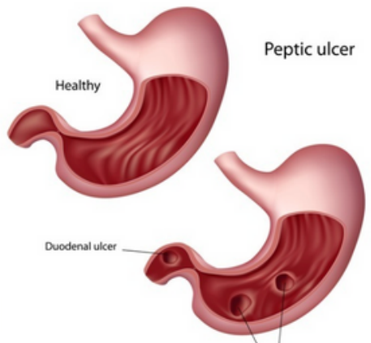
The ABCs of

Peptic Ulcer Disease

UNDERSTANDING THE FACTS BEHIND

1. Definition

- A peptic ulcer is a break in the lining of the gastrointestinal tract, extending through to the muscular layer (muscularis mucosae) of the bowel wall
- Most commonly located at the lesser curvature of the proximal stomach, or the first part of the duodenum
- The incidence of peptic ulcers in roughly 0.1-0.2% of the population per year, with duodenal ulcers presenting earlier and being more common than gastric ulcers



2. Causes

- PUD occurs when there is an imbalance between factors protecting the gastric mucosa (eg surface mucus secretion and bicarbonate) and factors that cause damage to it
- The most common causes would be Helicoabcter pylori (H. pylori) and increased or prolonged NSAID use.
- H. pylori → gram negative spiral shaped bacillus which causes ulceration by:
  - Invoking a cytokine & interleukin driven inflammatory response
  -Increasing gastric acid secretion by inducing histamine to act on parietal cells
  -Damaging host mucous secretion & reducing bicarbonate production
- NSAIDs cause peptic ulceration by:
  -Action in inhibiting prostaglandin synthesis→ reduced secretion of mucous, glycoproteins and phospholipids by gastric epithelial cells
  -Normally these work to protect gastric mucosa

3. Clinical features

- Dyspepsia
  -Epigastric pain
  -Discomfort
  -Burning sensation

5. Diagnosis

- Following a thorough history and physical examination:
  -Testing for H. pylori in patients with history of PUD, dyspepsia symptoms or gastric MALT lymphoma. Methods:
  -noninvasive
    -Urea breath test
    -Stool monoclonal antigen tests
  -Invasive (biopsy)
    -Rapid urease test
    -Histology
    -Culture
    -polymerase chain reaction

6. Management

- All patients with suspected or confirmed PUD must first be given advice on lifestyle changes:
  -Smoking cessation
  -Weight loss
  -Reduced alcohol consumption
  -Avoidance of NSAIDs if possible
- Once H. pylori infection has been confirmed, triple therapy must be started
  -Standard triple therapy→ PPI (eg. omeprazole), amoxicillin and clarithromycin, given for 10-14 days
  -Second line therapy→ Non-bismuth based quadruple therapy: PPI, amoxicillin, clarithromycin and tinidazole
- When indicated eradication testing should be ne performed at least 4weeks after completion of therapy
- Surgical management→ partial gastrectomy
  -Very rare except in emergencies eg. ulcer perforation
  -Can also be used for :
    -Zollinger-ellison Syndrome
    -Severe relapsing disease

4. Differential diagnosis

- Possible differentials to consider
  -Esophagitis
  -Functional dyspepsia
  -Gastritis
  -Gastroenteritis
  -GORD
- Less likely differentials
  -Celiac disease
  -Cholangitis
  -Esophageal perforation
  -IBS
  -IBD

A. Peptic ulcer located in the gastric antrum
B. Haemorrhaging gastric ulcer

CREDITS
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