

Direct parasympathomimetics

Parasympathomimetics are drugs that mimic the effects of the parasympathetic nervous system. Direct parasympathomimetics are substances that act directly on M receptors. They mimic the properties of acetylcholine.

Effects and uses

They increase the tone and motility of the GIT and smooth muscles. The main indication for the use of direct PSMs is GIT and bladder atony after general anesthesia.

Adverse effects

- Diarrhea;
- perspiration;
- miosis ;
- nausea ;
- increased salivation;
- bradycardia ;
- reduced cardiac output.

Contraindications

- Urinary tract obstruction;
- megacolon

Substances Used

Acetylcholine

It is not absorbed from the GIT. Administration iv – for rapid breakdown by acetylcholinesterase (ACHE) only works for a **short time** .

Betanechol

Degraded by gluterylcholinesterase - slowly metabolized. Use for bladder **detrusor stimulation**.

Carbachol

Degraded by gluterylcholinesterase - slowly metabolized. It does not cross the BBB (blood-brain barrier). Used as a **miotic** in glaucoma .

Pilocarpine

An alkaloid of vegetable origin. It has a tertiary N atom, is characterized by increased lipophilicity and good penetration into the CNS and cornea. It is an agonist of muscarinic receptors. It is mainly used in ophthalmology, where it **induces miosis** , it is used in glaucoma and xerostomia .

Links

Related Articles

- Parasympathomimetics
- Indirect parasympathomimetics
- Sympathomimetics
- Sympatholytics

References

- ABZ.cz. *ABZ dictionary of foreign words: Concept of parasympathomimetics* [online]. [feeling. 2010-11]. < <https://slovník-cizích-slov.abz.cz/web.php/slovo/parasympatomimetika> >.
- HYNIA, Sixtus. *Pharmacology in a nutshell*. 2nd edition. Prague: Triton, 2001. ISBN 80-7254-181-1 .

