



**Contact us:**



[Pathology433@gmail.com](mailto:Pathology433@gmail.com)



@pathology433

# *Summaries & MCQs for final's lectures*

## شارك في العمل

أسيل الغنيمي

ملاك العبودي

روان العبدالله

نهى المنديل

أفنان المطوع

مريم باوزير

ندى بن داوود

رنيم العتيبي

عبدالله موسى

هشام غباني

عبدالله العطر

أحمد الحسين

## بقيادة:

معن الحربش

# Summary of IBD

- IBD are group of chronic diseases characterized by an idiopathic immunological reaction of the intestine, most common are Crohn's disease and Ulcerative colitis.
- Generally manifested by Diarrhea, pain and malabsorption and some other extra-intestinal manifestations (Eye, skin, joints).
- Each disease has its own features of development, involvement and complications depending on the area involved.
- Comparison are shown below:

	<i>Crohn's disease</i>	<i>Ulcerative colitis</i>
<b>Most common affected age</b>	<b>Young adults</b>	<b>20-30 Years old</b>
<b>Area of involvement</b>	<b>Any part of the GIT, mostly ileum</b>	<b>Restricted to colon, mostly rectum</b>
<b>Pattern of involvement</b>	<b>Segmental</b>	<b>continuous</b>
<b>Involved layers</b>	<b>All layers (Transmural inflammation)</b>	<b>Mucosal inflammation</b>
<b>Granuloma</b>	<b>present</b>	<b>absent</b>
<b>Common complications</b>	<b>Intestinal obstruction, Fistula, Malabsorption</b>	<b>Severe bleeding, Toxic megacolon , Adenocarcinoma</b>
<b>Gross features</b>	<b>Cobble-stones effect, creeping fat</b>	<b>Inflammatory Pseudopolyps</b>
<b>Incidence of carcinoma</b>	<b>Low</b>	<b>High</b>

# Summary of colonic Tumors

- Development of colon carcinoma directly is very rare, instead they develop after the formation of Polyps.
- Polyps are classified into neoplastic (progress to carcinoma) and non-neoplastic.
- Non-neoplastic polyps are grouped in 5 categories
  - 1) Hyperplastic (Asymptomatic)
  - 2) Hamartomatous: can be Juvenile (affect children) or as a part of Peutz-Jehgers syndrome
  - 3) Inflammatory polyp: as a response of mucosal injury, also called (Pseudopolyp).
  - 4) Lymphoid polyp.
- Neoplastic polyps (Adenoma) can be familial or sporadic. Can be Villous/Tubular/Tubulovillous, Most common is tubular adenoma. The more the Larger/Villous the more probability to cancer progression.
- To progress into Adenocarcinoma, the cells should undergo some mutations (e.g. APC/P53 loss)
- When a person has the tendency of neoplastic development due to inherited genetic mutations, the conditions is called Familial polyposis syndrome.
- Most common example is Familial polyposis coli (inherited loss of APC gene).
- Adenocarcinoma is one of the most serious causes of morbidity and mortality, Left-sided carcinoma tend to be more obstructive.
- It's associated with Carcinoembryonic antigen rising levels.
- Small intestine tumors are classified according to the commonness into carcinoid, adenocarcinomas, lymphomas and leiomyosarcomas.

# ***Summary of liver cirrhosis and its complications***

- **Classification is based on the etiology rather than being classified upon the size of the nodules.**
- **Most common causes are alcoholic liver disease and chronic viral hepatitis.**
- **Cirrhosis features:**
  - 1. Diffused Fibrosis.**
  - 2. Nodules containing regenerating hepatocytes encircled by fibrosis (can be Macronodular or Micronodular depending on the etiology)**
  - 3. Disruption of the vascular architecture of the entire liver.**
    - **Pathogenesis: loss of fenestrations in the sinusoidal endothelial cells.**
    - **Cirrhosis may be clinically silent or symptomatic with nonspecific manifestations.**
    - **It's an irreversible condition of the liver.**
    - **Most common complications are:**
      - 1) Ascites.**
      - 2) Hepatic encephalopathy.**
      - 3) Portal hypertension (increase resistance to portal blood flow).  
Leading to esophageal varices and splenomegaly.**
      - 4) Jaundice and cholestasis.**
      - 5) Hepatorenal syndrome (development of renal failure in an individuals with severe chronic liver disease without primary abnormalities of the kidneys).**
      - 6) Hepatocellular carcinoma.**
      - 7) Chronic Hepatitis.**

