

# Peptic Ulcer disease

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# Peptic ulcer

- A break in superficial epithelial cells penetrating down to muscularis mucosa

# Duodenal vs Gastric

	DUODENAL	GASTRIC
INCIDENCE	More common	Less common
ANATOMY	First part of duodenum – anterior wall	Lesser curvature of stomach
DURATION	Acute or chronic	Chronic
RELATION TO FOOD	<b>D</b> ecreases with meal-weight gain -Pain 2 to 4 hours after eating	<b>G</b> reater with meals-weight loss -Pain soon after eating
MALIGNANCY	Rare	Benign or malignant

# Risk factors

- HELICOBACTER PYLORI
- Non Steroidal Anti-inflammatory Drugs
- Steroid therapy
- Smoking
- Excess alcohol intake
- Genetic factors
- Zollinger Ellison syndrome – rare syndrome caused by gastrin-secreting tumour
- Blood group O
- Hyperparathyroidism

# H Pylori

- Urease producing, gram negative bacillus
- Developing countries
- Infection increases with age
- Infects mucosa of stomach > inflammatory response > gastritis > increased gastrin secretion > gastric metaplasia > damage to mucosa > ulceration
- Increased risk of developing gastric adenocarcinoma

# Symptoms of PUD

- Asymptomatic
- Epigastric pain
- Nausea
- Oral flatulence, bloating, distension and intolerance of fatty food
- Heartburn
- Pain radiating to the back

# ALARM signs for epigastric pain

- Chronic GI bleeding
- Iron-deficiency anaemia
- Progressive unintentional weight loss
- Progressive dysphagia
- Persistent vomiting
- Epigastric mass
- Patients aged 55 years and older with unexplained and persistent recent-onset dyspepsia alone

# Investigations

- H pylori testing

# H pylori testing

- Urea breath tests
- Stool antigen tests
- Serology
- Endoscopy with biopsy

# Investigations

## Peptic Ulcer disease

- To rule out active bleeding
  - CBC
  - EGD
  - Stool guaiac

# H pylori treatment

- 7-day, twice-daily
  - PPI, amoxicillin, clarithromycin 500 mg (PAC500) regimen
    - *or*
  - PPI, metronidazole, clarithromycin 250mg(PMC250)regimen.
- Do not re-test even if dyspepsia remains unless there is a strong clinical need.

# Peptic Ulcer disease

- **Treatment**
- Protect mucosa
  - Sucralfate
  - Bismuth subsalicylate
  - Misoprostol

# Peptic Ulcer disease

## Treatment

- Surgery
  - Perforation repair
  - Parietal cell vagotomy
  - Antrectomy

# Complications of PUD

- **Hemorrhage**
- Most common complication.
- Gastric, duodenal (posterior > anterior).
- Ruptured gastric ulcer on the lesser curvature of stomach → bleeding from left gastric artery.
- An ulcer on the posterior wall of duodenum → bleeding from gastroduodenal artery.

# Complications of PUD

- **Perforation**
  - Gastric(Stomach)
  - Duodenum

# Complications of PUD

- Severe abdominal pain
- Tenderness
- Guarding
- Rigidity

# Complications of PUD

- History of peptic ulcer disease
- Steroids
- NSAIDS

# Complications of PUD

- **Obstruction**
  - Pyloric channel
  - duodenal

# Gastritis

- Erosion of the gastric and duodenal mucosa secondary to impaired endothelial defenses and increased gastric acidity

# Gastritis

- Gastritis
  - Acute(erosive)
  - Chronic (non-erosive)
    - Occur in any part of the stomach, but chronic gastritis can occur in fundus or antrum of the stomach.

# Gastritis

- NSAIDs
- Alcohol
- Corrosive materials
- Helicobacter pylori
- stress

# Gastritis

- Gastritis
  - H. pylori detection
    - Urea breath test
    - Antral biopsy
    - Serum antibodies

# Gastritis

## Gastritis

- Stop alcohol or offending meds
- H<sub>2</sub> blocker or PPI
- Vitamin B<sub>12</sub> (type A)
- Treat *H. pylori* (type B)
  - PPI
  - Clarithromycin
  - Amoxicillin or metronidazole

# Zollinger-Ellison syndrome

- one or more tumors form in your pancreas or the upper part of your small intestine (duodenum).
- These tumors, called gastrinomas
  - secrete large amounts of the hormone gastrin, which causes your stomach to produce too much acid.
  - The excess acid then leads to peptic ulcers, as well as to diarrhea and other symptoms.

# Zollinger-Ellison syndrome

- H&P
  - Refractory PUD
  - Abdominal pain
  - Nausea/vomiting
  - Indigestion
  - Diarrhea
  - Steatorrhea
  - Other endocrine abnormalities

# Zollinger-Ellison syndrome

## Zollinger-Ellison syndrome

- Labs
  - Fasting gastrin level
  - Secretin stimulation test

## Zollinger-Ellison syndrome

- Radiology
  - CT or MRI
  - Endoscopic ultrasound
  - Somatostatin receptor scintigraphy
  - Angiography

# Zollinger-Ellison syndrome

## Zollinger-Ellison syndrome

- Treatment
  - Surgical resection
  - PPI
  - H<sub>2</sub> antagonist
  - Octreotide