- **Gastritis**

Gastritis…

- Inflammation of the **gastric or stomach mucosa**
  - Acute, lasting several hours to a few days, or
  - Chronic, resulting from repeated exposure to irritating agents or recurring episodes of acute gastritis

Gastritis…

Acute gastritis

- Caused by dietary indiscretion
- Overuse of aspirin and other nonsteroidal anti-inflammatory drugs (NSAIDs),
- Excessive alcohol intake, bile reflux, and radiation therapy
- Ingestion of strong acid or alkali, which may cause the mucosa to become gangrenous or to perforate

Gastritis…

Chronic gastritis

- Prolonged inflammation of the stomach caused either by benign or malignant ulcers of the stomach or
- By the bacteria ***Helicobacter pylori***
- Associated with autoimmune diseases such as pernicious anemia;
- Dietary factors such as caffeine; the use of medications such as NSAIDs

Gastritis…

Pathophysiology

- The gastric mucous membrane becomes edematous and hyperemic (congested with fluid and blood) and
- undergoes superficial erosion
- It secretes a scanty amount of gastric juice,
- Superficial ulceration may occur and can lead to hemorrhage

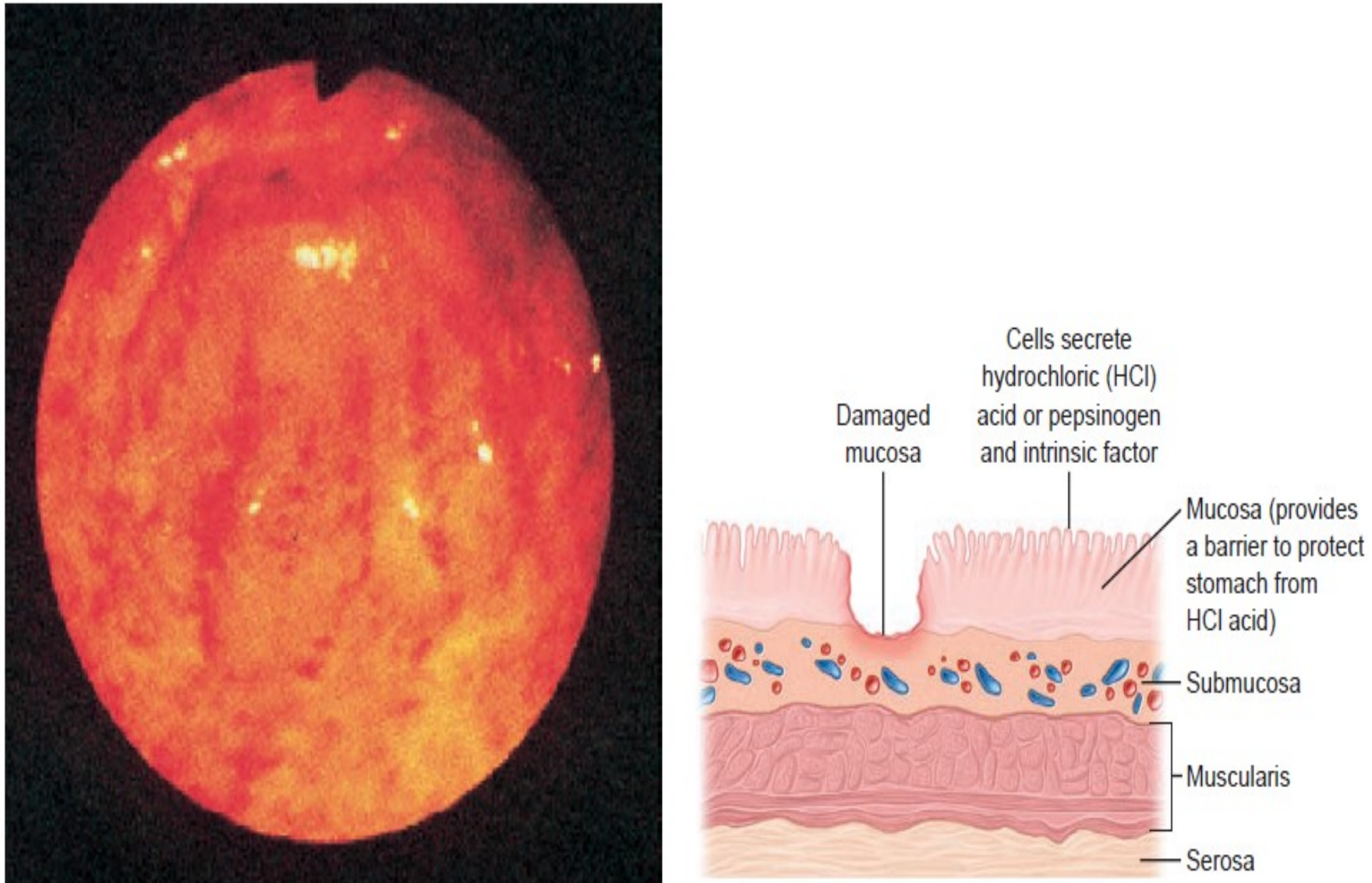


Figure 37-1 Endoscopic view of erosive gastritis (*left*). Damage from irritants (*right*) results in increased intracellular pH, impaired

Gastritis…

Clinical Manifestations

- **Acute gastritis:-** rapid onset of symptoms, such as abdominal discomfort, headache, lassitude, nausea, anorexia, vomiting
- **Chronic gastritis:-** anorexia, heartburn after eating, belching, a sour taste in the mouth, or nausea and vomiting

Assessment and Diagnostic Findings

- Upper GI x-ray series or
- Endoscopy and histologic examination of a tissue specimen obtained by biopsy.
- Diagnostic measures for detecting *H. pylori infection may be used*

Medical Management

