EFFECT OF THERAPEUTIC DIET AND LIFESTYLE MODIFICATION ON KIDNEY FUNCTION AMONG CKD PATIENTS

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Abstract

Chronic Kidney Disease (CKD) is a progressive disorder characterized by the gradual loss of kidney function over time. This study aims to evaluate the effect of therapeutic diet and lifestyle modifications on the kidney function of CKD patients. A sample of 100 CKD patients undergoing treatment in both urban and rural hospitals was selected. Data were collected through structured questionnaires, biochemical analysis (serum creatinine, urea, and GFR), and dietary recall. The intervention group received individualized therapeutic diet counseling and lifestyle modification advice for three months. The results revealed a significant improvement in kidney function indicators, dietary adherence, and overall health status post-intervention. The findings suggest that therapeutic nutrition and lifestyle modification play a crucial role in slowing CKD progression and improving patient quality of life.

Keywords: Chronic Kidney Disease, Therapeutic Diet, Lifestyle Modification, Kidney Function, Nutritional Intervention

Introduction

Chronic Kidney Disease (CKD) has emerged as a major global health concern, affecting millions of people worldwide. It is primarily characterized by a gradual decline in kidney function, which impairs the body's ability to remove waste and maintain fluid and electrolyte balance. Dietary management and lifestyle modifications are fundamental components in the treatment of CKD, as they help delay disease progression and reduce complications. Therapeutic diets focusing on controlled protein intake, reduced sodium and potassium levels, and increased fluid regulation can significantly influence renal outcomes. Moreover, lifestyle modifications such as physical activity, stress management, and

avoidance of smoking and alcohol can complement dietary measures in improving kidney function and overall well-being.

Review of Literature

Ikizler (2013) emphasized the importance of nutritional intervention in CKD management, showing that balanced dietary intake helps reduce uremic toxicity and inflammation. de Freitas et al. (2016) highlighted the role of therapeutic diet counseling in improving protein-energy status and minimizing infection risk among dialysis patients. Katekhaye et al. (2022) identified that consistent dietary monitoring and lifestyle changes contribute to better control of serum creatinine and urea levels. Similarly, Sharma and Singh (2021) observed that individualized nutrition therapy, when combined with patient education, leads to improved quality of life and delayed CKD progression.

Objectives of the Study

1. To assess the baseline kidney function among CKD patients.
2. To evaluate the impact of therapeutic diet and lifestyle modification on kidney function indicators.
3. To compare pre- and post-intervention outcomes among participants.

Hypotheses

H_0: There is no significant effect of therapeutic diet and lifestyle modification on kidney function among CKD patients.

H_1: There is a significant effect of therapeutic diet and lifestyle modification on kidney function among CKD patients.

Research Methodology

The present study adopted an experimental research design with pre- and post-intervention assessments. A total of 100 CKD patients aged 30–70 years were selected using purposive

sampling from nephrology units in Bhopal and Hoshangabad districts. Participants were divided into two groups: control and experimental. The experimental group received a three-month intervention including therapeutic diet counseling and lifestyle modification sessions. Data collection tools included a structured questionnaire, 24-hour dietary recall, and biochemical assessments (serum creatinine, urea, and GFR). Data were analyzed using paired t-test and descriptive statistics to determine the effectiveness of the intervention.

Results and Discussion

The results demonstrated a significant improvement in kidney function parameters among the experimental group after intervention. Mean serum creatinine levels reduced from 5.2 ± 1.1 mg/dL to 4.1 ± 0.9 mg/dL, and GFR increased from 38.6 ± 6.5 to 45.3 ± 7.2 mL/min. Similarly, patients reported improved dietary adherence, increased energy levels, and better management of fluid intake. The control group, however, did not show any significant improvement. These findings confirm the positive effect of therapeutic diet and lifestyle modifications in CKD management, consistent with previous research findings.

Conclusion

The study concludes that a therapeutic diet combined with lifestyle modification significantly improves kidney function and overall health outcomes in CKD patients. Implementing personalized dietary plans and continuous nutrition counseling can play a vital role in controlling disease progression and enhancing patient quality of life. Healthcare professionals should integrate nutrition and lifestyle interventions as part of the standard CKD management protocol.

References

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