# ***Summary of Liver and pancreatic Tumors***

- **Metastatic (secondary) liver tumors** contributes the most common type of liver neoplasms, malignant are more common than benign.
- **Metastasis** more common from breast, lung and colon. And appears with multiple nodules.
- **Primary tumors of the liver** are Hepatocellular carcinoma (HCC) and Cholangiocarcinoma (the common ones), Angiosarcoma and Hepatoblastoma (Less common)
- **HCC is associated with HBV, cirrhosis and chronic alcoholism.**
- **Morphology:** from hepatocyte, (unifocal, multifocal or diffusely infiltrative), highly invasive, greenish casts and satellite nodules.
- **Clinical feature:** classical tumor features in addition to hepatomegaly, elevated alpha-fetoprotein. Jaundice and fever are uncommon.
- **Cholangiocarcinoma:** arising from bile ducts, may cause obstruction. Microscopically, from bile duct epithelium with glandular appearance (resemble adenocarcinoma). Invasive and may metastasize. Usually, prognosis is poor.
- **Angiosarcoma** is endothelial cells in origin and linked to vinyl chloride exposure.
- **Pancreatic carcinoma:** from exocrine part (ductal epithelium). It's a hard, stellate and poorly defined mass. Two characteristic features: Highly invasive and showing desmoplastic response. Lymph nodes are frequently involved and distant metastasis may occur (to lungs or bones).
- **Clinical features:** Jaundice, metastasis to liver and migratory thrombophlebitis.

# ***Summary of Cholecystitis***

- **Most cases of Cholecystitis are associated with gall stones (Cholelithiasis).**
- **There are two major types of cholelithiasis:**

**1-Cholesterol stones (contains crystalline cholesterol monohydrate). It's due to super saturation and gall bladder hypomotility, which give rise to cholesterol nucleation and mucous hypersecretion. They're a yellow, hard radiolucent stones.**

**2-Pigment stones (contain bilirubin calcium salts). It's due to high amount precipitated unconjugated bilirubin in the biliary tree. They're black, soft radiopaque stones.**

- **Main complications of cholelithiasis are Cholecystitis at the top of the list, then pancreatitis.**
- **Cholecystitis is an inflammation of the gall bladder. Two types:**
- **Acute Cholecystitis: is again subclassified into calculous/Acalculous. Usually associated with Emphyema and thickened hyperemic gall bladder. Patients present with colicky pain and mild fever.**
- **Chronic Cholecystitis: ends up with fibrotic atrophied gall bladder. Patients show intolerance to fatty food.**
- **Complications of Cholecystitis are bacterial superinfection, Gall bladder perforation & rupture.**

# MCQs

1-which of the following diseases is only limited to the colon and rectum and only affect the mucosa?

- A. irritable bowel syndrome
- B. juvenile polyps
- C. Crohn's disease
- D. ulcerative colitis

2- Inflammatory bowel diseases are more common in?

- A. females
- B. males
- C. infants
- D. elderly

3- A biopsy of the large intestine is taken and showed transmural inflammation and presence of non-caseating epithelioid cell granulomas with thickening of the bowel wall and presence of strictures. Which of the following is the most likely diagnosis?

- A. Crohn's disease
- B. adenoma
- C. neoplastic polyps
- D. IBS

4- The features of typical cobblestone effect are?

