Gastrointestinal Disorders

Gastric Cancer

Overview

• The cause is not known.

• Associated with:
  – history of polyps,
  – pernicious anemia, hypochlorhydria
  – Gastrectomy
  – chronic atrophic gastritis
  – gastric ulcer.
Overview

Clinical

• The patient may be asymptomatic in early stages of the disease.

• Advance disease:
  – Weight loss
  – bleeding in the stools
  – hematemesis
  – vomiting after drinking fluids or eating meals.

Diagnosis

• Endoscopic/gastroscopic examinations with biopsy remain the best diagnostic tool.

• Carcinoembryonic antigen (CEA) and carbohydrate antigen (CA) 19-9 tumor markers are usually elevated in advanced gastric cancer.
# Medical Management

- The most therapeutic management of stomach cancer is surgical removal.

- The surgical intervention used in treating gastric cancer may be the same procedure used for peptic ulcer disease.

- Surgery for advanced gastric cancer carries high morbidity and mortality rates.

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## Complications post surgery

- **Dehiscence**: A partial or complete separation of the wound edges. Related to excessive coughing, straining, malnutrition, obesity, and infection.

- Nursing interventions include:
  - instructing the patient to remain quiet
  - avoid coughing or straining
  - position the patient to remove further stress on the wound.

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**Dehiscence**

![Dehiscence Image]
Complications post surgery

- **Evisceration**: when the patient's viscera protrude through the disrupted wound.

- **Nursing interventions**:
  - patient on bed rest
  - the protruding viscera are loosely covered with a warm sterile saline dressing.
  - The surgeon should be notified immediately

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Evisceration

Nursing interventions

- Place patient in semi-Fowler's position to aid ventilation. Encourage and assist with gentle turning and repositioning.

- Encourage patient to turn, breathe deeply, and cough at least every 2 hours until patient is ambulating well

- Splint incision before patient coughs

- Encourage use of incentive spirometer and ambulation.
Nursing interventions

• Monitor closely for elevated temperature, bleeding from incision, pallor, dyspnea, cyanosis, tachycardia, increased respirations, and chest pain.

• Monitor laboratory results and activity tolerance because of possible anemia.

• Change dressings using sterile technique

Prognosis

• The prognosis for patients with gastric cancer is poor. About 60% have clinical findings at the time of diagnosis, resulting in a low cure rate.

Intestinal Disorders
Infections

- Intestinal infections are the invasion of the alimentary canal (both the small and large intestine) by pathogenic microorganisms that reproduce and multiply.

- The most common entry is through the mouth by contaminated food or water.

- Person-to-person contact.

- Fecal-oral transmission occurs through poor handwashing after elimination.

Etiology

- Infectious diarrhea causes secretion of fluid into the intestinal lumen.
Etiology

- Clostridia, Salmonella, Shigella, and Campylobacter bacteria are associated with intestinal infections.
- These bacteria produce toxic substances, and the mucosal cells respond by secreting water and electrolytes, causing an imbalance.
- The amount of fluid secreted exceeds the ability of the large intestine to reabsorb the fluid into the vascular system.

Antibiotic-associated pseudomembranous colitis (AAPMC).

- This type of colitis is a complication of treatment with a wide variety of antibiotics.
- Lincomycin, clindamycin, ampicillin, erythromycin, tetracycline, cephalosporins, and aminoglycosides.
- A C. difficile test is ordered on the stool specimen to aid in the diagnosis of AAPMC in both inpatients and outpatients.
- The identification of characteristic lesions of AAPMC is done on tissues obtained through endoscopic examination.

Antibiotic-associated Pseudomembranous colitis (AAPMC).

- Treatment with antibiotics results in the inhibition of normal bacterial growth in the intestine.
- This inhibition of normal flora can lead to the overgrowth of other bacteria such as C. difficile.
AAPMC Treatment

- The physician will treat a mild case of antibiotic-related C. difficile-associated diarrhea by simply discontinuing the antibiotic and providing fluid and electrolyte replacement.

- In more severe cases the physician will need to both discontinue the antibiotic and start antimicrobial therapy;

- The drugs of choice are either metronidazole (Flagyl) or vancomycin.

Clinical

- Diarrhea with blood and mucus is the most common manifestation of an intestinal infection.

- Tenesmus (ineffective and painful straining with defecation)

- Nausea, and abdominal cramping.

- Fever greater than 102°F (38.8°C) and vomiting.

Diagnostic Tests/ Medical Management

- Stool culture.

- Blood chemistry
  - Observation

- Oral rehydration
  - IV hydration

- Antibiotics??
Nursing Interventions

• If oral intake can be tolerated, apple juice, clear carbonated beverages, clear broth, plain gelatin, and water should be offered.

• If intravenous feedings are required to maintain intravascular volume, these fluids should have electrolytes added.

• Maintain accurate I&O

Nursing Interventions

• Monitor for decreasing episodes of diarrhea.

• Monitor blood pressure, tissue turgor, mucous membranes, and urinary output.

• Monitor weight loss if symptoms are severe

Irritable Bowel Syndrome
Etiology

- Mainly intestinal pain and disturbed defecation or abdominal distention—that are not explained by structural or biochemical abnormalities;
- The patient with IBS may have associated psychological problems

Clinical

- Abdominal pain relieved after a bowel movement.
- Frequent bowel movements with pain onset
- A sense of incomplete evacuation
- Flatulence
- Constipation, diarrhea, or both

Diagnostic tests

- History and physical examination.
- Diagnosis of IBS occurs by exclusion
Medical Management

• bulking agents
• Avoid irritant food
• Anticholinergic drugs relieve abdominal cramps
• Antianxiety and antidepressants
• Chinese herbal remedies

NURSING INTERVENTIONS

• Logging the type of food for fiber content, consistency of stool, degree of pain.

