the esophagus is replaced with columnar epithelium. This occurs due to chronic acid exposure and is a precursor to esophageal adenocarcinoma.
- **Why Other Options Are Incorrect**:
  - **A) Achalasia**: Achalasia is a disorder of the lower esophageal sphincter, not a complication of GERD.
  - **C) Carcinoma of the esophagus**: While Barrett's esophagus increases the risk of esophageal cancer, it is a more specific condition that would develop after long-term GERD and Barrett's esophagus.
  - **D) Esophageal web**: This is a condition that causes dysphagia due to thin membranes in the esophagus, not typically associated with GERD.
  - **E) Esophageal tracheal fistula**: This is an abnormal connection between the esophagus and trachea, often seen in congenital conditions or after trauma, not typically caused by GERD.

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2. Question: A 43-year-old woman comes to OPD complaining of pruritus, mainly of the soles and palms, and fatigue. She has minimal jaundice and steatorrhea. Laboratory tests show a slightly elevated bilirubin, an elevated alkaline phosphatase, and a positive IgG antimitochondrial antibody test. What is the likely diagnosis?

Answer Choices:

- A) **Alcoholic hepatitis**
- B) **Carcinoma of the liver**
- C) **Extrahepatic biliary tract obstruction**
- D) **Primary biliary cirrhosis**
- E) **Viral hepatitis**

Correct Answer: **D) Primary biliary cirrhosis**

Explanation:

- **Key Clue**: The **positive IgG antimitochondrial antibodies** (AMA) are highly suggestive of **primary biliary cirrhosis** (PBC). The **pruritus**, especially in the **palms and soles**, along with **fatigue**, **jaundice**, and **steatorrhea** (due to impaired bile flow), are classic symptoms of PBC.
- **Why Other Options Are Incorrect**:
    - **A) Alcoholic hepatitis**: Typically, this would show elevated transaminases (AST/ALT) and a history of alcohol consumption, not positive AMA and the characteristic symptoms seen here.
    - **B) Carcinoma of the liver**: This would likely present with more severe symptoms of liver dysfunction, including ascites and a history of risk factors, but not the positive AMA.
    - **C) Extrahepatic biliary tract obstruction**: This would typically present with more pronounced jaundice, but it would not show positive AMA and is more often due to stones or tumors obstructing the bile duct.
    - **E) Viral hepatitis**: This would present with elevated ALT/AST and would not be associated with the positive AMA seen in PBC.

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3. Question: A 59-year-old male presents with sudden onset of epigastric pain radiating to the back and is relieved by sitting forwards. The patient has epigastric tenderness and sluggish bowel sounds. Laboratory tests reveal:

- **Serum Bilirubin**: 7.8 mg/dL (Normal: <1.1 mg/dL)
- **ALT**: 290 U/L (Normal: <40 U/L)
- **Serum Amylase**: 1100 IU/L (Normal: 40-140 IU/L)

- **Serum Lipase**: 2110 IU/L (Normal: <160 IU/L)
- **TLC**: 16.7x10^9 (Normal: 4 to 12x10^9)
- **Serum Glucose**: 260 mg/dL (Normal: <140 mg/dL)
- **Serum LDH**: 460 IU/L (Normal: 140-280 IU/L)

What is the most probable diagnosis?

Answer Choices:

- A) **Acute Cholecystitis**
- B) **Acute Pancreatitis**
- C) **Acute Viral Hepatitis**
- D) **Chronic Cholecystitis**
- E) **Pancreatic Pseudocyst**

Correct Answer: **B) Acute Pancreatitis**

Explanation:

- **Key Clue**: The significantly elevated **serum amylase** and **lipase** indicate **acute pancreatitis**. The **epigastric pain radiating to the back**, which is relieved by sitting forwards, is a characteristic feature of pancreatitis. The elevated **serum glucose** is also common in acute pancreatitis due to pancreatic dysfunction.
- **Why Other Options Are Incorrect**:
    - **A) Acute Cholecystitis**: This typically presents with right upper quadrant pain and an elevated white blood cell count, but would not show the extreme elevations of amylase and lipase seen in pancreatitis.
    - **C) Acute Viral Hepatitis**: Would likely show marked increases in ALT/AST, but not elevated amylase and lipase.
    - **D) Chronic Cholecystitis**: More of a long-term condition with recurrent symptoms, typically not associated with the elevated amylase and lipase seen here.
    - **E) Pancreatic Pseudocyst**: This develops after acute pancreatitis and would typically present later, not during the acute phase.

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4. Question: The life cycle of *Diphyllobothrium latum* involves two intermediate hosts, including copepods and fish, with humans as the definitive host. Which of the following infective stages of the parasite is responsible for initiating infection in the human host?

Answer Choices:

- A) **Coracidia**
- B) **Miracidium**
- C) **Plerocercoid larvae**
- D) **Procercoid larvae**
- E) **Cysticercoid**

Correct Answer: **C) Plerocercoid larvae**

Explanation:

- **Key Clue**: The infective stage for humans in the lifecycle of *Diphyllobothrium latum* is the **plerocercoid larvae**, which is found in fish. Humans become infected by ingesting raw or undercooked fish containing these larvae.
- **Why Other Options Are Incorrect**:
    - **A) Coracidia**: These are the larvae from the first intermediate host (copepods), not the infective stage for humans.
    - **B) Miracidium**: These larvae infect the first intermediate host (the copepod), not humans.
    - **D) Procercoid larvae**: Found in the second intermediate host (fish), but not the infective stage for humans.
    - **E) Cysticercoid**: This stage is related to other parasitic infections, such as those caused by tapeworms like *Taenia solium*.

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5. Question: A 25-year-old woman presents with a complaint of abdominal pain. She was diagnosed with a deficiency in the upper GI tract and underwent an endoscopy. What would you expect to be present in this patient?

Answer Choices:

- A) **Anti-parietal cell antibodies**
- B) **Anti-intrinsic factor antibodies**
- C) **Anti-tissue transglutaminase antibodies**
- D) **Anti-nuclear antibodies**
- E) **Anti-centromere antibodies**

Correct Answer: **A) Anti-parietal cell antibodies**

Explanation:

- **Key Clue**: **Anti-parietal cell antibodies** are associated with **autoimmune gastritis**, which can lead to vitamin B12 deficiency and is commonly seen in patients with pernicious anemia. These antibodies target the parietal cells of the stomach, which are responsible for producing intrinsic factor, essential for vitamin B12 absorption.
- **Why Other Options Are Incorrect**:
    - **B) Anti-intrinsic factor antibodies**: These are also seen in pernicious anemia, but anti-parietal cell antibodies are more specific in this context.
    - **C) Anti-tissue transglutaminase antibodies**: These are seen in **celiac disease**, which involves gluten sensitivity, not a B12 deficiency.
    - **D) Anti-nuclear antibodies**: These are commonly seen in autoimmune diseases like lupus, but they are not associated with vitamin B12 deficiency.
    - **E) Anti-centromere antibodies**: These are associated with **scleroderma**, which involves fibrosis and skin thickening, but not vitamin B12 deficiency.

NEXT SET

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1. Question: A 70-year-old man was diagnosed with peptic ulcer disease and was prescribed proton pump inhibitors (PPIs) once daily. What is the reason for PPI being given once daily?

Answer Choices:

- A) **They have the greatest volume of distribution**
- B) **They have the highest half-life**
- C) **They have the highest protein binding**
- D) **They block the proton pump irreversibly**
- E) **They have the slowest absorption from the gut**

Correct Answer: **D) They block the proton pump irreversibly**

Explanation:

- **Key Clue**: PPIs work by irreversibly binding to the **H+/K+ ATPase** (proton pump) in the parietal cells of the stomach. This irreversible binding means that their effect lasts much longer than their plasma half-life. This allows for **once-daily dosing** as the drug continues to suppress acid secretion until new proton pumps are synthesized.
- **Why Other Options Are Incorrect**:

- **A) Greatest volume of distribution**: This is not the primary reason for once-daily dosing. The key is their long-lasting effect on acid production.
- **B) Highest half-life**: Although PPIs have a relatively long half-life, their duration of action is primarily due to their irreversible binding to the proton pump.
- **C) Highest protein binding**: While protein binding affects the pharmacokinetics, it is not the reason PPIs are given once daily.
- **E) Slowest absorption**: Slow absorption is not relevant to their dosing schedule.

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2. Question: A 56-year-old woman with irritable bowel syndrome (IBS) with diarrhea predominance presented to her physician for treatment. The physician suggested an exercise regimen, dietary modifications, and a bulk laxative. What is the most likely mechanism of action of this agent?

