Gastric Cancer

Pathophysiology/Etiology

Risk factors include:

a. Chronic atrophic gastritis with intestinal metaplasia.

b. Pernicious anemia or having had gastric resections (greater than 15 years).

c. More common in men.

d. Uncommon in those younger than age 40.

Early Manifestations

- same symptoms as gastric ulcer

1. Progressive loss of appetite.
2. gastric fullness, dyspepsia lasting more than 4 weeks
3. Blood (usually occult) in the stools(melena)
4. Vomiting

a. pyloric obstruction or cardiac-orifice obstruction

b. a coffee-ground because of slow leaks of blood from cancer

Continue…..

Later Manifestations

1. Pain, often induced by eating and relieved by vomiting
2. Weight loss, loss of strength, anemia, metastasis (usually to liver), hemorrhage, obstruction

Diagnostic Evaluation

1. History—weight loss and loss of strength over several months.
2. Upper GI radiography in conjunction with fiberoptic endoscopy—affords visualization and provides means for obtaining tissue samples for histologic and cytologic review.
3. Imaging, such as bone or liver scan— may determine extent of disease.

Management

1. The only successful treatment of gastric cancer is surgical removal. Gastric resection is surgical removal of part of the stomach.
2. If tumor is localized to stomach and can be removed, chances are still poor that the patient can be cured.
3. If tumor has spread beyond the area that can be excised surgically, cure cannot be accomplished.

a. Palliative surgery such as subtotal gastrectomy with or without gastroenterostomy may be performed to maintain continuity of the GI tract.

b. Surgery may be combined with chemotherapy to provide palliation and prolong life.

Continue….

- Nursing Assessment
- 1. Assess for anorexia, weight loss, gastric fullness, dyspepsia, vomiting).
- 2. Evaluate for pain, noting characteristics.
- 3. Check stool for occult blood.
- 4. Monitor complete blood count—assess for anemia
- Nursing Diagnoses
- A. Pain related to disease process or surgery
- B. Altered Nutrition, Less Than Body Requirements, related to malignancy and treatment
- C. Fluid Volume Deficit and other complications related to surgery and impaired gastric tissue function

