

Chronic Kidney Disease Patient: Effects of Medicine

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Abstract: *Aim: This review aims to evaluate pharmacological and non-pharmacological treatments for Chronic Kidney Disease (CKD) and End-Stage Renal Disease (ESRD), focusing on therapies like RAAS inhibitors, dialysis modalities, and management of metabolic acidosis.*

Subjects and Methods: The review analyzes clinical studies and guidelines related to CKD and ESRD management. It explores the effectiveness of pharmacological agents (ACE inhibitors, statins, phosphate binders) and non-pharmacological strategies (dialysis, dietary management, cardiovascular risk reduction). Data from peer-reviewed sources, clinical trials, and meta-analyses were synthesized.

Results: RAAS inhibitors (ACE inhibitors/ARBs) are beneficial in reducing proteinuria and controlling blood pressure but may increase the risk of hyperkalemia in dialysis patients. Spironolactone at low doses can help manage fluid retention and reduce cardiovascular risk. Statins, while useful in dyslipidemia, do not significantly lower mortality in dialysis patients but may reduce cardiovascular events. Phosphate binders are critical in managing hyperphosphatemia and preventing complications like cardiovascular calcification. Dialysis (hemodialysis or peritoneal dialysis), dietary restrictions, and cardiovascular interventions are essential for managing CKD and ESRD. Sodium bicarbonate is effective in treating metabolic acidosis, slowing renal decline.

Conclusion: A comprehensive treatment approach combining pharmacological and non-pharmacological strategies is crucial in managing CKD and ESRD. Personalized care is key to improving kidney function, preventing complications, and enhancing patient outcomes. Further research is needed to optimize treatment regimens, particularly regarding medication use in dialysis patients and long-term effects on renal and cardiovascular health.

Keywords: Chronic Kidney Disease (CKD), End-Stage Renal Disease (ESRD), pharmacological treatment, RAAS inhibitors, ACE inhibitors, ARBs, spironolactone, statins, phosphate binders, dialysis, hemodialysis, peritoneal dialysis, dietary management, sodium bicarbonate, metabolic acidosis, benazepril, renal protection, cardiovascular risk, kidney transplantation, non-pharmacological interventions.