



REVIEW ARTICLE

Clinical use of aldosterone antagonists for slowing progression of chronic kidney disease: From the physiological basis to clinical application

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Abstract Aldosterone is synthesized in the adrenal cortex and is the main regulator of sodium and potassium metabolism and the extracellular volume. Acting through the mineralocorticoid receptor, it is the final endocrine signal of the renin-angiotensin-aldosterone system with effects on the renal tubular epithelium and distal colon stimulating sodium reabsorption and potassium secretion. Water is absorbed by osmosis favoring expansion of circulating volume and increasing arterial blood pressure.

Recently there has been great interest in the non-classical actions of aldosterone on the vascular endothelium, heart and kidney. There is evidence suggesting that aldosterone participates in vascular remodeling, endothelial function and collagen deposition, contributing to heart failure progression and kidney damage. Clinical and experimental evidence supporting the use of aldosterone blocking agents in different models of kidney damage is reviewed.

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