• Patient teaching regarding the relationship of fiber to both constipation and diarrhea.

• Patient teaching regarding the use of bulking agent

Chronic Inflammatory Bowel Disease

Ulcerative colitis and Crohn's disease
Overview

- Chronic, episodic, inflammatory diseases.
- Women, Jewish population, and in the nonwhite population
- Familial tendency.
- Exacerbations and Remissions
- The two diseases require similar nursing interventions but different surgical interventions.

Ulcerative Colitis

- Affects the mucosa and sub-mucosa of the colon.
- Tiny abscesses form, which grow and produce purulent drainage, sloughing of the mucosa, and subsequent ulceration.
- Usually starts on the left side of the colon and progresses to the right side.
- The enteric bacterium E. coli may play a role
Overview

- Capillaries bleed causing the characteristic diarrhea containing pus and blood.
- With healing and the natural formation of scar tissue, the colon may lose elasticity and absorptive capability.
- Pseudopolyps are common in chronic ulcerative disease and may become cancerous. Carcinoma of the colon occurs in 40% to 50%.

Clinical

- Abdominal cramps
- Diarrhea: 15 to 20 liquid stools a day, containing blood, mucus, and pus
- Sodium, potassium, bicarbonate, and calcium ions losses.

Clinical

- Weight loss
- Abdominal distention
- Fever
- Tachycardia
- Leukocytosis
- Observation of frequency and characteristics of stools.
Diagnostic tests

- Barium studies of the intestine,
- Sigmoidoscopy and colonoscopy with possible biopsy
- Checking the stool for melena
- Serum electrolytes and albumin levels
- Liver function
- Hematological studies.

Complications

- Toxic megacolon (toxic dilation of the large bowel): The bowel becomes distended and so thin that perforation could happen at any time.
- This life-threatening complication
- Clinical manifestations of toxic megacolon include:
  - temperature of 104° F (40° C)
  - Abdominal distention

Medical Management

- Medications
- Diet
- Stress reduction
Medical Management

- Medications:
  - Anti-inflammatory: Corticosteroids
  - Antibacterial drugs: Sulfasalazine (Azulfidine).
  - Antidiarrheal preparations: Loperamide (Imodium), Azathioprine (Imuran)

Medical Management

- Stress reduction: Identifying the factors that cause stress is the first step in controlling the disease.

- Diet:
  - A high-protein, high-calorie diet
  - Excludes milk products and highly spiced.

Surgical Interventions

- Colon resection: Removal of a portion of the large intestine and anastomosis of the remaining segment

- Ileostomy: Surgical formation of an opening of the ileum onto the surface of the abdomen, through which fecal matter is emptied.
Surgical Interventions

- Ileoanal anastomosis: Removal of the colon and rectum but the anus is left intact along with the anal sphincter; anastomosis is formed between the lower end of the small intestine and the anus.

- Proctocolectomy: Removal of anus, rectum, and colon; ileostomy is established for the removal of digestive tract wastes.

Surgical Interventions

- Kock pouch (Kock continent ileostomy): Surgical removal of the rectum and colon (proctocolectomy) with formation of a reservoir by suturing loops of adjacent ileum together to form a pouchlike structure, nipple valve, and stoma.

Nursing Interventions

- Provide small frequent meals, which will help patients with poor appetite or intolerance to larger amounts.

- Eliminate foods that aggravate condition.

- Assist weakened patient with activities of daily living (bathing, oral hygiene, shaving, and other grooming needs).

- Offer choices to patient, when possible, to facilitate patient control.

- Read Box 5-5 Post-operative nursing interventions.
Crohn's Disease

- Crohn's disease is characterized by inflammation of segments of the GI tract. It can affect any part of the GI tract, from the mouth to the anus.

- In the early stages of Crohn's disease, tiny ulcers form on various parts of the intestinal wall.

- Over time, horizontal rows of these ulcers fuse with vertical rows, causing the mucosa to take on a cobblestone appearance.

Overview

- Crohn's disease primarily occur in the small intestine (jejunum and terminal ileum).

- Malabsorption.

- Megaloblastic (pernicious) anemia

- Fluid and electrolyte disturbances with acid-base imbalances
Clinical

- Diarrhea: mucus and pus but not blood and steatorrhea
- Fever.
- Increased weight loss
- Malnutrition, dehydration,
- Electrolyte imbalance
- Anemia.
- Intestinal strictures and fistulas

Diagnostic Tests

- A small bowel barium enema
- Colonoscopy with multiple biopsies of the colon and terminal ileum

Medical Management

- Anti-inflammatory agents such as sulfasalazine or mesalamine (Asacol, Pentasa, Rowasa).
- Multivitamins and B12 injections.
- Corticosteroids (choice) such as prednisone
- Chemotherapy agents (severe)
- Surgery
Diet

• Low-residue, high-protein, high-calorie diet
• Avoid:
  – Lactose-containing foods in patients suspected of having lactose intolerance;
  – Brassica vegetables (cauliflower, broccoli, asparagus, cabbage, and brussels sprouts);
  – Caffeine, beer, monosodium glutamate, and sugarless (sorbitol-containing) gum and mints;
  – Highly seasoned foods, concentrated fruit juices, carbonated beverages, and fatty foods.

Nursing Interventions

• Oral diets of 2500 mL per day to replace loss of fluids and electrolytes
• Weight is monitored for losses or gains.
• The condition of the skin and all fluid I&O are monitored daily
• A urinary output of at least 1500 mL per day is desired.

Bye-Bye!