Nursing Interventions

A. Promoting Comfort and Wound Healing

B. Attaining Adequate Nutritional Status

C. Preventing Shock and other Complications

D. Patient Education/ Health Maintenance

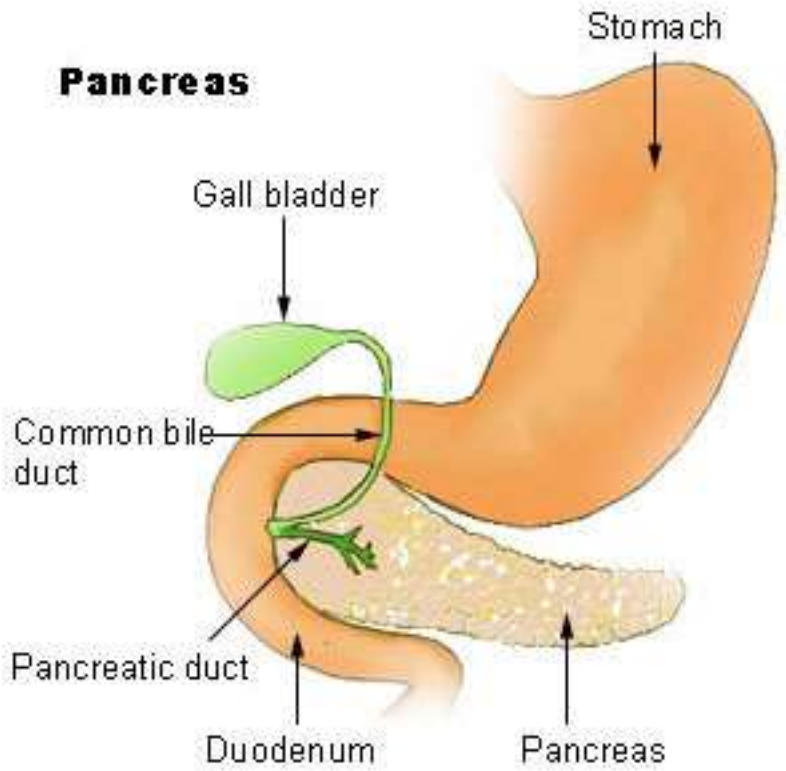
Dumping Syndrome

- A group of unpleasant vasomotor and G.I. symptoms caused by rapid emptying of gastric content into the jejunum.
- Common complication of some types of gastric surgery
- **Manifestations:**
- **Early:**
  - 5 to 30 minute: weakness, tachycardia, dizziness, diaphoresis, pallor, feeling of fullness, nausea and diarrhea.
- **Late: 2- 3 hrs:**
  - sudden hyperglycemia, increased insulin secretions, rebound hypoglycemia (sweating, weakness, palpitation, confusion), this may called postprandial hypoglycemia

Nursing interventions

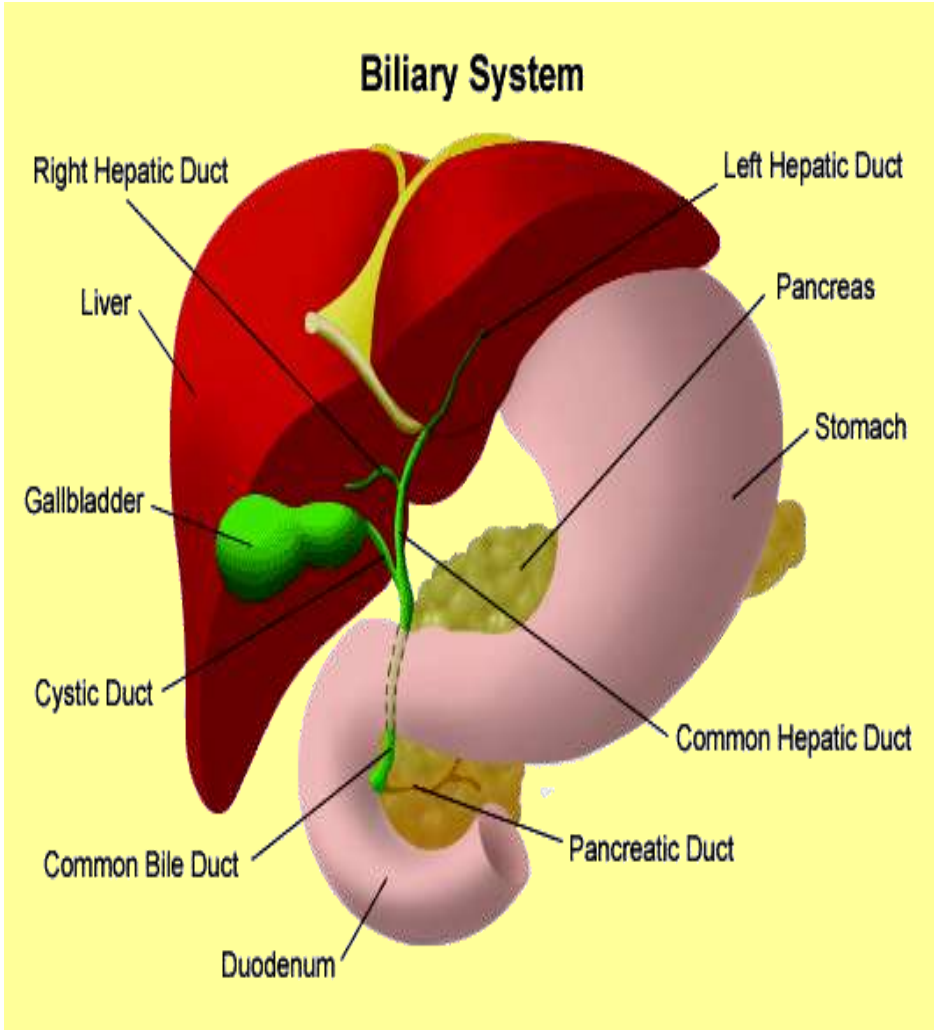
- Eat in a recumbent or semi recumbent position
- Lie down after a meal
- Small, frequent feedings
- Moderate fat, high protein diet: Fats slow down gastric motility, proteins increase colloidal osmotic pressure and prevents shifting of plasma
- Limit carbohydrates, no simple sugars
- Give fluids few hours after meals or in between meals
- Avoid very hot and cold foods and beverages

