

CARCINOMA IN GALL BLADDER



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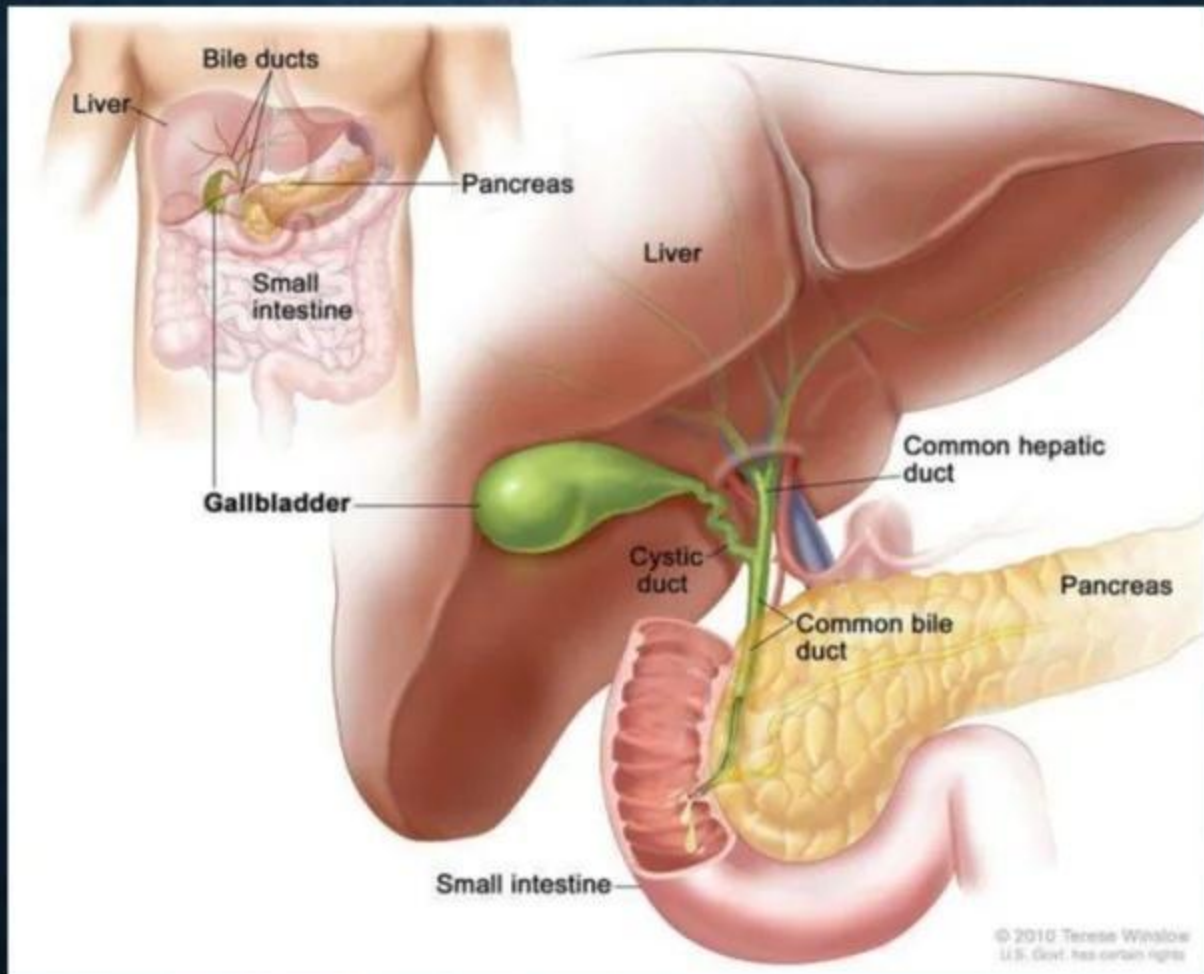
Group No.11