- Instructing the patient to refrain from alcohol and food until symptoms subside
- When the patient can take nourishment by mouth, a nonirritating diet is recommended
- Emergency treatment consists of diluting and neutralizing the offending agent
- To neutralize acids, common antacids (e.g. aluminum hydroxide)

Medical Management

- Therapy is supportive and may include nasogastric (NG) intubation, analgesic agents and sedatives, antacids, and IV fluids.
- In extreme cases, emergency surgery may be required to remove gangrenous or perforated tissue

Medical Management

- A gastric resection or a gastrojejunostomy (anastomosis of jejunum to stomach to detour around the pylorus) may be necessary to treat pyloric obstruction
- Chronic gastritis is managed by modifying the patient's diet, promoting rest, reducing stress, recommending avoidance of alcohol and NSAIDs, and initiating pharmacotherapy
- *H. pylori may be treated with selected drug combinations*

Medical Management

Antibiotics

- Amoxicillin
- Clarithromycin
- Tetracyclin

Histamine-2 (H2) Receptor Antagonists

- **Cimetidine**
- Famotidine
- **Ranitidine**

Proton Pump Inhibitors of Gastric Acid (PPIs)

Omeprazole

Nursing Management

- Reducing Anxiety
- Promoting Optimal Nutrition
- Promoting Fluid Balance
- Relieving Pain

Intestinal Obstruction

Partial or complete impairment of the forward flow of intestinal contents.

Two processes can impede this flow.

- **Mechanical Obstruction**:
  - Is an intra luminal obstruction or a mural obstruction from pressure of the intestinal walls

Intestinal Obstruction…

Functional Obstruction /Paralytic ileus/ a dynamic obstruction.

Causes:

- Neurogenic or muscular impairment of peristalsis
- Chemical irritation caused by bile, bacterial toxins, electrolyte imbalances as in hypokalemia
- Inflammatory condition Ex. Peritonitis.
- Spinal fracture

Intestinal Obstruction…

Incidence:

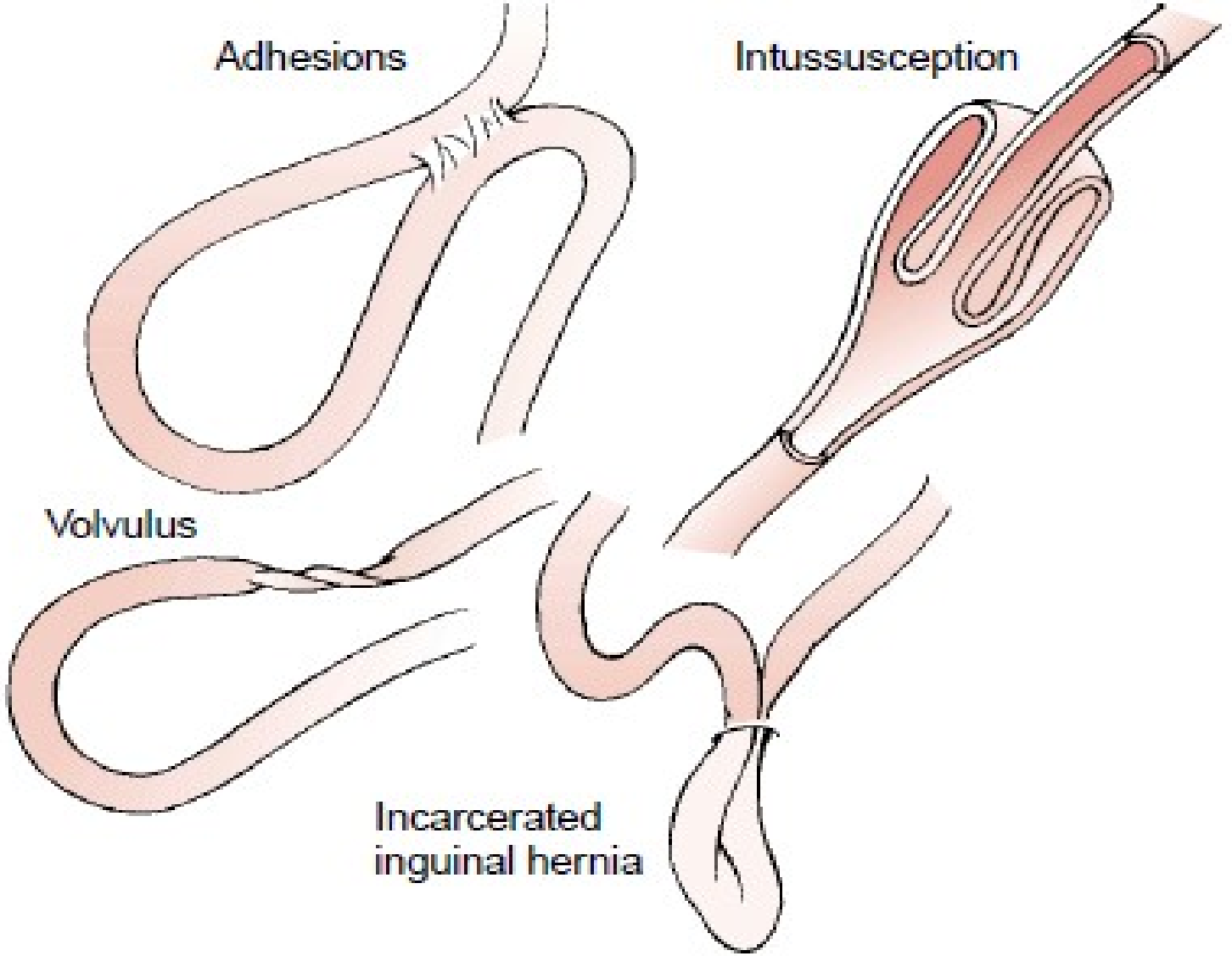
- Most bowel obstructions occur in the small intestine (85%).
- About 15% in large bowel obstruction.(most of these are found in sigmoid colon)

Intestinal Obstruction…

- **Mechanical causes of intestinal obstruction**

Adhesion

- Most common causes of small bowel obstruction (60 incidence).
- Mostly occur after abdominal operation
- Loops of intestine may become adherent to these area.
- **Results-** kinking of an intestinal loop.