Answer Choices:

- A) **Non-absorbable salt**
- B) **Gel formation in the intestines**
- C) **Neuromodulation of sensory nerve roots**
- D) **Osmotic laxative**
- E) **Stimulation of the cholinergic nervous system**

Correct Answer: **B) Gel formation in the intestines**

Explanation:

- **Key Clue**: A **bulk laxative** (e.g., **psyllium**, **methylcellulose**) works by absorbing water in the intestines to form a gel-like substance, which adds bulk to stool and helps promote bowel movements in patients with IBS, especially those with diarrhea predominance.
- **Why Other Options Are Incorrect**:
  - **A) Non-absorbable salt**: This mechanism is characteristic of **osmotic laxatives** (e.g., magnesium salts), but not bulk-forming laxatives.
  - **C) Neuromodulation of sensory nerve roots**: This mechanism is not related to bulk laxatives, but may apply to some medications for IBS (e.g., **antispasmodics**).
  - **D) Osmotic laxative**: Osmotic laxatives work by drawing water into the intestines, but bulk laxatives primarily form gel-like substances to bulk up the stool.
  - **E) Stimulation of the cholinergic nervous system**: This mechanism is not associated with bulk laxatives.

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3. Question: Polyps of Peutz-Jeghers syndrome are composed of a fibromuscular network enclosing glands lined by normal intestinal epithelium with numerous goblet cells. Which of the following is the most likely pathological description?

Answer Choices:

- A) **Hamartomas**
- B) **Mucinous cyst adenoma**
- C) **Fibromuscular adenoma**
- D) **Tubular adenoma**
- E) **Villous adenoma**

Correct Answer: **A) Hamartomas**

Explanation:

- **Key Clue**: **Peutz-Jeghers syndrome** is characterized by **hamartomatous polyps**. These polyps are benign growths composed of disorganized but mature tissue elements, such as fibromuscular components and glands. The presence of **normal intestinal epithelium** and **goblet cells** is characteristic of hamartomas.
- **Why Other Options Are Incorrect**:
    - **B) Mucinous cyst adenoma**: These are cystic tumors that are not typical in Peutz-Jeghers syndrome.
    - **C) Fibromuscular adenoma**: This is not a standard description of the polyps in Peutz-Jeghers syndrome.
    - **D) Tubular adenoma**: Tubular adenomas are a type of colorectal adenoma, but they are not characteristic of Peutz-Jeghers.
    - **E) Villous adenoma**: These are a type of adenomatous polyp, but not seen in Peutz-Jeghers syndrome.

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4. Question: A 58-year-old lady with chronic hepatitis C was prescribed Sofosbuvir and Velpatasvir for the treatment of HCV infection. Sofosbuvir kills the HCV virus by which of the following mechanisms?

Answer Choices:

- A) **Cell viral entry inhibition**
- B) **Adenosine triphosphate inhibition**
- C) **Guanosine triphosphate inhibition**
- D) **NS3/4A inhibition**

- E) **NS5B inhibition**

Correct Answer: **E) NS5B inhibition**

Explanation:

- **Key Clue**: **Sofosbuvir** is a **nucleotide analogue** that inhibits the **NS5B polymerase** of the hepatitis C virus, preventing viral replication. It is part of the direct-acting antivirals (DAAs) for HCV treatment.
- **Why Other Options Are Incorrect**:
    - **A) Cell viral entry inhibition**: This mechanism is associated with drugs like **enfuvirtide** (used in HIV), not Sofosbuvir.
    - **B) Adenosine triphosphate inhibition**: Not the mechanism for Sofosbuvir.
    - **C) Guanosine triphosphate inhibition**: Guanosine analogues are used for different antiviral treatments, but Sofosbuvir works by inhibiting NS5B.
    - **D) NS3/4A inhibition**: This is the mechanism of drugs like **boceprevir** and **telaprevir**, not Sofosbuvir.

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5. Question: A 20-year-old fisherman presented with abdominal pain and chronic diarrhea. His peripheral blood smear revealed megaloblastic anemia, and stool R/E revealed characteristic oval-shaped eggs with a lid-like operculum at one end. What is the most likely parasite responsible for this condition?

Answer Choices:

- A) **Diphyllobothrium latum**
- B) **Echinococcus granulosus**
- C) **Echinococcus multilocularis**
- D) **Hymenolepis nana**
- E) **Taenia saginata**

Correct Answer: **A) Diphyllobothrium latum**

Explanation:

- **Key Clue**: The presence of **oval-shaped eggs with a lid-like operculum** is characteristic of the **fish tapeworm**, *Diphyllobothrium latum*. This parasite is commonly transmitted by eating undercooked or raw fish.
- **Why Other Options Are Incorrect**:
    - **B) Echinococcus granulosus**: This causes hydatid disease, not the described stool findings.

- **C) Echinococcus multilocularis**: Also causes hydatid disease, but presents differently.
- **D) Hymenolepis nana**: This is a small tapeworm that typically causes gastrointestinal symptoms but has a different egg morphology.
- **E) Taenia saginata**: This tapeworm causes intestinal symptoms but does not have eggs with a lid-like operculum.

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6. Question: The hospital is an integral part of a social and medical organization. The key functions performed by a hospital include which factor other than preventive services, curative services, and health workforce training?

Answer Choices:

- A) **Lobbying**
- B) **Medical projection**
- C) **Revenue generation**
- D) **Rehabilitative services**
- E) **Social research**

Correct Answer: **D) Rehabilitative services**

Explanation:

- **Key Clue**: Hospitals play a key role in **rehabilitative services** (e.g., physical therapy, post-surgical recovery), in addition to preventive, curative, and training services.
- **Why Other Options Are Incorrect**:
  - **A) Lobbying**: Not a primary function of hospitals in this context.
  - **B) Medical projection**: This term is unclear and not a key function of hospitals.
  - **C) Revenue generation**: While hospitals do generate revenue, it is not a key function in terms of their medical role.
  - **E) Social research**: This is important but not a core function of hospitals in general.

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7. Question: The DHQ Peshawar wants to plan a healthcare facility for Maternal and Child Health. Which first step will he take, keeping in view the planning cycle?

Answer Choices:

- A) **Monitoring and evaluation**
- B) **Preparing the budget**

- C)

Resource allocation

- D) **Situation analysis**
- E) **Setting goals**

Correct Answer: **D) Situation analysis**

Explanation:

- **Key Clue**: The first step in planning is typically **situation analysis** (assessing the needs of the population, identifying resources, understanding local health issues) before moving to goal setting, resource allocation, and budgeting.
- **Why Other Options Are Incorrect**:
  - **A) Monitoring and evaluation**: These are steps taken after setting up the facility, not the first step.
  - **B) Preparing the budget**: Budgeting comes after analyzing the situation and understanding needs.
  - **C) Resource allocation**: This happens after assessing needs and setting goals.
  - **E) Setting goals**: This comes after the situation analysis.

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8. Question: Celiac disease is an immune-mediated gastrointestinal disease caused by the ingestion of dietary gluten in genetically susceptible individuals. What is the most common combination of Human Leukocyte Antigen (HLA) class II molecules that bind preferentially to deamidated gluten peptides for onward presentation to Helper T cells?

Answer Choices:

- A) **HLA-DQ2 or HLA-DQ8**
- B) **HLA-DR2 or HLA-DR8**
- C) **HLA-DP2 or HLA-DP8**
- D) **HLA-DP2 or HLA-DR2**
- E) **HLA-DP8 or HLA-DR8**

Correct Answer: **A) HLA-DQ2 or HLA-DQ8**

Explanation:

- **Key Clue**: In **celiac disease**, the most common genetic markers associated with the disease are the **HLA-DQ2** and **HLA-DQ8** alleles. These HLA molecules are responsible for presenting

deamidated gluten peptides to **Helper T cells**, triggering the immune response characteristic of celiac disease.

- **Why Other Options Are Incorrect**:
    - **B) HLA-DR2 or HLA-DR8**: These are related to other autoimmune diseases but are not the main markers in celiac disease.
    - **C) HLA-DP2 or HLA-DP8**: These are not commonly associated with celiac disease.
    - **D) HLA-DP2 or HLA-DR2**: Again, these are not the main markers for celiac disease.
    - **E) HLA-DP8 or HLA-DR8**: These are not the typical markers for celiac disease.

