Care of the Patient with a Gastrointestinal Disorder

Figure 45 - Location of digestive organs.


Location of digestive organs.
Overview of the Digestive System

• Digestive system
  • Stomach: churn and mix contents with gastric juices
  • Small intestine: most digestion occurs here
  • Large intestine: 80% of water absorbed, forms and expels feces
  • Rectum: stores and expels feces

Overview of Anatomy and Physiology

– Organs and their functions
  • Liver: produces bile; stores it in the gallbladder
  • Pancreas: produces pancreatic juice
• Regulation of food intake
  – Hypothalamus
    • One center stimulates eating and another signals to stop eating

The Pituitary & Hypothalamus
Disorders of the Mouth

• Candidiasis
  • Infection caused by Candida albicans
  • **Fungus** normally present in the mouth, intestine, vagina, and on the skin
  • Also referred to as thrush
  • Clinical manifestations/assessment
  • Small white patches on the mucous membrane of the mouth

Disorders of the Esophagus

• Gastroesophageal reflux disease
  • Backward flow of stomach acid into the esophagus
  - Clinical manifestations/assessment
    • Heartburn 20 min – 2 hrs after eating
    • Regurgitation
    • Dysphagia
    • Eructation
Disorders of the Esophagus

- GERD disease: Medical management/nursing interventions
  - Antacids or acid-blocking medications
  - Diet: 4-6 small meals/day, low fat, adequate protein, remain upright for 1-2 hours after eating
  - Lifestyle: eliminate smoking, avoid constrictive clothing, HOB up at least 6-8 inches for sleep

Disorders of the Stomach

- Gastric ulcers and duodenal ulcers
  - Most commonly occur in the stomach and duodenum
  - Result of acid and pepsin imbalances
  - H. pylori
    - Bacterium found in 70% of patients with gastric ulcers and 95% of patients with duodenal ulcers
Disorders of the Stomach

- Gastric and duodenal ulcers
- Clinical manifestations/assessment
  - Pain: Dull, burning, boring, or gnawing, epigastric
  - Dyspepsia
  - Hematemesis
- Diagnostic tests
  - Esophagogastroduodenoscopy (EGD)
  - Breath test for H. pylori

(Figure 45 - Fiberoptic endoscopy of the stomach.
Disorders of the Stomach

- Gastric and duodenal ulcers
- Medical management/nursing interventions
  - Antacids
  - Histamine H₂ receptor blockers
  - Antibiotics
  - Diet: high in fat and carbohydrates; low in protein and milk products; small frequent meals; limit coffee, tobacco, alcohol, and aspirin use

Disorders of the Intestines

- Infection
  - Etiology/pathophysiology
    - Invasion of the alimentary canal by pathogenic microorganisms
    - Most commonly enters through the mouth in food or water
    - Person-to-person contact
    - Fecal-oral transmission
    - Long-term antibiotic therapy can cause an overgrowth of the normal intestinal flora (C. difficile)
Disorders of the Intestines

- **Infections**
- Clinical manifestations/assessment
  - Diarrhea
  - Nausea and vomiting
  - Abdominal cramping
  - Fever

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Disorders of the Intestines

- Diagnostic tests
  - Stool culture
- Medical management/nursing interventions
  - Antibiotics
  - Fluid and electrolyte replacement
  - Kaopectate
  - Pepto-Bismol

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**Ulcerative colitis**

- Etiology/pathophysiology
  - Ulceration of the mucosa and submucosa of the colon
  - Tiny abscesses form which produce purulent drainage, slough the mucosa, and ulcerations occur
- Clinical manifestations/assessment
  - Diarrhea—pus and blood; 15-20 stools per day
  - Abdominal cramping
  - Involuntary leakage of stool
• Ulcerative colitis

• Diagnostic tests
  - Barium studies, colonoscopy, stool for occult blood

• Medical management/nursing interventions
  - Medications
    - Azulfidine, Dipentum, Rowasa, corticosteroids, Imodium
  - Diet: No milk products or spicy foods; high-protein, high-calorie; total parenteral nutrition

Disorders of the Intestines

• Ulcerative colitis

• Medical management/nursing interventions
  - Surgical interventions
    - Colon resection
    - Ileostomy
Disorders of the Intestines

- **Crohn's disease**
  - Etiology/pathophysiology
    - Inflammation, fibrosis, scarring, and thickening of the bowel wall
  - Clinical manifestations/assessment
    - Weakness; loss of appetite
    - Diarrhea: 3-4 daily; contain mucus and pus
    - Right lower abdominal pain
    - Steatorrhea