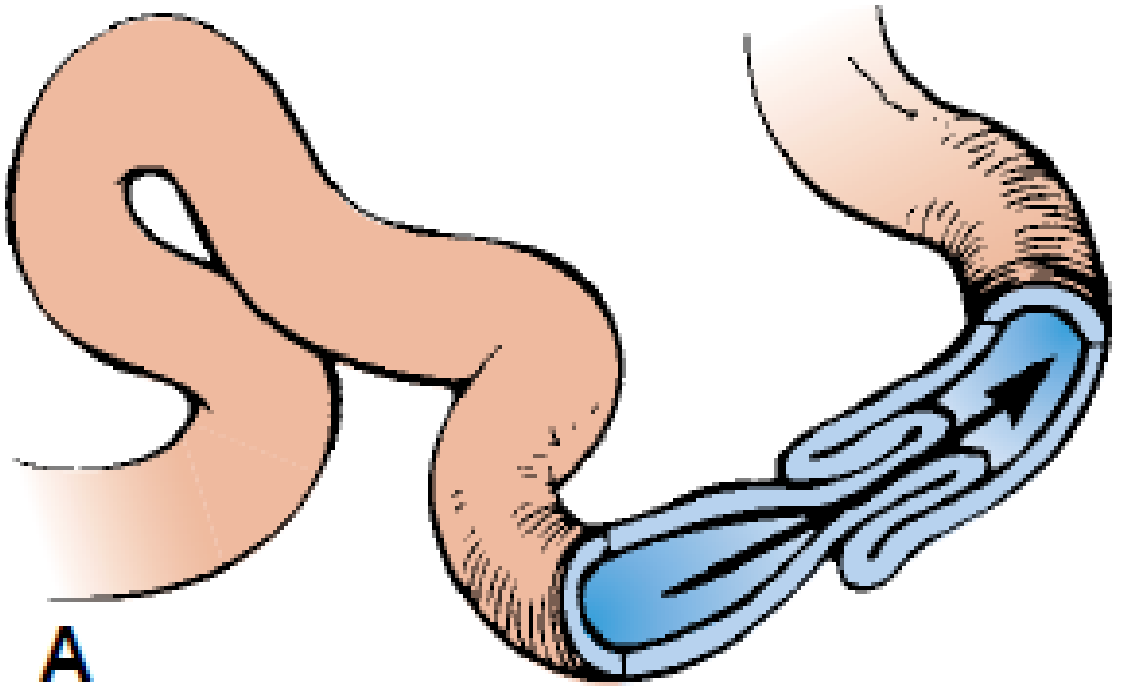
■ **FIGURE 27-7** ■ Causes of mechanical bowel obstruction.

Intestinal Obstruction…

Intussusception:

- One part of intestine slips into another part located below it.
- Is prolapsing or invaginating of bowel.
- Is a telescoping of the bowel on itself.
- Is the tube with in a tube

Intestinal Obstruction…



Intestinal Obstruction…

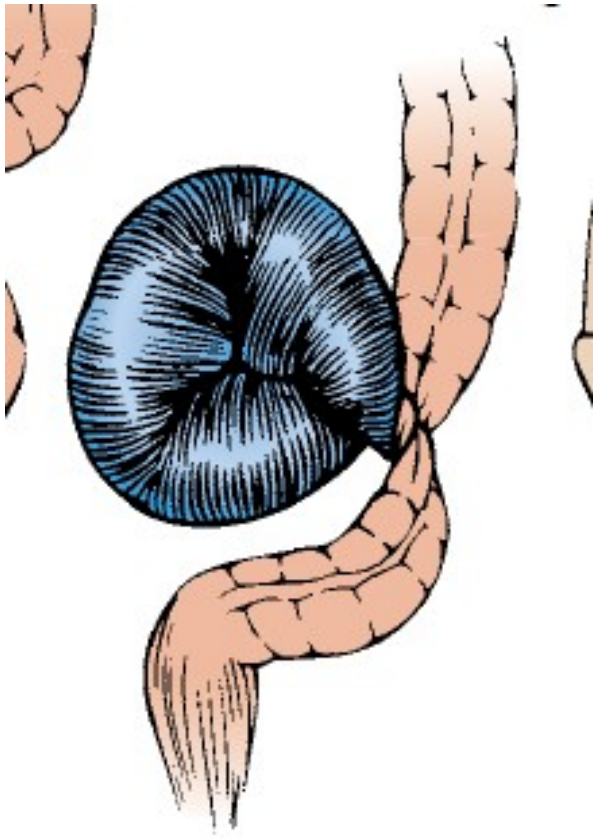
Volvulus:

- Bowel twists and turns on itself.

Results- intestinal lumen becomes obstructed, gas and fluid accumulate in the trapped bowel.

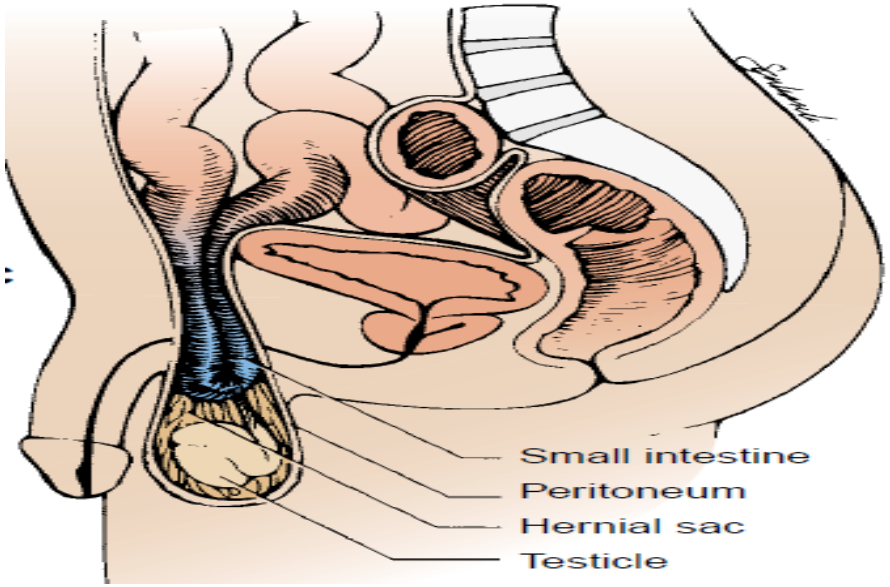
- Volvulus- can be sometimes corrected without surgical intervention

