Chapter 44

Care of the Patient with a Gastrointestinal Disorder

The Digestive System

- Consists of the digestive tract
  - A muscular tube that extends from the mouth to the anus
  - Consists of the mouth, pharynx, esophagus, stomach, small intestine, large intestine, and anus
  - Accessory organs aid in digestion

Organs of the Digestive System

- Mouth
- Pharynx
- Esophagus
- Stomach
- Small intestine
- Large intestine
- Anus
Mouth

- Marks the entrance of the digestive system
- Contains the tongue
  - Involved in chewing and swallowing
  - Contain taste buds
- Digestion begins in the mouth
- The teeth, located in the mouth, are an accessory organ of the digestive system

Esophagus

- Muscular, collapsible tube
- Approximately 25 cm long
- Moves food from the mouth to the stomach

Stomach

- Digestion of protein begins in the stomach
- The stomach breaks the food down into chyme
- Chyme passes through the pyloric sphincter into the duodenum for the next phase of digestion
Small Intestine

- Approximately 20 feet long
- Up to 90% of digestion takes place in the small intestine
- Contain villi that aid in digestion

Large Intestine (Colon)

- Approximately 5-6 feet long
- Larger in diameter than the small intestine
- Main function is the reabsorption of water

Rectum

- The last 8 inches of the large intestine
- Where fecal material is expelled
- The anus is the sphincter through which feces are passed
Accessory Organs of the Digestive System

- Liver
- Gallbladder
- Pancreas

Liver

- Produces bile, which is necessary to digest fat
- Manages blood coagulation
- Metabolizes proteins, fats, and carbohydrates
- Manufactures cholesterol and albumin
- Detoxifies poisons (alcohol, nicotine, drugs)
- Converts ammonia to urea

Gallbladder

- Connected to the underside of the liver
- Stores bile
- Ejects bile into the duodenum to aid in digestion
Pancreas

- For digestion, the pancreas produces enzymes that aid in digestion of carbohydrates, fats, and protein
- Secretes sodium bicarbonate that aids in neutralizing stomach acid

Laboratory and Diagnostic Examinations

Upper Gastrointestinal Series (Upper GI, UGI)

- Consists of a series of radiographs of the lower esophagus, stomach, and duodenum using barium sulfate as the contrast medium
- Nursing interventions
  - Keep patient NPO prior to exam
  - No smoking prior to exam
  - Explain importance of ensuring all barium is expelled rectally following procedure
  - Instruct patient to increase fluid intake following exam

Tube Gastric Analysis

- Stomach contents are aspirated to determine the amount of acid produced by the parietal cells in the stomach
- Nursing interventions
  - Patient should receive no anticholinergic medications for 24 hours before the test
  - NPO prior to procedure
  - No smoking prior to the exam
  - Insert an NG tube
Laboratory and Diagnostic Examinations cont’d

Esophagogastroduodenoscopy (EGD, UGI Endoscopy, Gastroscopy)
- Enables direct visualization of a particular hollow organ or cavity by means of a long, flexible fiberoptic scope
- Nursing interventions
  - Maintain the patient NPO after midnight
  - Ensure the patient has IV access
  - Following procedure, keep patient NPO until after gag reflex returns
  - Monitor vital signs
  - Monitor for signs and symptoms of complications

Barium Swallow
- Allows easy recognition of
  - Swallowing difficulties resulting from conditions such as cerebrovascular accidents
  - Anatomical abnormalities, such as hiatal hernia
- Nursing interventions
  - Keep patient NPO after midnight
  - Explain the importance of ensuring all barium is expelled rectally

Examination of Stool for Occult Blood
- Patient is usually asked to collect stool in an appropriate container
- Nursing interventions
  - Instruct patient to keep sample free from urine or toilet paper
  - Instruct patient to avoid eating organ meat 48 hours prior to collecting sample
Laboratory and Diagnostic Examinations cont’d

Colonoscopy

- Can detect lesions in the proximal colon, which would not be found by sigmoidoscopy
- Nursing interventions
  - Patient should be on a clear liquid diet 1-3 days prior to exam
  - NPO 8 hours prior to procedure
  - Administer bowel cleansers as ordered
  - Assess after procedure for signs of bowel perforation