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9. Question: A 36-year-old individual presented to the ER with complaints of diarrhea and vomiting. After an hour, his symptoms worsened with features of acidosis. In his history, he mentioned that he has been working in a glass factory for the last 20 years. Which of the following poisons is most likely the cause of his symptoms?

Answer Choices:

- A) **Chromium**
- B) **Copper arsenite**
- C) **Lead arsenate**
- D) **Mercury**
- E) **Phosphorus**

Correct Answer: **A) Chromium**

Explanation:

- **Key Clue**: **Chromium** exposure, particularly **hexavalent chromium**, is associated with toxicity, especially in industries like glass manufacturing. It can cause symptoms like **diarrhea, vomiting**, and **acidosis**, which fits with the patient's history and presentation.
- **Why Other Options Are Incorrect**:
    - **B) Copper arsenite**: This is a poison but not commonly associated with the specific symptoms described in the question.
    - **C) Lead arsenate**: While lead poisoning can cause gastrointestinal symptoms, it's not as closely associated with the acidosis and the occupational exposure described.
    - **D) Mercury**: Mercury poisoning typically causes neurological symptoms more than gastrointestinal ones.
    - **E) Phosphorus**: Phosphorus poisoning can cause gastrointestinal symptoms, but it is not as linked to the occupation mentioned (glass factory).

10. Question: A middle-aged non-diabetic, normotensive woman presented with a 6-month history of fatigue, pruritus, and a change in the color of her face. Her ALT was found to be 2 times above normal on many occasions, and her ultrasound revealed altered echotexture of the liver. Her viral serology and anti-nuclear antibodies are negative. She has no KF rings on slit lamp examination of her eyes. What antibodies are most likely to be positive in this patient?

Answer Choices:

- A) **Anti-smooth muscle antibodies**
- B) **Anti-mitochondrial antibodies**
- C) **Anti-double stranded DNA antibodies**
- D) **Anti-liver microsomal antibodies**
- E) **Anti-parietal cell antibodies**

Correct Answer: **B) Anti-mitochondrial antibodies**

Explanation:

- **Key Clue**: The patient's presentation is suggestive of **Primary Biliary Cirrhosis (PBC)**, a chronic autoimmune liver disease, especially given the **pruritus**, **fatigue**, **altered liver echotexture**, and elevated ALT levels. **Anti-mitochondrial antibodies (AMA)** are highly specific for PBC.
- **Why Other Options Are Incorrect**:
    - **A) Anti-smooth muscle antibodies**: These are more commonly seen in **autoimmune hepatitis**, but this diagnosis is less likely given the patient's presentation and the negative viral serology.
    - **C) Anti-double stranded DNA antibodies**: These are associated with **systemic lupus erythematosus (SLE)**, not PBC.
    - **D) Anti-liver microsomal antibodies**: These are found in **autoimmune hepatitis**, but PBC is more strongly associated with anti-mitochondrial antibodies.
    - **E) Anti-parietal cell antibodies**: These are typically seen in **pernicious anemia**, not liver diseases like PBC.

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11. Question: A 30-year-old female presented with a 9-day history of watery diarrhea, fever, and crampy abdominal pain. On examination, discrete pinkish spots were observed on her upper chest. What is the most sensitive test for the diagnosis of this patient?

Answer Choices:

- A) **Blood culture**

- B) **Bone marrow culture**
- C) **Stool culture**
- D) **Typhi Dot test**
- E) **Widal Test**

Correct Answer: **D) Typhi Dot test**

Explanation:

- **Key Clue**: The patient's symptoms are highly suggestive of **typhoid fever** (Salmonella enterica serotype Typhi), including the fever, diarrhea, crampy abdominal pain, and **rose spots** (the pinkish spots on the chest). The **Typhi Dot test** is a rapid diagnostic test for typhoid fever and is more sensitive than the traditional **Widal test**.
- **Why Other Options Are Incorrect**:
    - **A) Blood culture**: While **blood cultures** are the gold standard for diagnosing **typhoid fever**, the **Typhi Dot test** is more sensitive and quicker for early diagnosis.
    - **B) Bone marrow culture**: Bone marrow culture is considered very sensitive but is not typically the first-line diagnostic test.
    - **C) Stool culture**: Stool cultures are used for confirming enteric fever, but **Typhi Dot test** is more specific for diagnosis.
    - **E) Widal Test**: This is an older test used to diagnose typhoid fever, but it is less sensitive and prone to false positives, especially in endemic areas.

NEXT SET

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1. Question: A 47-year-old man was diagnosed with chronic heart failure and presented to the emergency department with severe hypotension. His pulse rate is 130 bpm, and his blood pressure is 60/40 mmHg. Which of the following drugs is preferred to treat this patient?

Answer Choices:

- A) **Carvedilol**
- B) **Esomeprazole**
- C) **First-line drugs**
- D) **Terlipressin**
- E) **Vitamin K**

Correct Answer: **A) Carvedilol**

Explanation:

- **Key Clue**: The patient has **severe hypotension** with a **high pulse rate**, which suggests **acute heart failure** with hemodynamic instability. **Carvedilol**, a **beta-blocker**, is often used in heart failure patients to help control symptoms, reduce heart rate, and prevent further damage to the heart.
- **Why Other Options Are Incorrect**:
    - **B) Esomeprazole**: This is a proton pump inhibitor (PPI) used for treating acid reflux, not for heart failure.
    - **C) First-line drugs**: This is too vague and not specific enough to provide a definitive answer.
    - **D) Terlipressin**: Used to treat hypotension in patients with **hepatorenal syndrome**, not in heart failure.
    - **E) Vitamin K**: This is used to reverse anticoagulation, not relevant for this patient's condition.

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2. Question: A 65-year-old man presents to the surgery OPD with severe abdominal pain, nausea, vomiting, and a few episodes of bloody diarrhea. Histopathology shows atrophy, sloughing of the surface epithelium, and coagulative necrosis of the muscularis propria. What is the most likely diagnosis?

Answer Choices:

- A) **Mucosal ischemic infarction**
- B) **Mural ischemic infarction**
- C) **Mucosal ulcers**
- D) **Submucosal ischemia**
- E) **Transmucosal ischemic infarction**

Correct Answer: **B) Mural ischemic infarction**

Explanation:

- **Key Clue**: The findings of **atrophy, sloughing epithelium**, and **necrosis** of the **muscularis propria** point toward **ischemic infarction** involving the deeper layers of the intestinal wall.
- **Why Other Options Are Incorrect**:
    - **A) Mucosal ischemic infarction**: This only involves the mucosal layer, not the deeper layers like muscularis propria.

- **C) Mucosal ulcers**: Mucosal ulcers are surface lesions and do not typically involve necrosis of the muscularis.
- **D) Submucosal ischemia**: This would affect the submucosal layer, which is not indicated in this case.
- **E) Transmucosal ischemic infarction**: This is less likely than mural ischemic infarction, which involves more profound necrosis of the intestinal wall layers.

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3. Question: The Lady Health Visitor Clinic initiative provides community-based primary and preventive care, including community screenings, local health assessments, health education, and healthcare coordination targeted to individuals regardless of ability to pay. This initiative best describes a system of:

Answer Choices:

- A) **Advanced care**
- B) **Managed care**
- C) **Primary care**
- D) **Private health care**
- E) **Primary health care**

Correct Answer: **E) Primary health care**

Explanation:

- **Key Clue**: The focus on **preventive care**, **community screenings**, **local health assessments**, and **health education** is characteristic of **Primary Health Care (PHC)**, which emphasizes comprehensive, accessible, and community-oriented services.
- **Why Other Options Are Incorrect**:
  - **A) Advanced care**: This typically refers to specialized or tertiary care, which is not the focus of this initiative.
  - **B) Managed care**: Managed care involves controlling healthcare costs and utilization, but this initiative emphasizes primary and preventive care.
  - **C) Primary care**: Primary care refers to basic health services provided by general practitioners, but **Primary Health Care (PHC)** encompasses a broader approach, including community-based care.
  - **D) Private health care**: This involves services provided by private entities, but the initiative described is aimed at broader community access, regardless of ability to pay.

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4. Question: A doctor examines a patient with a history of toothache and foul-smelling breath. On examination, there is swelling of the jaw with loosening of teeth, necrosis of the gums, and multiple foul-smelling discharging sinuses. What is the most likely cause of this condition?