- A. deep ulcerated fissures with fat necrosis
- B. intravescical fistula
- C. longitudinal serpiginous ulcers separated by Irregular Island of edematous mucosa
- D. fibrosis and obstruction of the bowel wall with increased thickening of the wall

5- IBD is usually the result of?

- A. abnormal host interactions with intestinal microbiota
- B. intestinal epithelial dysfunction
- C. abnormal mucosal immune responses
- D. all of the above

6- Risk of IBD is increased when there is an affected family member?

- A. true
- B. false

7-A patient came with acute right lower quadrant pain, fever, and bloody diarrhea. If we exclude acute appendicitis and bowel perforation, which of the following is reason of these manifestations?

- A. ulcerative colitis
- B. Crohn's disease
- C. gastritis
- D. peptic ulcer

**8-A serum sample of a patient who suffers from ulcerative colitis shows?**

- A. hyperalbuminemia**
- B. uremia**
- C. antibodies that cross-react with intestinal epithelium**

**9-One of the important histological features of the active phase of ulcerative colitis is the presence of?**

- A. crypt atrophy and distortion**
- B. granulomas**
- C. crypt abscess (neutrophils)**
- D. strictures**

**10-Which of the following is the most serious complication of ulcerative colitis?**

- A. sever bleeding**
- B. abdominal distention**
- C. Toxic megacolon**
- D. a and c**

**11-One of these facts is true about Crohn's disease?**

- A. Is caused by mumps virus**
- B. Is more common in Asians than in Jews**
- C. Tends to occur in families**
- D. Is less frequent in temperate climates than in tropical ones**

**12-Which of the following is a feature of Crohn's disease?**

- A. Transmural inflammation**
- B. Diffuse distribution**
- C. No granulomas**
- D. Associated with toxic megacolon**

**13-Morphological features of Crohn disease include?**

- A. Skip lesions**
- B. Left-sided disease**
- C. Broad-based ulcers**
- D. Pseudopolyps**

**14-Which of the following is an initial presentation of Crohn's disease?**

- A. May be a medical/surgical emergency**
- B. Begins with intermittent attacks of relatively mild diarrhea**
- C. Present acutely with left lower quadrant pain**
- D. Never have bloody diarrhea**

**15-In contrast to ulcerative colitis, Crohn's disease of the colon?**

- A. Is not associated with increased risk of colon cancer**
- B. Never develops toxic mega colon**
- C. Is usually segmental rather than continuous**
- D. Has a lower incidence of perianal fistulas**

**Answers: 1:D - 2:A - 3:A - 4:C - 5:D - 6:A - 7:B - 8:C - 9:C - 10:D - 11:C - 12:A - 13:A - 14:B - 15:C**



**1-The most common site for GI polyps, diverticula and cancer is?**

- A. Transverse colon**
- B. Sigmoid colon**
- C. Ascending colon**
- D. Cecum**

**2-Which of the following is an example of Hamartomatous polyps?**

- A. Inflammatory polyps**
- B. Juvenile polyps**
- C. Peutz-Jehgers polyps**
- D. Both B&C**

**3-Which of the following present with red blood in stool?**

- A. Peutz-Jehgers syndrome**
- B. Juvenile polyps**
- C. Inflammatory polyps**
- D. Hyperplastic polyps**

**4-Patients with Peutz-Jehgers syndrome have increased risk of developing carcinoma of:**

- A. Pancreas**
- B. Lung**
- C. breast**
- D. All of the above**

**5-Adenomatous polyps occur:**

- A. Sporadic**
- B. Familial**
- C. Familial and sporadic**

**6-Epithelial proliferation and dysplasia occurs in:**

- A. Adenoma**
- B. Retention polyps**
- C. Peutz-Jehgers syndrome**
- D. Hyperplastic polyps**

**7-which of the following is most likely to undergo malignant transformation:**

- A. Tubular adenoma**
- B. Villous adenoma**
- C. Tubulovillous adenoma**
- D. None of the above**