OBJECTIVES

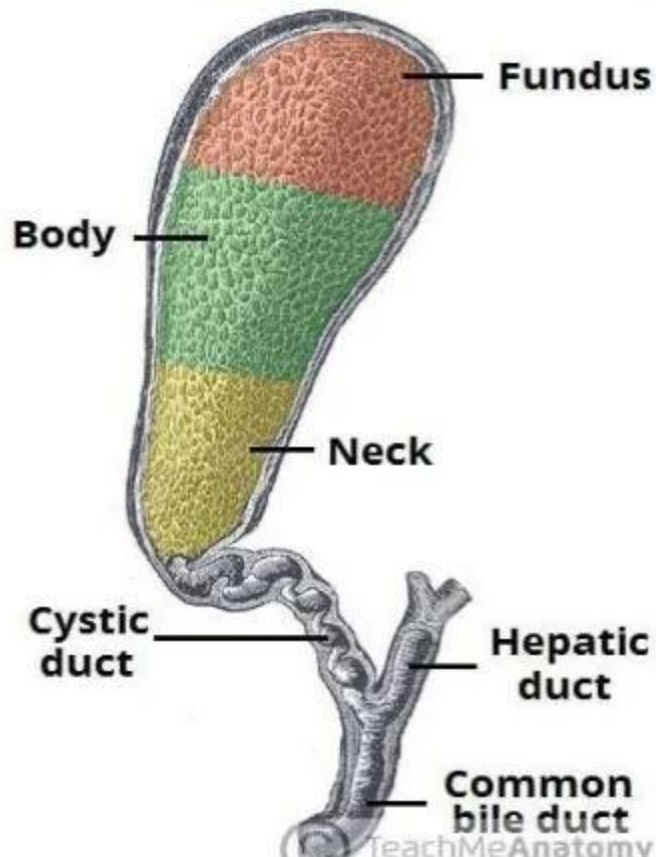
- **Anatomy and Physiology of the Gall Bladder**
- **Definition of the Carcinoma of Gall Bladder**
- **Types and Stages of the Carcinoma of Gall Bladder**
- **Pathophysiology of the Carcinoma of Gall Bladder**
- **Etiology of the Carcinoma of Gall Bladder**
- **Clinical manifestations of the Carcinoma of Gall Bladder**
- **Risk factors of the Carcinoma of Gall Bladder**
- **Diagnostic findings of the Carcinoma of Gall Bladder**
- **Medical management of the Carcinoma of Gall Bladder**
- **Nursing management**
- **Health education**

ANATOMY

- Gall bladder is a small hollow organ where bile is stored and concentrated before it is released into the small intestine.
- It measures approximately 7 to 10 cm in length and 4 cm in diameter when fully distended. It has a capacity of 50 ml.
- It is pear shaped and its tip opens into the cystic duct.
- It is divided into three sections :- fundus, body and neck.
- It is attached to liver on segment IVB and V.
- Cystic duct unites with the common hepatic duct to become a common bile duct.



