

# GIT Block

Revision Questions for the 5<sup>th</sup> week

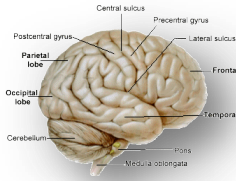


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## **Table of contents :**

Anatomy	(3)
Histology	(5)
Physiology	(6)
Biochemistry	(8)
Medicine	(9)
Pharmacology	(10)
Pathology	( 12 )
Radiology	(19 )



## **Anatomy:**

### **Anatomy of Pancreas & Biliary System**

#### **1) Spleen located in the ?**

- A. epigastrium
- B. Left upper quadrant of abdomen
- C. Right upper quadrant of abdomen
- D. Umbilical region
- E. A-b

Answer: E

#### **2) regarding the tail of PANCREAS which of the following is true ?**

- A. a)behind the superior mesenteric vessels
- B. b)may get injured during splenectomy at T12
- C. c)splenic vein is embedded in its posterior surface
- D. d)front of origin of superior mesenteric artery
- E. E)Lies in the splenicorenal ligament at T10

Answer: B

**Note:** choice "A" uncinat process , "c"Body of pancreas ,"D" neck of pancreas

#### **3)which of the following lies posterior to pancreas**

- A. a)upper 1/3 of right kidney
- B. b)Transverse colon
- C. c)Left psoas muscle
- D. d)right adrenal gland

Answer: C

#### **4)Accessory duct of pancreas "Santorini" receive tributary from?**

- A. a)tail of pancreas
- B. b)superior portion of the head of pancreas
- C. c)inferior portion of head of pancreas
- D. d)uncinate process

Answer: B

**4)Head & neck supplied by ?**

- A. a)Celiac trunk through inferior pancreatico-duodenal artery
- B. b)Superior mesenteric artery through Superior pancreatico-duodenal artery
- C. c)Splenic artery
- D. d) Celiac trunk through through superior pancreatico-duodenal artery

Answer: D

Note: choice "C" supplied "Body & tail "

**5)Fundus of Gallbladder contact with the anterior abdominal at?**

- A. tip of the ninth right costal cartilage.
- B. b)tip of the fourth right costal cartilage.
- C. c)c3
- D. d)tip of the ninthleft costal cartilage

Answer: A



# Histology :

## histology Pancreas & Biliary System

### 1) which of the following composed of cholangiocytes.?

- A. a) Canals of Hering
- B. b) Bile Canaliculi
- C. c) Interlobular Bile Ducts
- D. d) Bile Ductules
- E. e) a-d

Answer: E

### 2) forming of the right and left hepatic ducts by?

- A. a) Canals of Hering
- B. b) Bile Canaliculi
- C. c) Interlobular Bile Ducts
- D. d) Bile Ductules

Answer: C

### 3) epithelium of Interlobular Bile Ducts near to portahepatis is ?

- A. a) simple cuboidal epithelium
- B. b) simple columnar epithelium
- C. c) simple columnar epithelium with goblet cell
- D. d) simple cuboidal epithelium with goblet cell

Answer: B



# Physiology :

## Bile Formation & Enterohepatic Circulation

### Q1) regarding to function of gall bladder which of the following is wrong?

- A. stores bile but it concentrates and elevate the pH
- B. Gall bladder epithelium secretes mucus
- C. Buffer of biliary pressure
- D. stores bile but it concentrates and lowers the pH

Answer: A

### 2)The result in drop of pH of gall bladder bile due to?

- A. decreased  $\text{NaHCO}_3$
- B. b)increased  $\text{NaHCO}_3$
- C. c)decreased  $\text{NaCl}$
- D. d)a-c

Answer: A

### 3) The human liver secretes bile at a pressure of?

- A. a)25 cm  $\text{H}_2\text{O}$
- B. B)30 cm  $\text{H}_2\text{O}$
- C. c)0-16 cm  $\text{H}_2\text{O}$
- D. d)a-c

