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Spironolactone

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Class: Potassium-sparing diuretic; aldosterone antagonist.

Indications: Ascites and peripheral edema associated with portal hypertension and hyperaldosteronism (i.e. cirrhosis, hepatocellular cancer, extensive hepatic metastases), CHF, nephrotic syndrome, primary hyperaldosteronism, †hypertension.

Contraindications: Hyperkalemia, Addison's disease, anuria, severe renal impairment, concurrent use with potassium supplements or potassium-sparing diuretics.

Pharmacology

Spironolactone and two metabolites (7 α -thiomethyl-spironolactone and canrenone) bind to cytoplasmic mineralocorticoid receptors and function as aldosterone antagonists. This results in a potassium-sparing diuretic effect in the distal tubules of the kidney.

A diuretic-induced reduction in plasma volume can activate several neurohumoral systems, e.g. the renin-aldosterone-angiotensin system, sympathetic nervous system, and ADH secretion, resulting in impaired renal perfusion and increased Na⁺ and water resorption. These changes contribute towards a reduced effect of the diuretic ('diuretic resistance') and also renal impairment.

In patients with cirrhosis receiving spironolactone $\pm$ **furosemide**, improved renal function and diuresis is seen with co-administration of **octreotide** 300microgram SC b.i.d. or

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