PARTS OF THE GALL BLADDER



HISTOLOGICAL FEATURES OF GALL BLADDER

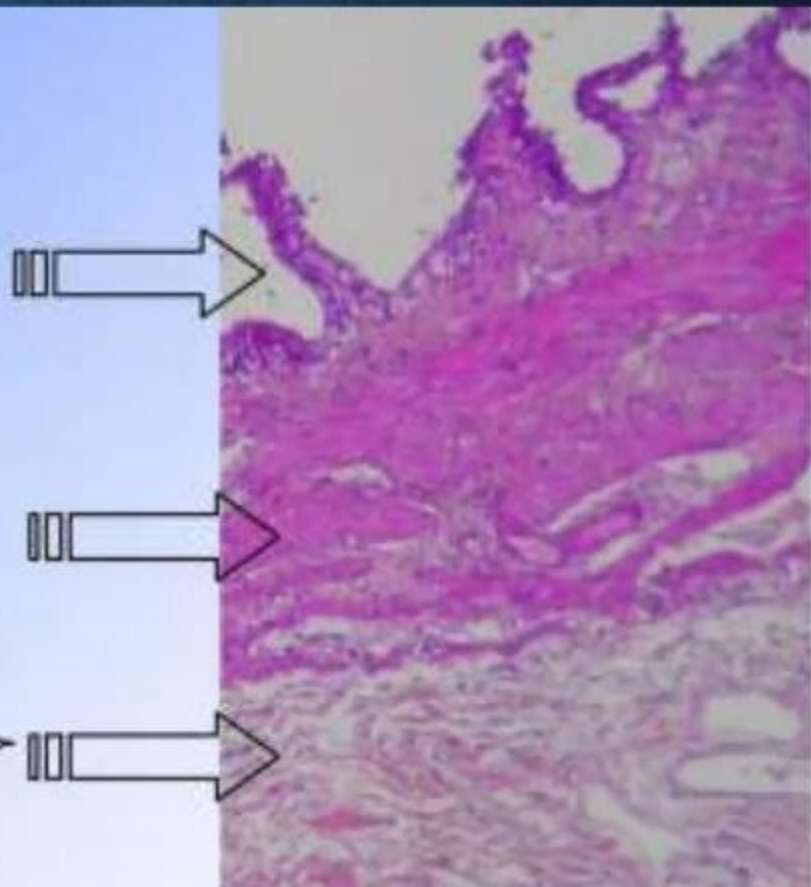
- Mucosa:

- Single layer of columnar epithelium
- Basement membrane
- Lamina propria

- Muscle layer

- Peri-muscular connective tissue

- Serosa



DEFINITION

- **Gallbladder cancer is a disease in which malignant (cancer) cells form in the tissues of the gallbladder.**
- **It is a rare disease that is thought to be related to gallstones building up, which also can lead to calcification of the gallbladder, a condition known as porcelain gallbladder.**

TYPES

The gall bladder carcinoma is of following types based on the type of cells affected :-

- 1. Adenocarcinoma :- it is a cancer that forms in mucous secreting gland cells in the lining of the gall bladder.**
- 2. Squamous cell carcinoma :- It develops from the skin like cells that form the lining of the gallbladder, along with the gland cells.**
- 3. Adenosquamous carcinomas :- These are cancers that have both squamous cancer cells and glandular cancer cells**

STAGES

Stage 0 (Carcinoma in Situ)

- In stage 0, abnormal cells are found in the mucosa (innermost layer) of the gallbladder wall

Stage I

- In stage I, cancer has formed in the mucosa (innermost layer) of the gallbladder wall and may have spread to the muscle layer of the gallbladder wall.

Stage IIA

- Cancer has spread through the muscle layer to the connective tissue layer of the gallbladder wall on the side of the gallbladder that is not near the liver.

Stage IIB

- Cancer has spread through the muscle layer to the connective tissue layer of the gallbladder wall on the same side as the liver. Cancer has not spread to the liver

Stage IIIA

- Cancer has spread through the connective tissue layer of the gallbladder wall and one or more of the following:-
 - ❑ Cancer has spread to the serosa (layer of tissue that covers the gallbladder).
 - ❑ Cancer has spread to the liver.
 - ❑ Cancer has spread to one nearby organ or structure (such as the stomach, small intestine, colon, pancreas, or the bile ducts outside the liver).

Stage IIIB

- Cancer have spread to the muscle, connective tissue, or serosa and may have also spread to the liver or to one nearby organ or structure (such as the stomach, small intestine, colon, pancreas, or the bile ducts outside the liver). Cancer has spread to one to three nearby lymph nodes

Stage IVA

- Cancer has spread to the portal vein or hepatic artery or to two or more organs or structures other than the liver. Cancer may have spread to one to three nearby lymph nodes.

Stage IVB

- Cancer may have spread to four or more nearby lymph nodes; or
- To other parts of the body, such as the peritoneum and liver.

