Gastrointestinal Disease

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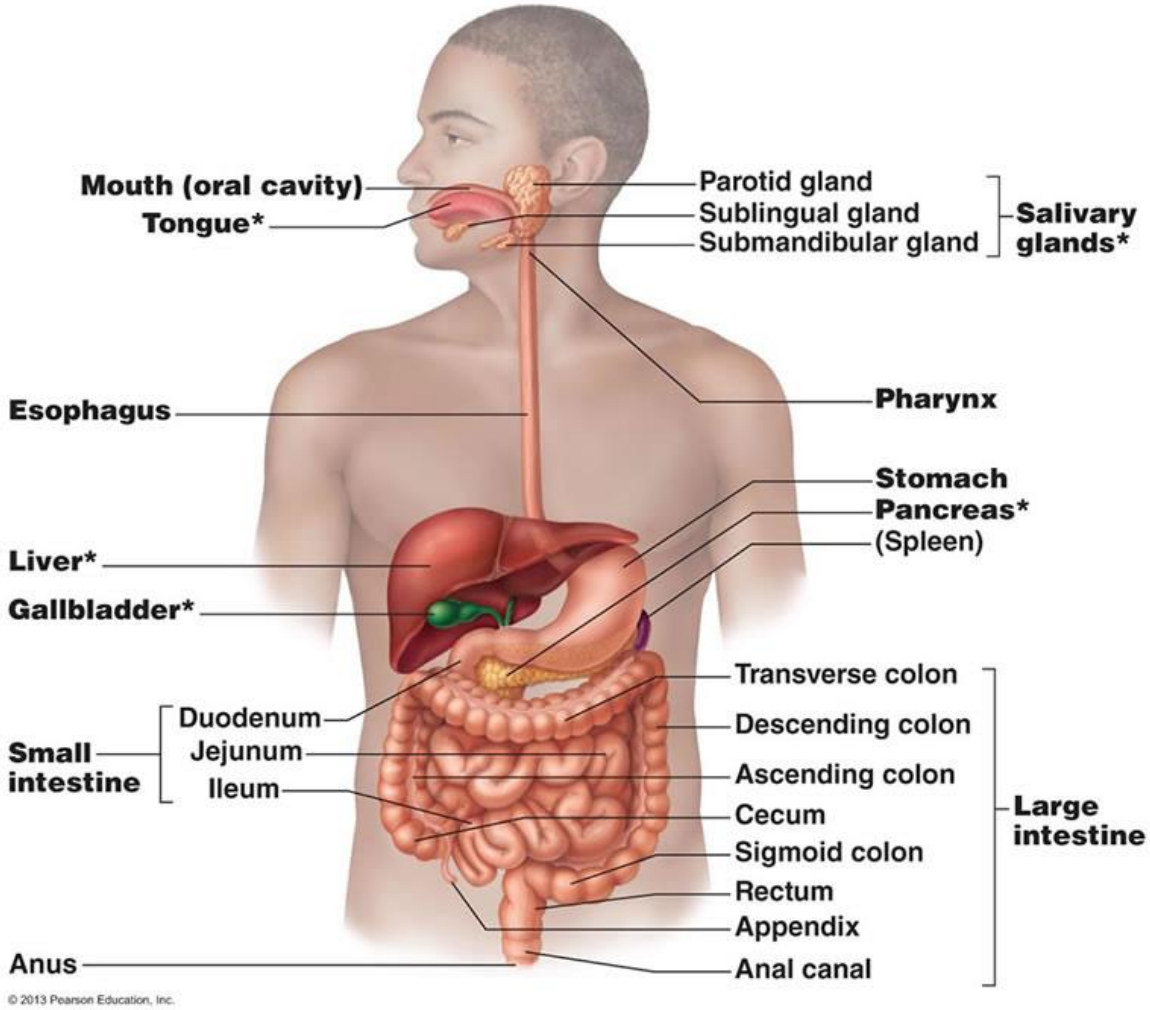


Gastroesophageal Reflux Disease (GERD)

- **Defined as symptoms that result from mucosal damage produced by the abnormal reflux of gastric contents into the esophagus.**
  - **Typically caused by changes in the barrier between the stomach and the esophagus, producing an abnormal relaxation of the lower esophageal sphincter (LES)**