Assessment and management of patients with hepatic & biliary disorders



Anatomic and physiologic overview

Liver is located behind the ribs in the (RUQ) of abdominal cavity it weights about 1500 g divided into 4 lobes .



Functions of the liver :

1- Glucose metabolism :

glucose is take up from portal vein by liver and stored as glycogen in hepatocytes . glucose is also synthesized in liver (**Gluconeogensis**).

2- Ammonia conversion :

ammonia result from Gluconeogensis (protein---glucose).the liver convert it to urea . ammonia result by bacteria in the intestine is removed from portal vein for urea synthesis .

3- Protein metabolism : it synthesis all plasma protein (except gamma globulin) including albumin , alpha and beta globulin, blood clotting factors . lipoprotein

4- fat metabolism : breakdown of fatty acid for energy production .

5- vitamins and iron storage : vitamin A,B,D and several B complex .

Continue…

- **6- Drug metabolism** :
- **7- Bile formation** : bile produced by hepatocytes. its composed of water, electrolytes (Na. K. Ca.) fatty acid, cholesterol, bilirubin. Bile is collected and stored in gallbladder

  Bile salts are synthesized by hepatocytes from cholesterol after conjugated (binding to amino acid) they excreted into bile .
- **8- Bilirubin excretion** : hepatocytes remove bilirubin from blood through conjugated it with glucuronic acid (to make it soluble) . in small intestine bilirubin is converted into urobilinogen which excreted by feces.

Assessment and Diagnostic procedures

- Health history : occupation , alcohol intake, smoking, drugs, sexual practice , past medical history
- Physical examination :
- Liver function test (LFT) : next slide
- Liver Biopsy :

Description

Sampling of liver tissue through needle aspiration to establish a diagnosis of liver disease through histological study

Nursing/Patient Care Considerations

Liver function test (LFT) :

Liver Function Tests (LFTs)

LFT Components	Hepatitis Pattern	Cirrhosis Pattern
Total Protein	Normal	↓
Albumin	Normal	↓
Globulin	Normal	↑
A/G ratio	>1	<1
Alkaline Phosphatase	Elevated 1-2 times normal	Elevated 1-2 times normal
ALT (SGPT)	Values increased into the thousands	ALT, AST are increased up to a maximum of 300 IU
AST (SGOT)	Values increased into the thousands; but ALT is always > than AST	Never greater than 300 IU AST is always > than ALT