**8-In villous adenoma large tumors may produce:**

- A. Hypocalcemia**
- B. Hypoalbuminemia**
- C. Hypokalemia**
- D. Both B&C**

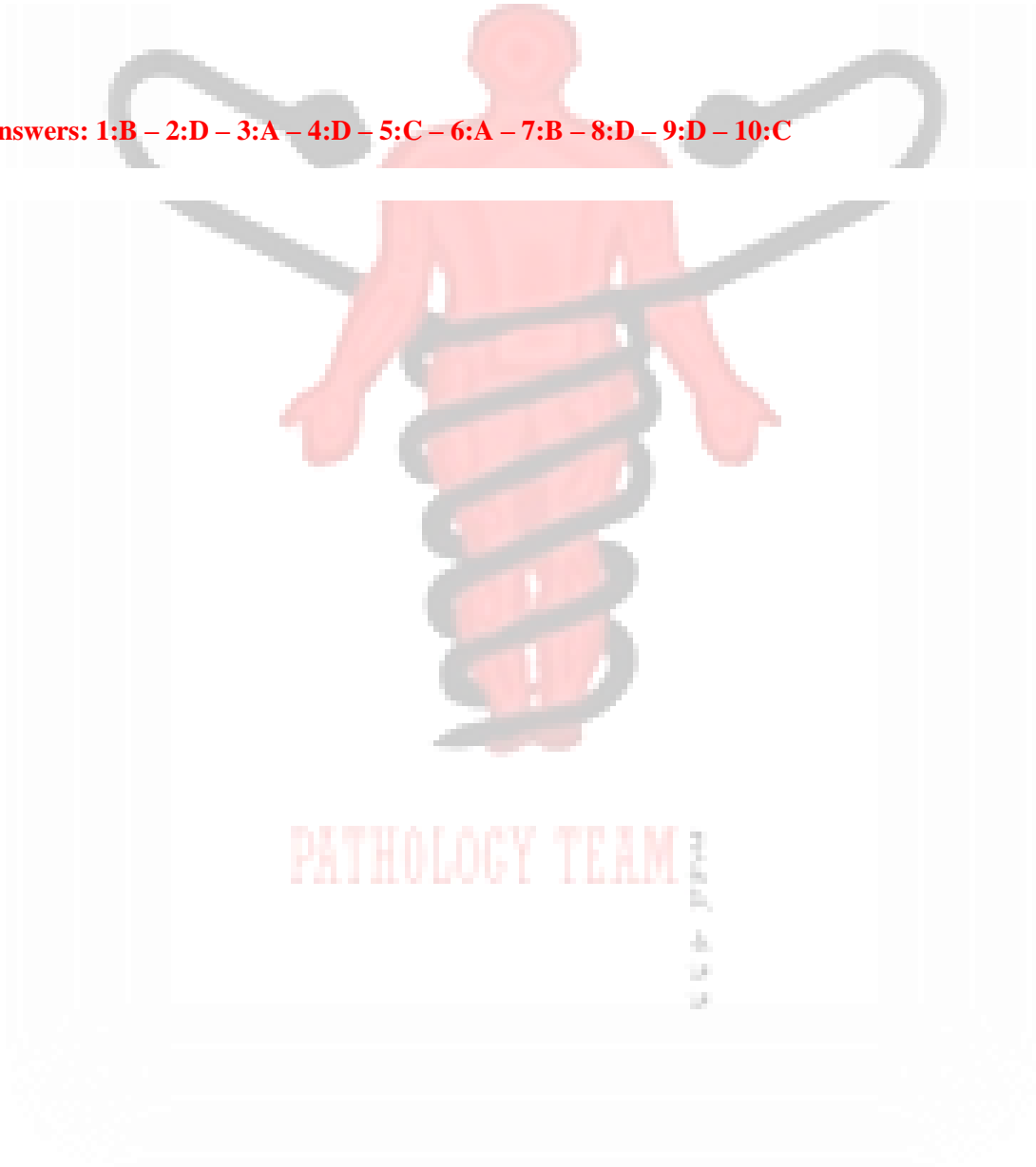
**9-The probability of carcinoma occurring in a neoplastic polyp is related to:**