Answer: A

**Note:** choice "B" sphincter of Oddi will close , choice "C" Pressure in the lumen of the gall bladder

### 4)which of the following substances increase the volume of secretion of bile from the liver?

- A. a)Methanethiol
- B. b) choleretics
- C. c)cholagogues.
- D. d)b-c

Answer: B

**Note:** choice "C" Gall bladder evacuants "emptying"

### 5)Bile acid dependent component depends mainly on ?

- A. enterohepatic circulation.
- B. b)hormonal
- C. c)neural

Answer: A

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## Physiology of Bile Salts & Pathogenesis of Gall stones

### 1) bile acid pool ranges from ?

- A. a) 2-4g
- B. b) 2-16g
- C. c) 20-30g
- D. d) 6-9g

Answer: A

### 2) production of secondary bile acids by?

- A. A) dehydroxylation of bile acid
- B. B) hydroxylation of bile acid
- C. C) oxidation of bile acid

Answer: A

### 3) bile acid absorbed mainly in ?

- A. a) colon
- B. b) terminal ileum
- C. c) jejunum
- D. d) duodenum

Answer: B

### 4) Cholesterol stones may cause by all of the following except ?

- A. a) Too much secretion of cholesterol in bile.
- B. b) Too much absorption of water from the bile
- C. c) Too much secretion of bile salts & lecithin from bile
- D. d) Inflammation of the epithelium of the gall bladder

Answer: C

### 5) regarding to Brown pigment stones which of the following is WRONG?

- A. A) contain  $\text{Ca}^{++}$  palmitate
- B. B) found in the gallbladder
- C. C) found in bile ducts
- D. D) following biliary dysmotility and bacterial infection

Answer: B



## **Biochemistry :**

### Liver function test

**1) High increase in ..... And moderate increase in ..... Both Indecate Alcoholic Hepatitis :**

- A- GGT , ALT
- B- ALT , AKP
- C- ALT, GGT

"A"

**2) which one is highly specific for bone disease ?**

- A- GGT
- B- ALT
- C- AKP

"C"

**3) Prothrombin time increase in which of the following ?**

- A- Vit. K deficincy
- B- damage of the liver to more than 80%
- C- both

"C"

**4) which one of the following will be the result of chronic liver diseases ?**

- A- decrease the globulin and increase albumin
- B- decrease the albumin and increase globulin
- C- none

"B"

**5) Which Type of Bilirubin raised in hemolytic jaundice?**

- A- Unconjugated and conjugated
- B- Unconjugated
- C- conjugated

"B"





## **Medicine :**

### **Ascitis**

**1) which one of these cases will cause painful ascitis ?**

- A- bacterial peritonitis
  - B- malignancy
  - C- alcoholic hepatitis
  - D- all of them
- "D"

**2) patient with long standing stable cirrhosis suddenly develop ascitis , which one is the most likely cause ?**

- A- carcinoma
  - B- viral
  - C- CHF
- "A"

**3) which of the following will increase in case of presinusoidal portal hypertension ?**

- A- WHVP
  - B- PVP
  - C- HVPG
- "B"

**4) the major function of the fenestrae is :**

- A- decrease the portal perfusion
  - B- increase the portal perfusion
  - C- none of them
- "A"

**5) portal hypertension will happen if the pressure is :**

- A- above 5 mmHg
  - B- above 16 mmHg
  - C- above 12 mmHg
- "C"

**6) the result of collagen deposition is ..... , while the fibrosis will result in ..... ?**

- A- presinusoidal , postsinusoidal
  - B- sinusoidal , postsinusoidal+presinusoidal
  - C- sinusoidal , sinusoidal+postsinusoidal
- "C"



# Pharmacology :

## HEPATOTOXIC DRUGS

1) which of the following drugs can cause direct cumulative hepatotoxicity?

