Chapter 3
Management of Patients with Gastrointestinal Disorders

3.4. Management of Patients with Hepatic, Pancreas, and Biliary Disorders

Liver Introduction;

Liver is normally able to regenerate damaged cells. Cirrhosis develops when the factor damage the liver such as alcohol and chronic infections are present over a long period of time. When this happens, the liver become injured and scarred. A scarred liver cannot function properly and cirrhosis results

- Definition: Cirrhosis is a chronic disorder characterized by replacement of normal liver tissue with diffuse fibrosis that disrupts the structure and function of the liver.

Incidence

- Cirrhosis and chronic liver diseases were the tenth leading cause of death for men and twelth leading cause of death in women.
- In India 2,08,185 total deaths due to cirrhosis.
- The age adjusted death rate is 23.59 per 1,00,000 of population ranks India 27 in world.

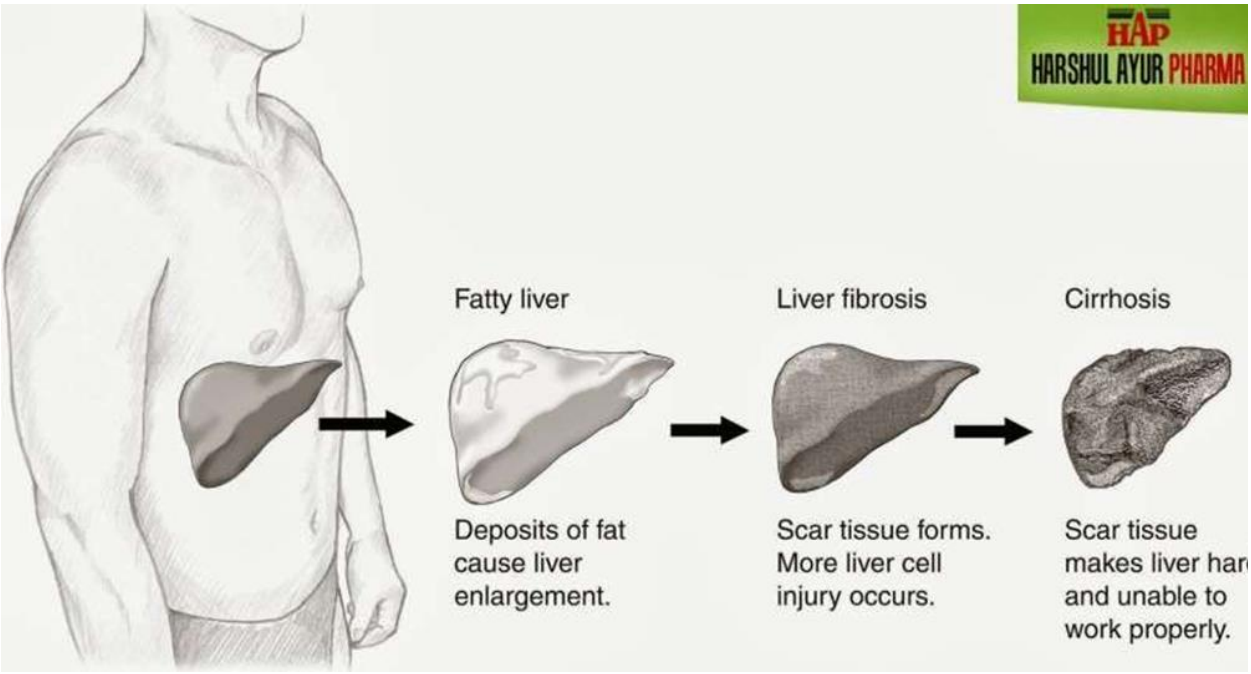
CAUSES:

- Alcoholism
- Hepatitis B and C
- Fatty liver disease
- Idiopathic

Types;

1) Alcoholic
2) Cirrhosis
3) Post necrotic cirrhosis
4) Biliary cirrhosis
5) Cardiac cirrhosis

Pathophysiology



CLINICAL MANIFESTATIONS:

Early manifestations

- ❖ GI disturbances
- ❖ Fever
- ❖ Weight loss
- ❖ Abdominal pain neuropathy
- ❖ Enlargement of liver and spleen

Late

- ❖ Liver dysfunction Portal hypertension Endocrine problems Peripheral
- ❖ Mental deterioration

DIAGNOSTIC STUDIES:

- History collection
- Physical examination
- Serum levels
- AST, ALT, GGT
- Bilirubin tests
- Ultrasound
- CT, MRI
- Liver biopsy
- ABG analysis

MEDICAL MANAGEMENT:

- Anti-inflammatory drugs
- Anti-oxidants
- Pottassium-sparing diuretics
- Histamine 2 antagonist
- Vitamins and nutritional supplements

SURGICAL MANAGEMENT:

- LIVER TRANSPLATATION

COMPLICATIONS:

- Ascites
- Esophageal variceal bleeding
- Hepatic encephalopathy
- Infection
- Hepatocellular carcinoma
- Spontaneous bacterial peritonitis

NURSING MANAGEMENT:

- Promote rest
- Improving nutrition
- Providing skin care
- Reduce the risk of injury
- Managing and monitoring complications

NURSING MANAGEMENT:

- Daily weight - same what?
- Fluid & electrolyte comparisons
- Assess dependent edema- Where?
- Assess stool & urine & vomit for what?
- Assess for internal bleeding - How?
- Dependent areas exercised - Why & how?
- How can pruritis associated skin breakdown be averted?
- Why no constipation, sneezing, hard toothbrushes and straight razor
- Why check on OTC meds?
- Why no alcohol?
- What drugs will likely be used?