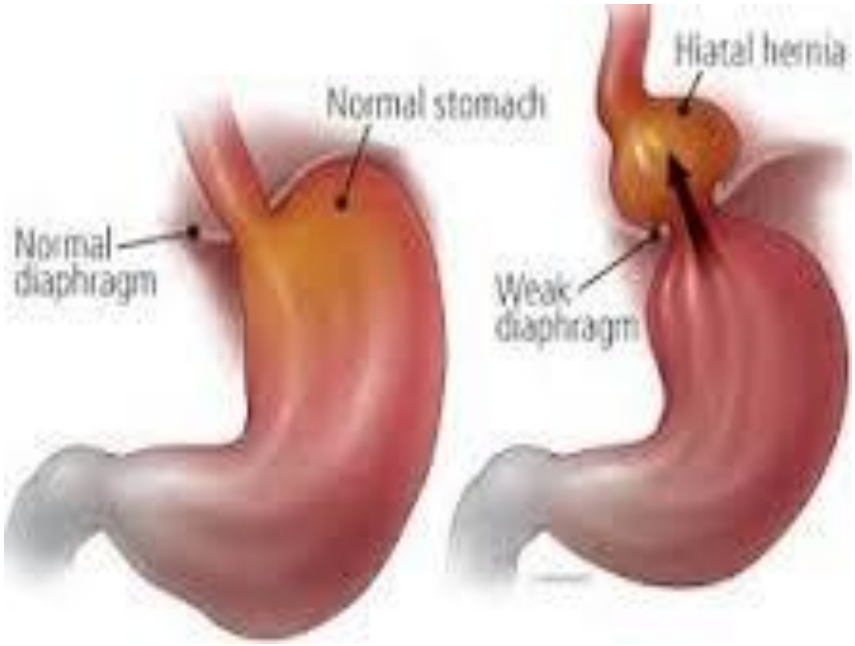
Symptomology and clinical presentation

- Symptoms for younger adults include burning epigastric pain that may radiate into the oropharynx, sour taste in mouth, frequent belching, flatulence, dysphagia, early satiety, and regurgitation of gastric contents.

- Atypical symptoms for geriatric clients include dysphagia, hoarseness, cough, globus sensation, otitis media, noncardiac chest pain, vomiting, anorexia, dental problems

Complications of Gastroesophageal Reflux Disease (GERD)

- **Esophagitis, which left untreated may lead to severe ulceration and hemorrhage**
- **Esophageal stricture**
- **Barrett esophagus**
- **Pulmonary aspiration**
- **Esophageal cancer**



Pathophysiology

- **Defective antireflux barrier (LES), abnormal clearance, reduced salivary production, altered esophageal mucosal resistance, and delayed gastric emptying**
- **LES relaxations**
- **NSAID's, potassium supplements, and bisphosphonates (medication that prevents loss of bone mass for osteoporosis) are known to cause direct injury to esophageal mucosa**

Treatment of GERD

- Elevate the head of bed (HOB) before going to sleep
- Avoid eating within 3 hours of going to bed
- Smoking and tobacco cessation
- Diet modification to decrease fat and volume of meals
- Avoid dietary irritants such as alcohol, peppermint, onion, citrus juice, coffee, and tomatoes

Medications for GERD

- OTC antacids
- Antireflux agents
- Promotility agents
- Histamine receptor type 2 (H2) antagonists
- Proton pump inhibitors (PPI's)

Surgical Interventions

- **Wrap the upper part of the stomach around the end of the esophagus with stitches. The stitches create pressure at the end of the esophagus, which helps prevent stomach acid and food from flowing up from the stomach into the esophagus.**

- **Ideally for patients with intractable GERD, difficult to manage strictures, severe bleeding, nonhealing ulcers, recurrent aspiration and GERD requiring large doses of medication**

- **Careful patient selection with complete preoperative evaluation, including upper GI endoscopy, esophageal manometry, pH testing, and gastric emptying studies prior to surgery**

Patient Education

- **Lifestyle modifications**
- **Elevate head of bed (HOB) 2 to 6 inches or use a foam wedge to sleep**
- **Avoid spicy and fatty foods, tomatoes and citrus juices, chocolate, mints, coffee, tea, cola, alcoholic drinks, , avoid recumbency for three hours postprandially, avoid tight fitting clothes, and bending down using the knees**
- **Smoking cessation, weight loss, and eating smaller portions may decrease symptoms of GERD**