- A. a)Statins
- B. b) Acetaminophen
- C. c)Oral contraceptives
- D. d)Amiodarone
- E. e)c-d

Answer: E

Note: "A & B" cause Direct dose dependent hepatotoxicity "Increased Dose"

2)which of the following drug can cause Viral hepatitis-like pattern?

- A. a)Isoniazid
- B. b)Methyldopa
- C. c)Phenytoin
- D. d)all

Answer: D

3)which of the following drugs Interfere with bilirubin metabolism?

- A. Erythromycin
- B. Corticosteroids
- C. Tetracycline
- D. Rifampicin
- E. e)a-d

Answer: E

Note: "B &c" Interfere with protein synthesis

4)which of the following drugs cause CHOLESTASIS ?

- A. a)Erythromycin
- B. b)Rifamycin
- C. c)Chlorpropamide
- D. d)Oral contraceptives
- E. e)all

Answer: E

Note: symptoms of CHOLESTASIS "increase ALP"(Alkaline phosphatase) + "severe pruritis"

**5)which of the following drugs cause HEPATITIS ?**

- A. a)Acetaminophen
- B. b)Amiodarone
- C. c)NSAIDs
- D. d)Isoniazid
- E. e)all

Answer: E

**Note: symptoms of HEPATITIS “increase “ALT”(Alanine aminotransferases) + “of malaise, severe anorexia”**

**6-Ahmed use acetaminophen after that he complains of nausea, vomiting, pallor, and sweating after massive overdoses, ahmed develop symptoms of metabolic acidosis which of the following drugs treat acetaminophen toxicity ?**

- A. a)N-acetylcysteine
- B. b)L-carnitine
- C. c)Corticosteroids
- D. d)Cholestyramine
- E. e)Ursodeoxycholic acid

Answer: A

**Note: “B” for “valproate toxicity” , “C” for “severe allergic reaction”**

**“D” for “pruritus” , “E” for “cholestatic liver”**



## Pathology :

### Liver cirrhosis and its complications

A 62-year-old man is brought to the emergency room in a disoriented state. Physical examination reveals signs of poor hygiene and an odor of alcohol, as well as jaundice, splenomegaly, and ascites. The patient has a coarse flapping tremor of the hands, palmar erythema, and diffuse spider angiomata. The abdomen displays dilated paraumbilical veins. Serum levels of ALT, AST, alkaline phosphatase, and bilirubin are all mildly elevated. Soon after admission, the patient vomits a large amount of blood. Which of the following is the most likely underlying cause of hematemesis in this patient?

- (A) Acute alcoholic hepatitis
- (B) Acute gastritis
- (C) Cirrhosis
- (D) Hepatic steatosis
- (E) Mallory-Weiss tear

**The answer is C: Cirrhosis.** Patients with cirrhosis often present with complications of portal hypertension, including ascites, splenomegaly, and bleeding esophageal varices. Esophageal varices arise from the opening of portal-systemic venous collaterals. Mallory-Weiss tear (choice E) is a possible cause of hematemesis, but is only seen in patients with protracted vomiting. The other choices do not present with portal hypertension or systemic signs of endstage liver disease.

**Diagnosis:** Alcoholic cirrhosis, bleeding esophageal varices

For the patient described in Question 1, which of the following pathophysiologic mechanisms is most directly associated with the development of ascites?

- (A) Decreased aldosterone secretion
- (B) Decreased intravascular volume
- (C) Hyperalbuminemia
- (D) Increased intravascular oncotic pressure
- (E) Increased portal hydrostatic pressure

**The answer is E: Increased portal hydrostatic pressure.**

In the setting of cirrhosis, decreased intravascular oncotic pressure due to hypoalbuminemia is also an important factor in the pathogenesis of ascites (see choice D). Aldosterone secretion (choice A) is increased in cirrhotic patients. Overall, imbalances in Starling forces lead to transudation of fluid into the abdominal cavity.