JAUNDICE

Introduction:

Jaundice causes your skin and the whites of your eyes to turn yellow. Too much bilirubin causes jaundice. Bilirubin is a yellow chemical in hemoglobin, the substance that carries oxygen in your red blood cells. The term jaundice comes from the French word *jaune*, meaning yellow.

Definition:

Jaundice (also known as icterus) is a yellowish pigmentation of the skin, the

conjunctival membranes over the sclera (whites of the eyes), and other mucous membranes caused

By hyperbilirubinemia (increased levels of bilirubin in the blood).

Incidence:

Many healthy babies have some jaundice during the first week of life. It usually goes away. However, jaundice can happen at any age and may be a sign of a problem.

Etiology:

Jaundice can happen for many reasons, such as

- Blood diseases
- Genetic syndromes
- Liver diseases, such as hepatitis or cirrhosis
- Blockage of bile ducts
- Infections
- Medicines

Types:

1. Pre-hepatic jaundice
2. Hepatic jaundice
3. Post-hepatic jaundice

CLINICAL MANIFESTATIONS:

- The main symptom of jaundice is a yellow discoloration of the white part of the eyes (sclera) and of the skin.
- The conjunctiva of the eye are one of the first tissues to change color as bilirubin levels rise in jaundice. This is sometimes referred to as scleral *icterus*. However, the sclera themselves are not "icteric" (stained with bile pigment) but rather the conjunctival membranes that overlie them.
- The yellowing of the "white of the eye" is thus more properly termed *conjunctival icterus*

ASSESSMENT AND DIAGNOSTIC STUDIES:

- This hyperbilirubinemia subsequently causes increased levels of bilirubin in theextracellular fluid. Concentration of bilirubin

in blood plasma is normally below 1.2 mg/dL (<25µmol/L). A concentration higher than approx. 3 mg/dL (>50µmol/L) leads to jaundice.

Laboratory findings include:

- Urine: no bilirubin present, urobilinogen > 2 units (i.e., hemolytic anemia causes increased heme metabolism; exception: infants where gut flora has not developed).
- Serum: increased unconjugated bilirubin.

Management:

- Correction of coagulopathy
- Fluid and electrollyte balance
- Low fatty spicy foods
- Blood transfusion if needed
- Antibiotics
- Encourage fluid and fiber diet
- Biliary drianage with ERCP(Endoscopic retrograde cholangiopancreatography)

Hepatitis

Introduction:

Hepatitis is an inflammation of the liver.

Hepatitis is of various **types** that is:

- ✓ Viral hepatitis
- ✓ Non-viral hepatitis

Viral hepatitis

DEFINITION:

It is a systemic viral infection in which necrosis and inflammation of liver cells produce a characteristic cluster of clinical, biochemical and cellular changes.

Classification:

- ✓ Hepatitis A
- ✓ Hepatitis B
- ✓ Hepatitis C
- ✓ Hepatitis D
- ✓ Hepatitis E

Hepatitis A virus (HAV) lives in feces in the intestinal tract. Transmission is through fecal oral route.

Hepatitis B virus (HBV) lives in blood and other body fluids. HBV is transmitted from person to person through unprotected sexual contact, the sharing of infected needles or other sharp instruments that break the skin (such as tattooing & body piercing).

The hepatitis C virus (HCV), called the 'silent epidemic'

Risk factors same as for HBV (illicit IV drug use, occupational exposure to blood, perinatal exposure, blood transfusion or organ transplant, exposure to contaminated equipment (including toothbrushes and razors), unprotected sexual contact.

Hepatitis D is always found with HBV since it is a virus of HBV. (same risk factors as HBV)

Hepatitis E is a water borne virus (transmission trough oral-fecal route) that is endemic in many parts of the world.

Epidemics occur in countries such as India, Mexico, Africa Nepal.

- **Hepatitis G** (HGV) is not well understood but is spread through contaminated blood, body fluids, needles.

Pathophysiology:

Hepatocytes undergo pathological changes as a result of the body's immune response to the virus.

There is generalized inflammation with areas of necrosis

This leads to functional impairment of the liver cells.

There is Kuepfer cell hyperplasia (increase in number of phagocytes)

Disruption of structure and function leads to obstruction of portal & hepatic blood flow.