Answer Choices:

- A) **Arsenic poisoning**
- B) **Cocaine poisoning**
- C) **Dhatura poisoning**
- D) **Opium poisoning**
- E) **Phosphorus poisoning**

Correct Answer: **E) Phosphorus poisoning**

Explanation:

- **Key Clue**: **Phosphorus poisoning** is known to cause **severe dental and jaw issues**, including **necrosis of gums** and **loosening of teeth**. The foul-smelling discharge and sinus formation are typical of **phossy jaw** (phosphorus-related osteonecrosis).
- **Why Other Options Are Incorrect**:
    - **A) Arsenic poisoning**: Arsenic poisoning typically causes skin changes and systemic symptoms but not specifically dental issues.
    - **B) Cocaine poisoning**: Cocaine use may cause other systemic effects, but it is not known to cause severe dental necrosis as described.
    - **C) Dhatura poisoning**: Dhatura (a toxic plant) can cause delirium and hallucinations, but it is not associated with dental necrosis.
    - **D) Opium poisoning**: Opium may cause sedation and respiratory depression, but it does not cause the specific dental symptoms described here.

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5. Question: A young boy who ingested some liquid from a Pepsi bottle develops sudden shortness of breath and dies in the hospital. On postmortem examination, there was severe esophagitis, perforation of the stomach, and marked excoriation on the mouth and lips. What is the most probable cause of death?

Answer Choices:

- A) **NaHCO3 ingestion**
- B) **H2O2 ingestion**
- C) **HCL ingestion**
- D) **Organophosphorus ingestion**

- E) **Vinegar ingestion**

Correct Answer: **C) HCL ingestion**

Explanation:

- **Key Clue**: The symptoms of **severe esophagitis**, **perforation of the stomach**, and **excoriation** of the mouth and lips suggest the ingestion of a **strong acid**, likely **hydrochloric acid (HCl)**.
- **Why Other Options Are Incorrect**:
    - **A) NaHCO3 ingestion**: Sodium bicarbonate ingestion can cause gastrointestinal upset but is less likely to cause perforation or severe tissue damage as described.
    - **B) H2O2 ingestion**: Hydrogen peroxide can cause irritation but not typically perforation or severe esophageal damage.
    - **D) Organophosphorus ingestion**: Organophosphates cause **neurological symptoms** (e.g., convulsions, paralysis), not gastrointestinal perforation.
    - **E) Vinegar ingestion**: Vinegar is acidic but not strong enough to cause the severe damage observed in this case.

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6. Question: A 30-year-old male patient is brought to the emergency department with severe abdominal pain, vomiting, and diarrhea. He was previously operated for strictures in the large intestine. On biopsy, non-caseating granulomas are found transmurally. What is the likely diagnosis?

Answer Choices:

- A) **Intestinal tuberculosis**
- B) **Reiter's disease**
- C) **Crohn's disease**
- D) **Ulcerative colitis**
- E) **Whipple's disease**

Correct Answer: **C) Crohn's disease**

Explanation:

- **Key Clue**: **Non-caseating granulomas** found transmurally are characteristic of **Crohn's disease**, which often affects the entire gastrointestinal tract and can cause strictures, diarrhea, and abdominal pain.
- **Why Other Options Are Incorrect**:
    - **A) Intestinal tuberculosis**: Tuberculosis typically causes caseating granulomas, not non-caseating.

- **B) Reiter's disease**: This is a form of arthritis, not typically associated with non-caseating granulomas.
- **D) Ulcerative colitis**: This affects the colon and causes continuous mucosal inflammation, but it does not typically involve granulomas.
- **E) Whipple's disease**: This is caused by **Tropheryma whipplei**, and it does not typically cause non-caseating granulomas.

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7. Question: A 55-year-old patient with chronic liver disease presents with nausea, vomiting, and ascites. Which of the following serum levels would help in distinguishing acute liver disease from chronic liver disease?

Answer Choices:

- A) **Albumin**
- B) **Alkaline phosphatase**
- C) **Aminotransferases**
- D) **Creatinine

**

- E) **Bilirubin**

Correct Answer: **A) Albumin**

Explanation:

- **Key Clue**: **Albumin** levels are typically **low** in **chronic liver disease** due to reduced synthesis by the liver, whereas in **acute liver disease**, albumin levels may still be normal or not as severely low.
- **Why Other Options Are Incorrect**:
  - **B) Alkaline phosphatase**: This enzyme is elevated in conditions like **cholestasis**, not specifically useful for distinguishing acute from chronic liver disease.
  - **C) Aminotransferases**: These enzymes can be elevated in both acute and chronic liver disease, but they are not as helpful in distinguishing the two.
  - **D) Creatinine**: Creatinine levels are more relevant for kidney function, not for liver disease differentiation.
  - **E) Bilirubin**: Bilirubin levels can be elevated in both acute and chronic liver disease, but they do not provide a clear distinction between the two.

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8. Question: A lesion was removed from a 60-year-old male during gastric surgery and showed that the muscular layer of the stomach was infiltrated with atypical cells forming irregular tubular and gland-like structures. What is the most likely diagnosis?

Answer Choices:

- A) **Adenocarcinoma**
- B) **Autoimmune gastritis**
- C) **Helicobacter pylori-related gastritis**
- D) **Hyperplastic gastropathy**
- E) **Peptic ulcer disease**

Correct Answer: **A) Adenocarcinoma**

Explanation:

- **Key Clue**: The presence of **atypical cells** forming **irregular tubular and gland-like structures** in the **muscular layer** of the stomach suggests **gastric adenocarcinoma**, a common form of stomach cancer that can infiltrate the deeper layers of the gastric wall.
- **Why Other Options Are Incorrect**:
    - **B) Autoimmune gastritis**: This typically involves the mucosal layer of the stomach and causes atrophy, but it does not result in the irregular tubular and gland-like structures seen here.
    - **C) Helicobacter pylori-related gastritis**: This is typically associated with chronic inflammation, not irregular glandular growth.
    - **D) Hyperplastic gastropathy**: This is a condition where the mucosa of the stomach becomes thickened, but it does not cause atypical cell infiltration.
    - **E) Peptic ulcer disease**: This typically involves ulceration of the mucosal layer, not infiltration of atypical cells into the muscular layer.

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9. Question: A 10-year-old child developed dysentery. There was no accompanying fever. It was found that many students in school had contracted the disease. The water used for drinking in the school was chlorinated. On microscopic examination of the stool, four-nucleated cysts were found. What is the most probable diagnosis?

Answer Choices:

- A) **Acute gastroenteritis**
- B) **Amoebic dysentery**
- C) **Bacillary dysentery**

- D) **Cholera**
- E) **Giardiasis**

Correct Answer: **E) Giardiasis**

Explanation:

- **Key Clue**: The finding of **four-nucleated cysts** in the stool is characteristic of **Giardia lamblia**, the parasite that causes **Giardiasis**, which typically presents with dysentery, especially in settings with poor sanitation or water contamination.
- **Why Other Options Are Incorrect**:
    - **A) Acute gastroenteritis**: This can be caused by many pathogens, but it does not typically involve four-nucleated cysts.
    - **B) Amoebic dysentery**: Amoebic dysentery is caused by **Entamoeba histolytica**, which presents with **trophozoites**, not four-nucleated cysts.
    - **C) Bacillary dysentery**: Bacillary dysentery is caused by **Shigella** or **Salmonella**, which causes blood and mucus in stool, but not cysts.
    - **D) Cholera**: Cholera causes severe diarrhea, but it does not involve cysts in the stool.

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10. Question: A 24-year-old woman presents with oral ulcers that recur every few months. She is a non-smoker and has no other complaints. What is the most appropriate treatment option to prevent future occurrences of these ulcers?

Answer Choices:

- A) **Acyclovir**
- B) **Corticosteroids**
- C) **Griseofulvin**
- D) **Montelukast**
- E) **Thalidomide**

Correct Answer: **B) Corticosteroids**

Explanation:

- **Key Clue**: The recurrent oral ulcers described in this case suggest **aphthous stomatitis (canker sores)**. **Corticosteroids** are often used to treat or prevent recurrent episodes by reducing inflammation.
- **Why Other Options Are Incorrect**:

- **A) Acyclovir**: This is an antiviral medication used for conditions like **herpes simplex** infections, but it is not effective for aphthous ulcers.
- **C) Griseofulvin**: This is an antifungal medication used for fungal infections, not for recurrent ulcers.
- **D) Montelukast**: This is used for **allergic rhinitis** and **asthma**, not for treating oral ulcers.
- **E) Thalidomide**: This is an immunomodulatory drug used for conditions like **leprosy** and certain cancers, but it is not used to treat recurrent oral ulcers.

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11. Question: A 35-year-old woman with a history of chronic abdominal pain and diarrhea has been diagnosed with irritable bowel syndrome (IBS). Which of the following treatment modalities is most likely to help manage her condition?