- A. The size of the polyp**
- B. Multiple polyps**
- C. The relative proportion of its villous features**
- D. All of the above**

**10-In familial polyposis coli the risk of colorectal cancer by midlife is:**

- A. 75%**
- B. 80%**
- C. 100%**
- D. 60%**

**Answers: 1:B – 2:D – 3:A – 4:D – 5:C – 6:A – 7:B – 8:D – 9:D – 10:C**



**1-Which one of the following is not a characteristics of liver cirrhosis?**

- A- Fibrosis**
- B- Nodules**
- C- Cyst**

**2-Alcoholic cirrhosis is classified depending on the size as (less than 3 mm in size)?**

- A-Micronodular**
- B-Macronodular**

**3-Cryptogenic cirrhosis means?**

- A- Cardiac cirrhosis**
- B- drug-induced cirrhosis**
- C-primary cirrhosis due to unknown cause**

**4-A patient came to the ER. He was suffering from anorexia, weight loss, weakness, and osteoporosis. He died after one month what can be the leading mechanism if he had diagnosed by liver cirrhosis?**

- A- Progressive liver failure**
- B-Hepatocellular carcinoma**
- C- All of the above**

**5-A 23 years old patient received a blood which is contaminated with HBV.**

**After one year he developed chronic liver cirrhosis. What is the most likely microscopic key feature you will find?**

- A-"ground-glass" hepatocytes, "sanded" nuclei**
- B-bile duct damage, lymphoid aggregate formation**
- C- All of the above**

**6-A 35 year old man came to the hospital with malaise, anorexia, weight loss, upper abdominal discomfort, tender hepatomegaly, and fever. If he is an alcohol abuse for weeks or months what is the most likely diagnosis?**

- A-Steatosis of liver**
- B-Cirrhosis**
- C-Hepatitis**

**7-Based on the previous question which one will be found in the microscopic finding?**

- A-Mallory bodies**
- B-Periventricular fibrosis**
- C-Hyperplastic nodules**

**8-The dominant intrahepatic cause of portal hypertension is?**

- A- Ascites**
- B- Bacterial infection**
- C-Cirrhosis**

**9-Hematological abnormalities such as thrombocytopenia or pancytopenia can be found in liver cirrhosis due to?**

- A-Renal failure**
- B-Splenomegaly**
- C-Bacterial peritonitis**

**10-A patient is known to have chronic liver cirrhosis came to the ER because of hematemesis. The most common mechanism of esophageal varices in this patient is?**

**A- Inflammatory erosion**

**B- Increased vascular hydrostatic pressure**

**C-Increased tension in progressively dilated veins**

**11-Based on the previous question what is the most common complication that can lead to death?**

**A- Hemorrhage**

**B- Hepatic coma**

**C- Both**

**Answers: 1:C – 2:A – 3:C – 4:C – 5:A – 6:C – 7:A – 8:C – 9:B – 10:B – 11:C**



**PATHOLOGY TEAM**  
S.S.P.

**1-Which ONE of the following is a primary liver cancer that occurs in childhood?**

- A. Hepatocellular Carcinoma**
- B. Cholangiocarcinoma**
- C. Hepatoblastoma**
- D. Angiosarcoma**

**2-Which of the following primary sites has highest incidence to spread to the liver?**

- A. Kidney**
- B. Breast**
- C. Bone**
- D. Brain**

**3-53-year-old male came with abdominal pain, fatigue, weight loss and abdominal swelling. Histological findings of the liver show well-differentiated cells with bile pigments. Which of the following most likely to be elevated in serum?**

- A. alpha-fetoprotein**
- B. Alanine aminotransferase**
- C. Bilirubin**
- D. Albumin**

