Peptic Ulcer

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Peptic Ulcer

- 10% population affected
- Gastric ulcer in elderly 5-6th decade
- Duodenal ulcer in adults 4th decade
- DU also in young

Duodenal Ulcer

- Proximal duodenum
- 1 - 2 cm of pylorus
- ▲ acid
- Distal duodenum = ZE

Type 1 **Gastric Ulcer**

- most common (among gastric Ulcers)
- proximal antrum
- ↓ mucosal defense
- ↓ acid

Type II **Gastric Ulcer**

- Secondary to DU + pyloric stenosis

Type III **Gastric Ulcer**

- Prepyloric and pyloric canal ulcer
- acid ▲
- common etiology with DU

- Incidence
- **etiology**
- CP
- Investigations
- DD
- Rx

Pathogenesis

- Imbalance of acid-pepsin and mucosal defence
- H. pylori infection
- NSAID
- ZE Syndrome
- Type A personality

H.pylori

- 95% - duodenal ulcer
- 80% - gastric ulcer
- ↓ mucosal resistance hydrophobicity
- eradication reduces ulcer recurrence

NSAID

- Suppress prostaglandins
- prostaglandin ►
  ↓ acid secretion
  ↑ ▲ mucosal blood flow
  ↑ mucus & bicarbonate secretion
- 10 -30% in chronic users

A/ DU

- NSAIDs
- Acid hypersecretion
- Rapid gastric emptying
- Impaired acid disposal
- Smoking

Duodenal Ulcer

- Increased secretion of acid
- More rapid gastric emptying
- Decreased prostaglandin
- Chronic duodenitis with H.pylori
- Smoking

Gastric Ulcer

- H.pylori
- NSAIDs
- Duodenogastric reflux
- Impaired gastric mucosal defense

Gastric Ulcer

- Acid secretion - normal to low
- Reflux of duodenal contents → gastritis → ulcer
- Pylorus sphincter disorder
- Smoking
- Disturbed mucosa with low grade gastritis

Clinical Presentation

- Duodenal Ulcer
  - pain relieved by food or alkali
  - pain several hours after meal
- Gastric Ulcer - gnawing or burning pain on eating

- Periodic chronic recurrent pain
- Nausea & vomiting
- Weight loss
- Epigastric tenderness

Investigations

- **Endoscopy**
  - 90% sensitivity
  - must in all pts. with severe pain
  - excludes malignancy
  - biopsy can be taken
  - test for H.pylori

Investigations

- **Barium Meal** double (air) contrast
  - 90% sensitivity

H Pylori detection:

- Breath test
- Blood test
- Tissue test

Treatment

- Stop smoking, NSAIDs
- Stop alcohol
- Antacids - acid neutralisation
- H_2 receptor antagonist -Ranitidine - secretion inhibition

- H^+ pump inhibition - H^+/K^+ase inhibition - Omeprazole
- Anticholinergic - secretory inhibition
- Prostaglandin - Misoprostol
  - mucosal protection

Proton Pump Blockers

- Omeperazole
- Eso-meperazole
- Rabi-meperazole

- Sucralfate - protective coating
- Colloidal Bismuth
  - eradicate H.pylori
  - protective coating
- Antibiotics - H.pylori
- Kit for H Pylori

H2 Receptor Antagonists

- On parietal cells
- Decrease basal & stimulated acid secretion
- Pepsin output decreased
- Decreased gastric blood flow
- Competitive inhibitor of parietal cell

Treatment - Duodenal Ulcer

- 95% control - medical Rx
- Surgery-Outdated, Obsolete
- Omeprazole better thanRanitidine
- Ulcer heels in 80% by 6 m
- ↓ recurrence in 95% by H.pylori eradication

- Indications for surgery =Compl
  - Hemorrhage
  - Obstruction
  - Perforation
  - Intractability of pain
- Intractable pain ► HSV / TV + GJ

- H2 blockers heals 75% DU in 4 weeks
- H/K proton pump inhibitor better results
- ulcer may recurr in 80% cases on stopping
- treatment of H.pylori

- Indication of surgery in hemorrhage
  - bleeding of > than 6 units
  - recurrent bleed after endoscopic control
- pyloro-duodenotomy and control of bleeding
- HSV or TV + GJ

- Perforation - simple closure with omental patch -Graham's patch
- definitive surgery
  - HSV
  - TV + pyloroplasty
  - parietal cell vagotomy
  - TV+GJ

Treatment GU

- Omeprazole, H2 receptor antagonist - 8 weeks
- if pain not relieved by 2 weeks - add one more drug
- repeat endoscopy after 8 weeks
- if no healing by 12 - 115 weeks - Surgery

- Type I - Distal Gastrectomy with vagotomy + G-D or GJ
- proximal ulcer- total gastrectomy
- parietal cell vagotomy - high recurrence

Hemorrhage

- Hemorrhage - potential cause of death
- 15 -20% gross bleeding
- erosion of duodenal ulcer into gastro-duodenal artery
- Endoscopy –laser, sclerosant oralcohal injection

Perforation

- In 5-10% of cases
- pneumo-peritoneum in 75% cases
- peritonitis, pain, ileus
- leukocytosis, hypovolumia, IIIrd space loss
- DD - acute appendicitis, enteric perf.

Obstruction

- Chronic ulcer disease with edema and scarring
- in 5% cases of DU
- nausea, vomiting, abdominal distension
- metabolic alkalosis, paradoxical aciduria

Obstruction

- Endoscopy
- Ba study
- Scintigraphy
- Rx V + G-J / G-D

Thank you