**Diagnosis:** Alcoholic cirrhosis, portal hypertension

**A 3-day-old neonate born after a 32-week gestation develops yellow skin. Physical examination of the infant is unremarkable. Which of the following is most likely to be increased in this neonate's serum?**

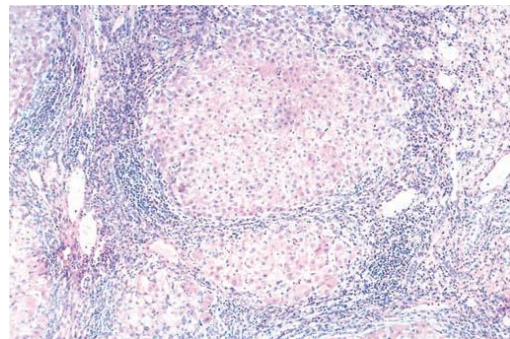
- (A) Alanine aminotransferase
- (B) Carotene
- (C) Conjugated bilirubin
- (D) Galactosyltransferase
- (E) Unconjugated bilirubin

**The answer is E: Unconjugated bilirubin.** Approximately 70% of normal newborns exhibit transient unconjugated hyperbilirubinemia. Immaturity of the liver leads to inadequate conjugation of bilirubin. This physiologic jaundice is more pronounced in premature infants due to inadequate hepatic clearance of bilirubin and increased erythrocyte turnover. Fetal bilirubin levels in utero remain low because bilirubin crosses the placenta, where it is conjugated and excreted by the mother's liver. The other enzymes are unrelated to neonatal jaundice. Elevated serum levels of carotene (choice B) reflects hypervitaminosis A.

**Diagnosis:** Neonatal (physiologic) jaundice

**A 30-year-old man presents with a 9-month history of fatigue and recurrent fever. He also complains of yellow skin and sclerae, abdominal tenderness, and dark urine. Physical examination reveals jaundice and mild hepatomegaly. Laboratory studies demonstrate elevated serum bilirubin (3.1 mg/ dL), decreased serum albumin (2.5 g/dL), and prolonged prothrombin time (17 seconds). Serologic tests reveal antibodies to hepatitis B core antigen (IgG anti-HBcAg). The serum is positive for HBsAg and HbeAg. A liver biopsy is shown in the image. What is the most likely diagnosis?**

- A) Acute hepatitis B
- (B) Alcoholic hepatitis
- (C) Chronic hepatitis B
- (D) Delta virus infection
- (E) Subacute hepatic necrosis secondary to hepatitis B Infection



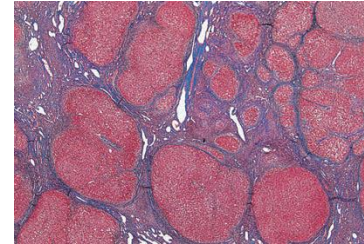
**The answer is C: Chronic hepatitis B.** Chronic hepatitis B refers to infection with hepatitis B virus (HBV) that is associated with necrosis and inflammation in the liver for more than 6 months.

The biopsy in this case shows hepatocellular nodules and chronically-inflamed fibrous septa (see photomicrograph). Surface antigen (HBsAg) is present in the serum of patients with chronic hepatitis B, and the presence of HbeAg is often associated with progression of the disease. Choices A, B, and E do not demonstrate cirrhosis as depicted and do not show the serologic characteristics of HBV infection.

**Diagnosis:** Hepatitis B, chronic

A 60-year-old man is found in a state of disorientation and is brought to the emergency room in a comatose state. He lived alone, ate poorly, and drank large amounts of hard liquor. Physical examination reveals an emaciated man with a distended abdomen, jaundice, ascites, and a slightly enlarged liver and spleen. A liver biopsy is shown in the image. What blood test would confirm a diagnosis of hepatic coma?

- A) Alanine aminotransferase
- B) Alkaline phosphatase
- C) Ammonia
- D) Bilirubin
- E) Urea nitrogen



**The answer is C: Ammonia.** The photomicrograph shows cirrhosis, with regenerative nodules of liver cells surrounded by fibrous septa.