**4-Pancreatic carcinoma arises from which of the following cells?**

- A. Ductal epithelial cells**
- B. Acinar cells**
- C. Islets of Langerhans**
- D. Pancreatic blood vessels**

**5-Which one of these patients is in a high risk to get pancreatic carcinoma?**

- A. White diabetic female in her 6th to 8th decade**
- B. Black diabetic male in his 2nd to 3rd decade**
- C. White non diabetic male in his 6th to 8th decade**
- D. Black diabetic male in his 6th to 8th decade**

**6-A 57 years old female complaining from upper abdominal pain came to see her doctor after a chemotherapy session for colon cancer, in the examination the doctor noticed hepatomegaly so he arranged for MRI scan, the MRI image revealed multiple nodules at the right side of the body, which one of these could be the reason?**

- A. Metastatic cancer in the pancreas**
- B. Angiosarcoma**
- C. Metastatic cancer in the liver**
- D. Cholangiocarcinoma**

**7-A 33 years old Saudi male came to the GP complaining from upper abdominal pain, malaise and weight loss, the investigation revealed increased in serum  $\alpha$ -fetoprotein level, in the patient's history it's mentioned that the patient has become infected with HBV from his mother at the time of birth. An MRI image showed a large unifocal mass at the right side of the liver, which one of these could be the reason behind his complaints?**

- A. Angiosarcoma**
- B. Hepatocellular carcinoma**
- C. Hepatoblastoma**
- D. Liver failure**

**8-Usually tumors arise from which part of the pancreas?**

- A. Tail**
- B. Head**
- C. Body**
- D. Entire gland**

**9-A 55 years old worker who usually exposed to gas vinyl chloride, came to see his doctor complaining from upper abdominal discomfort with an obvious hepatomegaly, malaise and weight loss, a biopsy was taken from the liver indicates pleomorphic endothelial cells with large hyperchromatic nuclei, giant cells in frequent mitosis and irregular anastomosing vascular channels, the patient started the chemotherapy sessions, the patient died 2 years later, at autopsy liver cirrhosis was seen?**

- A. Hepatocellular carcinoma**
- B. Liver failure**
- C. Angiosarcoma**
- D. Fibrolamellar carcinoma**

**10-An autopsy was performed on a 48 years old patient who has died from cachexia, the pathologist noticed enlargement of the liver, the following morphologies were written in the report: diffusely infiltrative liver cancer with evidence of invasion the portal vein, bile pigment is present and tumor cells were positive for  $\alpha$ -fetoprotein, which one of these conditions was the reason of the death?**

- A. metastasis**
- B. poorly differentiated Hepatocellular carcinoma**
- C. hemangioma**
- D. Well differentiated Hepatocellular carcinoma**

**11-Which one of these tumors has the worst prognosis (high mortality rate)?**

- A. Pancreatic carcinoma**
- B. Fibrolamellar carcinoma**
- C. Angiosarcoma**
- D. Hepatocellular carcinoma**

**12-A patient with Primary sclerosing cholangitis came to see the doctor complaining from malaise and fatigue, in the imaging a tree like tumor was occupying the liver. Alpha-fetoprotein was not elevated, so the doctor arranged for biopsy procedure, under the microscope the biopsy showed adenocarcinoma-like tissue, this tissue was negative to the bile pigment (no stain)?**

- A. Hepatocellular carcinoma**
- B. Cholangiocarcinoma**
- C. Angiocarcinoma**
- D. Hepatoadenoma**

**13-An x-ray image of a 25 years old male patient showed a large scirrhus mass with fibrous bands coursing through it occupying the left lobe of the liver, the patient history revealed no HBV infection or liver cirrhosis , on microscopic examination nests were seen with of well-differentiated polygonal cells separated by dense collagen bundles?**

- A. Acinar cell carcinoma**
- B. Fibrolamellar carcinoma**
- C. Angiosarcoma**
- D. Hepatocellular carcinoma**

14-A "desmoplastic response" is a non-neoplastic host reaction that is seen in which one of these tumors?