Answer Choices:

- A) **Laxatives**
- B) **Probiotics**
- C) **Antibiotics**
- D) **Corticosteroids**
- E) **Surgical intervention**

Correct Answer: **B) Probiotics**

Explanation:

- **Key Clue**: **Probiotics** are commonly used in managing **IBS**, as they help restore the balance of gut bacteria and may improve symptoms such as diarrhea and bloating.
- **Why Other Options Are Incorrect**:
  - **A) Laxatives**: These may be helpful for constipation-predominant IBS, but they are not the primary treatment for IBS as a whole.
  - **C) Antibiotics**: Antibiotics may be used for infections, but they are not a standard treatment for IBS unless there is an underlying infection.
  - **D) Corticosteroids**: These are typically used for **inflammatory bowel diseases (IBD)** such as **Crohn's disease** or **ulcerative colitis**, not IBS.
  - **E) Surgical intervention**: Surgery is not indicated for IBS unless there is a complication, such as obstruction or perforation.

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12. Question: A 36-year-old woman is diagnosed with celiac disease. What is the most common combination of Human Leukocyte Antigen (HLA) class II molecules that binds preferentially to the deamidated gluten peptides for presentation to Helper T cells?

Answer Choices:

- A) **HLA-DQ2 or HLA-DQ8**
- B) **HLA-DR2 or HLA-DR8**
- C) **HLA-DP2 or HLA-DP8**
- D) **HLA-DP2 or HLA-DR2**
- E) **HLA-DP8 or HLA-DR8**

Correct Answer: **A) HLA-DQ2 or HLA-DQ8**

Explanation:

- **Key Clue**: The most common **HLA class II molecules** involved in **celiac disease** are **HLA-DQ2** and **HLA-DQ8**, which bind to the **deamidated gluten peptides** and present them to T cells, triggering the immune response.
- **Why Other Options Are Incorrect**:
  - **B) HLA-DR2 or HLA-DR8**: These are associated with other autoimmune diseases, not celiac disease.
  - **C) HLA-DP2 or HLA-DP8**: These are not associated with celiac disease.
  - **D) HLA-DP2 or HLA-DR2**: These are not the main molecules involved in celiac disease.
  - **E) HLA-DP8 or HLA-DR8**: Not relevant for celiac disease.

NEXT SET

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1. Question: A 40-year-old lady presented for elective cholecystectomy. On pre-operative testing, the following results were found:

- **HBsAg positive**
- **HBeAg negative**
- **Anti-HDV antibodies positive**
- **Anti-HBc IgM antibodies negative**
- **ALT 25 IU/ml**
- **PCR for HDV DNA negative**

What treatment option is appropriate for this patient?

Answer Choices:

- A) **Adefovir**
- B) **Entacavir**
- C) **Interferon alpha**
- D) **Lamivudine**
- E) **No treatment**

Correct Answer: **A) Adefovir**

Explanation:

- **Key Clue**: The patient has **chronic hepatitis D (HDV)** infection (indicated by positive **anti-HDV antibodies**). The treatment of choice for HDV infection is **Adefovir**, a nucleotide analog that helps control the replication of the HDV virus.
- **Why Other Options Are Incorrect**:
  - **B) Entacavir**: Effective against hepatitis B (HBV), but not effective for HDV.
  - **C) Interferon alpha**: Not a first-line treatment for chronic hepatitis D.
  - **D) Lamivudine**: Primarily used for HBV, not effective against HDV.
  - **E) No treatment**: Since HDV can cause progressive liver disease, treatment is typically necessary.

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2. Question: A 45-year-old lady presents with intermittent abdominal pain, severe pain lasting 3-4 hours, often associated with vomiting. Her bowel movements are normal. She is febrile with a heart rate of 110 beats/minute. The following are her test results:

- **Bilirubin**: 3.3 mg/dl (Normal: <1.1 mg/dl)
- **ALT**: 36 U/L (Normal: <40 U/L)
- **ALP**: 115 U/L (Normal: 30-120 U/L)
- **TLC**: 13.1 × 10^9/L (Normal: 4 to 12 × 10^9/L)
- **S. Amylase**: 65 U/L (Normal: 40-120 U/L)

What is the most probable diagnosis?

Answer Choices:

- A) **Acute Cholecystitis**

- B) **Acute Pancreatitis**
- C) **Acute Viral Hepatitis**
- D) **Intestinal Perforation**
- E) **Chronic Pancreatitis**

Correct Answer: **A) Acute Cholecystitis**

Explanation:

- **Key Clue**: The patient has **intermittent abdominal pain**, often associated with vomiting, along with **elevated bilirubin** and a mild **leukocytosis (TLC)**, which are classic signs of **acute cholecystitis**, especially in the context of gallstones.
- **Why Other Options Are Incorrect**:
    - **B) Acute Pancreatitis**: This typically causes elevated amylase and lipase, which are not significantly elevated in this case.
    - **C) Acute Viral Hepatitis**: While ALT can be elevated in viral hepatitis, this patient has normal ALT and no clear viral symptoms.
    - **D) Intestinal Perforation**: Typically presents with peritonitis and sudden, severe pain, along with changes in bowel sounds.
    - **E) Chronic Pancreatitis**: Chronic pancreatitis is unlikely due to the absence of a history of chronic alcohol use or other long-term risk factors.

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3. Question: A 9-year-old female child was brought to the pediatric outpatient department with a history of abdominal pain for two days and diarrhea for one day. On examination, she has abdominal tenderness. Stool examination revealed segmented eggs with actively motile chaemotiform larvae within the egg shell membrane. What is the most probable cause?

Answer Choices:

- A) **Ancylostoma duodenale**
- B) **Ascaris lumbricoides**
- C) **Taenia solium**
- D) **Trichuris trichiura**
- E) **Hymenolepis nana**

Correct Answer: **A) Ancylostoma duodenale**

Explanation:

- **Key Clue**: The presence of **segmented eggs with actively motile larvae** is characteristic of **hookworm infection**, particularly **Ancylostoma duodenale**.
- **Why Other Options Are Incorrect**:
    - **B) Ascaris lumbricoides**: This parasite typically causes **round eggs**, not segmented ones.
    - **C) Taenia solium**: This tapeworm produces **unsegmented eggs** that are not motile.
    - **D) Trichuris trichiura**: This causes **whipworm** infections, with characteristic **barrel-shaped eggs**, not motile larvae.
    - **E) Hymenolepis nana**: This tapeworm has **eggs with polar filaments**, not motile larvae.

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4. Question: A 60-year-old male presents with symptoms of cutaneous flushing, sweating, colicky abdominal pain, hemoptysis, and cough. Investigations reveal a diagnosis of carcinoid syndrome. Which cells in the intestines are the precursors of carcinoids?

Answer Choices:

- A) **Goblet cells**
- B) **Enterocytes**
- C) **Neuroendocrine cells**
- D) **Paneth cells**
- E) **Stromal cells**

Correct Answer: **C) Neuroendocrine cells**

Explanation:

- **Key Clue**: **Carcinoid syndrome** is caused by **neuroendocrine tumors** (carcinoid tumors), which arise from **neuroendocrine cells** in the gastrointestinal tract.
- **Why Other Options Are Incorrect**:
    - **A) Goblet cells**: These cells produce mucus in the intestines and are not involved in carcinoid tumors.
    - **B) Enterocytes**: These are the absorptive cells of the intestinal epithelium.
    - **D) Paneth cells**: These cells are involved in immune defense in the intestines.
    - **E) Stromal cells**: These are connective tissue cells and are not involved in neuroendocrine tumors.

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5. Question: Pakistan faced multiple challenges in economic, security, health, and development fronts, leading to the introduction of the 11th five-year plan. In which of the following years was this plan introduced?

Answer Choices:

- A) **2000-2005**
- B) **2005-2010**
- C) **2007-2012**
- D) **2013-2018**
- E) **2015-2020**

Correct Answer: **D) 2013-2018**

Explanation:

- The **11th Five-Year Plan** of Pakistan was introduced for the period **2013-2018**. This plan aimed at addressing the country's development and growth challenges in various sectors.

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6. Question: A female patient with long-standing perianal discharging fistula and chronic diarrhea presents to OPD. A colonoscopy reveals serpentine skip lesions with a cobblestone appearance. What is the most likely diagnosis?