Hepatic encephalopathy, a syndrome frequently observed in patients with cirrhosis of the liver, is characterized by personality changes, intellectual impairment, and a **depressed level of consciousness**. The development of hepatic encephalopathy is caused by increased serum concentrations of neurotoxic substances, among which is ammonia. Choices A, B, and D are elevated in a variety of liver diseases but are unrelated to hepatic encephalopathy. Blood urea nitrogen (choice E) is used to assess kidney function.

**Diagnosis:** Hepatic encephalopathy, alcoholic cirrhosis

A 58-year-old man with longstanding alcoholic cirrhosis presents with abdominal pain, fever, and an episode of hematemesis. Physical examination reveals jaundice and a markedly distended abdomen. The patient is disoriented and has a coarse flapping tremor of the hands. Laboratory studies reveal modestly elevated serum levels of AST and ALT (96 and 92 U/L, respectively) and a high serum level of alkaline phosphatase (320 U/L). Prothrombin time is prolonged (20 seconds). The WBC count is 18,000/ $\mu$ L. Shortly after admission, the patient develops coma, adult respiratory distress syndrome, and renal failure (oliguria and elevated serum levels of BUN and creatinine), leading to death within 3 days. Histologic examination of the patient's kidney at autopsy would most likely show which of the following?

- (A) Interstitial nephritis
- (B) Membranous nephropathy
- (C) No histologic changes
- (D) Proliferative glomerulonephritis
- (E) Pyelonephritis

**The answer is C: No histologic changes.** Hepatorenal syndrome usually occurs in the setting of cirrhosis and heralds a poor prognosis. The disorder is characterized by features of renal hypoperfusion, including oliguria, azotemia, and increased levels of serum creatinine. Microscopically, the kidney appears normal. Renal failure is caused by vasoconstriction and hypoperfusion of the kidneys, a combination mediated by various hormones and vasoactive substances, some of which may not be cleared by the cirrhotic liver. Similarly, a kidney from a patient in hepatorenal failure may be successfully transplanted into another person and assume normal functioning. The other choices are associated with direct injury to the renal parenchyma and exhibit characteristic histologic findings.

**Diagnosis:** Hepatorenal syndrome

**A 36-year-old, alcoholic woman presents with a 1-week history of yellow skin and sclerae. She has suffered persistent headaches. Her vital signs are normal. Physical examination reveals jaundice. Laboratory studies disclose markedly elevated levels of AST and ALT (956 and 1,400 U/L, respectively). A few days later, she develops hepatic encephalopathy and renal failure. A liver biopsy shows prominent centrilobular necrosis. Which of the following is the most likely diagnosis?**

- (A) Acetaminophen toxicity
- (B) Fatty liver of pregnancy
- (C) Metastatic carcinoma
- (D) Reye syndrome
- (E) Wilson disease

**The answer is A: Acetaminophen toxicity.** Drug toxicity should be suspected in all cases of acute hepatitis. In this case, centrilobular necrosis suggests acetaminophen toxicity. The toxic dose of acetaminophen after a single acute ingestion is in the range of 150 mg/kg in children and 7 g in adults. Acetaminophen is rapidly absorbed from the stomach and small intestine and conjugated in the liver to nontoxic agents, which then are eliminated in the urine. In cases of acute overdose, normal pathways of acetaminophen metabolism become saturated. Excess acetaminophen is then metabolized in the liver via the mixed function oxidase P450 system, yielding oxidative metabolites that cause predictable, hepatocellular necrosis. The centrilobular zones are particularly affected (centrilobular necrosis). Centrilobular necrosis is not seen in the other choices. Reye syndrome (choice D) occurs in children. Fatty liver of pregnancy (choice B) features microvesicular steatosis.