Stool Culture

- Examination of the stool for the presence of bacteria, ova, and parasites
- Nursing interventions
  - Gloves are worn for sample collection and the specimen is taken to the laboratory within 30 minutes of collection

Disorders of the Mouth

Dental Plaque and Caries

- *Plaque* is a film found on the teeth made of mucin and colloidal material
- Caries are commonly referred to as cavities
- Treated by removal of decayed portion and replacement with dental material
- Nursing interventions
  - Stress the importance of, and proper procedure for, brushing and flossing
### Disorders of the Mouth cont’d

**Candidiasis**
- An infection caused by Candida
- Also referred to as *thrush*
- Presents as milky, curdlike lesions
- Usually treated with nystatin or Diflucan
- **Nursing interventions**
  - Meticulous hand hygiene to prevent the spread of infection
  - Assess regularly
  - Administer meds as prescribed
  - Treat pain

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**Carcinoma of the Oral Cavity**
- May occur on the lips, oral cavity, tongue, and pharynx
- Higher incidence of cancers of the mouth and throat with a history of heavy drinking, tobacco use, or exposure to HPV
- **Clinical manifestations**
  - Leukoplakia
  - Sore in the mouth
- **Assessment**
  - Difficulty chewing, swallowing, or speaking
  - Edema, numbness, or loss of feeling in any part of the mouth
  - Earache, facial pain, and toothache
- **Medical management** varies greatly and can include surgery, radiation, and chemotherapy

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**Carcinoma of the Oral Cavity cont’d**
- **Nursing interventions**
  - Assess oral cavity frequently
  - Monitor saliva output
  - Treat pain
  - Develop methods for communication
  - Provide patient education
Disorders of the Esophagus

Gastroesophageal Reflux Disease (GERD)
- Backward flow of stomach acid up into the esophagus
  - Symptoms typically include
    - Burning and pressure behind the sternum
    - Described by patients as heartburn
    - Dry cough
    - Hoarseness
    - Sore throat

GERD Medical Management
- H₂ receptor antagonist
- Proton pump inhibitors
- Antiulcer medications
- Metoclopramide (Reglan)
- Nissen fundoplication

GERD Nursing Interventions
- Provide patient education concerning diet and medications
- Encourage patient to stop smoking
- Patient should avoid clothing that is tight over the abdomen
- Patient should avoid working in a bent-over position
- Elevate the head of the bed
Carcinoma of the Esophagus

- Malignant epithelial neoplasm that has invaded the esophagus
- Risk factors
  - Alcohol
  - Tobacco use
  - Acid reflux
  - Obesity
- Prevention focuses on eliminating risk factors

Carcinoma of the Esophagus cont’d

Clinical Manifestations and Assessment

- Progressive dysphagia over a six-month period
- Assessment
  - Dysphagia
  - Chronic cough
  - Vomiting
  - Hoarseness

Carcinoma of the Esophagus cont’d

Medical Management

- Radiation
- Chemotherapy
- Surgery
Achalasia

- Also called *cardiospasm*
- Inability of a muscle to relax, particularly the cardiac sphincter of the stomach
- The primary manifestation is dysphagia
- Treatment
  - Medications
  - Dilatation

Disorders of the Stomach

- Gastritis
- Peptic ulcer disease
- Cancer of the stomach

Gastritis

- Inflammation of the lining of the stomach
- Associated with alcoholism, smoking, and stressful physical problems
- Manifestations
  - Nausea
  - Vomiting
  - Fever
  - Diarrhea
  - Headache
  - Loss of appetite
Gastritis cont’d

● Assessment
  ➢ Anorexia
  ➢ Nausea
  ➢ Discomfort eating
  ➢ Pain
  ➢ Vomiting
  ➢ Hematemesis
  ➢ Melena

Gastritis cont’d

● Medical management
  ➢ Medications
  ➢ NG tube
  ➢ Gastric lavage
  ➢ Removal or avoidance of causative factors
● Nursing interventions
  ➢ Monitor I&O
  ➢ Keep NPO until symptoms subside
  ➢ Administer IV feedings as indicated