INCIDENCE:

- Approximately 61000 cases occur in U.S and 10 million cases world wide
- The prevalance of HAV antibodies increases with age and most people older than 50 yrs of age have prior exposure.

ETIOLOGY:

- Viral hepatitis is caused by one of the major viruses that is A,B,C,D,E and G

Other viruses include

- Cytomegalovirus
- Herpes virus
- Coxsackie virus
- Rubella virus

MODE OF TRANSMISSION:

- Over crowding
- Poor sanitation
- Faeceal-oral route
- Infected food handler
- Multiple sex partners
- Blood transfusions

CLINICAL MANIFESTATIONS:

- Flu like upper respiratory tract infections
- Low grade fever
- Anorexia
- Jaundice
- Indigestion
- Epigastric distress
- Nausea and vomiting and Heart burn, flatulence

ASSESSMENT AND DIAGNOSTIC STUDIES:

- History collection
- Physical examination
- Antigen test
- Blood tests
- Stool culture
- Polymerase chain reaction
- Biopsy

MEDICAL MANAGEMENT:

- Anti-viral agents
- Adequate bed rest
- Administer IV fluids
- Restrict the physical activity
- Frequent small feedings

PREVENTION:

- Vaccination
- Hand washing
- Safe drinking water
- Proper control of sewage disposal
- Caution about contaminated foods
- Health education

Nursing Management:

- Medications include: Vit K if prolonged PT, antihistamines for relief of pruritis,
- antiemetics.
- Bile acid sequestrants (Clestid, Questran) bind with bile acids in the GI tract and is excreted in feces, relieving pruritis.
- Skin care: emollients and lipid cream (Eucerin)
- Reduce fatique
- Diet of low fat, high carb is better tolerated. Na restriction may be necessary.

LIVER ABSCESS

DEFINITION:

- Liver abscess is accumulation or stagnantion of pus in the liver due to infection

INCIDENCE:

- It is most commonly occurs in developing countries of the trophics and sub trophics due to poor sanitation and hygiene

Types:

- AMOEBIC LIVER ABSCESS
- PYOGENIC LIVER ABSCESS

ETIOLOGY:

- Cholangitis
- Benign loss malignant obstruction of biliary tree
- Abdominal trauma
- Infections

PATHOPHYSIOLOGY:

Due to infection

↓

Infective organisms reach the liver through the biliary, portal arterial loss

↓

lymphatic system

↓

Bacterial toxins destroy the neighbouring liver cells

↓

Necrotic tissue serves a protective wall for the organisms

↓

Leukocyte migrate serves a protective wall for the organism

↓

Abscess cavity full liquid containig living and dead leukocytes, liquefied

↓

liver cells, and bacteria

↓

LIVER ABSCESS

CLINICAL MANIFESTATIONS:

- Fever with chills
- Diaphoresis
- Malaise
- Anorexia
- Dull abdominal pain
- Tenderness in right upper quadrant
- Anemia

ASSESSMENT AND DIAGNOSTIC STUDIES:

- History collection
- Physical examination
- Blood culture
- Aspiration of liver abscess guided by ultrasound
- CT
- MRI
- Percutaneous drainage of pyogenic abscess

MEDICAL MANAGEMANT:

- IV antibiotics thearpy depend on the organism
- Continuous supportive care is provided
- Open surgical drainage may be required if antibiotic thearpy and percutaneous drainage is ineffective
- A catheter is left in place for continuous drainage

NURSING MANAGEMENT:

- Continuous monitoring of the drinage and skin care is provided
- Vital signs monitoring
- Administer antibiotics as prescribed
- Management of drainage

WILSONS DISEASE:

INTRODUCTION:

Wilsons disease is a progressive, familial, terminal neurologic disease accompained by chronic liver disease leading to cirrhosis.It is associated with increased storage of copper.

Definition;

Wilsons disease is an inherited condition that causes the body to retain excess copper.

INCIDENCE:

- Wilsons disease occurs world wide with an average prevalance of 30 individuals per million population.
- Wilsons disease is an inherited disorder that affects about one to 4 in 30,000-1,00,000 individuals of any race or ethnicity.

CAUSES:

- The condition is due to “mutations” in the wilson disease protein (ATP7B) gene.

PATHOPHYSIOLOGY:

Due to etiological factors

↓

Copper accumulates in the liver Ceruminoplasmin is still secreted

↓

Terminated apoceruloplasmin

↓

Rapidly degraded into the blood stream

↓

Clinical manifestations

CLINICAL MANIFESTATIONS:

- Corneal-kayser fleischer rings
- Neurological dysfunction
- Drooling
- Rigid dystonia
- Seizures
- Migrane
- Headache
- Insomnia

ASSESSMENT AND DIAGNOSTIC STUDIES

- History collection
- Physical examination
- Serum ALT and AST levels
- Serum uric acid level decreases
- Liver biopsy
- Genetic testing

MEDICAL MANAGEMENT:

- Generally pencillamine I the firt treatment used.
- Zinc actate
- Physical thearpy

SURGICAL MANAGEMENT:

Liver transplant

GILBERT'S SYNDROME

INTRODUCTION:

Gilbert's syndrome is often shortened to GS also called Gilbert-Meulengracht syndrome.

