NR283 PATHO STUDY GUIDE FOR EXAM 3

Comprehensive Final Exam

GI: Digestive system, alimentary tract or gut, consists of a long hollow tube, which extends thru the trunk of the body and its accessory structures: salivary glands, liver, gallbladder and pancreas. Upper tract: mouth, esophagus and stomach Lower tract: intestines

GERD (Gastroesophageal reflux disease) – backflow of gastric or duodenal contents (or both) into the esophagus and past the lower esophageal spincter (LES), without associated belching or vomiting

Causes:

1. Alcohol, cigarettes or food causing LES pressure
2. Hiatal hernia – upper part of the stomach bulges thru the large muscle separating the abdomen and chest (diaphragm)
3. Increased abdominal pressure (obesity, pregnancy)
4. Medications
5. Nasogastric intubation for more than 4days
6. Weakened esophageal sphincter

Pathophysiologic Changes:

- Increased abdominal pressure and esophageal irritation → burning pain in epigastric area (usually ff. meals or when lying down)
- Stomach contents flow into the esophagus → feeling of fluid accumulation in the throat sour or bitter taste in the mouth, dyspepsia, N/V

Signs: acid stomach, chronic heartburn or acute epigastric pain ff. meals

Gastritis – acute or chronic an inflammation of the gastric mucosa that's benign and self-limiting, usually a response to local irritants

Acute Gastritis Causes:

- Bacterial endotoxins
- Ingestion of irritants (hot peppers, shellfish allergy), excessive alcohol intake, certain medications (aspirin/ulcerogenic drugs on an empty stomach) and poisons (corrosive or toxic substances)
- Radiation or chemotherapy
- Physiologic stress
- Gastric mucosa is inflamed, appears red and edematous

Chronic gastritis causes:

- Diabetes mellitus
- H. pylori infection
- Peptic ulcer disease
- Pernicious anemia
- Renal disease

Pathophysiologic Changes:

- Alteration of the mucosal lining of the stomach → epigastric discomfort, indigestion, cramping, N/V, GI bleeding, abdominal tenderness and distention
- GI bleeding → tachycardia, hypotension, pallor, restlessness, abdominal distention, coffee ground emesis or melena

Complications: dehydration, electrolyte loss, and metabolic acidosis, infection

Duodenal & Gastric Ulcers (Compare and contrast the two)

ULCERS

- Characterized by circumscribed lesions in the mucosal membrane extending below the epithelium
- May develop in the lower esophagus, stomach, pylorus, duodenum and jejunum
- May be acute (superficial and multiple) or chronic (identified by scar tissue at their base)

Causes:

- Helicobacter pylori infection (toxins and enzymes that promote inflammation and ulceration)
- Hypersecretion of stomach acid and pepsin
- Use of NSAIDS
- High gastrin levels
- Acid production by cigarette smoking

Duodenal Ulcer

- Most common of the peptic ulcers
- Common: increased acid secretion
- Risk factors: family hx, common with blood O group

Pathophysiology

Excessive production of acid in the duodenum → epigastric pain, pain relieved by food or antacids, epigastric tenderness, hyperactive bowel sounds