



SNS COLLEGE OF ALLIED HEALTH SCIENCES
SNS Kalvi Nagar, Coimbatore - 35
Affiliated to Dr MGR Medical University, Chennai



DEPARTMENT: ALLIED HEALTH SCIENCES
COURSE NAME: SURGERY

Topic: Gall stones



CASE SCENARIO

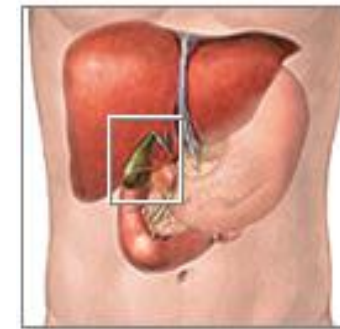


- A 45 year old female presented with a complaints of abdominal pain in the right upper quadrant associated with general weakness and nausea and the investigations showed elevated bilirubin level. How wil you diagnose this patient?

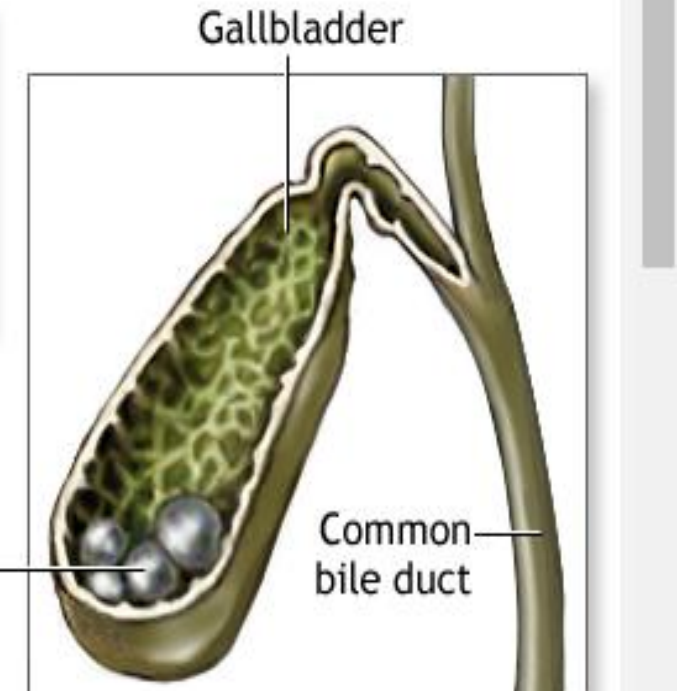
Introduction

DEFINITION

Gallstones are hardened deposits of bile that can form in the gallbladder. Bile is a digestive fluid produced in the liver and stored in the gallbladder. a small, hard crystalline mass formed abnormally in the gall bladder or bile ducts from bile pigments, cholesterol, and calcium salts. Gallstones can cause severe pain and blockage of the bile duct.



