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Novel Drugs and Hyperkalemia: Risks and Solutions

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Recently, novel drugs are being introduced in the field of nephrology. These novel drugs have achieved groundbreaking results in improving the prognosis of patients with kidney disease, but caution is needed regarding various side effects, especially electrolyte imbalance. This presentation explains the risks of hyperkalemia and the latest trends in solutions for hyperkalemia. Hyperkalemia is common after treatment with a mineralocorticoid receptor antagonist. Recently, finerenone, a non-steroidal mineralocorticoid receptor antagonist has become available to treat patients with type 2 diabetes. Finerenone has a lesser risk of hyperkalemia than steroidal MRA but a higher risk than placebo. Sacubitril/valsartan, a new pharmacological class of angiotensin receptor neprilysin inhibitor, is beneficial to heart failure through blocking the degradation of natriuretic peptides and inhibiting renin-angiotensin-aldosterone system (RAAS) activation which also relate to the pathophysiologic mechanisms of chronic kidney disease. Sacubitril/valsartan has a higher risk of hyperkalemia than placebo. Newer oral potassium-binding agents have been approved for clinical use, as an alternative to the decades long use of sodium polystyrene sulfonate. Patiromer and sodium zirconium cyclosilicate (SZC) are newer options for hyperkalemia treatment. Patiromer is available to all patients experiencing hyperkalemia, no matter the disease state leading to the condition. Recent randomized clinical trials have shown that SZC effectively lowers serum potassium and maintains normokalemia in most hyperkalemic patients. It is likely these newer oral potassium-binding agents will help change how patients with hyperkalemia are treated in regards to sudden and chronic medical conditions.

Keywords: Hyperkalemia, Finerenone, Sacubitril/valsartan, patiromer, sodium zirconium cyclosilicate