DEFINITION:

Gilberts syndrome is a genetic liver disorder and the most common hereditary cause of increased bilirubin and is found upto 5% of the population.

INCIDENCE:

- It is mostly seen in 5% of population
- Gilbert syndrome is closer to 10% of caucasian people.

CAUSES:

- Idiopathic
- Genetic disorder
- Reduction activity of the enzyme.

PATHOPHYSIOLOGY:

Due to etiological factors

↓

Reduced activity of enzyme gluuronyltransferase It conjugates bilirubin and a few

↓

other lipophilic

↓

molecules

↓

Conjugation renders bilirubin water-soluble Excreted in bile into the duodenum

CLINICAL MANIFESTATIONS:

- Mild jaundice
- Fatigue
- Difficulty in maintaining concebtration
- Loss of appetite
- Abdominal pain
- Weight loss
- Itching

ASSESSMENT AND DIAGNOSTIC STUDIES:

- History collection
- Physical examination
- Increased bilirubin levels

TREATMENT

- Gilbert syndrome usually does not need any treatment.

HAEMOCHROMATOSIS

INTRODUCTION:

Haemochromatosis is a systemic disease that affects the liver, heart, pancreas and the endocrine system. It is caused by increased and inappropriate absorption of dietary iron.

DEFINITION:

Haemochromatosis is iron over load indicates accumulation of iron in the body from any cause.

INCIDENCE:

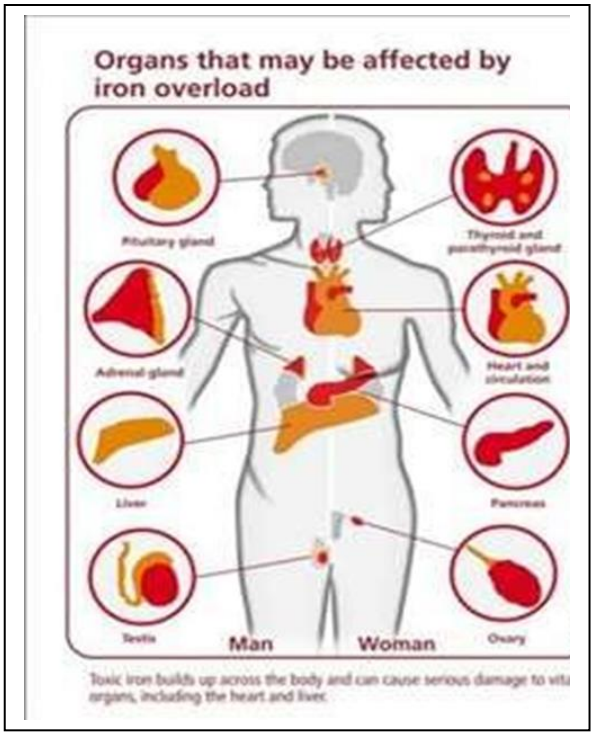
- It is most common in white people and occurs in 0.6% of the population.
- It is uncommon in indian population due to low prevalence of gene associated with haemochromatosis.

CAUSES:

- Genetic disorder
- Transfusional iron over load (repeated blood transfusion)
- Increased and inappropriate absorption of dietary iron.

CLINICAL MANIFESTATIONS:

- Abdominal pain
- Weight loss
- Arthritis
- Joint pain and bone pain
- Lethargy
- Cirrhosis of liver



ASSESSMENT AND DIAGNOSTIC STUDIES:

- History collection
- Physical examination
- Serum ferritin
- Liver biopsy
- MRI
- CT scan

MANAGEMENT:

- Phlebotomies
- Deferoxamine drug
- Dietary modifications such as avoidance of vitamin c and iron supplements, uncooked foods, and iron-rich foods.
- Complications include cirrrhosis, liver failure, hepatic carcinaoma, and cardiac failure

PORTAL HYPERTENSION

DEFINITION:

The normal venous pressure is 5-10 mm of Hg. A wedged hepatic venous pressure or direct portal pressure that is more than 5 mm of Hg greater than the inferior vena caval pressure, a splenic pressure of more than 15 mm of Hg measured at suregry of greater than 30 cm water is abnormal and indicates the presence of portal hypertension.