Gallstones in gallbladder





Types of Gall stones



Incidence

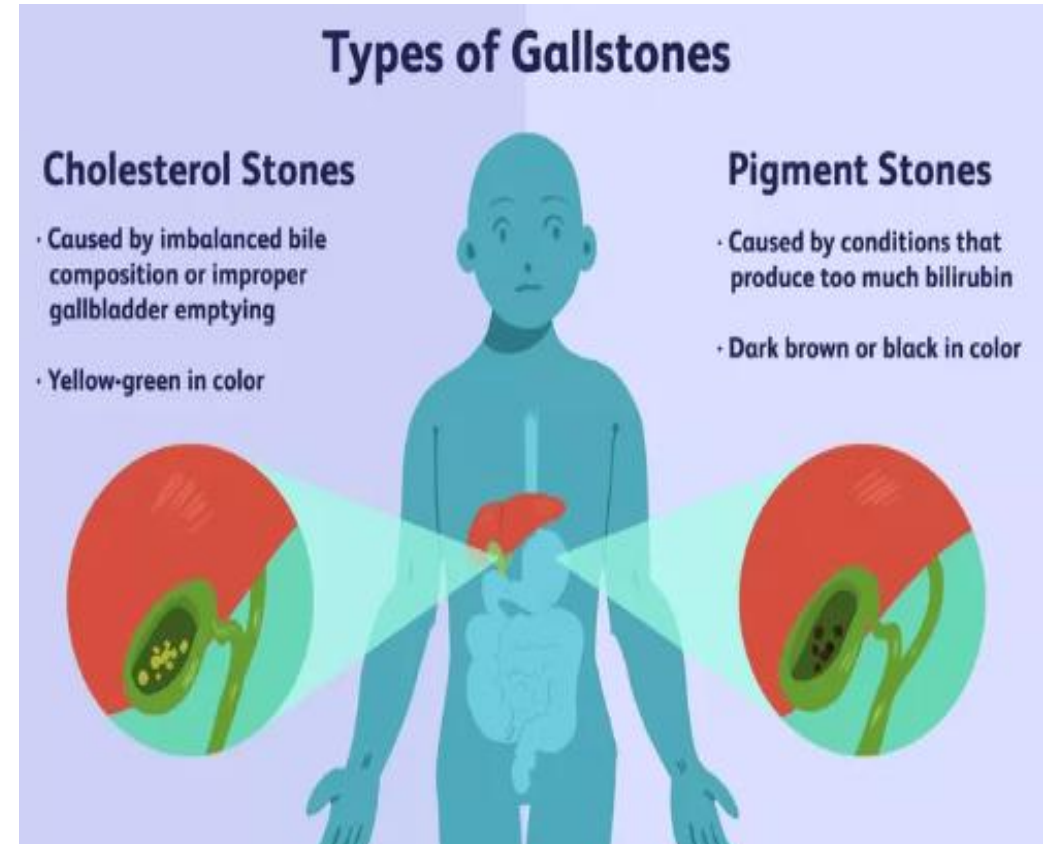
in adult population was 6.12% (men 3.07% and women 9.6%)

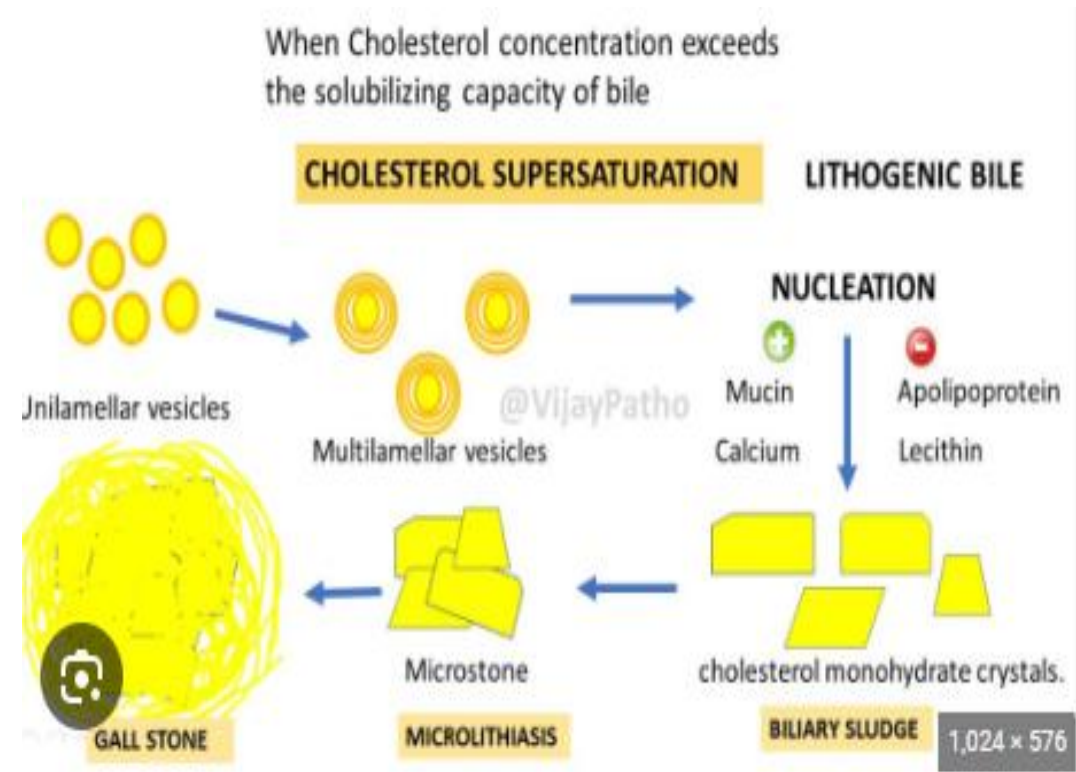
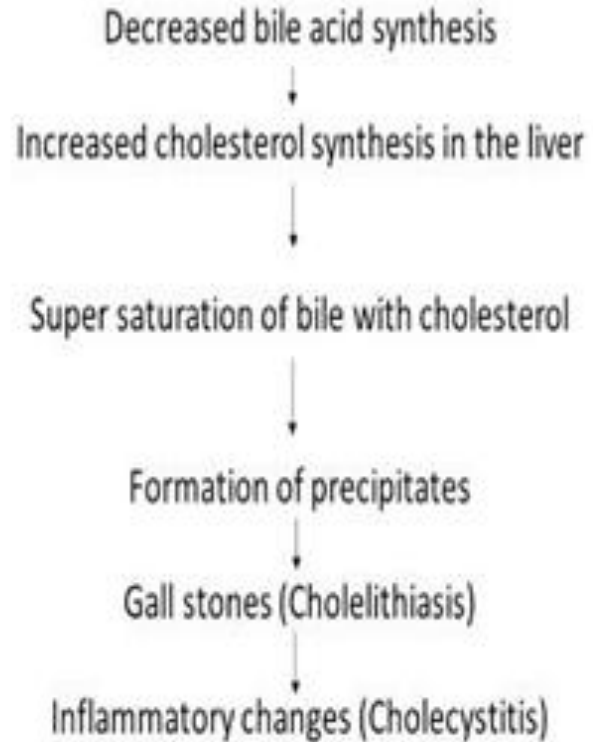
Etiology

