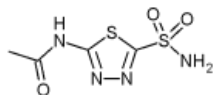


Proximal tubule diuretic

This group of diuretics includes carbonic anhydrase inhibitors, which inhibit the reabsorption of bicarbonates in the proximal tubule with subsequent bicarbonate diuresis. Significant bicarbonate losses can lead to metabolic acidosis. However, the effect gradually decreases over the course of several days. The cause is increased reabsorption of NaCl, which leads to acidosis.

Representatives



Dorzolamide The main two representatives are:

- acetazolamide',
- dorzolamide.

Indication

The main indication is the therapy of glaucoma. The ciliary body secretes bicarbonate into the intraocular fluid by a mechanism similar to tubular reabsorption, but in the opposite direction. It can also be blocked by carbonic anhydrase inhibitors, leading to a decrease in the amount of intraocular fluid. Dorzolamide is administered in the form of eye drops. Another indication is the correction of **metabolic alkalosis** and the prophylaxis and treatment of altitude sickness.

Adverse Effects and Toxicity

- Metabolic acidosis.
- Kidney stones - phosphaturia and hypercalciuria develop during bicarbonate diuresis. Under these conditions, calcium salts become potentially insoluble in the alkaline pH, thereby fulfilling the conditions for the formation of stones.
- Hypokalemia.
- CNS disorders - confusion, drowsiness.

Links

Related Articles

- Diuretics
- Renin-angiotensin-aldosterone system
- Hypertension
- Hypertensive crisis

Source

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Incomplete publication citation. MARTÍNKOVÁ, Dahlia, Stanislav MICHUDA and Jolana CERMANOVÁ. *Selected chapters in clinical pharmacology for undergraduate studies : Cardiovascular system* [online] . 2000. Also available from <<https://www.lfhk.cuni.cz/farmakol/predn/bak/kapitoly/prednasky/kardio-bak.ppt/>>.

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