CAUSES:

- Idiopathic
- Increased portal venous blood flow
- Splenomegaly
- Thrombosis
- Liver diseases
- Congenital hepatic fibrosis
- Prolonged ingestion of arsenic

PATHOPHYSIOLOGY:

Due to etiological factors

↓

Increased blood flow in the portal vein

↓

Increased hepatic arterial flow

↓

Increased resistance

↓

PORTAL HYPERTENSION

CLINICAL MANIFESTATIONS:

- Splenomegaly
- Ascites
- Varices
- Weight gain
- Lethargic
- Fatigue
- Nausea
- Vomiting

ASSESSMENT AND DIAGNOSTIC STUDIES:

- History collection
- Physical examination
- Ultrasonography
- Splenoportography
- Angiography
- Measurements of portal venous pressure
- Doppler ultrasound
- Liver biopsy

MANAGEMENT:

- Hepatic vein catheterization
- Direct transhepatic portal venous pressure
- Measurement of hepatic artey and portal venous blood flow

ASCITES

DEFINITION: Ascites is the accumulation of the serous fluid in the peritoneal or abdominal cavity

CAUSES:

- Cirrhosis of liver
- Variceal bleeding
- Hepatic encephalopathy
- Jaundice
- Portal hypertension
- Increased flow of hepatic lymph
- Impaired water excretion

PATHOPHYSIOLOGY:

Due to etiological factors(cirrhosis of liver)

↓

Splenic arterial vasodilatation

↓

Decreased in circulating arterial blood volume

↓

Activation of renin angiotensin and sympathetic nervous system

↓

Kidney retains sodium and water

↓

Hypervolemia

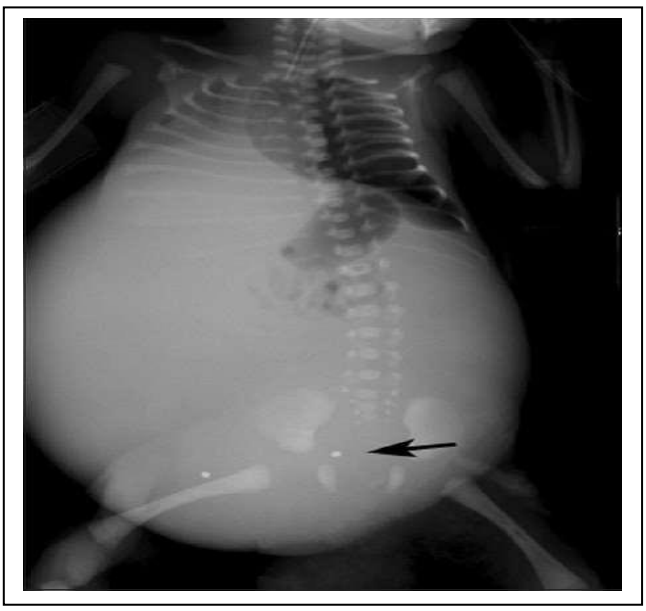
↓

Edema formation

↓

ASCITES

CLINICAL MANIFESTATIONS:



- Increased abdominal girth
- Weight gain
- Bulging flanks
- Shortness of breathe
- Fluid and electrollyte imbalances
- Straie, distended veins
- Umbilical hernia

ASSESSMENT AND DIAGNOSTIC STUDIES:

- History collection
- Physical examination
- Ultrasound
- Doppler examination
- Serum levels
- Ascites total protein and serum ascites albumin gradient is 1.1g/dl

MANAGEMENT:

- Sodium restriction
- Diuretics
- Large volume paracentesis
- Transjugular intrahepatic portosystemic shunt
- Peritovenous shunt
- Liver transplantation

ACUTE LIVER FAILURE

DEFINITION:

Fluminant hepatic failure or liver failure is a clinical syndrome characterized b severe impairement of liver function associated with hepatic encephalopathy.

DEFINITION:

Fluminant hepatic failure or liver failure is a clinical syndrome characterized b severe impairement of liver function associated with hepatic encephalopathy.

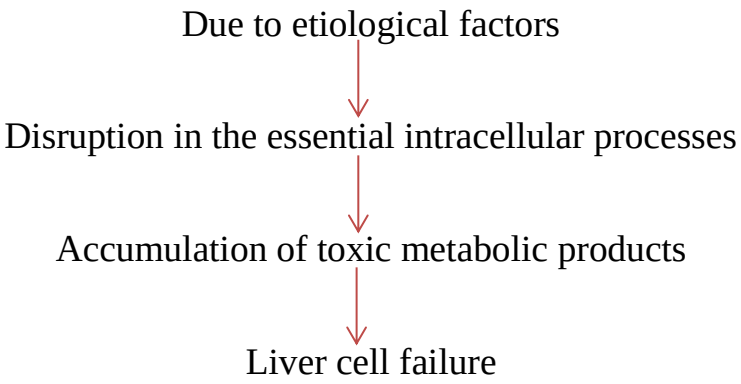
INCIDENCE:

- It is uncommon with approximately 2,000 cases per year in the united states.
- It develops within 8 weeks after the first symptom of jaundice
- The survival rate is approximately 50%-80%
- It is common in men than in women

ETIOLOGY:

- Hepatotrophic viruses e.g:hepatitis A,B,C,D,E viruses
- Paromyxovirus
- Systemic viral infections
- Drug induced acute liver failure
- Metabolic causes
- Malignancie

PATHOPHYSIOLOGY:



CLINICAL MANIFESTATIONS:

- Anorexia, nausea
- Epigastric and upper abdominal distress
- Abdominal pain and GI bleeding
- Tacchycardia
- Oliguria, hyponatremia, hypokalemia
- Altered mental status
- Cerebral edema
- Hepatic encephalopathy

ASSESSMENT AND DIAGNOSTIC STUDIES:

- History collection
- Physical examination
- Doppler sonogram
- ABG analysis
- Elevation of serum alkaline, AST, ALT
- Blood culture

- Chest x-ray
- Echocardiography
- Coagulation studies

MANAGEMENT:

- Administration of life saving antibodies
- Fluid and electrollyte balance
- N-acetylcysteine for acetaminophen toxixity
- Plasmapharesis
- Prostaglandins thearpy
- Extra corporeal liver assist devices
- Bio artificial liver
- Liver transplantation

CANCER OF THE LIVER

DEFINITION:

Hepatic tumours may be benign or malignant. It is an abnormal proliferation of cells in the liver.

INCIDENCE:

- It is most frequently in women in their reproductive years

TYPES:

- Benign
- Metastatic

ETIOLOGY

- Chronic infections
- Hepatitis B and C
- Exposure to certain chemical toxins
- Cigaratte smoking
- Alchol use

CLINICAL MANIFESTSTIONS:

- Pain in epigastric right upper quadrant or back
- Weight loss
- Loss of sterngth
- Anorexia
- Anemia
- Jaundice
- Ascites

ASSESSMENT AND DISGNOSTIC STUDIES:

- History collection
- Physical examination
- Increased serum bilirubin and alkaline
- Leukocytosis
- Erythrocytosis
- X-ray,CT scan, MRI
- Arteriography, laproscopy
- Liver biopsy

MEDICAL MANAGEMENT:

- Chemothearpy
- Radiation thearpy
- Anti-neoplastic agents
- Percutaneous biliary drinage
- Transcatheter arterial embolization

NURSING MANAGEMENT:

- Constant infusion of 10% glucose may be required in first 48hrs to prevent fall in blood glucose levels
- Close monitoring
- Hydration
- Health education
- Psychological reassurance

CHOLECYSTITIS

DEFINITION:

Cholecystitis is defined as acute inflammation of gallbladder.

INCIDENCE:

It is more common after 40 yrs. of age, especially in women

It is uncommon in children and young women

5-F risk factors for cholelithiasis

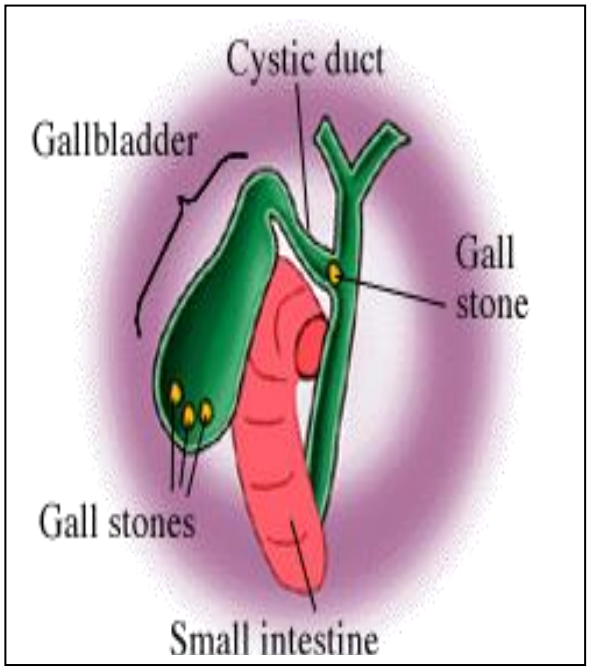
1. Fair: more prevalent in the Caucasian population 1
2. Fat: BMI >30.
3. Female.
4. Fertile: one or more children.
5. Forty: age ≥40. cholelithiasis can occur in young patients with a positive family history; in such cases, the 'familial' factor can substitute for the 'forty' factor 2

RESEARCH NEWS!! PHYSICAL ACTIVITY AND GALLSTONES

Gallstones affect 10-15% of adults in Canada. Themajority of cases produce no symptoms, but there are still a half million operations to remove gallbladders each year because of gallstones. Three of four stones are made of cholesterol, which have many contributing factors including over secretion of cholesterol by the liver, obesity, high fat diet, and rapid weight loss. A recent prospective study of over 60,000 women found that *physical inactivity* is related to higher incidence of gallstones.

