

PATHOLOGY MCQs

Liver & Gallbladder

لا تنسوننا من صالح دعائكم

Functions of hepatocytes include each of the following except:

- A. antibody production
- B. drug metabolism
- C. heat production
- D. protein production
- E. urea synthesis

Fatty change of the liver is associated with each of the following except:

- A. alcoholism
- B. biliary cirrhosis
- C. carbon tetrachloride poisoning
- D. diabetes mellitus
- E. obesity

“Nutmeg” liver is a gross descriptive term for liver changes due to:

- A. petechial hemorrhages
- B. alcoholic hepatitis
- C. viral hepatitis
- D. chronic passive congestion
- E. active hyperemia

An increase in cytoplasmic smooth endoplasmic reticulum in hepatocytes reflects an increase in:

- A. protein synthesis
- B. oxidative function
- C. lipid intake
- D. detoxification
- E. DNA synthesis

A needle biopsy of the liver in a jaundiced patient reveals inspissation of bile in central lobular bile canaliculi. This can be due to:

- A. intrahepatic biliary obstruction
- B. extrahepatic biliary obstruction
- C. both**
- D. neither

A 65-year-old white male has a total serum bilirubin of 13 mg/dl, an alkaline phosphatase of 450 IU (normal 30—85) and a plasma prothrombin time of 18 seconds against a control of 12. The findings are most consistent with diagnosis of

- A. epidemic viral hepatitis
- B. chlorpromazine hypersensitivity
- C. biliary atresia
- D. liver abscess
- E. adenocarcinoma of the ampulla of Vater**

The principal cells injured in acute liver necrosis are:

- A. endothelial cells
- B. Kupffer cells
- C. hepatocytes**
- D. epithelial cells of bile ducts

The usual response of intrahepatic bile ducts to obstruction of the extrahepatic biliary tree is:

- A. atrophy
- B. hypertrophy
- C. hyperplasia**
- D. necrosis

Which of the following is often associated with high serum alkaline phosphatase levels?

- A. hemolytic anemia
- B. metastatic carcinoma to the liver**
- C. Dubin-Johnson syndrome
- D. Gilbert's disease

A patient has gradual onset of jaundice associated with elevated serum conjugated bilirubin and alkaline phosphatase. These findings are most characteristic of:

- A. fatty metamorphosis
- B. cholestasis**
- C. parenchymal necrosis
- D. advanced cirrhosis

A patient with profound nausea has mild jaundice, dark urine, and distinct elevations of serum conjugated and unconjugated bilirubin and aspartate aminotransferase. The disease process in the liver is most likely:

- A. fatty metamorphosis
- B. cholestasis
- C. hepatocellular necrosis**
- D. advanced cirrhosis

Bilirubin appears in the urine in:

- A. hemolytic anemia
- B. obstructive jaundice**
- C. both
- D. neither

The most common outcome in patients with acute viral hepatitis B is:

- A. complete recovery without residual dysfunction**
- B. chronic persistent hepatitis
- C. chronic active hepatitis
- D. postnecrotic cirrhosis
- E. massive hepatic necrosis

Transfusion-associated hepatitis is most commonly due to

- A. cytomegalovirus
- B. hepatitis A virus
- C. hepatitis B virus
- D. infectious mononucleosis

E. non-A, non-B hepatitis virus

What is the usual fate of hepatitis A?

- A. massive necrosis
- B. chronic active hepatitis
- C. chronic persistent hepatitis
- D. return to normal

In a patient suspected of having viral hepatitis, which laboratory finding would indicate the most severe and life-threatening amount of liver damage?