PATHOPHYSIOLOGY

Infectious and non infectious factors leads to chronic inflammation

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graph TD; A[Infectious and non infectious factors leads to chronic inflammation] --> B[Cytokines, chemokines, prostaglandins, mRNAs]; B --> C[Activation of oncogenes and inactivation of tumor suppression genes]; C --> D[Cell transformation, proliferation, inhibition of apoptosis, evasion of immune response and angiogenesis]; D --> E[GALL BLADDER CARCINOMA];
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Cytokines, chemokines, prostaglandins, mRNAs

Activation of oncogenes and inactivation of tumor suppression genes

Cell transformation, proliferation, inhibition of apoptosis, evasion of immune response and angiogenesis

GALL BLADDER CARCINOMA

ETIOLOGICAL FACTORS

- **Chronic gall bladder irritation and inflammation**
- **Gallstones**
- **Porcelain gall bladder**
- **Primary sclerosing cholangitis**
- **Obesity**
- **Gall bladder polyps**
- **Chronic typhoid and para typhoid infections**
- **Carcinogens**

CLINICAL MANIFESTATIONS

Jaundice

**Pain in the upper
right abdomen.**

Indigestion

Dyspepsia

Fever.

**Nausea
and vomiting.**

CLINICAL MANIFESTATIONS...

Bloating.

**Lumps in the
abdomen.**

Billious vomit

Weakness

Loss of appetite

Weight loss

RISK FACTORS

- Female
- Obesity
- Chronic cholecystitis and cholelithiasis
- Primary sclerosing cholangitis

DIAGNOSTIC FINDINGS

- **History and physical examination**
- **Liver function test**
- **CBC**
- **Biopsy**
- **Ultrasound**
- **Endoscopy**
- **MRI**
- **CT scan**
- **PTC - Percutaneous transhepatic cholangiography**
- **MRCP - MR cholangio-pancreatography**
- **ERCP - Endoscopic retrograde cholangiopancreatography**

MEDICAL MANAGEMENT

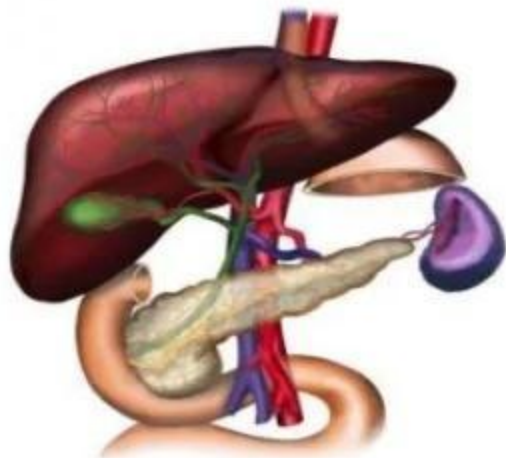
- **CHEMOTHERAPY**

- Gemcitabine
- Cisplatin
- Methotrexate
- 5FU

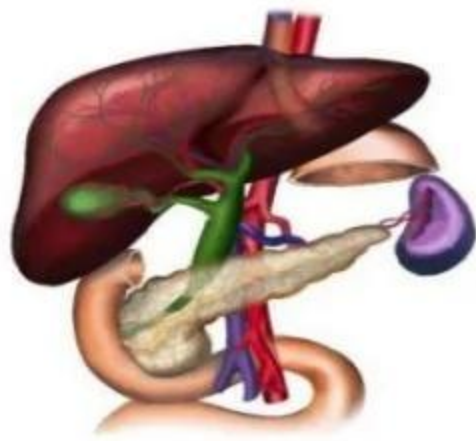
- **RADIOTHERAPY** :- It is a cancer treatment that uses high-energy x-rays or other types of radiation to kill cancer cells or keep them from growing.

If the cancer has spread and cannot be removed, the following types of palliative surgery may relieve symptoms:

1. Biliary bypass :- If the tumor is blocking the bile duct and bile is building up in the gallbladder, a biliary bypass may be done. During this operation, the doctor will cut the gallbladder or bile duct in the area before the blockage and sew it to the small intestine to create a new pathway around the blocked area.



