Potassium-sparing diuretics

náhled|150px|chemická struktura spironolaktonu náhled|150px|Kalium-kanrenoát (Aldactone®) 125 mg v ampuli pro i. v. aplikaci náhled|150px|chemická struktura amiloridu náhled|150px|chemická struktura kalium-kanrenoátu Potassium-sparing diuretics act as **aldosterone antagonists** in the collecting duct and in the lower part of the distal tubule. It can be a direct antagonism – e.g. spironolactone acts as a blocker of the mineralocorticoid receptor. On the other hand, for example, amiloride inhibits the transport of Na+ by ion channels in the luminal membrane, thus reducing sodium resorption. This also reduces the loss of potassium into the urine, as the resorption of Na+ from the collecting ducts creates a negative electrical potential in their lumen, which facilitates the secretion of K+ and H+ into the urine.

Representatives

We rank among the main representatives:

- Template:HVLP and its active metabolite, Template:HVLP
- Template:HVLP.

Indication

Increased mineralocorticoid effect due to **primary** or **secondary aldosteronism**. Secondary aldosteronism results from heart failure, liver cirrhosis, nephrotic syndrome, and administration of thiazide and loop diuretics.

Adverse effects and toxicity

- Hyperkalemia can reach life-threatening values. The risk of this complication is increased if the kidneys are affected or with simultaneous administration of drugs (beta-blockers, non-steroidal anti-rheumatic drugs or ACE inhibitors).
- Hyperchloremic metabolic acidosis can be induced when H+ secretion is inhibited with simultaneous K+ secretion.
- Gynecomastia – spironolactone.

Links

Related articles

- Diuretics
- The renin-angiotensin-aldosterone system
- Hypertension
- Hypertensive crisis

Source

- MARTÍNKOVÁ, Jiřina – MIČUDA, Stanislav – CERMANOVÁ, Jolana. *Vybrané kapitoly z klinické farmakologie pro bakalářské studium : Kardiovaskulární systém* [online]. [cit. 2010-07-02]. <https://www.lfhk.cuni.cz/farmakol/predn/bak/kapitoly/prednasky/kardio-bak.ppt/>.

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