STONES:

- ❖ Block
- ❖ Traumatize
- ❖ Cause Pain
- ❖ May be symptomatic
- ❖ Usually made of cholesterol (80%)
- ❖ or Calcium (20%)



CLASSIFICATION:

- Acute cholecystitis
- Chronic cholecystitis
- Calculous cholecystitis
- Acalculous cholecystitis

ETIOLOGY:

- Gall stones
- Emphysema of the gall bladder
- Intestinal organisms like E.coli
- Cytomegalovirus and cryptosporidium
- Generalized peritonitis

PATHOPHYSIOLOGY

Due to formation of gall stones

↓

It obstructs the bile out flow

↓

Bile in gall bladder intiates a chemical recation

↓

Autolysis and edema occurs, and blood vessel are compressed

↓

It results in gangrene of the gall bladder with perforation

↓

CHOLECYSTITIS

CLINICAL MANIFESTATIONS:

- Epigastric pain at right hypochondrial region
- Nausea and vomiting
- Flatulence
- Sweating patient with swallow
- Fever, Jaundice
- Murphys sign:Right hypochondrial tenderness is present and is exacerbated by inspiration
- Muscle grading and rebound tenderness

ASSESSMENT AND DIAGNOSTIC STUDIES:

- History collection
- Physical examination
- Liver function test
- Abdominal radiography
- Ultrasound

MANAGEMENT:

- Analgesics like buphine and atropine is administered
- Antibiotics are given like amoxicillin
- Oral feedings are stopped and intravenous fluid administered
- The patient should be frequently observed with abdominal examination and sequential leukocyte cont

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SURGICAL MANAGEMENT:'

- Cholecystectomy
- Laproscopic cholecystectomy
- Endoscopic cholecystectomy
- Open cholecystectomy

CHOLEDOCHOLITHIASIS

DEFINITION:

It is defined as formation of stones in the common bile duct is called choledocholithiasis.

INCIDENCE:

About 50% of patients with cholelithiasis have common bile duct stones

It increase with age

ETIOLOGY:

- Common bile duct gall stones
- Cholangitis
- Carcinoma of bile duct and gall bladder
- Sclerosing cholangitis
- Metastatic carcinoma
- Haemophilia
- Biliary atrexia
- Choledochol cyst

CLINICAL MANIFEASATIONS:

- The classic traid of symptoms
- Right upper abdominal pain
- FEVER
- Jaundice
- Pain is colicky severe and persists for hours
- Vomiting
- Dark colour urine

- Faces are pale
- Itching

ASSESSMENT AND DIAGNOSTIC STUDIES:'

- History collection
- Physical examination
- Liver function test
- Prolonged prothrombin time
- Radiography
- Ultrasonography
- Cholangiography

MANAGEMENT:

- Administer antibiotics
- Maintain fluid and electrollyte balance
- Maintain nutritional status
- Administer parenteral vit k of prothrombin time is prolonged
- Sphinterotomy
- Cholecystectomy

Cholecystectomy

Gallbladder is removed through an abdominal incision Performed for acute and chronic cholecystitis Bile duct injury is a serious complication of this procedure

Once one of the most common surgical procedures in Canada, this procedure has largely been replaced by laparoscopic cholecystectomy.

OPEN CHOLECYSTECTOMY

Performed when:

- Patient's condition prevents more extensive surgery or when an acute inflammatory reaction is severe
- Gallbladder is surgically opened, the stones and the bile or the purulent drainage are removed, and a drainage tube is secured with a purse-string suture
- Location of incision / breathing
- Wound care & care of “T” tube if used
- Pre & post op teaching
- Dietary management

OPEN CHOLECYSTECTOMY

- Location of incision / breathing
- Wound care & care of “T” tube if used
- Pre & post op teaching
- Dietary management

What is a “T” Tube?

Comes right out of bile duct

Sutured in place on skin

1st 24-48 hours

200-500 ml of drainage

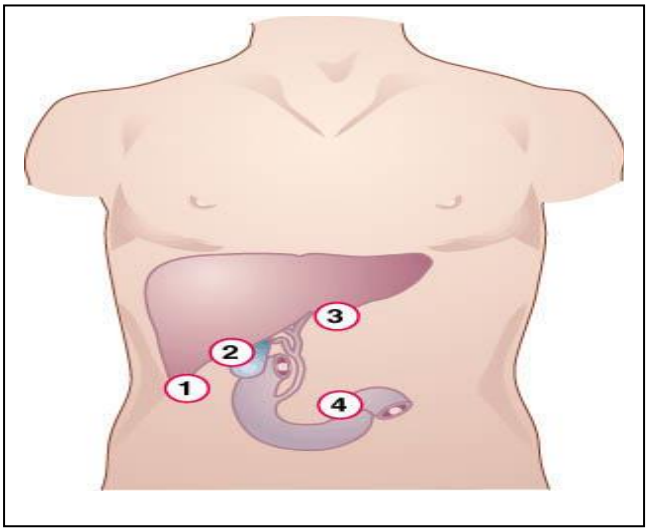
Potential Complications:

Dislodgement

Infection

The T-tube allows bile to drain out of the patient's body into a small pouch, known as a bile bag. If a T-tube is put in place, it may remain attached to a bile bag for a week or possibly longer.

When the bile bag is removed the T-tube will be tied or capped. It will remain in place for several months so that it can be used for special testing.



