Long-term effects of aldosterone blockade in resistant hypertension associated with chronic kidney disease.

Hypertension is a major risk factor for the development and progression of chronic kidney disease (CKD). Mineralocorticoid receptor antagonists (MRAs) are effective in the management of resistant hypertension but are not widely used in CKD because of the risk of hyperkalemia. We retrospectively evaluated the long-term effects and safety of MRAs added to a pre-existing antihypertensive regimen in subjects with resistant hypertension associated with stage 3 CKD. In all, 32 patients were treated with spironolactone and 4 with eplerenone for a median follow-up of 312 days. MRAs induced a significant decrease in systolic blood pressure from 162±22 to 138±14 mm Hg (P<0.0001) and in diastolic blood pressure from 87±17 to 74±12 mm Hg (P<0.0001). Serum potassium increased from 4.0±0.5 to 4.4±0.5 mEq l(-1) (P=0.0001), with the highest value being 5.8 mEq l(-1). The serum creatinine increased from 1.5±0.3 to 1.8±0.5 mg dl(-1) (P=0.0004) and the estimated glomerular filtration rate decreased from 48.6±8.7 to 41.2±11.5 ml min(-1) per 1.73 m(2) (P=0.0002). One case of acute renal failure and...
three cases of significant hyperkalemia occurred. MRAs significantly reduced blood pressure in subjects with resistant hypertension associated with stage 3 CKD, although close biochemical monitoring is recommended because of an increased risk of hyperkalemia and worsening of renal function.

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