

Antidiarrheals

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Medications used for the therapy of diarrhea. The main goal is to eliminate patient's inconveniences and prevent dehydration. The primary pathophysiological mechanisms leading to diarrhea are:

1. *Excessive secretion* – **secretory diarrhea** (inflammation, tumor);
2. *Osmotic diarrhea* which are caused by the high content of osmotically active ions and molecules in the stool that irritates the mucosa to produce the mucus and electrolytes and stimulates bowel peristalsis (for example, enterotoxins).
3. Over-intensified *motility of GIT*.

Agents with enteric adsorption

Inert medication with large surface (adsorb not absorb), which are able of binding multiple substances (they lower the osmotic intraluminal pressure), medication and toxins. It is effective in therapy for non-infectious diarrhea.

Carbo adsorbens (Carbo medicinalis)

Charcoal. It turns the color of the stool to black (we need to distinguish it from melena).

Diosmectite

It is made up of aluminosilicate clay consisting of a double aluminium and magnesium silicate.



Carbo medicinalis.

Intestinal antiseptics

Non-absorbable chemotherapeutics which have effect on multiple pathogens (including shigella and some salmonella species) without any distinct influence of normal gut microbiota. They are indicated in cases of infectious diarrhea, and putrid or yeast dysmicrobia. They are not suitable for administration in the first trimester of pregnancy, in severe kidney disease or severe liver disease.

Cloroxine

Chinolin bacteriostatic chemotherapeutics, it has also amoebicidal effect on vegetative forms of enteric amoebas.

Ftalylsulfathiazole

Non-absorbable broad-spectrum sulfonamide.

Nifuroxazide

Nitrofurantoin bacteriostatic chemotherapeutics.

Anti-motility agents

Anticholinergics

Favourable for diarrhea accompanied by severe intestine spasticity and hypermotility (see spasmolytics).

Calcium channel blockers

Pinaverium

Suitable for therapy of functional diarrhea and irritable bowel syndrome.

Opioids

Very effective. The mechanism of action is based on inhibition of acetylcholine release in intramural ganglia of the enteric plexus in the GIT (anticholinergic activity) based on the stimulation of opioid receptors. The oldest opium tincture is prescribed only in rare cases and for therapy of uncontrollable diarrhea. More appropriate are morphine derivatives – **codeine and ethylmorphine**.

The disadvantage is their non-selective effect on opioid receptors (including CNS) associated with CNS negative side effect and toleration. By contrast, the selective medication (*diphenoxylate, loperamide*) primarily influence the receptors in GIT – they significantly lower the secretion in large intestine and relax the smooth muscles of the intestinal wall. For this indication, the physician must acquaint with the negative side effect of opioids. Attention: do not administer in case of acute abdomen.

Diphenoxylate

In higher doses it spreads to CNS – it can have euphoric effect (the intoxication resembles the opiate intoxication). In order to enable the usage in lower dosage, *diphenoxylate* combines with atropine in REASEC®

product.

Loperamide

The structure is similar to *diphenoxylate*, practically, it does not absorb from the gut (so it does not have any effect on CNS). Besides already mentioned effects it also increase the tone of anal sphincters and muscles of the aboral colon. Thereby it's administration in patients with chronic inflammatory disease involving the large intestine can induce toxic megacolon.

Other antidiarrheals

Octreotide

Synthetic somatostatin analogue. It is indicated in short bowel syndrome, after jejunostomy, ileostomy, in amyloidosis, diarrhea in patients with advanced AIDS symptoms.

Cholestyramine

Non-absorbable ion exchanger with high capacity for bile acids. The indication is cholestatic diarrhea.

Links

Related articles

- Průjmová onemocnění
- Terapie průjmových onemocnění

Literature

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