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Appropriate Use of Diuretics to Control Blood Pressure in Chronic Kidney Disease

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Fluid overload due to loss of functional nephron mass can lead to higher blood pressure, a characteristic of hypertension in chronic kidney disease (CKD). This rationale supports the use of diuretics at suitable doses to manage hypertension in CKD patients. However, there's a lack of conclusive evidence on the efficacy or safety of diuretics as a primary treatment for hypertension in CKD sufferers. Some studies have shown that diuretics may not effectively lower blood pressure and could potentially exacerbate electrolyte imbalances and deteriorate renal function in CKD patients. Current clinical guidelines for blood pressure or CKD management highlight the uncertain benefits of thiazide diuretics in advanced CKD stages, although loop diuretics are generally recognized for their volume control capabilities at reduced levels of kidney filtration. Lately, there's growing evidence supporting the use of diuretics for blood pressure management in advanced CKD cases. The renoprotective effect of thiazide or loop diuretics could rise from their impact on blood pressure or their ability to enhance the renin-angiotensin system's blockade effects, leading to a more renin-angiotensin-dependent intraglomerular pressure, even though their direct effects on kidney health are still debated. In this presentation, I will discuss recent findings on the potential benefits of diuretics in reducing blood pressure, slowing CKD progression, and lowering cardiovascular risks for patients with CKD.

Keywords: hypertension, diuretics, chronic kidney disease