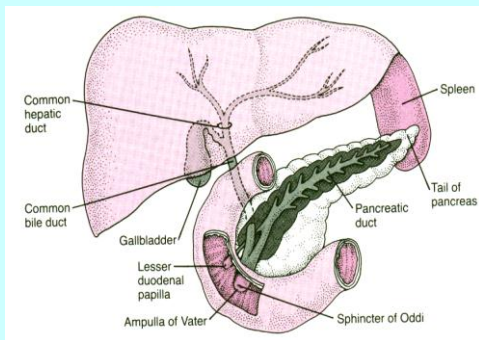


Cholelithiasis

(ko-le-li-thi-ah-sis)

Definition

The presence of gallstones in the gallbladder without any associated symptoms.



Causes and Risks

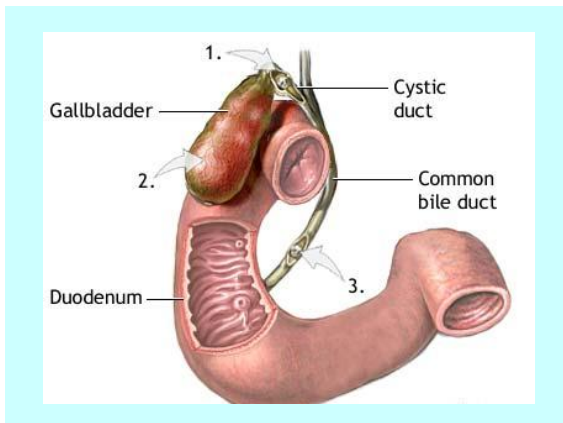
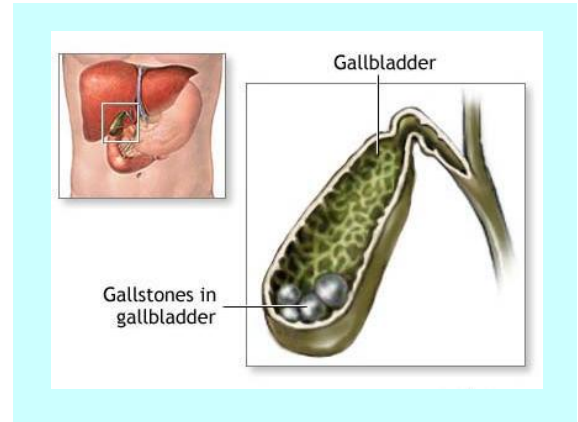
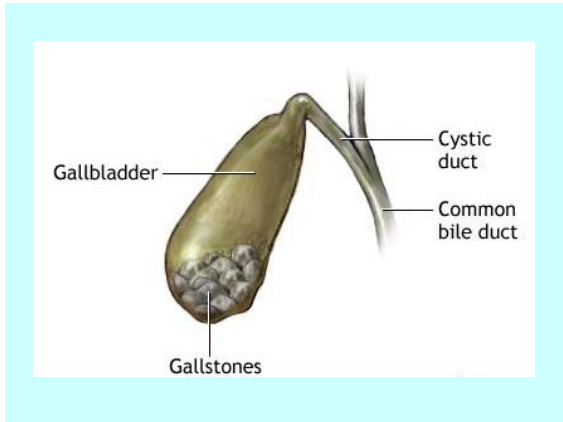
- Gallbladder - an organ that normally functions to store bile excreted from the liver.
- Bile - a solution composed of water, bile salts, lecithin, cholesterol and some other small solutes.
- Changes in the relative concentration of these components may cause precipitation from solution and formation of a nidus, or nest, around which gallstones are formed.
- While these stones may be as small as a grain of sand, they may become as large as an inch in diameter and yellow in colour.
- It is a worldwide problem
 - incidence of 1 out of 1,000 people
 - over weight
 - more prevalent in women
 - people over the age of 40. (**3 F's - Fat, Fertile & Forty**)
- Cholelithiasis is usually incidentally discovered by routine X-ray study, surgery, or autopsy

Prevention

- There is no known way to prevent gallstones.
- If you have gallstone symptoms, eating a low fat diet and losing weight may be helpful in controlling symptoms.