**Diagnosis:** Acetaminophen toxicity, hepatorenal syndrome

### Cancer of the liver and pancreas

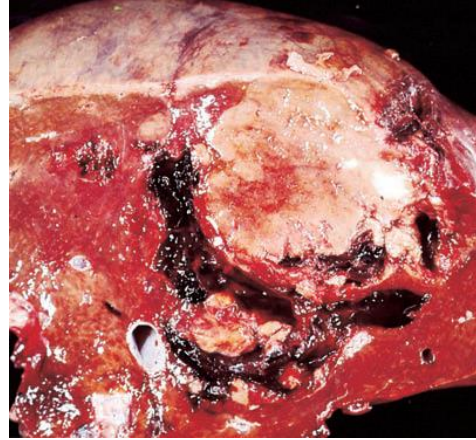
**A 52-year-old recent immigrant from Vietnam complains of abdominal swelling, weight loss, and upper abdominal pain of 3 weeks in duration. His past medical history includes malaria and infection with the liver fluke *Clonorchis sinensis*. The liver is hard to palpation. An abdominal CT scan shows a hypoattenuated mass with lobulated margins in the liver. A biopsy discloses well-differentiated neoplastic glands embedded in a dense fibrous stroma. Which of the following is the most likely diagnosis?**

- (A) Carcinoma of the gallbladder
- (B) Cholangiocarcinoma
- (C) Hemangiosarcoma
- (D) Hepatocellular carcinoma
- (E) Metastatic colon adenocarcinoma

**13 The answer is B: Cholangiocarcinoma.** Carcinoma originates anywhere in the biliary tree. Cholangiocarcinoma arising within the liver is associated with substantial fibrosis and can be confused with metastatic carcinoma and reactive fibrosis. These tumors occur at an increased frequency in persons infected with the liver fluke *C. sinensis*, which takes up residence in the biliary tree. Primary sclerosing cholangitis is another risk factor for this cancer. Patients with cholangiocarcinoma have a poor prognosis. The other choices are not associated with a history of *C. sinensis* infestation.

**Diagnosis:** Cholangiocarcinoma

25-year-old woman complains of sudden onset of acute abdominal pain. Physical examination shows abdominal distention. Her temperature is 37°C (98.6°F), respirations 22 per minute, heart rate 110 per minute, and blood pressure 70/50 mm Hg. A tap of the abdomen returns blood. A CT scan reveals a solitary 20-cm mass of the liver. A surgically resected portion of the liver is shown in the image. This patient's tumor was most likely associated with chronic exposure to which of the following?

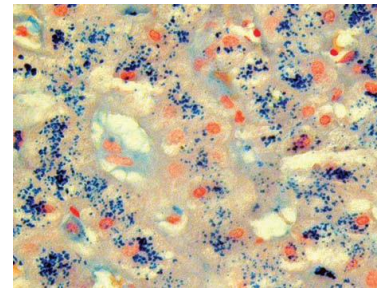


- (A) Carbon tetrachloride
- (B) Halothane
- (C) L-thyroxine
- (D) Oral contraceptives
- (E) Vinyl chloride

**The answer is D: Oral contraceptives.** Hepatic adenoma usually occurs as a solitary, sharply demarcated mass up to 40 cm in diameter and 3 kg in weight. On gross examination, the tumor is encapsulated and paler than the surrounding liver parenchyma. Hepatic adenoma is a complication of oral contraceptive use in women. In about 30% of patients with hepatic adenomas, the tumor tends to bleed into the peritoneal cavity, inducing hypovolemic shock that requires emergency treatment. The other choices do not induce hepatic tumors.

**Diagnosis:** Hepatic adenoma

A 54-year-old man presents with a 9-month history of progressive skin pigmentation. He passes large amounts of urine and is always thirsty. His father died of liver cancer. Physical examination reveals a dark skin color and an enlarged liver. Laboratory studies show normal serum levels of corticotropin. A glucose tolerance test indicates chemical diabetes. A liver biopsy stained with Prussian blue is shown in the image. If untreated, which of the following conditions is most likely to develop in this patient?



