

Abstract Submission No. : IL-9088

Pharmacologic treatment of chronic hyperkalemia in CKD

Gheun-Ho Kim
Hanyang University Medical Center, Korea, Republic of

Hyperkalemia is frequently complicated in patients with advanced chronic kidney disease (CKD) because kidney is the major route of potassium excretion. The incidence and prevalence of hyperkalemia increase according to declines in glomerular filtration rates, and the risk of hyperkalemia is also increased in patients with high potassium intake, advanced age, diabetes mellitus, congestive heart failure, and medications such as renin-angiotensin-aldosterone system (RAAS) blockades. Thus, low doses of RAAS blockades should be started and monitored closely when patients are vulnerable to hyperkalemia. Recently, the benefit of a high-potassium diet has been reported in CKD patients as well. To overcome these contradictory treatment strategies, potassium binders may be new options in managing the patients with CKD. These agents will enhance fecal potassium excretion, contributing to maintenance of potassium balance in CKD. All over the world, four types of potassium binders are preferentially used. Whereas sodium polystyrene sulfonate (SPS) exchanges sodium for potassium, calcium polystyrene sulfonate (CPS) has the advantage of avoiding hypervolemia because it exchanges calcium for potassium. SPS was first introduced in the 1950s and used for a long time in western countries, and CPS are currently prescribed in Asia including South Korea. In contrast with the paucity of clinical studies using SPS or CPS, the recent randomized, controlled trials reported that two newer potassium binders, patiromer and sodium zirconium cyclosilicate (ZS-9), effectively and safely reduce serum potassium levels in CKD patients taking RAAS blockades. Our experiences showed that the long-term administration of a small dose of CPS was also effective and safe in treatment of chronic hyperkalemia. Further comparative trials among patiromer, ZS-9, and CPS are required to provide guides to cost-effective management of hyperkalemia in CKD patients.