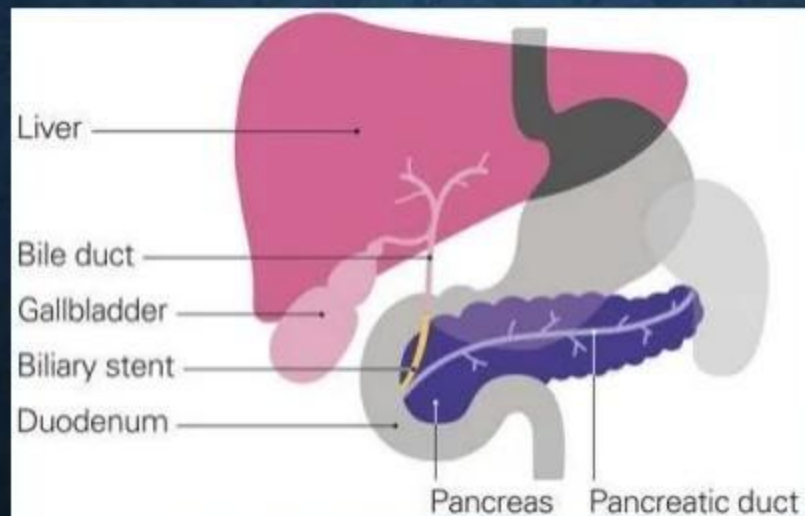
Normal Biliary Tree



Dilated Biliary Tree



2. Endoscopic stent placement :- If the tumor is blocking the bile duct, surgery may be done to put in a stent (a thin tube) to drain bile that has built up in the area. The doctor may place the stent through a catheter that drains the bile into a bag on the outside of the body or the stent may go around the blocked area and drain the bile into the small intestine.



Percutaneous transhepatic biliary drainage:

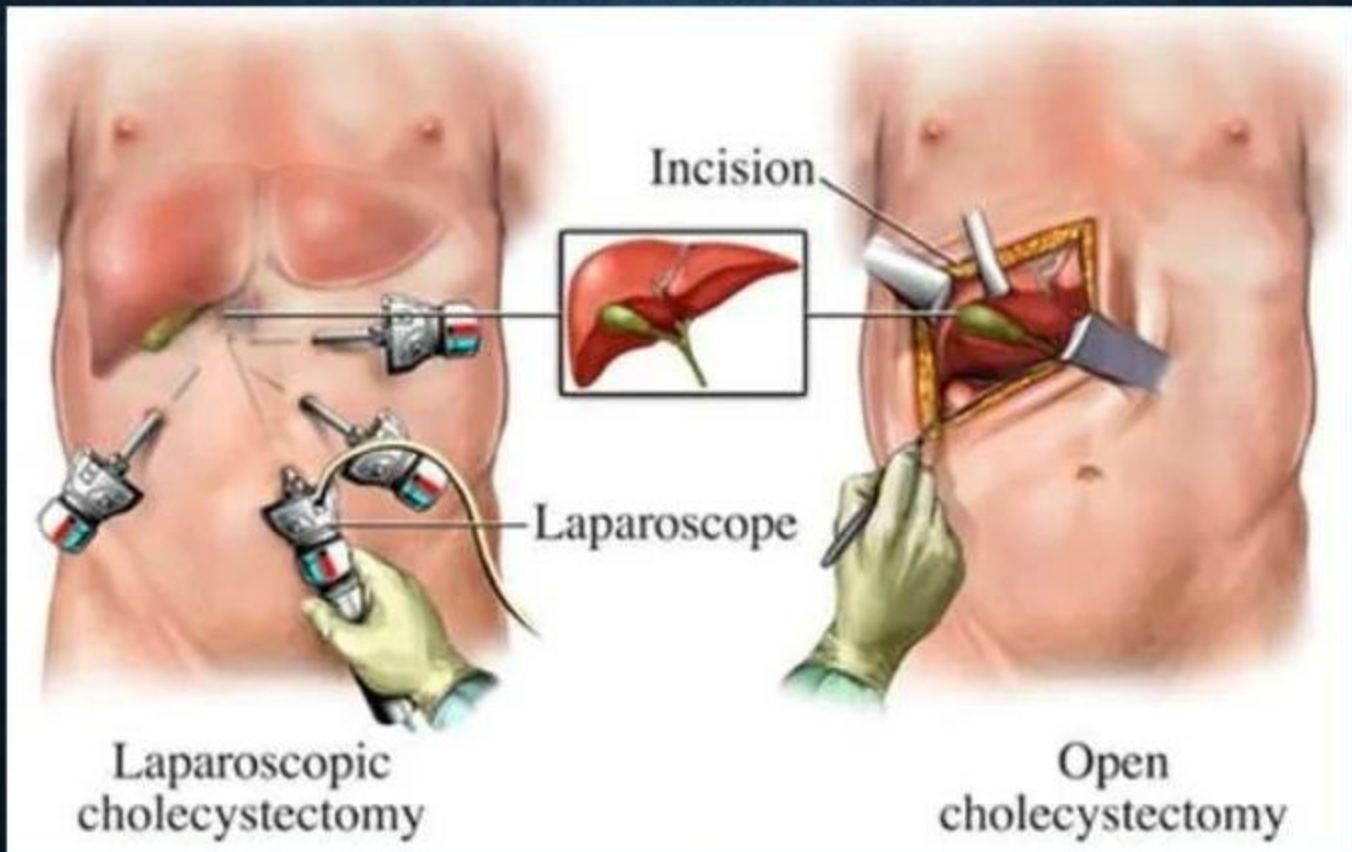
- **A procedure done to drain bile when there is a blockage and endoscopic stent placement is not possible. An x-ray of the liver and bile ducts is done to locate the blockage. Images made by ultrasound are used to guide placement of a stent, which is left in the liver to drain bile into the small intestine or a collection bag outside the body. This procedure may be done to relieve jaundice before surgery.**

