

Peptic Ulcer

Dr Muhammad shah
MBBS,FCPS,MRCGS
AP Surgical B Unit MTI
KGMC/HMC

Peptic Ulcer Disease

Gastric Ulcer

- Duodenal Ulcer
- Hyperacidity
- ZE Syndrome

APD= Acid Peptic Disease

- Acute Ulcer
- Stress Ulcer
- Curling's
- Cushing's

PUD

- **Incidence**

- Aetiology

- CP

- Investigations

- DD

- Rx

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

PUD

- Incidence
- **Aetiology**
- CP
- Investigations
- DD
- Rx

PUD

■ Hurry

■ Worry

■ Curry

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

ZE= Zollinger Ellison Syndrome

- Recurrent
- Resistant
- Unusual sites
- Multiple
- Malignant

ZE Syndrome

- 0.1 - 1.0% of peptic ulcer
- Type I and Type II
- Gastrin secretion from non-beta cell tumor of pancreas - **Gastrinoma**
- MC in pancreas ; duodenum, antrum

ZE Syndrome

- 20% multiple
- 66% malignant
- slow growing indolent tumor
- parietal cell mass increased
- massive hyper-secretion of acid

ZE Syndrome

■ MEN - I

- hyperparathyroidism
- islet cell tumor
- pituitary tumors

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

pudd

- Incidence
- Aetiology
- **CP**
- Investigations
- DD
- Rx

CP

■ Duodenal Ulcer

- pain relieved by food or alkali
- pain several hours after meal

■ Gastric Ulcer - gnawing or burning pain on eating

CP

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

PUD

- Incidence

- Aetiology

- CP

- **Investigations**

- DD

- Rx

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

PUD

- Incidence
- Aetiology
- CP
- Investigations
- **DD**
- Rx

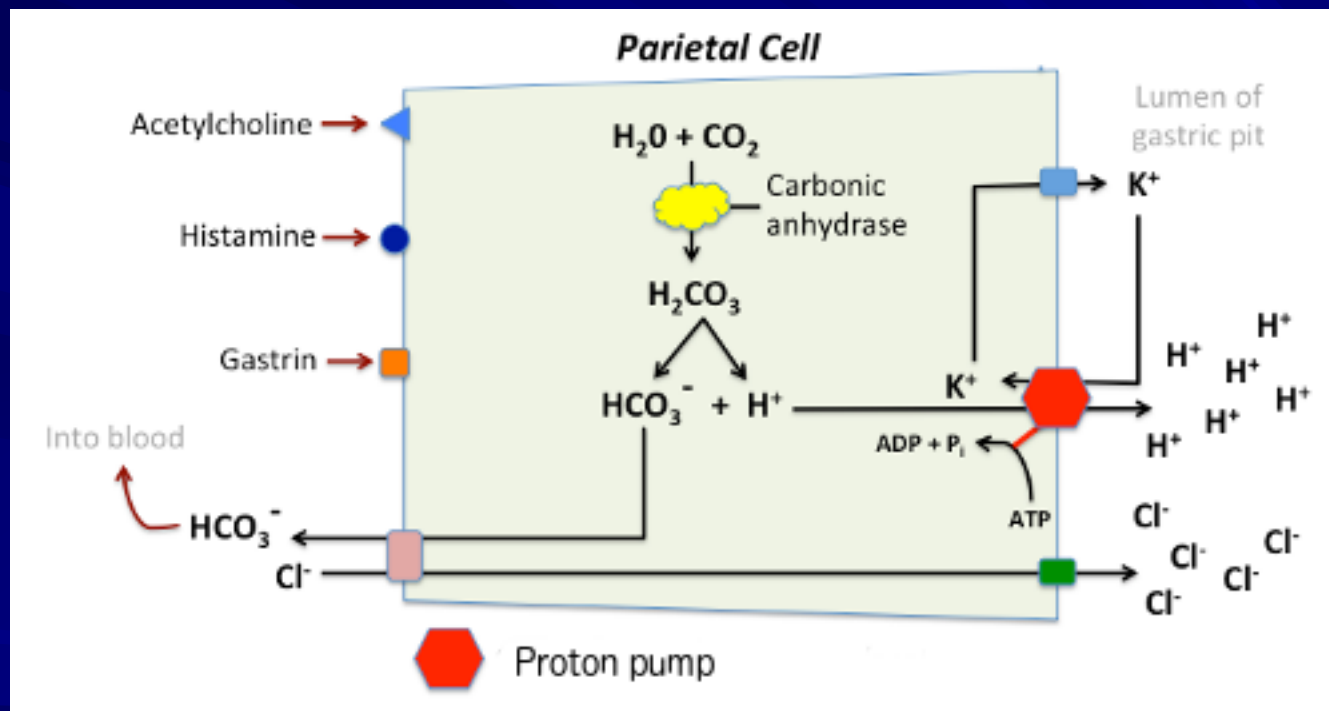
DD

- Cholecystitis
- Hiatus hernia
- Pancreatitis
- MI
- Pneumonia
- Dissecting aneurysm
- Worm Infestations

PUD

- Incidence
- Aetiology
- CP
- Investigations
- DD
- **Rx**

PUD



Rx - Medical

- Stop smoking, NSAIDs
- Stop alcohol
- Antacids - acid neutralisation
- H₂ receptor antagonist -Ranitidine
- secretion inhibition

Rx- Medical

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

Proton Pump Blockers

- Omeperazole
- Eso-meperazole
- Rabi-meperazole

Rx - Medical

- Sucralfate - protective coating
- Colloidal Bismuth
 - eradicate H.pylori
 - protective coating
- Antibiotics - 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

Rx - Duodenal Ulcer

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

Rx - Duodenal Ulcer

- Indications for surgery = Compl
 - Hemorrhage
 - Obstruction
 - Perforation
 - Intractability of pain
- Intractable pain

Rx - DU

- 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

Rx - DU

- 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

Rx - DU

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

Rx 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 - 15 weeks -
Surgery

Rx - GU

- 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, hypovolemia, 11rd space loss
- DD - acute appendicitis, enteric perf.