- (A) Acute hepatitis
- (B) Addison disease
- (C) Cholangiocarcinoma
- (D) Cholelithiasis
- (E) Hepatocellular carcinoma

**The answer is E: Development of hepatocellular carcinoma.**

Hereditary hemochromatosis (HH) is a common, autosomal recessive, genetic disorder that is characterized by excessive iron absorption and the toxic accumulation of iron in parenchymal cells, particularly of the liver, heart, and pancreas. In the liver, HH leads to cirrhosis and a high incidence of primary hepatocellular carcinoma. The clinical hallmark of advanced HH is the presence of other diseases such as diabetes, skin pigmentation, and cardiac failure. The Prussian blue stain binds iron and provides histologic evidence for iron overload. Addison disease (choice B) presents with skin pigmentation but reflects autoimmune destruction of the adrenal glands.

**Diagnosis:** Hereditary hemochromatosis



**A 60-year-old man presents with a 3-week history of weight loss, vague abdominal pain, and progressive yellowing of his skin and sclerae. He also reports the recent onset of intermittent pain in the upper and lower extremities. Laboratory studies show a serum bilirubin level of 15 mg/dL, mostly in the conjugated form. A CT scan of the abdomen reveals a mass in the head of the pancreas. The patient develops sudden shortness of breath and is diagnosed with pulmonary thromboembolism. Which of the following is the most likely cause of thromboembolism in this patient?**

- (A) Adenocarcinoma of the ampulla of Vater
- (B) Gastrinoma of the pancreas
- (C) Insulinoma of the pancreas
- (D) Pancreatic adenocarcinoma
- (E) Pancreatic pseudocyst

**8 The answer is D: Pancreatic adenocarcinoma.**

Adenocarcinoma is the most common malignant tumor of the pancreas. **Migratory thrombophlebitis**, which is also referred to as Trousseau syndrome, may accompany adenocarcinoma of the pancreas as well as other malignancies. The cause of migratory thrombophlebitis is not entirely understood, but it is thought that the tumor releases thrombogenic substances into the circulation (e.g., serine proteases) that initiate the coagulation cascade. The CT scan excludes adenocarcinoma of the ampulla of Vater (choice A). Endocrine tumors of the pancreas (choices B and C) are not expected to induce Trousseau syndrome.

**Diagnosis:** Pancreatic adenocarcinoma

**A 68-year-old man complains of vague abdominal pain, intermittent fever, and a 20-lb (9-kg) weight loss over the past 6 months. For the past 12 years, he has suffered from chronic hepatitis B. On physical examination, the patient shows diffuse abdominal tenderness, hepatomegaly, and mild jaundice. A CT scan of the abdomen reveals a diffusely nodular liver, with a dominant mass measuring 3 cm in diameter. Which of the following serum markers is useful for monitoring the progression of disease in this patient?**

- (A) Alkaline phosphatase
- (B) Alpha-fetoprotein
- (C) Anti-HBc antibody
- (D) Carcinoembryonic antigen
- (E) Human chorionic gonadotropin

**The answer is B: Alpha-fetoprotein (AFP).** AFP is a glycoprotein that is normally synthesized in the fetus by the yolk sac, liver, and gastrointestinal tract. In adults, an elevated serum level of AFP is a useful indicator of hepatocellular carcinoma and germ cell tumors of the testis. AFP levels decline rapidly after surgical resection of liver cell cancer or treatment of patients with metastatic germ cell tumors. Alkaline phosphatase (choice A) is a common indicator of hepatobiliary disease. Carcinoembryonic antigen (choice D) is principally used to monitor gastrointestinal cancers.

