



PASSION ACADEMIC TEAM



Sheet# 2

YU - MEDICINE

GASTROINTESTINAL SYSTEM

Lec. Title : Treatment of
Peptic Ulcer (2) .

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IF YOU COME BY ANY MISTAKE , PLEASE KINDLY REPORT IT TO
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Anticholinergic drugs

-selective M1 receptors antagonist

- nzepine : Telenzepine , Pirenzepine

-Optional drug in duodenal ulcer that make small effect

-**C\I in gastric ulcer**, because it causes less motility in stomach → ↓
gastric emptying → food lasts further and increase contact time in stomach
→ hurt mucosa which is already hurt in gastric ulcer

Mucosal protective drugs

1-Prostaglandins : Misoprostol

-Do 3 things in stomach :

1- ↑ blood flow to stomach mucosa

2- ↓ HCl production

3- ↑ bicarbonate & mucus production

- very excellent for patient who take NSAIDs who are at risk for gastric ulcers (cytoprotective effect)

-Side effect : stimulation of uterine contraction → **abortion**

2-Sucralfate

-sucralfate : **SUCR** :sucrose \ **AL**: aluminum \ **FATE**: sulphate

- sucrose sulphate (negative) + aluminum hydroxide gel (positive)

*aluminum hydroxide is anti-acid , but sucralfate has no anti-acid effect even though it has Al hydroxide

-RULE OF 4's

^ needs 4 Ph to work

^ taken 4 \ day

- Work locally at low ph (4 ph)by dissolving to aluminum and sulphate then aluminum attaches to phosphate and stops it from going into systemic circulation .Aluminum is positivity charged so, sucralfate changes to **negative** after it lets go of the aluminum. Sucralfate makes a sticky layer and attaches to the ulcer for **6 hours** (taken 4\day). it also inhibit pepsin and induces PG to regenerate the mucosal layer to protect ulcer from HCl and increase mucus secretion

3-carbenoxolone

- Derived from **liquorice** ,that's why we advise patients to drink liquorice
- Increase mucus secretion &PG ,inhibit pepsin activity →"like sucralfate "
- Aldosterone-like action
- Structure similar to steroids but it only causes Na and water retention → edema .So, **C\I with hypertension** unless you give thiazide with; cause thiazide will decrease Na & water retention
- Can't give spironolactone instead of thiazide , because it antagonize carbenoxolone's anti-ulcer effect

4-Colloidal bismuth

-Bismuth has 3P's actions :

Eradicate H.Pylori\ mucus Production\ inhibit Pepsin



-**important Side Effect** : Dark discoloration of teeth and tongue →

H Black Hairy tongue

- For gastric and duodenal ulcer

Anti-Acid

- for Pain relief

- Hydroxide is the most common base but trisilicate, carbonate are also used

- Tab act more slowly than liquid antacid unless sucked or chewed

-divided into 2 sections :

A. bicarbonate anti-acid :Absorbed systemically → leads to side effects

1.Sodium bicarbonate

-release CO₂ from bicarbonate → Rebound acidity : ↑ acid secretion due to high presence of CO₂

-sodium retention → **C\I in hypertension**

2. Calcium bicarbonate

-hypercalcemia → **C\I in renal disease**

- if you drink it with milk → **Milk-alkali syndrome** : because milk has high calcium ,too.

- cause **Rebound acidity**

B. Hydroxide anti-acid: Locally absorbed → NO side effect

1. magnisum hydroxide

-causes diarrhea

2.aluminum hydroxide

-causes constipation

#Side effect of anti-acid :

-**Aluminum containing antacids** can cause **Hypophosphatemia** by making chelation locally in stomach which cause hypophosphatemia

- Bind drugs: tetracycline, digoxin and prevent their absorption