Crohn's disease

- Medical management/nursing interventions
  - Diet
    - High-protein
    - Hyperalimentation
    - Avoid
      - Lactose-containing foods, brassica vegetables, caffeine, beer, monosodium glutamate, highly seasoned foods, carbonated beverages, fatty foods
• Crohn's disease
• Medical management/nursing interventions
  • Medications
    – Corticosteroids
    – Antibiotics
    – Antidiarrheals; antispasmodics
    – Enteric-coated fish oil capsules
    – B12 replacement
  • Surgery
    – Segmental resection of diseased bowel

Disorders of the Intestines
• Appendicitis
  – Etiology/pathophysiology
    • Inflammation of the vermiform appendix
    • Lumen of the appendix becomes obstructed, the
      \( E.\ coli \) multiplies, and an infection develops
  – Clinical manifestations/assessment
    • Rebound tenderness over the right lower
      quadrant\(^{1}\) of the abdomen (McBurney's point)
    • Vomiting
    • Low-grade fever
    • Elevated WBC
Right lower Quadrant Pain

Disorders of the Intestines

- Appendicitis
  - Diagnostic tests
    - WBC
    - Ex-ray
    - Ultrasound
    - Laparoscopy
  - Medical management/nursing interventions
    - Appendectomy
Disorders of the Intestines

• **Diverticular disease**
  - Etiology/pathophysiology
• Diverticulosis
  - Pouch-like herniations through the muscular layer of the colon

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**Fig**

![Diverticulosis](image)

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Diverticular disease

• Clinical manifestations/assessment
  - Diverticulosis
    - May have few, if any, symptoms
    - Constipation, diarrhea, and/or flatulence
    - Pain in the left lower quadrant
  - Diverticulitis
    - Mild to severe pain in the left lower quadrant
    - Elevated WBC, low-grade fever
    - Abdominal distention
    - Vomiting
    - Blood in stool
• Diverticular disease
• Medical management/nursing interventions
  • Diverticulosis with muscular atrophy
  - Low-residue diet; stool softeners
  - Bedrest

• Diverticular disease
• Medical management/nursing interventions Surgery
  - Hartmann’s pouch
  - Double-barrel transverse colostomy
  - Transverse loop colostomy
Peritonitis
- Etiology/pathophysiology
  - Inflammation of the abdominal peritoneum
  - Bacterial contamination of the peritoneal cavity from fecal matter or chemical irritation
- Clinical manifestations/assessment
  - Severe abdominal pain; nausea and vomiting
  - Abdomen is tympanic; absence of bowel sounds
  - Chills; weakness
  - Weak rapid pulse; fever; hypotension
Peritonitis

- Diagnostic tests
  - Flat plate of the abdomen
  - CBE
- Medical management/nursing interventions
  - Position patient in semi-Fowler's position
  - Surgery
    - Repair cause of fecal contamination
    - Removal of chemical irritant
  - Parenteral antibiotics
  - NG tube to prevent GI distention
  - IV fluids

External hernias

- Etiology/pathophysiology
  - Congenital or acquired weakness of the abdominal wall or postoperative defect
    - Abdominal
    - Femoral or inguinal
    - Umbilical
• External hernias

• Clinical manifestations/assessment
  • Protruding mass or bulge around the umbilicus, in the inguinal area, or near an incision
  • Incarceration
  • Strangulation
  - Diagnostic tests
    • Radiographs
    • Palpation

• External hernias

• Medical management/nursing interventions
  • If no discomfort, hernia is left unrepaired, unless it becomes strangulated or obstruction occurs

• Hiatal hernia
  - Etiology/pathophysiology
    • Protrusion of the stomach and other abdominal viscera through an opening in the membrane or tissue of the diaphragm
    • Contributing factors: obesity, trauma, aging
  - Clinical manifestations/assessment
    • Most people display few, if any, symptoms
    • Gastroesophageal reflux
Figure 45-15


• Hiatal hernia
• Medical management/nursing interventions
  • Head of bed should be slightly elevated when lying down

• Intestinal obstruction
  – Etiology/pathophysiology
    • Intestinal contents cannot pass through the GI tract
    • Partial or complete
    • Mechanical
    • Non-mechanical
  – Clinical manifestations/assessment
    • Vomiting; dehydration
    • Abdominal tenderness and distention
    • Constipation
**Hemorrhoids**
- **Etiology/pathophysiology**
  - Varicosities (dilated veins)
    - External or internal
  - Contributing factors
    - Straining with defecation, diarrhea, pregnancy, CHF, portal hypertension, prolonged sitting and standing
- **Clinical manifestations/assessment**
  - Varicosities in rectal area
  - Bright red bleeding with defecation
  - Pruritus
  - Severe pain when thrombosed

**Formation of hemorrhoids**

**Hemorrhoids Medical management/nursing interventions**
- Bulk stool softeners; hydrocortisone cream
- Analgesic ointment
- Sitz baths
- Ligation
- Sclerotherapy; cryotherapy
- Infrared photocoagulation
- Laser excision
- Hemorrhoidectomy
The End