Liver biopsy…

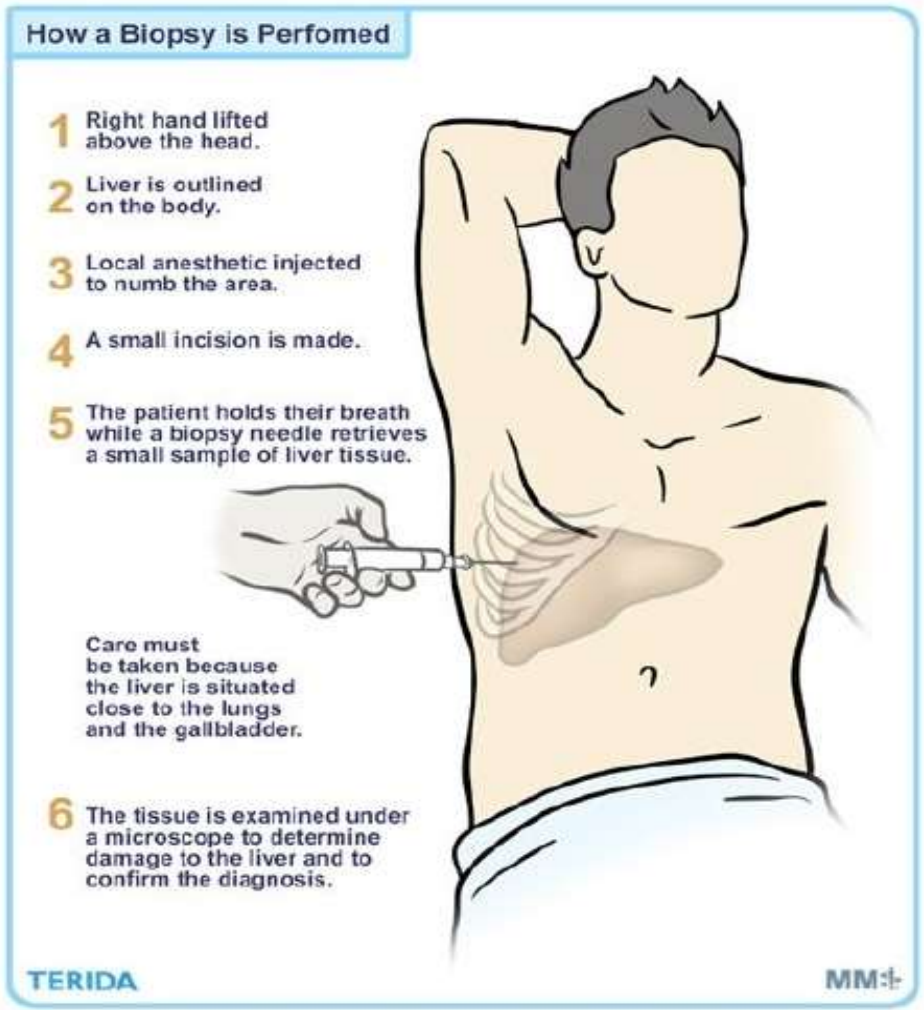
Pre-procedure

1. Ensure that prothrombin time (PT) is within normal limits.
2. Verify informed consent.
3. Establish baseline vital signs.
4. Tell patient that cooperation in holding breath for about 10 seconds during the procedure is important to obtain biopsy without damaging the diaphragm.

Post-procedure

1. Position patient on right side with pillow supporting lower rib cage for several hours.
2. Check vital signs : Report tachycardia, decreasing BP.
3. and observe biopsy site frequently for bleeding or drainage.
4. Report increasing pain, and apprehension, which may indicate hemorrhage.

Liver Bx:



Ultra sound is used to identify the location for the biopsy.

Dx tests: Continue…

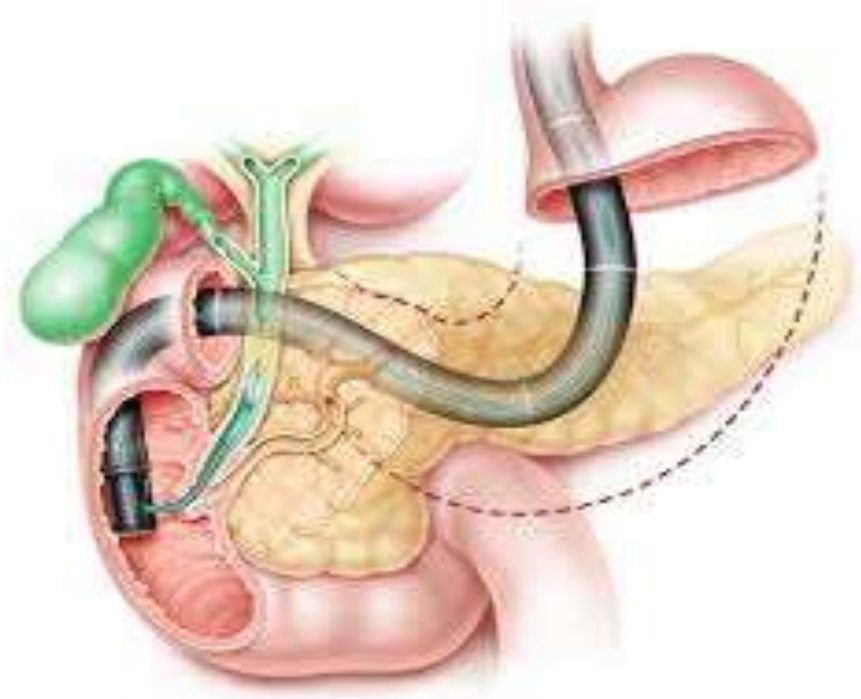
- CT scan
- MRI
- Laparoscopy
- **Endoscopic Retrograde Cholangiopancreatography (ERCP)** Description:

