



The Islamia University
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Anti-Diarrheal Agents

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Anti-Diarrheal Agents

- Opioids Agonists
- Colloidal Bismuth Compounds
- Absorbents
- Octreotide
- Bile Salt Binding Resins



Opioid Agonists

- › Two drugs that are widely used to control diarrhea are **Diphenoxylate** and **Loperamide**. Both are analogs of *meperidine* and have opioid-like actions on the gut. They activate presynaptic opioid receptors in the enteric nervous system to inhibit acetylcholine release and decrease peristalsis. At the usual doses, they lack analgesic effects.
- › **Dose:** 2-2.5 mg for 1-4 times in a day



Colloidal Bismuth Compounds

- › Two bismuth compounds are available: **bismuth subsalicylate** , a nonprescription formulation containing bismuth and salicylate, and **bismuth sub-citrate potassium**.
- › Bismuth subsalicylate, used for traveler's diarrhea, decreases fluid secretion in the bowel. Its action may be due to its salicylate component as well as its coating action.
- › Adverse effects may include black tongue and black stools.



Absorbents

- › Absorbents include **Aluminum hydroxide, methylcellulose, pectin, and ispaghula husk.**
- › These agents are used to control diarrhea.
- › Presumably, these agents act by adsorbing intestinal toxins or microorganisms and/or by coating or protecting the intestinal mucosa.
- › They are much less effective than anti-motility agents, and they can interfere with the absorption of other drugs.



Octreotide

- › **Octreotide** is a synthetic octapeptide with actions similar to somatostatin. When administered intravenously, it has a serum half-life of 1.5 hours.
- › Octreotide inhibits intestinal secretion and has dose-related effects on bowel motility.
- › Octreotide is effective in higher doses(100-250 mcg subcutaneously) for the treatment of diarrhea



Bile Salt Binding Resins

- › Conjugated bile salts are normally absorbed in the terminal ileum. Disease of the terminal ileum (e.g., Crohn's disease) or surgical resection leads to malabsorption of bile salts, which may cause colonic secretory diarrhea.
- › The bile salt-binding resins **cholestyramine**, **colestipol**, or **colesevelam**, may decrease diarrhea caused by excess fecal bile acids.
- › Adverse effects include bloating, flatulence, constipation, and fecal impaction.



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