Peptic Ulcer Disease

● Ulcerations of the mucous membrane or deeper structures of the GI tract
● Most commonly occur in the stomach and duodenum
● Pain is the characteristic symptom
● It is described as dull, burning, boring, or gnawing
● Pain is located in the epigastric region
Peptic Ulcer Disease cont’d

Medical Management
- Insert an NG tube to monitor gastric content
- Antacids
- H₂ receptor blockers
- Proton pump inhibitors (PPIs)
- Sucralfate
- Antibiotics for H. pylori

Nursing Interventions
- NG or intestinal tube placement
- Intermittent suction
- Administer medications
- Assess frequently
- Monitor vital signs

Cancer of the Stomach
- Men more commonly affected than women
- Rates are highest in Japan, China, Southern and Eastern Europe, and South and Central America
- The patient may be asymptomatic in early stages of the disease
- With more advanced disease, the patient may appear pale and lethargic if anemia is present
Cancer of the Stomach cont’d

Assessment
- Vague epigastric discomfort
- Early satiety
- Weight loss
- Blood in stools
- Vomiting after eating or drinking
- Anemia

Cancer of the Stomach cont’d

Medical Management
- Surgery
  - Dumping syndrome is a possible complication
- Radiation
- Chemotherapy

Cancer of the Stomach cont’d

Nursing Interventions
- Improve nutritional status
- Relieve anxiety
- Improve understanding of drainage tubes
- Closely monitor I&O
- Maintain TPN
- Remain alert for weight loss
Inflammatory Bowel Disease
- Ulcerative colitis
- Crohn’s disease

Ulcerative Colitis

Clinical Manifestations
- Diarrhea that may contain blood, mucus, and pus
- Abdominal cramps
- Moderate, up to five stools per day
- Severe, 15-20 stools per day
- Diagnosed with double barium enema

Ulcerative Colitis cont’d

Assessment
- Complaints of rectal bleeding and abdominal cramps
- Lethargy
- Frustration
- Weight loss
- Fever
- Tachycardia
Ulcerative Colitis cont’d

Medical Management
- Inflammatory response modifiers
- Antibiotics
- Immune response modifiers
- Antidiarrheals
- Nutrition therapy
- Surgical control

Nursing Interventions
- Assess elimination pattern
- Assess and treat pain
- Assess nutritional status
- Assess coping abilities
- Provide patient education
- Perform preoperative measures
- Provide postoperative care

Crohn’s Disease
- Characterized by inflammation of segments of the GI tract
- Cause is not known
- Possible immune link
- Most commonly occurs during adolescence and early adulthood
- Mucosa develops a cobblestone appearance
- Malabsorption is a major issue
Crohn’s Disease cont’d

Clinical Manifestations
- Diarrhea
- Fatigue
- Abdominal pain
- Weight loss
- Fever
- Malnutrition

Assessment
- Weakness
- Loss of appetite
- Abdominal cramps
- Pain
- Frequent BMs
- Diarrhea
- Fistulas

Medical Management
- Antiinflammatory medications
- Corticosteroids
- Multivitamins
- Immunosuppressive therapy
- Dietary modification
- Surgery
Crohn’s Disease cont’d

Nursing Interventions
- Provide nutritional education
- Monitor I&O closely
- Assess and treat pain
- Provide bedside commode
- Provide emotional support

Nursing Interventions for the Patient with a Stoma
- Assess skin integrity
- Assess for allergies to powders or adhesive
- Provide education on changing pouch
- Assess peristomal area for infection

Acute Abdominal Inflammations
- Appendicitis
- Diverticulitis
- Peritonitis
Appendicitis

- Inflammation of the vermiform appendix
- Usually acute
- Characterized by rebound tenderness in the right lower quadrant of the abdomen
- Patient may also experience nausea and anorexia
- WBC count >10,000/mm³
- Emergency surgical intervention is the treatment of choice