- Watch for indications of:
- Infection
- Hemorrhage
- Damage to adjacent organs

DEFINITION

Pancreatitis is defined as inflammation of the pancreas

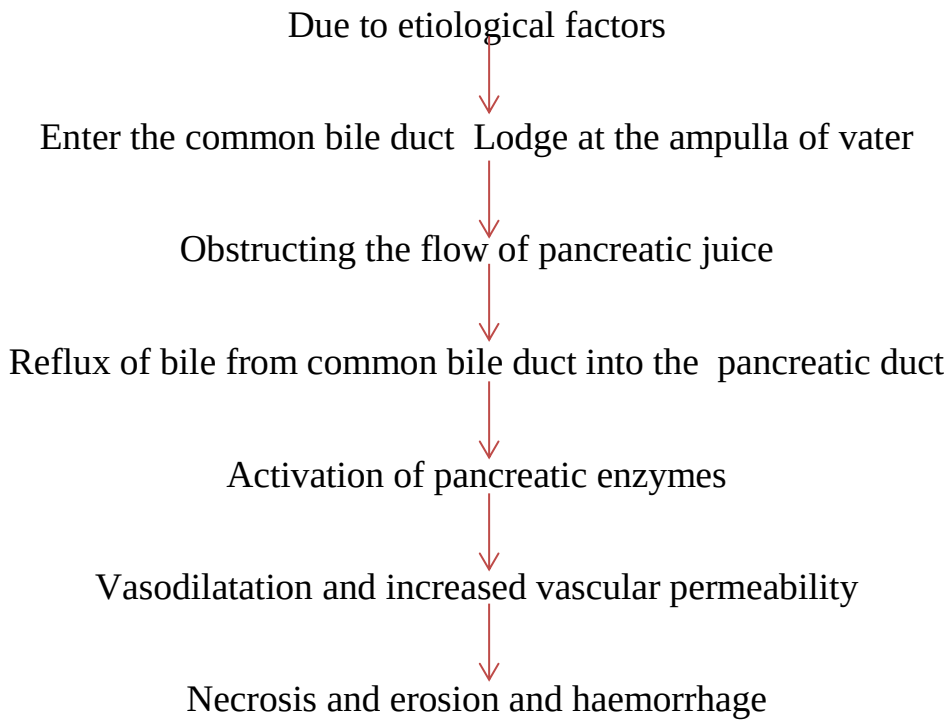
INCIDENCE:

- ❑ Men of 40-45 yrs of age
- ❑ Women f 50-55 yrs of age
- ❑ Hereditary
- ❑ Autodigestion of pancreas

ETIOLOGY:

- Use of alchol
- Spasm and edema
- Blunt abdominal trauma
- Peptic ulcer disease
- Ischemic vascular disease
- Hyperlipidemia, hypercalcemia
- Oral contraceptives

PATHOPHYSIOLOGY:



CLINICAL MANIFESTATIONS:

- Severe abdominal pain and back pain
- Low grade fever
- Leukocytosis
- Hypotension, tacchycardia, jaundice
- Bowel sounds decreased
- Cyanosis of abdominal wall
- Ecchymosis
- Mental confusion
- Agitation

ASSESSMENT AND DIAGNOSTIC STUDIES:

- History collection
- Physical examination
- Serum and lipase levels
- Urinary amylase levels
- White blood cell count increses
- Elevated serum bilirubin levels
- Ultrasound
- CT-scan
- ERCP

MANAGEMENT:

- Parenteral nutrition
- Nasogastric suction
- Histamine 2 antagonist such as cimentidine and rantidine

- Proton pump inhibitors such as pantoprozole
- Laporotomy

NURSING CARE & PANCREATIC DISEASE

- Keen Assessment
- Strategies to deal with S/S especially pain, itch, body image, anxiety, behavioral changes if alcohol related
- Education

PANCRATIC CANCER

DEFINITION:

- Pancreatic cancer occurs when cancer cells develop from the pancreas a glandular organ located behind the stomach.

INCIDENCE:

- In 2012 pancreatic cancer of all types cause 330000 deaths globally the seventh most common cause of deth due to cancer.

RISK FACTORS:

- Age
- Sex
- Gender
- Cigaratte smoking
- Obesity
- Family history

TYPES

- Endocrine
- Exocrine

CLINICAL MANIFESTATIONS:

- Pain in upper abdomen
- Painless jaundice
- Unexplained weight loss
- Dyspepsia
- Heartburn
- Trousseaus syndrome

ASSESMENT AND DIAGNOSTIC STUDIES:

- History collection
- Physical examination
- Leukocytosis
- Erythrocytosis
- X-ray
- CT scans, MRI
- Ultrasound studies
- Arteriography
- PET and biopsy

MANAGEMENT:

- Chemothearpy
- Radiation thearpy
- Anti-neoplastic agents
- Cryosurgery
- Cryoablation

Nursing Diagnosis

- Imbalanced nutrition: less than body requirements
- Impaired skin integrity
- Ineffective breathing pattern
- Risk for injury
- Risk for infection
- PC: hepatic encephalopathy
- PC: hemorrhage