- A. greatly prolonged prothrombin time
- B. very high serum bilirubin
- C. very high serum aspartate aminotransferase
- D. very high serum alkaline phosphatase

Hepatic necrosis is a feature of:

- A. viral hepatitis
- B. alcoholic hepatitis
- C. both
- D. neither

The pair of liver enzymes which are commonly used to assess viral hepatitis are:

- A. GGT and 5'-Nucleotidase
- B. ALT and AST
- C. AST and 5'-Nucleotidase
- D. AST and GGT

Granulomas are a feature of:

- A. viral hepatitis
- B. alcoholic hepatitis
- C. both
- D. neither

A liver biopsy from a patient who has had abnormal liver function tests for six months shows piecemeal necrosis with bridging between portal tracts and central veins. His serum is positive for hepatitis B surface antigen. The most likely outcome in this patient is:

- A. complete recovery
- B. death due to massive hepatic necrosis
- C. gradual recovery if serum gamma globulin is normal
- D. progression to cirrhosis**

Chlorpromazine (thorazine) induced liver injury produces predominantly

- A. parenchymal necrosis and is dose-related
- B. parenchymal necrosis and is not dose-related
- C. cholestasis and is dose-related
- D. cholestasis and is not dose-related**

Which type(s) of hepatitis frequently progress(es) to cirrhosis?

- A. chronic active**
- B. chronic persistent
- C. both
- D. neither

Which of the following is the most benign type of hepatitis?

- A. chronic active hepatitis
- B. subacute hepatic necrosis
- C. alcoholic hyaline and acute inflammation
- D. chronic persistent hepatitis**
- E. massive hepatic necrosis

Inflammation of the portal triads which spills into adjacent lobules, bands of inflammation extending between portal areas and terminal hepatic (central) veins, and foci of liver cell necrosis throughout the lobules is the picture of

- A. fulminant hepatitis
- B. cirrhosis
- C. chronic persistent hepatitis
- D. chronic active hepatitis**
- E. chronic passive congestion

The most important substance involved in the formation of gallstones is:

- A. calcium
- B. bilirubin
- C. cholesterol**
- D. lecithin
- E. bile salts

Gallstone ileus is most likely to be associated with:

- A. acute cholecystitis
- B. choledocholithiasis
- C. acute cholangitis
- D. cholecystoduodenal fistula**

At what age would the prevalence of gallstones be the highest?

- A. 20
- B. 40
- C. 60
- D. 80**

The most common complication of chronic cholecystitis is:

- A. acute cholecystitis**
- B. carcinoma of the gallbladder
- C. typhoid carrier state
- D. gallstone ileus

The pathogenic factor which appears to be responsible for the majority of instances of cholelithiasis is

- A. supersaturation of bile with cholesterol**
- B. infection of the biliary tract
- C. autoimmune inflammation of the gallbladder
- D. hemolytic anemia
- E. lecithinase secreted by the gallbladder mucosa

Gallstone ileus is generally a complication of:

- A. gallstone migration into the common bile duct and intestine
- B. decreased peristalsis secondary to acute cholecystitis
- C. perforation of the gall bladder with formation of cholecystointestinal fistula
- D. formation of gallstones in the ileum

Cholelithiasis is associated with all of the following except:

- A. atresia of extrahepatic bile ducts
- B. acute cholecystitis
- C. chronic cholecystitis
- D. hydrops of the gallbladder
- E. carcinoma of gallbladder

Complications associated with gallstones include each of the following except:

- A. obstruction of bile ducts
- B. cholangitis
- C. acute hepatic necrosis
- D. carcinoma of gallbladder
- E. acute pancreatitis

Cirrhosis produces most of its clinical manifestations by means of:

- A. hepatic necrosis leading to insufficient number of liver cells to maintain life
- B. cancerous change in regenerating nodules
- C. obstruction of large biliary passages
- D. production of abnormal proteins by regenerating nodules
- E. vascular derangements in the liver

The triad of hyperglycemia, bronzing of the skin and cirrhosis of the liver is classically associated with:

- A. schistosomiasis
- B. idiopathic hemochromatosis
- C. multiple blood transfusions
- D. alcoholic cirrhosis
- E. Wilson's disease

Hyaline material within the cytoplasm of hepatocytes is most commonly found in:

- A. viral hepatitis
- B. hemochromatosis
- C. hepatocellular carcinoma
- D. alcoholic liver disease**
- E. biliary cirrhosis

Complications of cirrhosis include

- A. atresia of bile ducts
- B. esophageal varices**
- C. both
- D. neither

At autopsy of a middle-aged male, the following lesions are seen in the liver: fatty metamorphosis, Mallory bodies, infiltration by polymorphonuclear cells and lymphocytes, diffuse fibrosis extending around and into the hepatic lobules. The histologic features suggest which of the following is of possible importance in pathogenesis of the disease?