- A. Hepatocellular carcinoma
- B. Fibrolamellar carcinoma
- C. Angiosarcoma
- D. Pancreatic ductal adenocarcinoma

15-Which one of these tumors has a poor prognosis (the patient can die within 6 months) + hematogenous spread to the vertebrae, lungs and brain can be seen?

- A. Fibrolamellar carcinomas
- B. extrahepatic Cholangiocarcinoma
- C. Intrahepatic Cholangiocarcinoma
- D. Angiosarcoma

16-Which one of these clinical features can be seen besides pancreatic carcinoma?

- A. Jaundice
- B. Liver metastasis
- C. Migratory thrombophlebitis
- D. All the above

17-Thorostrat exposure can lead to?

- A. Hepatocellular carcinoma
- B. Cholangiocarcinoma only
- C. Cholangiocarcinoma & Angiosarcoma
- D. Metastatic liver carcinoma

18-Lower limb thrombosis is considered as a para-neoplastic syndrome for which one of these tumors?

- A. hepatocellular carcinoma
- B. Fibrolamellar carcinoma
- C. Angiosarcoma
- D. pancreatic carcinoma

19-Which one of these tumors is considered as the most frequent PRIMARY malignant tumor of the liver?

- A. Acinar cell carcinoma
- B. hepatocellular carcinoma
- C. Angiosarcoma
- D. Cholangiocarcinoma

**Answers: 1:C - 2:B - 3:A - 4:A - 5:D - 6:C - 7:B - 8:B - 9:C - 10:D - 11:A - 12:B - 13:B - 14:D - 15:C - 16:D - 17:C - 18:D - 19:B**

**1-Which type of gallbladder stones can be present due to chronic hemolytic syndromes?**

- A. Cholesterol stones**
- B. pigment stones**
- C. bilirubin stones**

**2-Pigment gallstones that develop in the bile duct usually tend to be?**

- A. yellow**
- B. green**
- C. brown**
- D. black**

**3-Cholesterol stones usually appear on x-ray as? While pigment stones most of the time is?**

- A. radio-opaque \ radio-opaque**
- B. radio-opaque\ radiolucent**
- C. radiolucent\radio-opaque**

**4-The main complication of cholelithiasis is?**

- A. pancreatitis**
- B. empyema**
- C. Cholesystitis**

**5-The most common site of obstruction by gallstones in case of acute calculous Cholesystitis is?**

- A. neck or cystic duct**
- B. intestinal obstruction**
- C. liver ducts**
- D. biliary tree**

**6-What is the type of Cholesystitis that requires a quick cholecystectomy?**

- A. Acalculous cholecystitis**
- B- Chronic Cholesystitis**
- C- Acute calculous Cholesystitis**

**7-The main morphological finding in Cholesterolosis is?**

- A. strawberry gallbladder**
- B. multi-faceted stones**
- C. gallbladder atrophy**
- D. Empyema**

**8-in chronic cholecystitis, patients have to avoid which type of food?**

- A. fats**
- B. proteins**
- C. carbohydrates**

**9-The condition of dystrophic calcification within the gallbladder wall and its increased incidence of associated cancer is called?**

- A. Xanthogranulomatous Cholesystitis**
- B. Hydrops of the gallbladder**
- C. porcelain gallbladder**



**10-A 45-year-old obese woman suffers from abdominal pain after fatty meals, some abdominal distension, and frequent indigestion. An ultrasound examination discloses multiple echogenic objects in the gallbladder. Which of the following metabolic changes is most likely associated with the formation of gallstones in this patient?**

- A. Increased hepatic cholesterol secretion**
- B. Decreased serum albumin**
- C. Increased bilirubin uptake by the liver**
- D. Increased hepatic calcium secretion**

**Answers: 1:B – 2:D – 3:C – 4:C – 5:A – 6:C – 7:A – 8:A – 9:C – 10:A**



***Thank You***

**PATHOLOGY TEAM**

**554-1111**