Cheatography

Gastrointestinal drugs Cheat Sheet

by sam219 via cheatography.com/201893/cs/45455/

Manage peptic ulcer

1. Antacids

1st line. Neutralize acid & raise gastric pH.

Uses: PU, gastritis, reflux esophagitis

Rapid acting: MgOH, MgO & CaCO3
Intermediate acting: Magalderate & MgCO3
Slow acting: Mg silicate & Al compounds.

CaCO3: non-systemic Ca that causes **acid rebound**.

Bismuth subsalicylates:
MOA: glycoprotein-bismuth complex with mucus (protective barrier)
Stimulates epidermal growth factor which enhances ulcer healing.

NaHCO3: systemic antacid.

Gastric antacid mixtures benefits:
1. combine rapid & slow acting components to get rapid onset with sustained action.
2. Decreases dose and SE of single agents
3. Use agents that antagonize each other.

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2. H2 receptor antagonist

MOA: inhibits acid and gastrin stimulated secretions.

Cimetidine
has many SE: impotence, gynecomastia, headache, dirrahea, muscle pain, short acting and CYP 450 inhibitor (D-D interactions)

Ranitidine
more potent than cimetidine.
has furan ring.

Famotidine-Nizatidine-Roxatidine

Endogenous substances stimulating gastric acid secretion: ACh-Gastrin-Histamine-Calcium

Uses of H2RB:
1. PU
2. Benign gastric ulcer
3. Reflux esophagitis
4. Hypersecretory conditions.

Manage peptic ulcer 3. PPI

Omeprazole	Lansoprazole	Esomeprazole
Enteric-coated granules.		S-enantiomer of omeprazole. found in racemic omperazole.
ttt of gastric & duodenal ulcers.		More active due decreased interindividual variation in bioavailability.

Prodrugs.
Irreversibly (covalently) inhibit the proton pump (H/K ATPase) which stops proton pumping into gastric lumen.

Manage peptic ulcer

4. Sucralfate (chemical complex)	5. Prostaglandins **cytoprotective drugs**
Adjuvant therapy with only local action in GIT.	Inhibit gastric acid & pepsin secretions.
MOA: forms a protective barrier around ulcer site.	Misoprostil Semisynthetic deriv. from PGE1 , but **more stable & selective due to 16-methyl and 16-hydroxy gp.**
	- increase GI mucus and bicarbonates.
	- Used with NSAIDs for gastric and duodenal ulcer ttt.
	Misoprostol anti-secretory & cytoprotective.

Laxatives

Stimulant laxatives	Saline laxatives	Bulk-forming laxatives	Fecal softners
Increase persta-lisis & effect on water reabsorption and secretion.	Mg, sulfates, phosphates and tartrates salts. -Mg citrate-Mg sulfate-Dibasic sodium phosphate.	Polysaccharides that are only partially hydrol-yzed. (Plantago seed, Polycarbophil)	Surfuctants or wetting agents. (Docusate soduim)
Anthraquinone laxatives: Senna, Cascara	MOA: (work by hyperosmolarity) Cations and anions that are not absorbed from GIT and in a hypertonic solution, draw water from tissue into intestine-> perstalisis-> watery stool.	MOA: The undigested portions of the polymer are hydrophilic, so they swell and form a viscous solution or gel-> perstalisis-.>soft gelatinous stool	Non-absorbable & non-toxic.
Diphenylmethane: Bisacodyl, phenophathalein			MOA: lower surface tension of stool to allow intestinal fluid penetrati-on--> soft stool.
			uses: for geriatrics.

Anti-diarrheal agents

Loperamide HCl	Diphenoxylate HCl
Synthetic .	Synthetic congener of meperidine (opioid analog).
For acute non-specific diarrhea.	Slows intestinal motility.
MOA: works on opioid receptors	
Uses: travellers diarrhea.	

Antiemetics

Anti-psychotics	Antihistamines	Anticholinergics	Cannab-inoids (THC)	Metclopramide blocks D receptor of CTZ.	Domperidone increases gastric motility which decreases nausea.
Phenthiazines & butyrophenones	Diphenhydramine	combined with scopolamine and amphetamine.	Dronabinol	Diphenidol Depresses vestibular apparatus.	Ondansetron 5-HT3 antagonist. used for CINV.
Act on CTZ.	treat motion and morning sickness.	Treat motion sickness.	for N/V in cancer chemotherapy.		

Adsorbants

Activated charcoal	Kaolin	Pectin
Treated residue to increase adsorptive power.	hydrated aluminium silicate	Natural purified carbohydrate. Consists of partially methoxylated polygalacturonic acid.
Uses: Antiflatulence and antidote	Alone or a mixture with pectin.	Uses: protectant agent for diarrhea in infants and children
	Uses: for food poisoning diarrhoea or dysentery.	

Inert powders that adsorb gas, toxins & bacteria.

Miscellaneous GI compounds

Cholestyramine resin	Lactulose	Simethicone
Strong basic anion exchange resin with styrene-divinyl benzene copolymer with a quaternary ammonium.	Syrup to reduce blood ammonia levels.	Mix of fully methylated linear siloxane polymer of repeating units.
MOA: Bile acid sequesterant.	MOA: its poorly absorbed and converted in GIT into acids that neutralize ammonia.	Uses: antifoaming agent for distention, anti-spasmodic, antiflatulance (for kids).
Chelating agent so D-D interactions occur and affects ADEK vit. absorption.	Uses:Laxative, Portal-systemic encephalopathy.	
Uses: high cholesterol managmenr		