**Diagnosis:** Hepatocellular carcinoma

## Cholecystitis

A 47-year-old woman presents with a 3-month history of vague upper abdominal pain after fatty meals, some abdominal distension, and frequent indigestion. Physical examination shows an obese woman (BMI = 30 kg/m<sup>2</sup>) with right upper quadrant tenderness. An ultrasound examination discloses multiple echogenic objects in the gallbladder. The opened gallbladder is shown in the image. Which of the following metabolic changes is most likely associated with the formation of gallstones in this patient?

- (A) Decreased hepatic bilirubin conjugation
- (B) Decreased serum albumin
- (C) Increased bilirubin uptake by the liver
- (D) Increased hepatic calcium secretion
- (E) Increased hepatic cholesterol secretion

**The answer is E: Increased hepatic cholesterol secretion.**

Cholesterol stones are round or faceted, yellow to tan, and may be single or multiple. Risk factors for cholesterol stones include female sex, diabetes, pregnancy, and estrogen therapy. Solitary, yellow, hard gallstones are associated with bile that is supersaturated with cholesterol. During their reproductive years, women are up to three times more likely to develop cholesterol gallstones than men. If the bile contains excess cholesterol or is deficient in bile acids, it becomes supersaturated with cholesterol and precipitates to form stones (lithogenic bile). In obese women, cholesterol secretion by the liver is increased. Impaired gallbladder motor function is another risk factor that leads to gallstone formation. In this case, stasis permits the formation of biliary sludge, which then progresses to macroscopic stones.

Choices A and B are not associated with gallstones. Choices C and D are not physiologic.

**Diagnosis:** Cholelithiasis, cholesterol gallstones

A 45-year-old, mildly obese woman presents with a 1-week history of upper abdominal pain, fever, shaking chills, and occasional vomiting. Physical examination shows severe right upper quadrant tenderness. Laboratory studies include serum bilirubin of 1.0 mg/dL, AST of 25 U/L, ALT of 35 U/L, alkaline phosphatase of 220 U/L (high), WBC of 14,000/ $\mu$ L, and amylase of 95 U/L (normal). An ultrasound examination of the abdomen reveals a normal-appearing liver and bile duct and thickening of the wall of the gallbladder. Which of the following is the most likely diagnosis?

- (A) Acute cholecystitis
- (B) Acute pancreatitis
- (C) Adenocarcinoma of the gallbladder
- (D) Adenocarcinoma of the pancreas
- (E) Primary biliary cirrhosis

**The answer is A: Acute cholecystitis.** Acute cholecystitis refers to diffuse inflammation of the gallbladder, usually secondary to obstruction of the gallbladder outlet. Approximately 90% of cases of acute cholecystitis are secondary to gallstones (cholelithiasis). In patients with acute cholecystitis, the external surface of the gallbladder is intensely congested and often layered with a fibrinous exudate. Acute pancreatitis (choice B) is incorrect because the serum amylase level in this patient is normal. Unsuspected gallbladder cancer (choice C) may be discovered in cholecystectomy specimens, but such an occurrence is uncommon. Pancreatic carcinoma (choice D) often presents as painless jaundice.

**Diagnosis:** Acute cholecystitis



## Radiology :

**Q1) Middle age man known case of Budd Chiari syndrome presented to GI outpatient clinic with history of abdominal distension more than 15 cm what is the diagnosis ?**

- A. a) Cardiac failure
- B. b) Renal failure
- C. c) Hepatomegaly
- D. d) Late cirrhosis

Answer: C

**2) Diffuse fatty infiltration will be seen in ultra sound ?**

- A. a) more white
- B. b) more black
- C. c) gray
- D. d) red

Answer: A

**3) Ultrasound report shows acoustic shadowing which indicate that there is ?**

- A. a) Intraluminal gall stone
- B. b) Intraluminal polyp
- C. c) a-b

Answer: A

**Note:** Intraluminal polyp will not show acoustic shadowing.

If you have any questions you want to add, please send it to : [Revisiontest432@gmail.com](mailto:Revisiontest432@gmail.com)

**Good luck**

**Team Leaders :**

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