- A. alcoholism**
- B. viral hepatitis
- C. chronic, low-grade bacterial infection of the liver
- D. ingestion or inhalation of carbon tetrachloride
- E. hypersensitivity to a drug

The most common antecedent of cirrhosis in the United States is:

- A. alcoholism**
- B. drug-induced liver disease
- C. hemochromatosis
- D. alpha-1-antitrypsin deficiency
- E. non-A, non-B hepatitis

Biliary cirrhosis may be due to

- A. amyloidosis

- B. amebiasis
- C. Schistosoma hematobium
- D. choledocholithiasis**
- E. chronic passive congestion of the liver

Which of the following is not a significant factor in the production of alcoholic liver injury?

- A. total amount of alcohol consumed
- B. type of alcoholic beverage consumed**
- C. duration of alcoholic consumption
- D. previous episodes of acute alcoholic hepatitis

Which type of cirrhosis is most predisposing to hepatocellular carcinoma?

- A. biliary
- B. alcoholic
- C. cardiac
- D. viral induced (hepatitis B)**

The major cause of portal hypertension is

- A. prehepatic
- B. posthepatic
- C. intrahepatic**
- D. cardiac

Shunting of blood from the portal to the hepatic venous system without passing through the sinusoids is thought to be responsible for:

- A. portal hypertension
- B. cirrhosis
- C. hepatic encephalopathy**
- D. hemangiomas

A 65-year-old man was found unconscious in an alley surrounded by evidence of massive hematemesis. Upon admission to the emergency room, he was noted to be jaundiced. You would also expect to find all of the following except:

A. acute hemorrhagic pancreatitis

B. ascites

C. cirrhosis

D. esophageal varices

E. portal hypertension

The most common factor in the pathogenesis of esophageal varices is obstruction at the level of the:

A. esophageal veins

B. hepatic vein

C. intrahepatic vessels

D. portal vein

On routine physical examination, a 58-year-old woman has an enlarged nodular liver. Liver scan shows multiple filling defects consistent with metastases. The most likely site of the primary cancer is:

A. gallbladder

B. kidney

C. uterus

D. gastrointestinal tract

E. lymph nodes

Liver cell carcinoma is most frequently seen in patients who also have:

A. acquired immunodeficiency syndrome

B. cholelithiasis

C. cirrhosis

D. ingested testosterone over long periods

E. schistosomiasis

Features of hepatocellular carcinoma include each of the following except:

A. association with cirrhosis

B. extension into the portal and hepatic veins

C. often multicentric

D. previous hepatitis A infection

Features of carcinoma of the gallbladder include each of the following except:

- A. associated cholelithiasis
- B. direct invasion of the liver
- C. early production of symptoms
- D. histologically similar to adenocarcinoma of the pancreas
- E. metastases to lymph nodes

A striking elevation of serum alpha-fetoprotein suggests:

- A. liver metastases from colon cancer
- B. carcinoma of the gallbladder
- C. acute viral hepatitis
- D. primary biliary cirrhosis
- E. hepatocellular carcinoma

Hepatocellular carcinomas usually are associated with elevated serum:

- A. anti-mitochondrial antibody
- B. alpha fetoprotein
- C. carcinoembryonic antigen
- D. anti-nuclear antibody

A 31-year-old woman who had taken oral contraceptives for eight years complained of pain and fullness in the right upper quadrant of her abdomen. A liver scan demonstrated a large filling defect in the right lobe. An 8 cm tumor was resected. Which one of the following is the most likely diagnosis?