Symptoms

- Symptoms usually present when a stone reaches sufficient size (usually > 8mm), blocks the cystic duct, which drains the gallbladder, or the common bile duct, which is the main duct draining into the duodenum.
- A stone blocking the opening from the gallbladder or cystic duct usually produces symptoms of biliary colic, which is right upper quadrant abdominal pain that feels like cramping.
- If the stone does not pass into the duodenum but continues to block the cystic duct, acute cholecystitis results.
- The continued blockage of normal bile flow may produce jaundice.
- In addition, stones blocking the lower end of the common bile duct where it enters the duodenum may obstruct secretion from the pancreas producing pancreatitis.



- **abdominal pain**
 - in the right upper quadrant or in the middle of the upper abdomen
 - may be recurrent
 - sharp or cramping or dull
 - may radiate to the back or below the right shoulder blade
 - made worse by fatty or greasy foods
 - occurs within minutes following meals

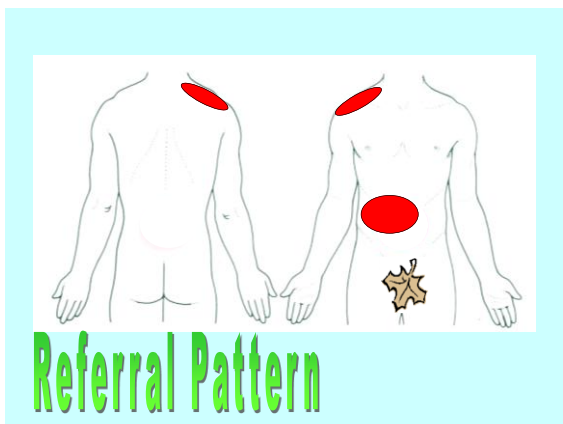
- **jaundice**

- **fever**

- Note: Often there are no symptoms.

Additional symptoms that may be associated with this disease:

- stools, clay coloured
- nausea and vomiting
- heartburn
- gas/flatulence, excessive
- abdominal indigestion
- abdominal fullness, gaseous



Referral Pattern

Signs and Tests

There are numerous tests to detect the presence of gallstones or gallbladder inflammation:

- abdominal ultrasound
- abdominal CT scan
- abdominal X-ray
- oral cholecystogram

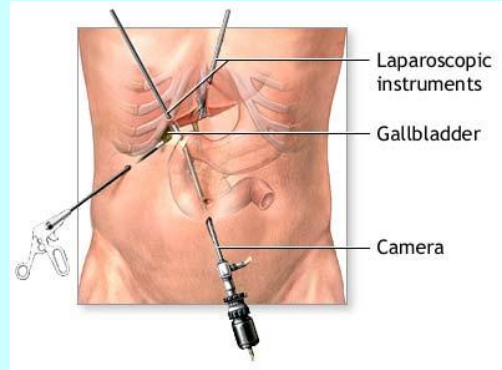
Ultrasound Scanning



- This disease may also alter the results of the following tests:
- faecal fat
- bilirubin; urine
- abdominal MRI

Treatment

- Cholecystectomy



Open procedure incision

Laparoscopic incisions



Prognosis

- Gallstones develop in many people without causing symptoms.
- The chance of symptoms or complications resulting from cholelithiasis is about 20%.
- With current surgical approaches, the outcome is excellent with no recurrence of symptoms in over 99% of individuals.

Complications

- acute cholecystitis (inflammation of gallbladder)
- cholangitis (inflammation of bile duct)
- chronic cholecystitis
- Choledocholithiasis (ko-led-o-li-thi-ah-sis)
- pancreatitis