Depends upon the concentration of bile , it contains more cholesterol or bilirubin

Types of gallstones

- **Cholesterol gallstones.** The most common type of gallstone, called a cholesterol gallstone, often appears yellow in color. These gallstones are composed mainly of undissolved cholesterol, but may contain other components.
- **Pigment gallstones.** These dark brown or black stones form when the bile contains too much bilirubin.







Assessment 1



1. What is the other name of gall bladder stone?
2. What are the Causes of cholelithiasis?
3. What are the types of gall stones?



Clinical manifestation of cholelithiasis



Gallstones may cause no signs or symptoms. If a gallstone lodges in a duct and causes a blockage, the resulting signs and symptoms may include:

- Sudden and rapidly intensifying pain in the upper right portion of the abdomen
- Sudden and rapidly intensifying pain in the center of the abdomen, just below the breastbone
- Back pain between the shoulder blades
- Pain in the right shoulder
- Nausea or vomiting
- Gallstone pain may last several minutes to a few hours.

1st stage, asymptomatic



There are no symptoms, treatment is typically not necessary.

2nd stage, symptomatic



Gallstones block the bile ducts, this can cause biliary colic.

3rd stage, complicated



There are obstructed bile ducts, acute cholecystitis and acute pancreatitis.



Complication of gall bladder stones



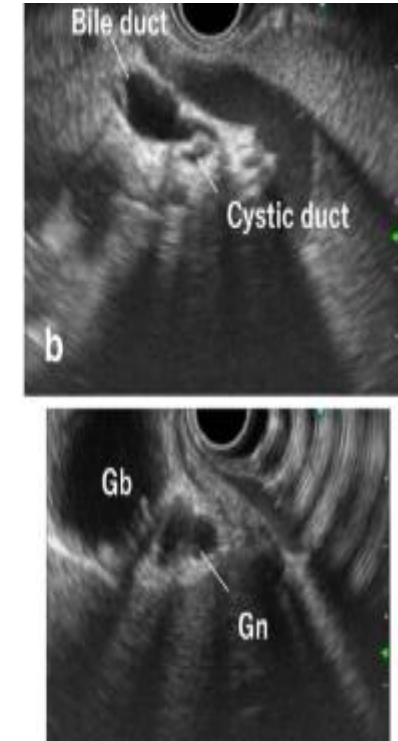
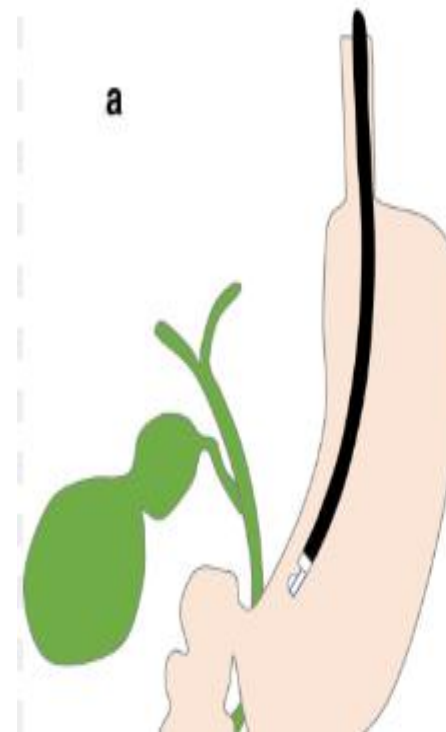
- Inflammation of the gallbladder
- Blockage of the common bile duct
- Blockage of the pancreatic duct
- Gallbladder cancer