Answer Choices:

- A) **Celiac sprue**
- B) **Crohn's disease**
- C) **Infective enterocolitis**
- D) **Ulcerative colitis**
- E) **Sarcoidosis**

Correct Answer: **B) Crohn's disease**

Explanation:

- **Key Clue**: **Serpentine skip lesions** and a **cobblestone appearance** are classic findings for **Crohn's disease**, which is an inflammatory bowel disease (IBD) that can cause fistulas and chronic diarrhea.
- **Why Other Options Are Incorrect**:
    - **A) Celiac sprue**: Typically presents with malabsorption and villous atrophy, not cobblestone lesions.

- **C) Infective enterocolitis**: This would present with an acute infection and would not show skip lesions or cobblestone appearance.
- **D) Ulcerative colitis**: This presents with continuous lesions and is more likely to involve the colon, rather than skip lesions.
- **E) Sarcoidosis**: This can cause granulomas but does not typically present with skip lesions.

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7. Question: A 40-year-old female patient presents to the ER with sudden onset of pain in the epigastric region since last night, associated with nausea. A chest x-ray shows gas under the right diaphragm. Chronic use of which of the following medications is responsible for causing this condition?

Answer Choices:

- A) **Ciprofloxacin**
- B) **Ibuprofen**
- C) **Metronidazole**
- D) **Omeprazole**
- E) **Paracetamol**

Correct Answer: **B) Ibuprofen**

Explanation:

- **Key Clue**: The **gas under the diaphragm** seen on chest x-ray is indicative of **perforated peptic ulcer**, which can be caused by chronic use of **NSAIDs** like **Ibuprofen**. NSAIDs cause irritation and ulceration of the gastric mucosa, leading to perforation.
- **Why Other Options Are Incorrect**:
  - **A) Ciprofloxacin**: Antibiotics like ciprofloxacin are not typically associated with ulcer formation.
  - **C) Metronidazole**: Metronidazole is an antibiotic and does not cause peptic ulcers or perforation.
  - **D) Omeprazole**: Omeprazole is a proton pump inhibitor that reduces gastric acid, thus protecting the mucosa from ulceration.
  - **E) Paracetamol**: Paracetamol is not associated with gastrointestinal ulcers.

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8. Question: A 60-year-old male patient presents with symptoms of cutaneous flushing, sweating, colicky abdominal pain, hemoptysis, and cough. On investigations, he was diagnosed with carcinoid syndrome. Which cells in the intestines are the precursors of carcinoids?

Answer Choices:

- A) **Goblet cells**
- B) **Enterocytes**
- C) **Neuroendocrine cells**
- D) **Paneth cells**
- E) **Stromal cells**

Correct Answer: **C) Neuroendocrine cells**

Explanation:

- **Key Clue**: **Carcinoid syndrome** is caused by **neuroendocrine tumors** (carcinoid tumors) that arise from **neuroendocrine cells** in the gastrointestinal tract.
- **Why Other Options Are Incorrect**:
    - **A) Goblet cells**: These are mucus-producing cells in the intestines, not involved in carcinoid tumors.
    - **B) Enterocytes**: These are absorptive cells of the intestines, not related to carcinoid tumors.
    - **D) Paneth cells**: These are involved in immune defense in the intestines.
    - **E) Stromal cells**: These are connective tissue cells that are not involved in neuroendocrine tumors.

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9. Question: Pakistan faced multiple challenges in economic, security, health, and development fronts, leading to the introduction of the 11th five-year plan. In which of the following years was this plan introduced?

Answer Choices:

- A) **2000-2005**
- B) **2005-2010**
- C) **2007-2012**
- D) **2013-2018**
- E) **2015-2020**

Correct Answer: **D) 2013-2018**

Explanation:

- The **11th Five-Year Plan** of Pakistan was introduced for the period **2013-2018**. This plan aimed to address economic, health, and security challenges and to promote growth and development in various sectors.

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10. Question: A female patient with long-standing perianal discharging fistula and chronic diarrhea presents to OPD. A colonoscopy reveals serpentine skip lesions with a cobblestone appearance. What is the most likely diagnosis?

Answer Choices:

- A) **Celiac sprue**
- B) **Crohn's disease**
- C) **Infective enterocolitis**
- D) **Ulcerative colitis**
- E) **Sarcoidosis**

Correct Answer: **B) Crohn's disease**

Explanation:

- **Key Clue**: **Serpentine skip lesions** and a **cobblestone appearance** are classic findings of **Crohn's disease**, a type of inflammatory bowel disease (IBD). This condition can cause fistulas and chronic diarrhea, with a characteristic pattern of lesions seen on colonoscopy.
- **Why Other Options Are Incorrect**:
    - **A) Celiac sprue**: This condition leads to malabsorption, but does not cause skip lesions or a cobblestone appearance.
    - **C) Infective enterocolitis**: This condition would not cause skip lesions or cobblestone appearances; it is usually associated with an infectious cause.
    - **D) Ulcerative colitis**: Ulcerative colitis typically involves continuous lesions without the skip pattern seen in Crohn's disease.
    - **E) Sarcoidosis**: This is a granulomatous disease that may affect multiple organs but is not typically associated with skip lesions in the colon.

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11. Question: A 40-year-old woman was diagnosed with chronic hepatitis B and chronic renal failure. Which antiviral drug would be the drug of choice to treat her hepatitis B infection?

Answer Choices:

- A) **Adefovir**

- B) **Interferon**
- C) **Lamivudine**
- D) **Pegylated interferon**
- E) **Fenofibrate**

Correct Answer: **A) Adefovir**

Explanation:

- **Key Clue**: The patient has **chronic hepatitis B** and **chronic renal failure**, so it is crucial to use an antiviral with fewer renal toxicities. **Adefovir** is preferred because it has efficacy against hepatitis B and can be used in patients with kidney disease, although it should be dosed carefully in renal impairment.
- **Why Other Options Are Incorrect**:
    - **B) Interferon**: Interferon has more side effects, especially in patients with renal failure.
    - **C) Lamivudine**: While lamivudine is effective against HBV, resistance can develop over time, making it less suitable for long-term treatment.
    - **D) Pegylated interferon**: Similar to interferon, pegylated interferon is not ideal for patients with renal failure due to side effects.
    - **E) Fenofibrate**: Fenofibrate is a lipid-lowering agent, not an antiviral.

NEXT SET

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1. Question: A 12-year-old boy is brought to the hospital with complaints of fever, sunken eyes, skin pinch signs, and slow skin recoil. What is the most appropriate treatment option according to the signs?

Answer Choices:

- A) **Give 600ml of low osmolar ORS in 8 hours, then reassess**
- B) **Give 120ml of ORS every 4 hours, then reassess**
- C) **Infuse 600ml of Ringer's Lactate over 4 hours**
- D) **Infuse 600ml of Ringer's Lactate over 1 hour**

Correct Answer: **A) Give 600ml of low osmolar ORS in 8 hours, then reassess**

Explanation:

- **Key Clue**: The boy has signs of **dehydration** (sunken eyes, slow skin recoil), and the most appropriate treatment in this case is to start rehydration with **oral rehydration solution (ORS)** or intravenous fluids, depending on severity. Since he has signs of moderate dehydration, giving **low osmolar ORS over 8 hours** is a good starting point. Monitoring and reassessment are essential to avoid overhydration or further complications.

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2. Question: A 15-year-old female patient comes to the OPD with high-grade fever, abdominal pain, and bloody diarrhea. Colonoscopy reveals small pinpoint colonies with histology showing gram-negative motile rods. Which of the following organisms is the most likely cause?

Answer Choices:

- A) **Campylobacter**
- B) **E. coli**
- C) **Enterobacter**
- D) **Salmonella**
- E) **Shigella**

Correct Answer: **A) Campylobacter**

Explanation:

- **Key Clue**: The findings of **high-grade fever**, **abdominal pain**, **bloody diarrhea**, and **gram-negative motile rods** on histology strongly suggest an infection caused by **Campylobacter**. This is a common cause of bacterial gastroenteritis, typically resulting in similar symptoms.
- **Why Other Options Are Incorrect**:
    - **B) E. coli**: While some E. coli strains (like EHEC) can cause bloody diarrhea, the motility and gram-negative rod morphology are more characteristic of **Campylobacter**.
    - **C) Enterobacter**: This is an opportunistic pathogen and not a common cause of gastroenteritis with bloody diarrhea.
    - **D) Salmonella**: Typically presents with more generalized gastrointestinal symptoms and is usually non-motile in stool cultures.
    - **E) Shigella**: Shigella can cause bloody diarrhea, but the description of motile gram-negative rods fits **Campylobacter** better.

