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Plant Based Diet for Nutrition Therapy in Chronic Kidney Disease (CKD)

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Objectives:

Nutrition therapy is important point for slowing CKD progression. Recently, plant-based diets are more modern and evidence based for CKD, that called "PLADO diet". PLADO diet consist of at least 50% of the protein from plant sources, that have various beneficial effect and potential risk of plant-based diet. This study aims to examine the effect of plant-based diet in patients with CKD.

Methods: This systematic review was obtained from the analysis and synthesis of recent journal on PubMed, Science Direct, Nutrients, Clinical Key, and Google Scholar. Relevant study was collected up to January 1st, 2023 using the following search terms: plant dominant diet, plant-based diet, low protein diet, chronic kidney disease.

Results:

Eating a plant-dominant, fiber-rich Low protein diet (LPD) with dietary protein intake of 0.6-0.8 g/kg/day with at least 50% plant-based source may lead to alterations in the gut microbiome, and can modulate uremic toxin generation and slow CKD progression. Then, volunteers fed for 3 weeks with a vegetable-based diet (N = 10), an animal protein diet (N = 10), or an animal protein diet supplemented with fiber (N = 7), all with the same amount of total protein; animal-based protein diets increased GFR more than plant-based proteins, i.e., higher glomerular hyperfiltration was observe with more meat and less vegetable-derived proteins. Other important studies supporting the benefit of a plant-dominant diet in slowing CKD progression.

Conclusions: Plant based diet (PLADO diet) are safe, feasible and flexible for patient CKD. Because PLADO diet can improve blood pressure, reduce CVD risk and stroke, slowing CKD progression. We hope it can be a trigger for all nutritionist and dietitian for nutrition therapy such as education, meal planning and evaluation PLADO diet for patient CKD. It can also provide new opinions for clinical work.