Diagnosis



- History collection
- Physical examination
- **Blood investigations-** to rule out infections, jaundice
- **Abdominal ultrasound**
- **Endoscopic ultrasound (EUS).** This procedure can help identify smaller stones that may be missed on an abdominal ultrasound. During endoscopic ultrasound (EUS) passes a thin, flexible tube (endoscope) through the mouth and digestive tract. A small ultrasound device (transducer) in the tube produces sound waves that create a precise image of surrounding tissue.



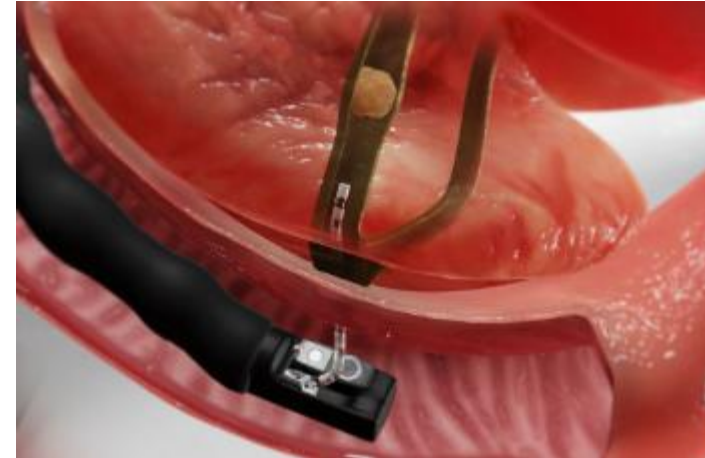


Cont...



- **Other imagings**-oral cholecystography, a hepatobiliary iminodiacetic acid (HIDA) scan, computerized tomography (CT), magnetic resonance cholangiopancreatography (MRCP) or endoscopic retrograde cholangiopancreatography (ERCP).
- **Endoscopic retrograde cholangiopancreatography**

Endoscopic retrograde cholangiopancreatography (ERCP) uses a dye to highlight the bile ducts and pancreatic duct on X-ray images. A thin, flexible tube (endoscope) with a camera on the end is passed down the throat and into the small intestine. The dye enters the ducts through a small hollow tube (catheter) passed through the endoscope.

