

APRIL

DRUGS ACTING ON GI TRACT

2013

05

Friday

14th Week • 095-270

Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa Su Mo Tu We

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April
2013

A. Antiulcer Drugs :-

1. Oral Antacids =>

a) Gastric Acid neutralization => Magnesium Hydroxide, Magnesium trisilicate, calcium hydroxide, Mg oxide

b) Buffering of Gastric Acid => Sodium citrate, Mg trisilicate

c) Combination of buffering & partial neutralization => Hydrated aluminium Oxide.

* Antacid Classification

- Systemic => Modify pH of Blood
Sodium bicarbonate, Sodium citrate
- Non-Systemic => Mg trisilicate, Aluminium hydroxide

1A. Anticholinergics => Pirenzepine / Propantheline / Oxyphenonium

2. H₂- Receptor Blockers => Ranitidine / Cimetidine / Famotidine / Nizatidine / Roxatidine
(Reduce Gastric Acid Secretion)

2A. Prostaglandin Analogue => Misoprostol (Inhibit gastric acid secretion by stimulation of Prostaglandin E₁ receptor on parietal cells of stomach)

3. Proton Pump Inhibitors => Omeprazole / Pantoprazole / Rabeprazole / Lansoprazole / Esmoprazole / Dexlansoprazole / Dexrabeprazole.
(Reduce Gastric Acid Formation)

4. Cytoprotective Drugs =>

a) Ulcer protective drugs :- Sucralfate / Colloidal Bismuth Subcitrate

b) Ulcer healing drugs :- Carbenoxolone Sodium

Important

5. Anti Helicobacter Pylori drugs => Amoxicillin, Clarithromycin, Metronidazole, Tinidazole, Tetracycline

Next day Program:

2013

Purgatives & Laxatives

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May
2013

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Saturday

06

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① Induces bowel movement or loosening ~~no~~ agent for evaluation of the bowel. For treatment of constipation.

Classification of Purgatives :-

i) Irritant Purgatives :-

a) Anthracene Group :- eg. \Rightarrow Rhubarb, Senna, Aloe, Cascara sagrada

b) Drastic Purgative :- eg. \Rightarrow Croton oil, Podophyllum.

c) Mild Purgative :- eg. \Rightarrow Castor oil, Phenolphthalein, Bisacodyl

ii) Bulk Purgative :-

a) Saline Purgatives :- eg. \Rightarrow Magnesium Sulphate, Sodium Potassium Tartrate, Potassium phosphate

b) Methylcellulose :- eg. \Rightarrow Sodium carboxymethyl Cellulose, Plantago, agaragar.

iii) Lubricant Purgative :- eg. \Rightarrow Mineral oil (Liq. paraffin), dioctyl Sodium Sulphosuccinate (Surface active agent)

Sunday 07

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Antiemetics

2013

08

Monday

15th Week - 098-267

Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa Su Mo Tu We

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April 2013

A. Anticholinergics \Rightarrow i) Hyoscine (scopolamine)
ii) Dicyclomine Hydrochloride

B. H₁ Receptor Blockers (Antihistaminics) \Rightarrow i) Promethazine
ii) Diphenhydramine
iii) Dimenhydrinate
iv) Doxylamine
v) Meclizine, Cyclizine

C. Neuroleptics (D₂-Blockers) \Rightarrow i) Chlorpromazine
ii) Trifluoperazine
iii) Prochlorperazine

D. Prokinetic Drugs \Rightarrow i) Metoclopramide
ii) Domperidone
iii) Cisapride
iv) Mosapride
v) Itopride

E. 5-HT₃ (Serotonin) Blockers \Rightarrow i) Ondansetron
ii) Granisetron
iii) Palonosetron
iv) Ramosetron

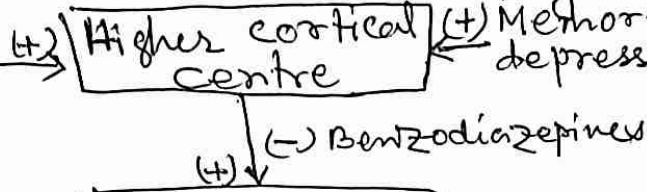
F. NK₁ Receptor Antagonist \Rightarrow i) Aprepitant
ii) Fosaprepitant