Intestinal Obstruction…



Intestinal Obstruction…

Hernia- protrusion of intestine through a weakened area in the abdomen muscle or wall.



Intestinal Obstruction…

Tumor

- exist within the wall of intestine or outside the intestinal causes pressure on the wall of intestine.
- Most common causes of large bowel obstruction.
- can result partially obstructed if the tumor is not removed

Intestinal Obstruction…

Pathophysiology of small bowel obstruction

- Intestinal contents, fluid, and gas accumulate above the intestinal obstruction
- The abdominal distention and retention of fluid reduce the absorption of fluids and stimulate more gastric secretion
- With increasing distention, pressure within the intestinal lumen increases, causing a decrease in venous and arteriolar capillary pressure

Intestinal Obstruction…

- This causes edema, congestion, necrosis, and eventual rupture or perforation of the intestinal wall, with resultant peritonitis.
- Reflux vomiting may be caused by abdominal distention.
- Vomiting results in a loss of hydrogen ions and potassium from the stomach, leading to a reduction of chlorides and potassium in the blood and to metabolic alkalosis
- Dehydration and acidosis develop from loss of water and sodium
- With acute fluid losses, hypovolemic shock may occur

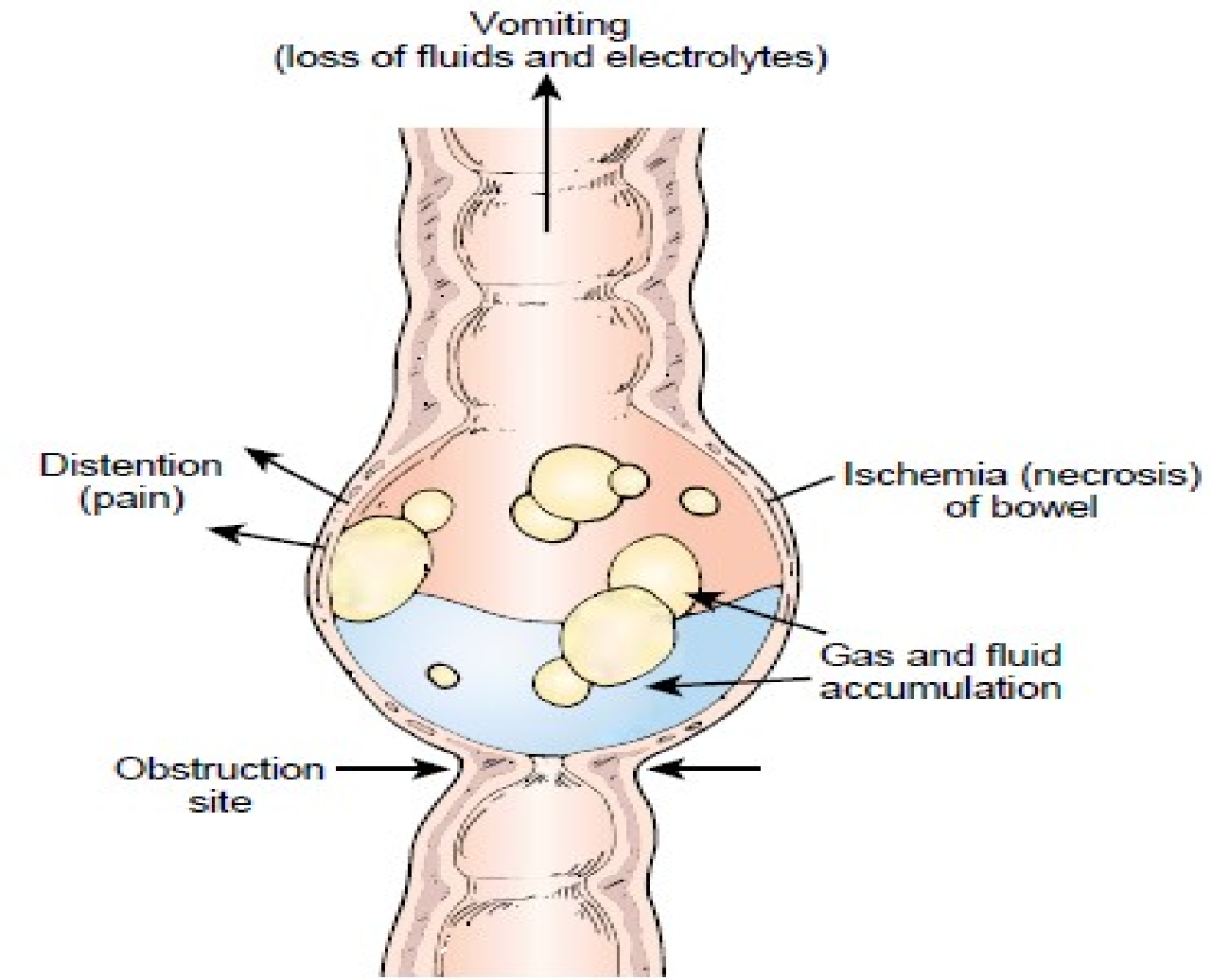
Intestinal Obstruction…

Pathophysiology of Large bowel obstruction

- As in small bowel obstruction, large bowel obstruction results in an accumulation of intestinal contents, fluid, and gas proximal to the obstruction.
- Obstruction in the large bowel can lead to severe distention and perforation unless some gas and fluid can flow back through the ileal valve.
- If the blood supply is cut off, however, intestinal strangulation and necrosis (i.e. tissue death) occur; this condition is life threatening.

Intestinal Obstruction…

- In the large intestine, dehydration occurs more slowly than in the small intestine
- Because the colon can absorb its fluid contents and can distend to a size considerably beyond its normal full capacity



■ **FIGURE 27-8** ■ Pathophysiology of intestinal obstruction.