SURGICAL MANAGEMENT

➤ LAPAROSCOPY CHOLECYSTECTOMY

➤ OPEN CHOLECYSTECTOMY

- It is the surgical removal of the gallbladder and some of the tissues around it. Nearby lymph nodes may be removed.



NURSING MANAGEMENT

- Monitor vital signs
- Monitor intake output
- Provide high protein and carbohydrate diet :- fresh fruits and vegetables, fruit juice, low-fat dairy products, whole grains.
- Provide plenty of fluids orally – 2-3 liters of fluids.

HEALTH EDUCATION

- ❑ **Teach the patient about the effects of chemotherapy and how to overcome it.**
- ❑ **Instruct the patient about regular follow up for further cycles of chemotherapy.**
- ❑ **Tell the patient to avoid :-**
 - **soft drinks, refined grains**
 - **baked potato**
 - **pickled food**
 - **Fried foods (fried chicken, French fries, potato chips)**
 - **High fat dairy products (milk, butter, cheese, ice cream)**
 - **Fatty meats (beef, pork)**
 - **Processed meats (bacon, ham, sausage)**
 - **Alcohol.**

HEALTH EDUCATION

- Tell the patient to have protein and carbohydrate rich diet which includes fresh fruits and vegetables, fruit juice, low-fat dairy products, whole grains, etc.
- Tell the patient to take frequent and small meals
- Provide adequate rest to the patient
- Tell the patient to do the following :-
 - Proper hand washing
 - Maintain personal hygiene
 - Keep skin clean and free from trauma.

REHABILITATION

- **Patient needs special care and attention from the time she is being diagnosed.**
- **Encourage the patient to maintain the family and social interactions.**
- **Encourage the patient to continue with the activities of daily living.**
- **Encourage the patient to get involve in diversional activities like yoga, meditation, art etc.**
- **Provide psychological support to the patient and family before, during and after chemotherapy.**
- **Inform the patient about the side effects of chemotherapy and radiotherapy before the therapy starts so that patient will not go in sudden shock.**
- **Tell the patient how to overcome the side effects of the chemotherapy like hair loss by covering the head by scarves or using wigs.**

THANK YOU