

Complete Liver Pathology - 30 MCQ Questions

1. Which of the following BEST explains why the liver is highly susceptible to toxic injury?
 - A. Because the liver functions only as a storage organ for glycogen and vitamins without metabolic activity
 - B. Because the liver is the major drug-metabolizing and detoxifying organ exposed to therapeutic agents, xenobiotics, and environmental chemicals
 - C. Because hepatocytes are incapable of metabolizing toxins and therefore all toxins bypass the liver completely
 - D. Because the liver receives blood only from systemic circulation without portal venous contribution
2. Which of the following agents is considered the MOST important cause of toxic liver injury according to the lecture?
 - A. Acetaminophen
 - B. Methotrexate
 - C. Alcohol
 - D. Oral contraceptives
3. Which of the following BEST describes unpredictable idiosyncratic drug reactions in liver disease?
 - A. They affect all individuals equally in a strictly dose-dependent manner
 - B. They depend on individual host variations such as immune responsiveness and metabolic rate
 - C. They occur exclusively after acute viral hepatitis infection
 - D. They are always associated with immediate liver failure within hours
4. Which of the following drugs is MOST strongly associated with cholestasis according to the lecture?
 - A. Acetaminophen and halothane
 - B. Oral contraceptives and anabolic steroids
 - C. Isoniazid and rifampicin

D. Methyldopa and phenytoin

5. Which of the following BEST defines steatohepatitis?

- A. Complete replacement of hepatocytes with fibrous nodules without fat deposition
- B. Fatty liver disease characterized by inflammation of the liver with concurrent fat accumulation
- C. Acute necrosis of bile duct epithelium caused by autoimmune injury
- D. Isolated accumulation of bilirubin within hepatocytes without inflammation

6. Which of the following neoplasms is associated with vinyl chloride exposure?

- A. Hepatic adenoma
- B. Hepatocellular carcinoma
- C. Cholangiocarcinoma
- D. Angiosarcoma

7. Which of the following BEST explains the primary physiological function of bile salts?

- A. Direct synthesis of clotting factors in circulation
- B. Promotion of dietary fat emulsification within the intestinal lumen
- C. Conversion of ammonia into urea within hepatocytes
- D. Production of albumin and plasma globulins

8. Which of the following serum bilirubin levels is MOST consistent with clinically apparent jaundice?

- A. Less than 0.5 mg/dL
- B. Around 1.0 mg/dL only
- C. Above 2.0 mg/dL
- D. Exactly 1.2 mg/dL without variation

9. Which of the following BEST defines cholestasis?

- A. Exclusive retention of unconjugated bilirubin without other biliary components
- B. Systemic retention of bilirubin together with bile salts and cholesterol due to impaired bile elimination

- C. Selective hepatic storage of glycogen associated with cirrhosis
- D. Acute inflammatory destruction of portal veins exclusively

10. Which of the following conditions is MOST associated with predominantly unconjugated hyperbilirubinemia?

- A. Extrahepatic biliary obstruction caused by gallstones
- B. Hemolytic anemia with excessive bilirubin production
- C. Cholangiocarcinoma with obstructive jaundice
- D. Hepatocellular cholestasis caused by estrogen therapy

11. CASE: A newborn develops jaundice during the first days of life. Laboratory investigations reveal elevated unconjugated bilirubin without evidence of biliary obstruction. Phototherapy is initiated to prevent bilirubin deposition in the brain. Which of the following complications is MOST feared in this condition?

- A. Portal hypertension
- B. Hepatic adenoma
- C. Kernicterus due to bilirubin accumulation in basal ganglia
- D. Cholangiocarcinoma formation during infancy

12. Which of the following BEST explains the mechanism of cholestatic pruritus?

- A. Excessive erythropoiesis caused by chronic hypoxia
- B. Accumulation of bile salts and impaired bile excretion
- C. Deficiency of clotting factors caused by thrombocytopenia
- D. Increased albumin synthesis within hepatocytes

13. Which of the following laboratory findings is MOST characteristic of cholestasis?

- A. Markedly decreased alkaline phosphatase levels
- B. Elevated alkaline phosphatase originating from bile duct epithelium and canalicular membranes
- C. Isolated reduction in serum bilirubin with elevated albumin
- D. Complete absence of γ -glutamyltransferase activity

14. CASE: A patient taking oral contraceptives for several years develops itching, dark urine, elevated alkaline phosphatase, and impaired absorption of fat-soluble vitamins. Which of the following is the MOST likely underlying disorder?

- A. Acute hemolytic anemia
- B. Cholestasis induced by estrogen-related impairment of bile flow
- C. Fulminant hepatitis caused by HBV infection
- D. Crigler-Najjar syndrome due to absent UGT activity

15. Which of the following hepatitis viruses is MOST commonly transmitted through contaminated food or water?

- A. Hepatitis B and C
- B. Hepatitis C and D
- C. Hepatitis A and E
- D. Hepatitis B and D only

16. Which of the following viral hepatitis types is MOST strongly associated with chronic liver disease and hepatocellular carcinoma?