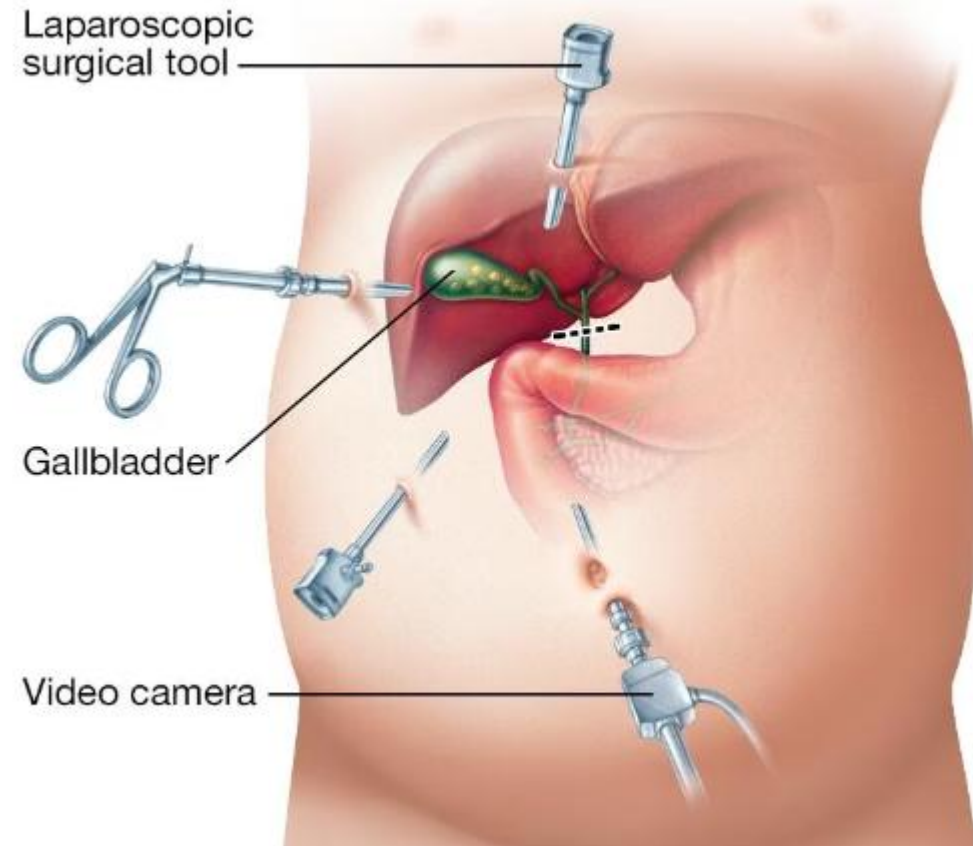


Surgical procedure

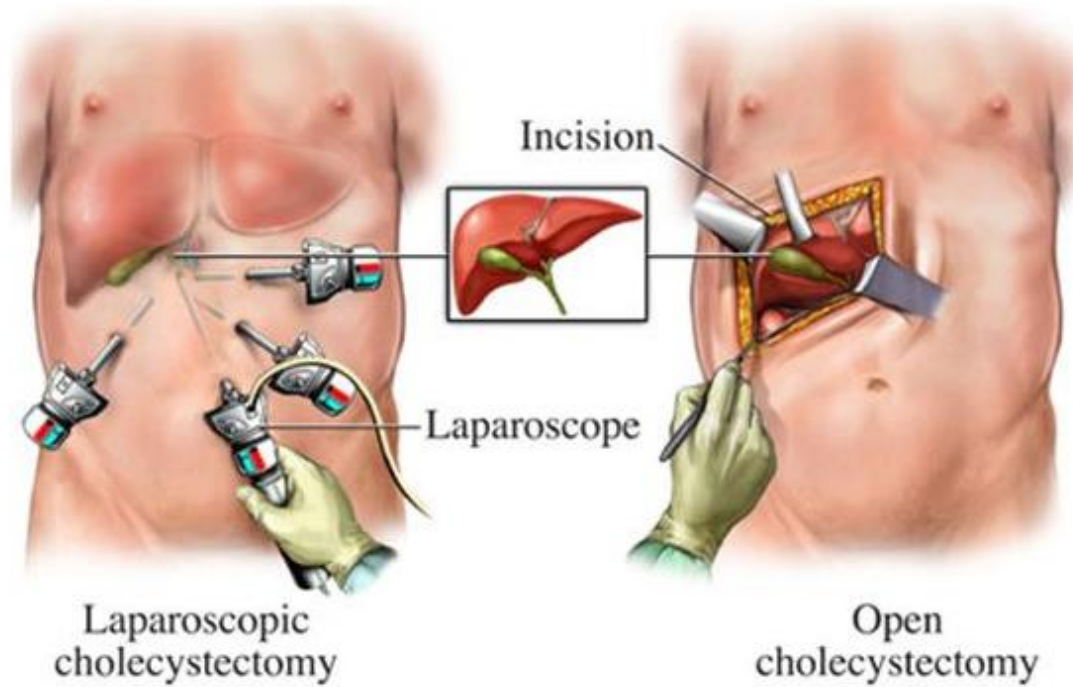
- **Surgery to remove the gallbladder (cholecystectomy).**
- Gallbladder removal surgery is known as a cholecystectomy.

There are two types of gallbladder removal surgery: laparoscopic and open cholecystectomy

- **Laparoscopic cholecystectomy:** To perform this surgery, through the four small incisions inside the abdomen, then inserts a tiny video camera and uses special surgical tools to remove the gallbladder.
- **Open cholecystectomy:** through a single large incision the procedure takes place



Types of Cholecystectomy





Assessment 2



- Group discussion about surgical management of Cholelithiasis



Reference



- The Text Book of Pathology author Nithin chawla
- For further reference –
- <https://youtu.be/qjv2hPWvTJo?si=IGVlnPZpnIA4LCsP>