- A. angiosarcoma
- B. cholangiocarcinoma
- C. hepatocellular carcinoma
- D. liver cell adenoma
- E. metastatic carcinoma

Alpha fetoprotein is a good serologic marker for

- A. cholangiocarcinoma
- B. metastatic carcinoma from the colon
- C. hepatocellular carcinoma
- D. chronic active hepatitis
- E. alcoholic liver injury

Carcinoma of the gallbladder is usually associated with

- A. gallstones
- B. high cure rate
- C. both
- D. neither

Each of the following is consistent with obstructive jaundice except:

- A. bilirubinuria
- B. direct bilirubin > 50% of the total bilirubin
- C. elevated serum alkaline phosphatase
- D. elevated serum gamma-glutamyl transpeptidase
- E. elevated urine urobilinogen

Acute hepatic failure may result from:

- A. viral hepatitis
- B. halothane anesthesia
- C. both
- D. neither

Which is likely to produce the greatest liver enlargement?

- A. acute hepatitis
- B. amoebic abscess
- C. cardiac sclerosis
- D. metastatic neoplasm
- E. postnecrotic cirrhosis

The major cause of death in patients with carcinoma of the gallbladder is

- A. invasion of the liver
- B. lung metastases
- C. lymph node metastases
- D. spread to the intestines

Acute centrilobular necrosis of the liver is usually associated with:

- A. congestive heart failure
- B. Milroy's disease
- C. obesity
- D. pregnancy
- E. contraceptive pill

The most common neoplasm involving the liver, biliary tree or pancreas is:

- A. adenoma of the liver
- B. carcinoma of the pancreas
- C. hepatocellular carcinoma
- D. carcinoma metastatic to the liver

Which of the following types of liver damage has the best prognosis?

- A. alcoholic hepatitis
- B. subacute hepatitis
- C. chronic persistent hepatitis
- D. acute yellow atrophy
- E. chronic active hepatitis

The most likely complication of chronic cholecystitis is:

- A. acute cholecystitis
- B. carcinoma of the gallbladder
- C. typhoid carrier state
- D. gallstone ileus

A two-week-old male infant presents with intense jaundice. After suitable laboratory tests, a liver biopsy is performed. Histologic examination reveals bile stasis, bile duct proliferation, delicate fibrils of intralobular connective tissue and active hematopoiesis. The entire parenchyma is composed of multinucleated giant liver cells, many with bile in their cytoplasm. In your differential diagnosis, you would consider:

- A. erythroblastosis fetalis
- B. neonatal hepatitis or atresia of bile ducts**
- C. congenital syphilis
- D. the histology normal for this age
- E. protein malnutrition

Patients with primary liver cancer often have a positive serum test for:

- A. hepatitis B surface antigen
- B. alpha-fetoprotein**
- C. Bence-Jones proteins
- D. pyroglobulins
- E. cryoglobulins

Which of the following types of hepatitis has the best prognosis?

- A. chronic active hepatitis
- B. subacute hepatic necrosis
- C. alcoholic hepatitis
- D. chronic persistent hepatitis**
- E. massive hepatic necrosis

Chronic hepatitis is usually not associated with:

- A. hepatitis A**
- B. hepatitis B
- C. hepatitis non-A non-B
- D. immunopathic (immune etiology)

An elderly first generation U.S. citizen of Chinese extraction develops hepatomegaly, ascites and jaundice. His family states that he is not an alcoholic. Liver biopsy most likely shows:

- A. infiltrating anaplastic spindle cells
- B. groups of anaplastic cells arranged in trabeculae
- C. fatty change
- D. epithelioid cell granulomas
- E. acute cholangitis

An elderly Chinese male develops hepatomegaly, ascites and jaundice. His family states that he is not an alcoholic. The most likely diagnosis is:

- A. hemangiosarcoma, liver
- B. hepatocellular carcinoma
- C. hepatic adenoma
- D. hemangioma, liver

The most common neoplasm involving the liver:

- A. hepatocellular carcinoma
- B. cholangiocarcinoma
- C. metastatic carcinoma
- D. metastatic sarcoma

Hepatocellular necrosis is characteristic of:

- A. acute hepatitis
- B. chronic hepatitis
- C. both
- D. neither

Which has/have a duration usually six months or less:

- A. acute hepatitis
- B. chronic hepatitis
- C. both
- D. neither

Patients with primary liver cancer are most likely to have a positive serum test for:

- A. LATS
- B. Bence-Jones proteins
- C. carcinoembryonic antigen
- D. alpha feto protein**
- E. cryoglobulins

A teenage drug user develops malaise, jaundice and an SGOT of 1100. The liver biopsy will most likely show:

- A. Mallory's hyaline and fatty change
- B. lobular disarray and acidophilic bodies**
- C. decreased portal bile ducts
- D. marked cholestasis and portal inflammation
- E. hepatocellular necrosis and PMN infiltration

A 25-year-old female lab assistant has suffered from intermittent indigestion and intolerance for fatty foods over several years. Her gallbladder now is most likely to show:

- A. epithelioid cell granulomas
- B. gall stones**
- C. necrosis and PMN infiltration
- D. fatty change

Associated with cholelithiasis:

- A. chronic cholecystitis
- B. carcinoma of the gall bladder
- C. both**
- D. neither

A 25-year-old female lab assistant has suffered from intermittent indigestion and intolerance for fatty foods over several years. The diagnosis most likely is:

- A. sarcoidosis
- B. chronic cholecystitis**
- C. torsion of the gallbladder
- D. carcinoma of the gallbladder

E. acute cholecystitis

Thickening of gall bladder wall on gross examination:

- A. chronic cholecystitis
- B. carcinoma of the gall bladder
- C. both
- D. neither

Hepatocellular degeneration and inflammation characteristic:

- A. viral hepatitis
- B. alcoholic hepatitis
- C. both
- D. neither

Frequently develops in a patient with cirrhosis:

- A. hepatocellular carcinoma
- B. hepatocellular adenoma
- C. both
- D. neither

A 35-year-old immigrant Japanese male entered the hospital with vague abdominal complaints and weight loss. He has a history of chronic active hepatitis and his serum was positive for HBsAG. This patient developed hypoglycemia. The most likely explanation for this is:

- A. his liver cancer caused the hypoglycemia
- B. he developed a second neoplasm of the pancreatic islets which secreted insulin
- C. he was malnourished which depleted his liver glycogen stores
- D. his chronic active hepatitis caused liver failure

A 40-year-old male alcoholic was admitted for hematemesis. His liver was enlarged and the serum chemistry included elevations of alanine transaminase (ALT or SGPT) and aspartate transaminase (AST or SGOT) as well as bilirubin. The liver was enlarged and spider angiomas and ascites were present. On a statistical basis the liver biopsy would most likely show:

- A. fatty liver only
- B. alcoholic hepatitis only
- C. normal liver
- D. cirrhosis

History of vinyl chloride exposure frequent:

- A. hepatocellular carcinoma
- B. hepatocellular adenoma
- C. both
- D. neither

A 40-year-old male alcoholic was admitted for hematemesis. His liver was enlarged and the serum chemistry included elevations of ALT and AST as well as bilirubin. The liver was enlarged and spider angiomas and ascites were present. If the liver biopsy shows evidence of alcoholic hepatitis, this evidence should include all of the following except:

- A. neutrophils
- B. fatty change
- C. amyloid deposition
- D. Mallory bodies

Fat and Mallory bodies characteristic:

- A. viral hepatitis
- B. alcoholic hepatitis
- C. both
- D. neither

A female teenager develops attacks of malaise, jaundice with elevated AST (aspartate transaminase) over the past year. The most likely diagnosis is:

- A. acute viral hepatitis
- B. alcoholic hepatitis
- C. chronic persistent hepatitis
- D. chronic active hepatitis
- E. extrahepatic biliary obstruction

A 25-year-old female lab assistant has suffered from intermittent indigestion and intolerance for fatty foods over several years. Her gallbladder is most likely to show:

- A. Aschoff Rokitansky sinuses
- B. massive necrosis and ulceration
- C. granulomas
- D. acute inflammation with abscesses
- E. anaplastic cells invading the stroma

A 25-year-old female lab assistant has suffered from intermittent indigestion and intolerance for fatty foods over several years. The diagnosis most likely is:

- A. sarcoidosis
- B. chronic cholecystitis
- C. torsion of the gallbladder
- D. carcinoma of the gallbladder
- E. acute cholecystitis