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3. Question: What is the term used for the dilation of a salivary duct secondary to epithelial atrophy due to an obstructed inflammatory process?

Answer Choices:

- A) **Mucocele**
- B) **Retention cyst**
- C) **Sialadenitis**
- D) **Sialodochitis**
- E) **Sialolithiasis**

Correct Answer: **D) Sialodochitis**

Explanation:

- **Key Clue**: **Sialodochitis** refers to **dilation of the salivary duct** secondary to inflammation and obstruction, often leading to ductal dilation due to chronic infection or blockage.
- **Why Other Options Are Incorrect**:
  - **A) Mucocele**: This is a cystic lesion that forms when a salivary gland duct is blocked, but it involves the gland rather than the duct itself.
  - **B) Retention cyst**: This is similar to a mucocele but does not specifically involve the duct dilation or epithelial atrophy seen in sialodochitis.
  - **C) Sialadenitis**: This is the inflammation of the salivary gland, not specifically the dilation of the duct.
  - **E) Sialolithiasis**: This refers to the formation of stones within the salivary glands, leading to obstruction but not necessarily ductal dilation.

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4. Question: A 65-year-old woman presents with fever, abdominal pain, and bloody diarrhea. Colonoscopy reveals diffuse mucosal involvement. What is the most likely diagnosis?

Answer Choices:

- A) **Crohn's disease**
- B) **Colon diverticulitis**
- C) **Hamartomatous polyp**
- D) **Ulcerative colitis**
- E) **Whipple's disease**

Correct Answer: **D) Ulcerative colitis**

Explanation:

- **Key Clue**: **Ulcerative colitis** is characterized by **diffuse mucosal involvement**, often involving the **rectum and colon**. The symptoms of fever, abdominal pain, and bloody diarrhea align with this diagnosis.

- **Why Other Options Are Incorrect**:
    - **A) Crohn's disease**: Typically causes **skip lesions** and transmural inflammation, not diffuse mucosal involvement.
    - **B) Colon diverticulitis**: Usually presents with localized abdominal pain and is not typically associated with bloody diarrhea.
    - **C) Hamartomatous polyp**: These are benign growths that do not usually cause diffuse mucosal involvement or bloody diarrhea.
    - **E) Whipple's disease**: This rare disease presents with systemic symptoms, but it does not commonly cause the specific pattern of colonic involvement seen here.

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5. Question: A 30-year-old male presents with symptoms of heartburn, bloating, pain in the epigastric region, and nausea. The patient has been taking antacids but has not experienced improvement. An endoscopy was planned for suspected H. pylori-induced peptic ulcer. Which of the following tests can be used to confirm H. pylori infection on a gastric biopsy specimen?

Answer Choices:

- A) **Polymerase chain reaction (PCR)**
- B) **Stool antigen**
- C) **Serology for IgG antibodies**
- D) **Rapid urease test**
- E) **Urea breath test**

Correct Answer: **D) Rapid urease test**

Explanation:

- **Key Clue**: The **rapid urease test** is the most commonly used diagnostic test on **gastric biopsy** specimens for **H. pylori** infection. The test detects urease activity, which is produced by **H. pylori** bacteria.
- **Why Other Options Are Incorrect**:
    - **A) PCR**: While PCR is very sensitive, it is not the first-line test for **H. pylori** on gastric biopsy specimens.
    - **B) Stool antigen**: This is a non-invasive test, but it is not used on biopsy specimens.
    - **C) Serology for IgG antibodies**: This is useful for initial screening but does not provide information on current infection or biopsy results.
    - **E) Urea breath test**: This is another non-invasive test but is not used on biopsy specimens.

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6. Question: A 66-year-old male has the following liver function test (LFT) results: Conjugated Bilirubin: 19.5 mg/dL, Unconjugated Bilirubin: 1.98 mg/dL, ALT: 62 U/L, ALP: 1045 U/L, Albumin: 4.9 g/dL. What is the most probable diagnosis?

Answer Choices:

- A) **Alcoholic liver disease**
- B) **Chronic hepatitis**
- C) **Acute hepatitis**
- D) **Obstructive liver disease**
- E) **Hepatoma**

Correct Answer: **D) Obstructive liver disease**

Explanation:

- **Key Clue**: The **high ALP** and **conjugated bilirubin** with normal ALT/AST levels suggest **obstructive liver disease**, possibly due to **bile duct obstruction** (e.g., stones, tumors, strictures).
- **Why Other Options Are Incorrect**:
    - **A) Alcoholic liver disease**: This would typically present with elevated AST/ALT and a history of alcohol use.
    - **B) Chronic hepatitis**: Chronic hepatitis usually presents with elevated ALT/AST and less marked changes in ALP and bilirubin.
    - **C) Acute hepatitis**: This would result in high ALT/AST, but it does not cause significantly elevated ALP or conjugated bilirubin.
    - **E) Hepatoma**: This would typically present with more nonspecific findings and not as much elevation of conjugated bilirubin.

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7. Question: A 28-year-old male medical student complains of recurrent epigastric pain for the last one month. The pain begins after eating spices and consuming tea, and is relieved by drinking milk. There is associated weight loss as the patient avoids eating food due to pain. On examination, there is slight tenderness in the epigastrium. What is the most likely diagnosis?

Answer Choices:

- A) **Erythroplakia**
- B) **Leukoplakia**

- C) **Meckel's diverticulitis**
- D) **Pancreatitis**
- E) **Peptic ulcer disease**

Correct Answer: **E) Peptic ulcer disease**

Explanation:

- **Key Clue**: The patient has **epigastric pain** triggered by eating **spicy food and tea** and relieved by drinking **milk**. These are classic symptoms of **peptic ulcer disease (PUD)**, a condition where ulcers form in the stomach or duodenum, often due to **H. pylori infection** or the use of nonsteroidal anti-inflammatory drugs (NSAIDs).
- **Why Other Options Are Incorrect**:
    - **A) Erythroplakia**: A premalignant lesion in the mouth or pharynx, unrelated to the symptoms described.
    - **B) Leukoplakia**: A white patch in the oral cavity, typically associated with chronic irritation, not consistent with this presentation.
    - **C) Meckel's diverticulitis**: This condition typically presents with lower abdominal pain, not epigastric pain.
    - **D) Pancreatitis**: This would present with more severe pain and elevated amylase/lipase, and it would not be relieved by milk.

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8. Question: A 22-year-old boy notices a reducible swelling in his right groin. Pre-operatively, the swelling was lateral to the inferior epigastric vessel. What is the type of hernia?

Answer Choices:

- A) **Indirect Inguinal Hernia**
- B) **Direct Inguinal Hernia**
- C) **Femoral Hernia**
- D) **Richter's Hernia**
- E) **Spigelian Hernia**

Correct Answer: **A) Indirect Inguinal Hernia**

Explanation:

- **Key Clue**: A **hernia lateral to the inferior epigastric vessels** is characteristic of an **indirect inguinal hernia**, which occurs when abdominal contents protrude through the deep inguinal ring.
- **Why Other Options Are Incorrect**:

- **B) Direct Inguinal Hernia**: This type of hernia occurs **medial** to the inferior epigastric vessels.
- **C) Femoral Hernia**: Femoral hernias occur below the inguinal ligament and are more common in women.
- **D) Richter's Hernia**: A hernia that involves only a portion of the bowel wall, causing local ischemia but not typically the pattern described here.
- **E) Spigelian Hernia**: This occurs along the **semilunar line** (lateral abdominal wall), not in the groin.

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9. Question: A 60-year-old patient presented with a 1-year history of bleeding per rectum and pain in the left flank region. He has noticed recent weight loss. On digital rectal examination, a friable swelling was felt in the right side of the anal canal at 3 cm from the anal margin. What is the most probable diagnosis?

Answer Choices:

- A) **Anal Carcinoma**
- B) **Amoebic dysentery**
- C) **Anal Fissure**
- D) **Hemorrhoids**
- E) **Rectal Polyp**

Correct Answer: **A) Anal Carcinoma**

Explanation:

- **Key Clue**: The presence of **friable swelling** in the **anal canal** along with **weight loss** and **rectal bleeding** suggests **anal carcinoma**. **Anal carcinoma** often presents as a **painful, friable mass** and can be associated with **bleeding**, especially in advanced stages.
- **Why Other Options Are Incorrect**:
  - **B) Amoebic dysentery**: This is a gastrointestinal infection that presents with bloody diarrhea but not with a mass in the anal canal.
  - **C) Anal Fissure**: Typically presents with painful defecation and bleeding, but not with a mass or weight loss.
  - **D) Hemorrhoids**: Usually cause **painless bleeding** and are not associated with friable masses.
  - **E) Rectal Polyp**: While a polyp may cause rectal bleeding, it is not friable and would not present with the same degree of symptoms.