Intestinal Obstruction…

C/m:

- Crampy pain that is wave like and colicky.
- Initially the peristaltic waves increase
- Patient may pass blood and mucus but no fecal matter and no flatus.
- Vomiting. In proximal small bowel obstruction ,greater Vomiting and less intestinal distention than distal obstruction
- If obstruction is in the ileum, fecal vomiting takes place

Intestinal Obstruction…

- Signs of dehydration.
- abdominal distention.
- Dehydration and electrolyte imbalance.
- Hypovolemic shock

In large bowel Obstruction_:

- On set of c/m is gradual vomiting rare
- Pain ,low- grade, cramping abdominal pain
- Dehydration occurs more slowly than in the small intestine.
- It can be distended.
- Symptoms develop and progress relatively slow

Intestinal Obstruction…

Assessment

- On History and P/E
- X- ray finding, abnormal quantities of gas or fluid or both in the bowel.
- Blood-count- shows dehydration

Intestinal Obstruction…

Medical Management

- ✓ Decompression of the bowel through a nasogastric or small bowel tube.
- ✓ Intravenous therapy is necessary to replace the depleted water, sodium, chloride, and potassium.
- ✓ When the bowel is completely obstructed, the possibility of strangulation warrants surgical intervention
- ✓ The surgical treatment of intestinal obstruction depends largely on the cause of the obstruction.

Intestinal Obstruction…

- ✓If hernia and adhesions, the surgical procedure involves repairing the hernia or dividing the adhesion to which the intestine is attached
- ✓In some instances, the portion of affected bowel may be removed and an anastomosis can performed.
- ✓The complexity of the surgical procedure for intestinal obstruction depends on the duration of the obstruction and the condition of the intestine

Intestinal Obstruction…

Nursing Care:

- ✓ Maintaining the function of the naso-gastric tube.
- ✓ Assessing for fluid and electrolyte imbalance.
- ✓ Monitoring nutritional status.
- ✓ Assessing improvement.
- ✓ Wound care and routine post operative nursing care

Intestinal Obstruction…

Complications:

Peritonitis.