A 25-year-old female lab assistant has suffered from intermittent indigestion and intolerance for fatty foods over several years. She now develops an attack of severe right upper abdominal pain with right upper quadrant tenderness and fever but no jaundice. Her gallbladder is most likely to show:

- A. foreign body giant cells
- B. bilirubin stones
- C. necrosis and PMN infiltration
- D. acute vasculitis
- E. infiltrating anaplastic glands

A 52-year-old female developed weight loss and painless jaundice of 2 months duration. A mass was palpable in the right upper quadrant. She most likely has:

- A. a positive Trousseau's sign
- B. Zollinger-Ellison's syndrome
- C. Courvoisier's gall bladder
- D. Gardner's syndrome

Frequently develops in a patient on steroids:

- A. hepatocellular carcinoma
- B. hepatocellular adenoma**
- C. both
- D. neither

Alpha fetoprotein frequently greatly elevated:

- A. hepatocellular carcinoma**
- B. hepatocellular adenoma
- C. both
- D. neither

Acidophilic bodies strongly suggest:

- A. viral hepatitis**
- B. alcoholic hepatitis
- C. both
- D. neither

A 35-year-old immigrant Japanese male entered the hospital with vague abdominal complaints and weight loss. He has a history of chronic active hepatitis and his serum was positive for HBsAG. Exploratory laparotomy was performed because a space occupying lesion was noted on CT scan of this patient. Biopsy of the liver tumor in this case would most likely show:

- A. cholangiocarcinoma
- B. adenoma
- C. hepatoblastoma
- D. hepatocellular carcinoma**

Which of the following types of liver damage has the best prognosis?

- A. alcoholic hepatitis
- B. submassive hepatic necrosis
- C. fatty change**
- D. massive necrosis

E. chronic active hepatitis

A two-week-old male infant presents with intense jaundice. After suitable laboratory tests, a liver biopsy is performed. Histologic examination reveals bile stasis, bile duct proliferation, delicate fibrils of intralobular connective tissue and active hematopoiesis. The entire parenchyma is composed of multinucleated giant liver cells, many with bile in their cytoplasm. In your differential diagnosis you would consider:

- A. erythroblastosis fetalis
- B. neonatal hepatitis or atresia of extrahepatic bile ducts**
- C. congenital syphilis
- D. the histology is normal for this age
- E. protein malnutrition

A female teenager develops attacks of malaise, jaundice with elevated aspartate transaminase (SGOT or AST) over the past year. The liver biopsy will most likely show:

- A. Mallory's hyaline and fatty change
- B. lobular disarray and acidophilic bodies
- C. decreased portal bile ducts
- D. piecemeal necrosis and bridging necrosis**
- E. hepatocellular necrosis and polymorphonuclear leukocyte infiltration

A teenage drug user develops malaise, jaundice and an aspartate transaminase (SGOT or AST) of 1100 (reference range = 10—35). The most likely diagnosis is:

- A. acute viral hepatitis**
- B. alpha-1-antitrypsin deficiency
- C. Reye's syndrome
- D. chronic active hepatitis
- E. extrahepatic biliary obstruction

A two-week-old male infant presents with intense jaundice. After suitable laboratory tests, a liver biopsy is performed. Histologic examination reveals bile stasis, bile duct proliferation, portal fibrosis and active hematopoiesis. Many of the hepatocytes contain bile in their cytoplasm. The most likely diagnosis is:

- A. drug induced cholestasis
- B. erythroblastosis fetalis

C. disseminated herpes or cytomegalic inclusion disease

D. congenital syphilis

E. atresia of extrahepatic bile ducts

A 25-year-old female lab assistant has suffered from intermittent indigestion and intolerance for fatty foods over several years. Her gallbladder is most likely to show:

A. foreign body giant cells

B. massive necrosis and ulceration

C. anaplastic infiltrating glands

D. Rokitansky -Aschoff sinuses

E. acute inflammation with abscesses

The most likely complication of chronic cholecystitis is

A. gallstone ileus

B. typhoid carrier state

C. carcinoma of the gallbladder

D. acute cholecystitis