Diverticulitis

- Diverticulosis is the presence of pouchlike herniations through the circular smooth muscle of the colon
- Diverticulitis is the inflammation of one or more of the diverticular sacs
- Incidence increases after age 40
- Inflammation can lead to perforation, abscess, peritonitis, obstruction, and hemorrhage
- Most common cause of lower GI hemorrhage

Diverticulitis cont’d

- Characterized by
  - Pain
  - Fever
  - Elevated WBC count
  - Left lower quadrant pain
  - Diarrhea
  - Vomiting
  - Nausea
Diverticulitis cont’d

- Diagnosed through ultrasound and CT
- Managed by diet, weight loss, exercise
- Antibiotics and surgical intervention may be required if complications occur

Peritonitis

- Inflammation of the abdominal peritoneum
- Characterized by severe abdominal pain
- Assess for severe abdominal pain, nausea, and fever
- Diagnosed through x-ray and labs
- CT and MRI may also be used
- Treatment usually involves pain treatment, antibiotic administration, and surgery

Hernia

- External hernia
- Hiatal hernia
External Hernia

- A protrusion of a viscus through an abnormal opening or a weakened area in the wall of the cavity within which it is normally contained
- Characterized by a visible protruding mass
- Patient may also experience pain and nausea
- Hernia may be left untreated, or the patient may wear an abdominal binder
- Surgical correction may be required

Hiatal Hernia

- A protrusion of the stomach and other abdominal viscera through an opening, or hiatus, in the diaphragm
- Usually corrected with surgery
- Nursing care similar to that for patients having gastric or thoracic surgery

Intestinal Obstruction

- Mechanical obstruction: caused by an occlusion of the lumen of the intestinal tract
- Nonmechanical obstruction: caused by something that decreases the muscle action of the bowel (may be neurologic or vascular disorders)
- Early phases of mechanical obstruction: auscultation of the abdomen reveals loud, frequent, high-pitched sounds
- In later stages, bowel sounds will likely be absent
Intestinal Obstruction cont’d

Assessment

- Subjective
  - Pain
  - Flatus
  - Cramping
- Objective
  - Hernia
  - Abdominal distention
  - Tenderness

Diagnosis and Medical Management

- Diagnosed by X-ray or CT
- Labs
- Treatment includes decompression of the bowel and replacement of electrolytes.
- If less invasive treatment is not effective, surgery may be required.

Nursing Interventions

- Monitor fluid status
- Monitor electrolytes
- Assess and treat pain, as indicated
- If the patient is undergoing surgery
  - Provide emotional support
  - Encourage turning, coughing, and deep breathing
  - Manage pain
  - Ambulate as soon as indicated
Colorectal Cancer

- Second leading cause of cancer deaths
- Most growths found in the sigmoid and rectal regions of the colon
- Cause remains unknown
- Risk factors include
  - Adenomatous polyps
  - Ulcerative colitis
  - Diverticulitis
  - Heredity
- Clinical manifestations are usually nonspecific

Colorectal Cancer cont’d

Assessment
- Constipation or diarrhea
- Excessive flatus
- Cramping
- Vomiting
- Weight loss

Colorectal Cancer cont’d

Diagnostic Exams
- Fecal occult blood tests
- Colonoscopy
- Endorectal ultrasonography
- CT
- Routine physical exam with digital rectal exam
- H&H
- CEA
Colorectal Cancer cont’d

Medical Management
- Surgery
- Radiation
- Chemotherapy

Colorectal Cancer cont’d

Nursing Interventions
- Assess bowel and urinary elimination
- Monitor fluid and electrolyte balance
- Assess tissue perfusion
- Provide adequate nutrition
- Assess and treat pain
- Promote gas exchange
- Prevent infection
- Maintain peristomal skin integrity

Fecal Incontinence
- Has a variety of causes
  - The external sphincter may be relaxed
  - Voluntary control of defecation may be disturbed
  - Distention of the rectum
  - Paralysis
Fecal Incontinence cont’d

Medical Management and Nursing Intervention

- Improve muscle tone of the sphincter
- Bowel training program
- Assist patient to toilet without delay when needed
- Provide patient education