Perforation

Comparison of small bowel Vs large bowel obstruction

Small bowel Obstruction

- Abdominal Cramp
- Vomiting early S/S
- Constipation late sign
- Abdominal distention
- **Diagnostic** - Hx & P/E

Large bowel obstruction

- Abdominal Crampy
- Constipation is early S/S
- Grossly distended abdomen
- Fecal Vomiting
- Hx & P/E

Comparison of small bowel Vs large bowel obstruction

- **Evaluation** - abdominal X-ray indicates quantities of gas &/or air in the bowel
- Mx: - Decompression of the bowel through NG tube
- IV fluid (N/S or R/L) administered
- Surgical Intervention

- Abdominal x-rays reveals abnormal distended colon
- Colonoscopy may be performed to Untwist & decompress the bowel in high colon obst^{n}
- Rectal tube may be used for decompression
- Surgical Intervention

Gastrointestinal Tract Dysfunction cont'd

Appendicitis

- ✓The appendix is a small, finger-like appendage about 10 cm (4 in) long that is attached to the cecum just below the ileocecal valve.
- ✓The appendix fills with food and empties regularly into the cecum.
- ✓Because it empties inefficiently and its lumen is small, the appendix is prone to obstruction and is particularly vulnerable to infection (i.e., appendicitis)

Gastrointestinal Tract Dysfunction cont’d

Appendicitis

- Is an inflammation of a narrow, blind protrusion located at the tip of the cecum (appendix).

Incidence:

- Can occur at any stage.
- More common in 10-30years.
- It is not common in adult but when it doesn’t occur, rupture is more common

Gastrointestinal Tract Dysfunction cont’d

- ✓The most common cause of acute abdomen in the United States,
- ✓Is the most common reason for emergency abdominal surgery.
- ✓About 7% of the population will have appendicitis at some time in their lives;

Gastrointestinal Tract Dysfunction cont’d

Etiology: can be caused by obstruction of the lumen of the appendix by

- A fecal mass (fecallith- hardend mass of stool).
- Tumor or foreign body.
- Kinking of the appendix
- External occlusion of the bowel by adhesions

Gastrointestinal Tract Dysfunction cont’d

Pathophysiology:

- when the appendix become obstructed,
- The intraluminal pressure increase leading to decrease Venus drainage, thrombosis, edema and bacterial invasion of the bowel wall.
- Will continue obstruction, perforation will result and the inflamed appendix fills will pus

Gastrointestinal Tract Dysfunction cont'd

C/M:

- ✓ Vague epigastric or periumblical pain progresses to right lower quadrant.
- ✓ Low grade fever.
- ✓ Anorexia, nausea and sometimes vomiting
- ✓ Local tenderness is elicited at **MC-burney's point** when pressure is applied. (an area mid way between the umbilicus and the right iliac crest)
- ✓ Rebound tenderness may present (i.e. production of pain when pressure is released)

Gastrointestinal Tract Dysfunction cont'd

- **Rovsing sign** may be elicited by palpating the left lower quadrants, causes pain in right lower quadrant.
- Pain becomes steady rather than intermittent and the client often guards the area by lying still and drawing the legs up to relieve tension on abdominal muscles.
- **Psoas sign(pain** on extension of the right hip)
- **Obturatory sign**(pain on internal or external rotation of the hip)