- A. Hepatitis A and E
- B. Hepatitis B and C
- C. Hepatitis A and D
- D. Hepatitis E only

17. CASE: A healthcare worker experiences accidental needle-stick exposure to contaminated blood. Months later, the patient develops chronic hepatitis with persistent viral carriage. Which of the following viruses is MOST likely responsible?

- A. Hepatitis A virus
- B. Hepatitis E virus
- C. Hepatitis B virus
- D. Epstein-Barr virus

18. Which of the following BEST describes fulminant hepatic failure?

- A. Mild asymptomatic liver inflammation resolving spontaneously

- B. Hepatic insufficiency with rapid progression to liver failure
- C. Selective destruction of bile duct epithelium only
- D. Chronic fibrosis occurring over several decades exclusively

19. Which of the following tests is considered MOST liver-specific for acute hepatocellular injury?

- A. AST only
- B. ALT
- C. Alkaline phosphatase from bone origin
- D. Serum calcium

20. CASE: A young woman presents with chronic hepatitis, elevated serum IgG greater than 2.5 g/dL, absence of viral serologic markers, and high titers of autoantibodies. Which of the following is the MOST likely diagnosis?

- A. Alcoholic hepatitis
- B. Autoimmune hepatitis
- C. Acute hepatitis A infection
- D. Cholangiocarcinoma

21. Which of the following metabolic abnormalities is MOST strongly associated with NAFLD?

- A. Hyperthyroidism and severe anemia
- B. Insulin resistance and metabolic syndrome
- C. Vitamin C deficiency exclusively
- D. Autoimmune destruction of bile ducts only

22. Which of the following liver alterations is included within the morphological spectrum of fatty liver disease?

- A. Steatosis, steatohepatitis, and fibrosis
- B. Portal vein thrombosis exclusively
- C. Cholangiocarcinoma and hemangioma only
- D. Pure biliary obstruction without hepatocyte injury

23. Which of the following BEST explains fat accumulation in alcoholic liver disease?
- A. Ethanol metabolism increases NAD availability for fatty acid oxidation
 - B. NADH production during ethanol metabolism decreases fatty acid oxidation leading to hepatic fat accumulation
 - C. Alcohol directly prevents hepatocyte glycogen storage only
 - D. Acetaldehyde exclusively stimulates bile salt excretion
24. CASE: A chronic alcoholic presents with hepatomegaly and elevated AST and ALT levels, where AST is markedly higher than ALT. Which of the following is the MOST likely diagnosis?
- A. Autoimmune hepatitis
 - B. Alcoholic fatty liver disease
 - C. Gilbert syndrome
 - D. Acute hepatitis A infection
25. Which of the following conditions is considered the MOST common cause of incidental elevation of serum transaminases?
- A. Viral hepatitis D infection
 - B. Cholangiocarcinoma
 - C. Nonalcoholic fatty liver disease
 - D. Hemolytic anemia
26. Which of the following complications is directly associated with portal hypertension in liver cirrhosis?
- A. Hyperthyroidism and nephrotic syndrome
 - B. Esophageal varices and splenomegaly
 - C. Increased clotting factor synthesis
 - D. Polycythemia caused by erythropoietin excess
27. CASE: A cirrhotic patient develops abdominal distension due to fluid accumulation, decreased albumin synthesis, and elevated hydrostatic pressure within portal circulation. Which of the following complications is MOST likely present?
- A. Ascites

- B. Hematemesis only
- C. Hepatic adenoma
- D. Acute pancreatitis

28. Which of the following BEST explains hepatic encephalopathy in advanced cirrhosis?

- A. Increased erythrocyte destruction within the spleen
- B. Loss of mental alertness progressing to confusion and coma due to severe hepatic dysfunction
- C. Excessive clotting factor production by damaged hepatocytes
- D. Hypersecretion of insulin caused by portal hypertension

29. CASE: A patient with chronic liver disease develops gynecomastia, palmar erythema, and testicular atrophy. Which of the following mechanisms BEST explains these manifestations?

- A. Increased glucagon production caused by hepatocyte hyperplasia
- B. Excessive aldosterone secretion by the adrenal cortex
- C. Reduced hepatic metabolism of hormones with decreased testosterone levels
- D. Increased renal excretion of bilirubin and bile salts

30. Which of the following BEST defines liver cirrhosis?

- A. Acute inflammatory injury limited to portal triads only
- B. Diffuse fibrosis with conversion of normal liver architecture into structurally abnormal nodules
- C. Temporary fatty infiltration that completely resolves without damage
- D. Selective destruction of Kupffer cells without hepatocyte injury

Model Answers

1. B

2. C

3. B

4. B

5. B

6. D

7. B

8. C

9. B

10. B

11. C

12. B

13. B

14. B

15. C

16. B

17. C

18. B

19. B

20. B

21. B

22. A

23. B

24. B

25. C

26. B

27. A

28. B

29. C

30. B