  1. Endoscopic visualization of the common bile, pancreatic, and hepatic ducts with a flexible fiberoptic endoscope inserted into the esophagus to the duodenum.

  2. The common bile duct and pancreatic duct are cannulated and contrast medium is injected into the ducts, permitting visualization and radiographic evaluation.

  3. Done to **detect extrahepatic biliary obstruction**, such as stones, tumors of the bile duct, strictures or injuries to the bile duct, and sclerosing cholangitis; **intrahepatic biliary obstruction** caused by stones or tumor; and pancreatic disease, such as pancreatitis, pseudocyst, or tumor.

ERCP



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4. ERCP may be combined with a therapeutic biliary or pancreatic procedure, such as endoscopic sphincterotomy, biliary and pancreatic stents, tissue biopsy or fluid cytology, or retrieval of retained gallstones.

Nursing/Patient Care Considerations

Preprocedure

1. Assess for any allergies to iodine, seafood, or contrast media.
2. Ensure patient remains NPO since midnight before the study.
3. Ensure that dentures are removed; instruct patient to gargle and swallow topical anesthetic to decrease gag reflex, as ordered.
4. Verify presence of a signed informed consent before sedation is given.
5. Establish intravenous (IV) access.
6. Administer antibiotic prophylaxis as ordered.

Continue…

Post-procedure

1. Monitor and document vital signs.
2. Observe for and report abdominal distention and signs of possible pancreatitis, including chills, fever, pain, vomiting, tachycardia.
3. Maintain NPO status until gag reflex returns.