Gastrointestinal Tract Dysfunction cont'd

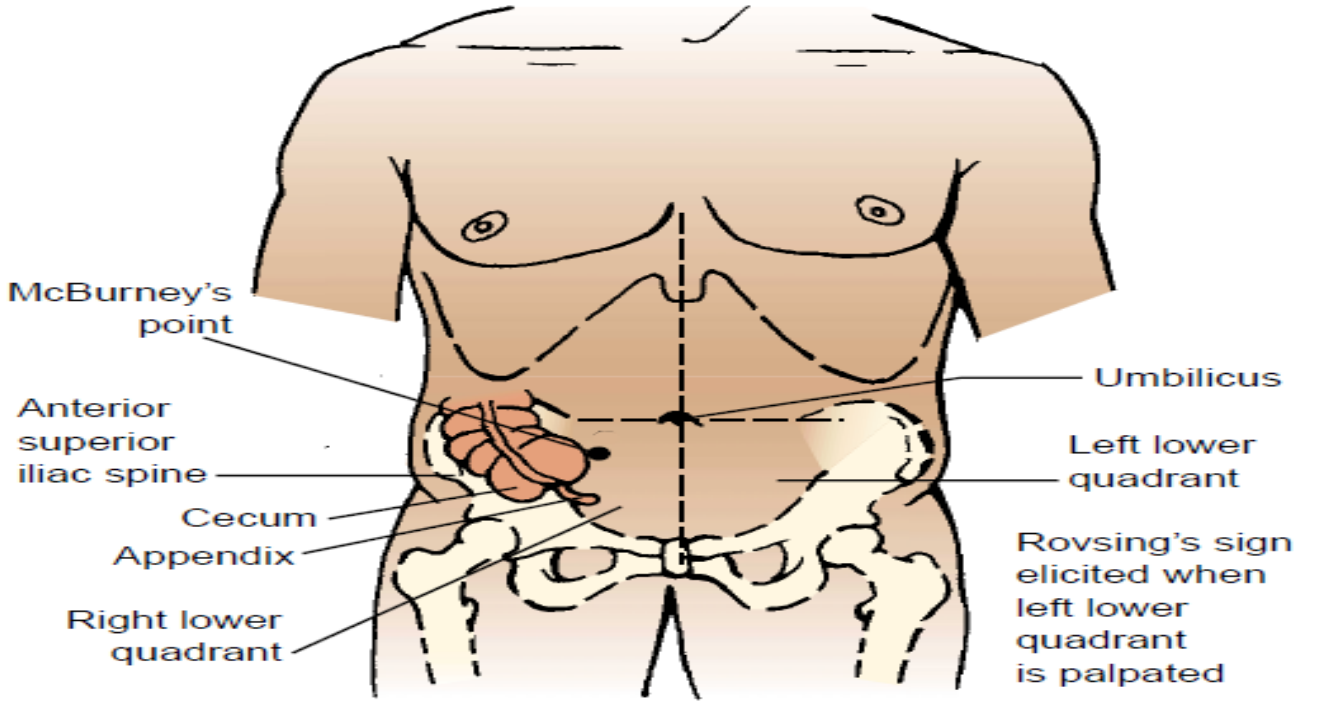


FIGURE 38-2 When the appendix is inflamed, tenderness can be noted in the right lower quadrant at McBurney's point, which is between the umbilicus and the anterior superior iliac spine. Rovsing's sign is pain felt in the right lower quadrant after the left lower quadrant has been palpated.

Gastrointestinal Tract Dysfunction cont'd

- The extent of tenderness depends on the location of the inflamed appendix.

Example

- If its tip in the pelvis, these signs may be elicited by only on rectal examination.
- Pain on defecation suggests that the tip of the appendix is resting against the rectum.
- Pain on urination suggests that the tip is near the bladder.
- If ruptured, pain becomes more diffuse, abdominal distension, patients' condition worsens)

Gastrointestinal Tract Dysfunction cont’d

Diagnostic Assessment

- History and physical examination
- Laboratory examination
- Complete blood count- elevated WBC count.

Gastrointestinal Tract Dysfunction cont'd

On laboratory findings

- The complete blood cell count
- Reveal an elevated white blood cell count.
- The leukocyte count may exceed 10,000 cells/mm3,
- The neutrophil count may exceed 75%.
- Abdominal x-ray films, ultrasound studies, and CT scans may reveal a right lower quadrant density or localized distention of the bowel

Gastrointestinal Tract Dysfunction cont'd

Complications

- The major complication of appendicitis is perforation of the appendix,
  - Lead to peritonitis or an abscess.
- The incidence of perforation is 10% to 32%.
- Perforation generally occurs 24 hours after the onset of pain
- Symptoms include a fever of 37.7°C (100°F) or higher, a toxic appearance, and continued abdominal pain or tenderness

Gastrointestinal Tract Dysfunction cont'd

Management

- No medical treatment as such for appendicitis.

Surgical Management

- Appendectomy (removing the appendix).
- Intravenous fluid (to correct electrolyte and fluid).
- Antibiotics to prevent infection.

Gastrointestinal Tract Dysfunction cont’d

Nursing Management

- If appendicitis is suspected.
- Prepare the patient for surgery.
- IV infusion (to replace fluid loss).
- Antibiotic therapy (to prevent infection).
- Pain medication should be with held until diagnosis is confirmed.
- Never give enema or a laxative or apply heat (because it can lead to perforation).NPO(Nothing per OS)

Gastrointestinal Tract Dysfunction cont’d

After Appendectomy

- Place the patient in a semi fowler’s position.
- Monitor vital sign, intake and output.
- Give analgesic, as ordered.
- Encourage the patient to cough, deep breath, and turn frequently to prevent pulmonary complication
- Document bowel sounds.
- Watch closely for possible surgical complications.
- Mouth care.