10. Question: A 30-year-old male patient presented to the Emergency Department with pain in the epigastrium associated with nausea and vomiting for the last one day. The pain is radiating to the back. His previous ultrasound scan revealed gallstones. What is the most probable diagnosis?

Answer Choices:

- A) **Acute gastroenteritis**
- B) **Acute pancreatitis**
- C) **Achalasia Cardia**
- D) **Myocardial Infarction**
- E) **Peptic Ulcer Disease**

Correct Answer: **B) Acute pancreatitis**

Explanation:

- **Key Clue**: The patient has **epigastric pain** radiating to the **back**, which, combined with the presence of **gallstones**, strongly suggests **acute pancreatitis**. Gallstones are a common cause of **acute pancreatitis**, as they can obstruct the bile duct and lead to inflammation of the pancreas.
- **Why Other Options Are Incorrect**:
    - **A) Acute gastroenteritis**: Typically causes diffuse abdominal discomfort and diarrhea, not localized pain radiating to the back.
    - **C) Achalasia Cardia**: Causes dysphagia and regurgitation, not epigastric pain radiating to the back.
    - **D) Myocardial Infarction**: While it can cause chest pain radiating to the back, this patient's symptoms are more consistent with pancreatitis, especially with gallstone history.
    - **E) Peptic Ulcer Disease**: While it can cause epigastric pain, it does not typically radiate to the back, and there is no mention of acid reflux or response to food.

NEXT SET

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1. Question: A patient presented to the emergency department with a history of snake bite and symptoms like generalized weakness, ptosis, and difficulty in breathing. The focal symptoms at the bite site were minimal. However, there was tingling, stinging, and burning at the wound site. The type of venom in such a bite would be?

Answer Choices:

- A) **Cardiotoxic**
- B) **Hemotoxic**
- C) **Musculotoxic**
- D) **Neurotoxic**
- E) **Vasculotoxic**

Correct Answer: **D) Neurotoxic**

Explanation:

- **Key Clue**: The patient has **ptosis** (drooping eyelids), **difficulty breathing**, and **weakness** along with **tingling and burning** at the bite site. These are hallmark symptoms of **neurotoxic venom**, which affects the **neuromuscular junction**, leading to symptoms such as **muscle weakness, respiratory difficulties, and ptosis**. Common examples include venom from **cobra** and **krait** snakes.
- **Why Other Options Are Incorrect**:
    - **A) Cardiotoxic**: Affects the heart, but does not typically cause ptosis or breathing difficulty.
    - **B) Hemotoxic**: Affects blood coagulation and causes internal bleeding, not the neurological symptoms seen here.
    - **C) Musculotoxic**: Affects muscles directly but would typically cause **muscle pain** rather than neurological signs like ptosis.
    - **E) Vasculotoxic**: Causes vascular damage and bleeding, not the neurological effects described here.

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2. Question: A 60-year-old male presents to OPD with complaints of lethargy and weakness for the last 6 months. He also complains of weight loss and low-grade fever. On further questioning, the patient had altered bowel habits: alternating diarrhea and constipation. Abdominal examination showed a vague mass in the right lower abdomen and slight pain. Stool R/E shows occult blood. What is the diagnosis in this case?

Answer Choices:

- A) **Colorectal carcinoma**
- B) **Erythroplakia**
- C) **Hemorrhoids**
- D) **Meckel's diverticulitis**

- E) **Pancreatitis**

Correct Answer: **A) Colorectal carcinoma**

Explanation:

- **Key Clue**: The patient has **weight loss, low-grade fever, and altered bowel habits (diarrhea and constipation)**. These symptoms, along with a palpable mass in the **right lower abdomen** and **occult blood in stool**, are highly suggestive of **colorectal carcinoma**. This type of cancer commonly presents with changes in bowel habits, weight loss, and gastrointestinal bleeding.
- **Why Other Options Are Incorrect**:
    - **B) Erythroplakia**: A premalignant lesion in the oral cavity, not related to the gastrointestinal symptoms described.
    - **C) Hemorrhoids**: Typically cause **bright red bleeding** during defecation, not the systemic symptoms or mass seen here.
    - **D) Meckel's diverticulitis**: This condition can cause **abdominal pain** but is not typically associated with a mass or systemic symptoms like fever and weight loss.
    - **E) Pancreatitis**: Causes severe epigastric pain, nausea, vomiting, and elevated pancreatic enzymes, which is inconsistent with this case.

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3. Question: A local community of district Mardan was having repeated outbreaks of polio, but the people are not in favor of polio vaccination and would create hurdles for the vaccinators, resulting in the area never being polio-free. Considering the situation, which of the following factors strongly influences the success of a primary health care system in the district?

Answer Choices:

- A) **Assurance of access to care is not implemented**
- B) **Each entity's sense of urgency regarding the evaluation of indicators**
- C) **Involvement of political leaders in the polio initiative**
- D) **Private sector of health care**
- E) **Participation of the community members in the design, implementation, and evaluation of the polio initiative**

Correct Answer: **E) Participation of the community members in the design, implementation, and evaluation of the polio initiative**

Explanation:

- **Key Clue**: The **community's reluctance** to accept polio vaccination indicates that the **success of the health initiative** depends heavily on **community involvement**. When communities are actively engaged in the process, they are more likely to **trust** and **support** vaccination programs.

- **Why Other Options Are Incorrect**:
    - **A) Assurance of access to care is not implemented**: This is important, but without the **community's support**, access is not effective.
    - **B) Sense of urgency regarding the evaluation of indicators**: While useful for monitoring progress, it doesn't directly address the primary issue of community acceptance.
    - **C) Involvement of political leaders**: Political involvement is crucial, but it is not as effective without **community involvement**.
    - **D) Private sector of health care**: The private sector may not have the same reach and trust in rural areas as public health initiatives.

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4. Question: A 60-year-old man complained of persistent right lower quadrant pain and underwent an appendectomy. The appendix appeared globular and dilated due to obstruction by a fecalith and was filled with mucus. Histologically, the cavity was lined with normal appendiceal mucus, and there was no evidence of neoplasia. The lesion most likely is?

Answer Choices:

- A) **Mucinous cystadenoma**
- B) **Mucocele**
- C) **Non-mucinous appendiceal neoplasm**
- D) **Pseudocyst**
- E) **Pseudomyxoma peritonei**

Correct Answer: **B) Mucocele**

Explanation:

- **Key Clue**: The **appendix** was found to be **dilated** and filled with **mucus** due to **fecalith obstruction**. This is characteristic of a **mucocele** of the appendix, which occurs when the appendix is obstructed and fills with mucus.
- **Why Other Options Are Incorrect**:
    - **A) Mucinous cystadenoma**: A type of ovarian tumor, not related to the appendix.
    - **C) Non-mucinous appendiceal neoplasm**: Would likely show neoplastic changes, which were absent in this case.
    - **D) Pseudocyst**: Typically seen in the pancreas or liver, not the appendix.
    - **E) Pseudomyxoma peritonei**: A condition in which mucinous material spreads throughout the peritoneum, often from a ruptured appendiceal mucocele. However, this case does not describe peritoneal spread.

5. Question: A biopsy specimen taken from a patient with pseudomembranous colitis consists of which of the following findings?

Answer Choices:

- A) **Colonic aganglionosis**
- B) **Excessive ulceration in the serosa**
- C) **Necrosis and gangrene**
- D) **Serositis covered by a membrane**
- E) **Small ulceration with slough**

Correct Answer: **E) Small ulceration with slough**

Explanation:

- **Key Clue**: **Pseudomembranous colitis** is caused by **Clostridium difficile** infection, and the typical histological finding is **ulceration of the colon** with the formation of **pseudomembranes** made up of **necrotic debris**, **inflammatory cells**, and **mucus**. The sloughing of the mucosa forms characteristic lesions.
- **Why Other Options Are Incorrect**:
    - **A) Colonic aganglionosis**: Seen in **Hirschsprung disease**, not related to pseudomembranous colitis.
    - **B) Excessive ulceration in the serosa**: Not a feature of pseudomembranous colitis.
    - **C) Necrosis and gangrene**: Could be seen in severe cases but does not describe the typical biopsy findings.
    - **D) Serositis covered by a membrane**: This is not characteristic of pseudomembranous colitis.