

● From pepsinogen **Peptic ulcer** ● Breakdown in lining mucosa

● Erosion » breakdown in epithelium 5mm

● Ulcer » breakdown in mucosa/submucosa

Causes / risk factors

H-pylori

Smoking

Stress

NSAIDs

● Most common cause » ↑ gastric acid secretion, ↓ duodenal HCO_3 secretion

● 2nd most common cause, decreases prostaglandin » decreased mucosal thickness, decreased blood supply

Classification

Gastric ulcer

● Stomach

Duodenal ulcer

● First part in duodenum bulb

Symptoms

● Pain worsen with eating, nausea, vomiting, weight loss

Common symptoms

● Epigastric pain, bloating, belching, heartburn, dyspepsia

● Pain relieved by eating, weight gain, nocturnal symptoms

Complications

Bleeding

Perforation

Obstruction

- Bleeding » most common complication but self limited , when ulcer erodes into blood vessels, symptoms: hematemesis (vomiting blood), melena (black stool), hematochezia (bright red blood in stool in case of massive bleeding), iron deficiency anemia (fatigue, dizziness)
- Perforation » when ulcer erodes through the full thickness of stomach or duodenal wall creating a hole that allows stomach or duodenal contents to spill into abdominal cavity, symptoms: Sudden severe sharp abdominal pain (knife-like), peritonitis (rigid abdomen, guarding, rebound tenderness), fever, tachycardia
- Obstruction » chronic inflammation or scar tissue (from healing ulcers) for more than ten years causes thickening in the wall due to extensive fibrosis which leads to narrowing and blockage (especially pre-pyloric), symptoms: nausea, vomiting undigested food

How to approach

- A patient came to the ER with bleeding or perforated ulcer » first thing check vital signs to exclude hemorrhagic shock (hypotension, tachycardia) or septic shock in case of peritonitis (hypotension, guarding and rigid abdomen), then IV fluid replacement , put catheter to assess fluid status
- If the patient is bleeding » perform both upper and lower colonoscopy to locate bleeding source
- If you perform upper and lower colonoscopy and you didn't find the source of bleeding & the patient presents with occult bleeding not melena » it's most likely to be obscure bleeding (source is small bowel)
- Most common presentation in ER » perforated ulcer especially duodenal ulcer, perforation on anterior wall could lead to peritonitis, perforation on posterior wall presents with bleeding (gastroduodenal artery)
- In case of peritonitis » supportive therapy, stabilize the patient, surgery: primary closure (sutures) or graham patch (closed with omentum)
- A young stable patient with small ulcer perforation » self healing then sealed » supportive, antibiotics, observation, follow up

Diagnosis

Fasting serum gastrin

- In case of suspecting gastric hypersecretion

H-pylori infection test

- Urea breath test

EGD

- Most sensitive and specific

Colonoscopy biopsy

- Rule out malignancy

Treatment

Non complicated ulcer

Lifestyle changes

- Stop smoking, reduce stress

Eradicate h-pylori

- Triple therapy

Anti-acid therapy

- PPIs

Complicated ulcer

- Surgery