G. Adjuvant-antiemetics \Rightarrow i) Dexamethasone (opioid) Gr-Receptor agonist
Glucocorticoid
ii) Benzodiazepine Next day Program
CB₁ \begin{cases} iii) Dronabinol
iv) Nabilone $\left. \begin{matrix} \text{Agonist} \end{matrix} \right\}$

Important

Sensory Inputs
Smell, Sight, Pain

Psychological Inputs
Memory, Fear, Anxiety, depression



Solitary Tract - Nucleus
5HT₃, D₂, H₁, NK₁, M, 5HT₂

via, Vagus nerve & Glossopharyngeal nerve

(+) Vomiting centre
Medulla Oblongata

CTZ
Area postrema 4th Ventricle
5HT₃, D₂, M₁, NK₁, CB₁, H₁, M, Kappa

GI Tract -

① Pharynx - Irritation, Gagging

② Stomach & Small Intestine → Cytotoxic drugs
→ Radiation
→ Infection

Chemo Receptors
Mechano Receptors
5HT₃

H₁, M

Vestibular Apparatus of Inner Ear

→ Motion Sickness
→ Ototoxicity
→ Labyrinth Surgery

Blood

→ cytotoxic drugs
→ opioids
→ Cardiac Glycosides
→ Levodopa
→ Bromocriptine
→ Apomorphine
→ Emetine

Notes :-

① CB₁ - Cannabinoid-1 Receptor

② NK₁ - Neurokinin-1 Receptor

10

Wednesday

15th Week - 100-265

Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa Su Mo Tu We

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- A. Antimicrobials : \Rightarrow
- i) Norfloxacin } Fluoroquinolone Group
 - ii) Ciprofloxacin }
 - iii) Rifaximin \rightarrow (Traveler's Diarrhoea, against *E. coli* & other common bacteria causing hepatic encephalopathy)
 - iv) Cotrimoxazole (Trimethoprim & Sulfamethoxazole)
 - v) Ampicillin (penicilline group)
 - vi) Tetracycline (Tetracycline group)
 - vii) Erythromycin (Macrolide Antibiotics)
 - viii) Metronidazole (Antiprotozoal)

B. Non-Specific Antidiarrhoeal drugs : \Rightarrow

- a) Absorbants / Adsorbants \Rightarrow
- i) Ispaghula
 - ii) Methylcellulose
 - iii) Pectin, Keolin

- b) Antisecretory drugs \Rightarrow
- i) Racecadotril (Peripheral Enkephalinase inhibitor \rightarrow \downarrow intestinal secretion without constipation)
 - ii) Bismuth Subsalicylate (Antinflammatory agent for nausea, indigestion, stomach upset)
 - iii) Anticholinergics
 - iv) Octreotide (Diarrhoea associated with metastatic (somatostatin analogue) carcinoid tumor)

- c) Antimotility Drugs \Rightarrow
- i) Codeine
 - ii) Diphenoxylate
 - iii) Loperamide

- d) Antispasmodic \Rightarrow
- i) Drotaverine
 - ii) Nefazodone

C. Drugs for Inflammatory Bowel Disease (IBS) \Rightarrow

- a) 5-ASA Compounds (5-Amino Salicylic Acid) \Rightarrow
- i) Sulfasalazine
 - ii) Mesalazine
 - iii) Balsalazide
 - iv) Olmesalazine

Important

- b) Glucocorticoids \Rightarrow Next day Program :
- i) Prednisolone
 - ii) Hydrocortisone

- c) Immunosuppressants \Rightarrow
- i) Azathioprine
 - ii) Methotrexate
 - iii) Cyclosporine
 - iv) Infliximab