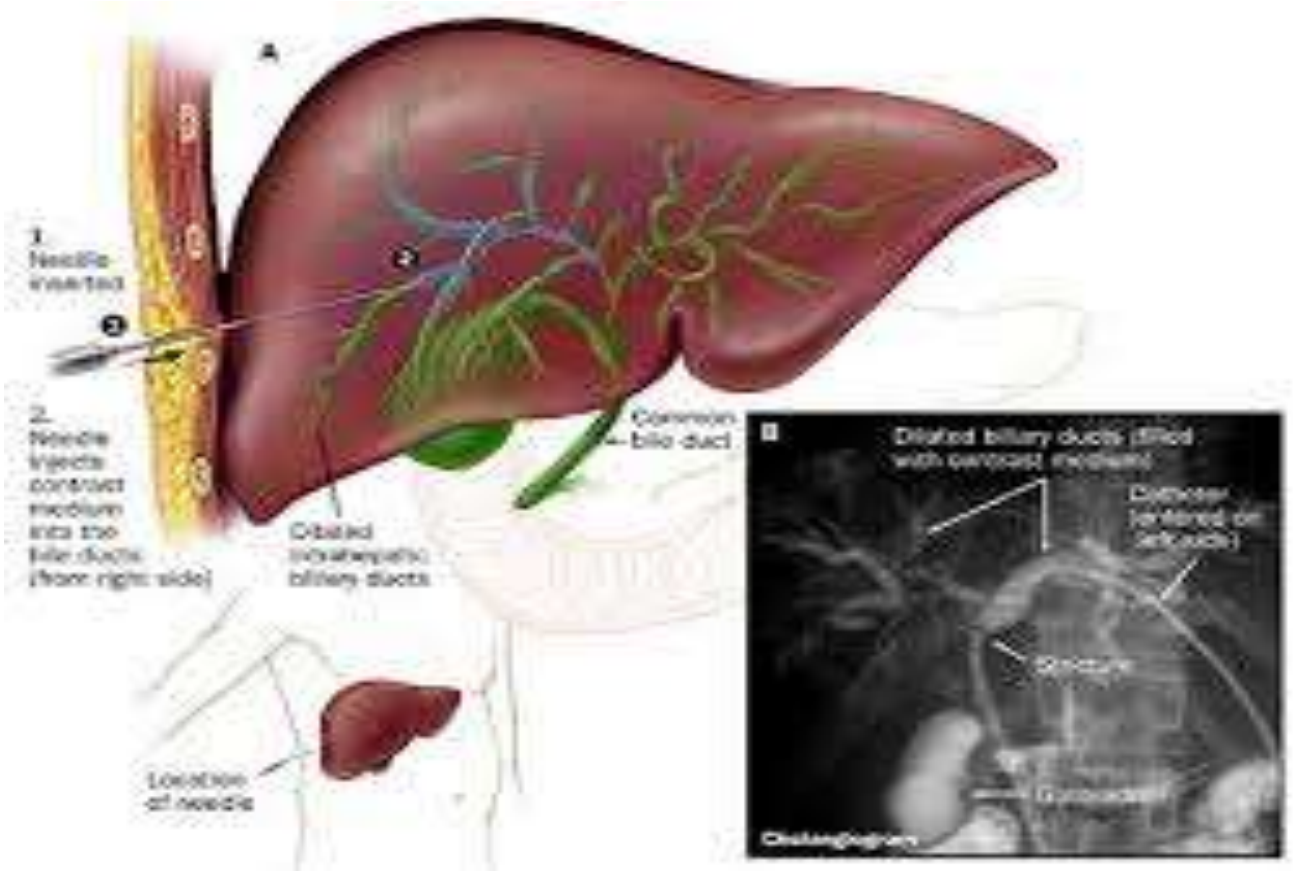
a. Check for gag reflex by applying gentle pressure on a tongue depressor placed on the back of the tongue.

Percutaneous Transhepatic Cholangiography (PTC)

Description

1. Fluoroscopic examination of the intrahepatic and extrahepatic biliary ducts after injection of contrast medium into the biliary tree through percutaneous needle injection.
2. Helps to distinguish obstructive jaundice caused by liver disease from that due to biliary obstruction, such as from a tumor, metal clips, injury to the common bile duct, stones within the bile ducts, or sclerosing cholangitis.

Percutaneous Transhepatic Cholangiography (PTC)



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3. A biliary catheter may be left in place to drain the biliary tree, called percutaneous transhepatic biliary drainage (PTBD). This relieves jaundice, decreases pruritus, improves nutritional status, allows easy access into the biliary tree for further procedures, and can be used as an anatomic landmark and stent at the time of surgery.

Nursing/Patient Care Considerations

Pre-procedure

1. Assess for any allergies to iodine, seafood, or contrast media to determine need to be premedicated with antihistamines and steroids to prevent reaction.
2. Instruct on remaining NPO or having clear liquids from the midnight before the procedure.
3. Verify that patient has a signed informed consent before sedatives are given.
4. Establish IV line. And Administer antibiotic prophylaxis as ordered

Post- Procedure : Continue…

1. Monitor and document vital signs and assess puncture site for bleeding, hematoma, or bile leakage.
2. Check for and report signs of peritonitis from bile leaking into the abdomen: fever, chills, abdominal pain and tenderness, and distention.
3. Continue antibiotic prophylaxis per protocol.
4. If the patient has a PTBD, monitor catheter exit site for bleeding or bile drainage and monitor drainage in bile bag for color, amount, and consistency. The drainage initially may have some blood mixed with bile but should clear within a few hours.

a. Report frank blood and/or blood clots that appear in the bile bag.

b. Large amounts of bile drainage may require fluid replacement.

c. Maintain patency and security of biliary catheter; perform routine care and dressing at catheter exit site.

d. Perform routine flushing of catheter as per order.