Cultural considerations

- In a recent study…
- Women complained of more frequent and severe heartburn than men, they also had a more difficult time swallowing solid foods, and were more likely to be taking medication to treat GERD compared to men
- Physicians found that men actually experienced more physical manifestation of GERD than women with weak valves in the esophageal sphincter
- Men were also more likely to develop esophagitis or Barrett esophagus twice as often as women, particularly Caucasian men
- Women were more likely to have a hiatal hernia and be obese compared to their male counterparts

Diverticulosis and diverticulitis

- **"Outpouchings" or herniations formed by weakness in the muscle wall of the colon**
- **Diverticulosis is defined as presence of more than one diverticulum or many diverticula of the intestine**
- **Diverticulitis is defined as inflammation of the diverticulum or diverticula that may cause obstruction, perforation, or bleeding**

Epidemiology and demographics

- Prevalence increases with age
- 80% of people affected by this disease are age 50 and older
- Most patients remain asymptomatic
- Three fourths of patients have crampy abdominal pain but no inflammation
- Remaining one fourth develop inflammation or diverticulitis

Pathophysiology and Etiology

- Caused by changes in the colon wall resistance or compliance leading to a reduced colonic diameter, disordered colonic motility, and diet
  - Increased risk of contracting disease when there is a low fiber diet, constipation, obesity, smoking, and physical inactivity
- When one or more diverticula become infected or inflamed it may lead to diverticulitis
- Diverticulitis may be caused by an abrasion of the mucosa by inspissated stool, changes in bacterial colonic microflora leading to chronic inflammation, stasis or obstruction of the diverticulum by stool, local ischemia

Clinical presentation

- Typically asymptomatic
- May present with paroxysms of abdominal pain and be colicky in nature, relieved by flatus or bowel movement.
- Other symptoms include; fever, constipation, nausea, vomiting, anorexia, rectal bleeding, right sided pain, localized tenderness on abdominal exam etc.

Evaluation (workup)

- **CT Scan of the abdomen**
- **CBC**
- **UA**
- **Abdominal X-ray**

TREATMENT

Diverticulitis is divided into two categories:

1) Mild or uncomplicated diverticulitis

Treatment: clear liquids, oral antibiotics with a need to avoid solid foods until conditions resolves, follow-up and reevaluation

2) Complicated diverticulitis

Treatment: Patient is usually hospitalized and requires IV fluids, bowel rest, and IV antibiotics

Constipation

- Defined as any form of difficult defecation including hard stool, difficult passing stool, strenuous straining, and a nonproductive urge
- Otherwise defined as less than three bowel movements per week
- Normally patients should produce a bowel movement (BM) daily but it may vary among individuals
- Frequency of normal stool varies from three times a day to three times a week

PATHOPHYSIOLOGY

- **Contributing factors include decreased mobility, medication use, and dietary changes**

- **Primary constipation is delineated into three groups:**
  - **normal transit constipation**
  - **slow transit constipation**
  - **anorectal dysfunction**

- **Secondary constipation is caused by a variety of reasons including diabetes, disease processes, depression and anxiety, irritable bowel syndrome, pregnancy, OTC and prescribed medications**

Evaluation of disease

- Clients without cognitive defects should keep a bowel diary for one week
- Social and family history should be explored
- Inquires regarding patient medications prescribed and OTC
- Physical examination including inspection of skin, auscultation of bowel sounds, palpation of abdominal quadrants
- Rectal exam
- Routine blood tests

Treatment of constipation

- Review stool diary
- Modify diet to include more fiber and water
- Increase physical activity
- Bulk-forming agents
- Emollient laxatives
- Hyperosmotic laxatives
- Stimulant laxatives
- Probiotics
- Pelvic floor retraining

About LAH3C:
This project received 19 million (100% of its total cost) from a grant awarded under the Trade Adjustment Assistance Community College and Career Training (TAACCCT) Grants, as implemented by the U.S. Department of Labor's Employment and Training Administration. The Los Angeles Healthcare Competencies to Careers Consortium is an equal opportunity employer / program and auxiliary aids and services are available upon request to individuals with disabilities.