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Compliance Of Dialysis patients With Nutrition Guidelines: Insights From A Questionnaire

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Abstract : Over the years of dialysis treatment, most patients experience significant weight loss. The primary emphasis in earlier research was the underlying mechanism of protein energy wasting and the subsequent malnutrition inflammation syndrome. In the interest to provide an effective and rapid solution for the patients, the aim of this study is identifying individual influences of their assumed reduced dietary intake, such as nausea, appetite loss and taste changes, and to determine whether the patients adhere to their nutrition guidelines. A prospective, controlled study with 38 end-stage renal disease patients was performed using a questionnaire to reflect their diet within the last 12 months. Thereby, the daily intake for the most important macro-and micronutrients was calculated to be compared with the individual KDQOI-guideline value, as well as controls matched in age and gender. The majority of the study population did not report symptoms commonly associated with dialysis, such as nausea or inappetence, and denied any change in dietary behavior since receiving renal replacement therapy. The patients' daily intake of energy (3080kcal ± 1266) and protein (89,9g [53,4-142,0]) did not differ significantly from the controls (energy intake: 3233kcal ± 1046, p=0,597; protein intake: 103,7g [90,1-125,5], p=0,120). The average difference to the individual calculated KDQOI-guideline was +176,0kcal ± 1156 (p=0,357) for energy intake and -1,75g ± 45,9 (p=0,491) for protein intake. However, there was an observed imbalance in the distribution of macronutrients, with a preference for fats over proteins. The patients' daily intake of sodium (5,4g [2,95-10,1]) was higher than in the controls (4,1g [2,04-5,99], p= 0,058) whereas both values for potassium (3,7g ± 1,84) and phosphorous (1,79g ± 0,91) went significantly below the controls' values (potassium intake: 4,89g ± 1,74, p=0,014; phosphorous intake: 2,04g ± 0,64, p=0,038). Thus, the values exceeded the calculated KDQOI-recommendation by + 3,3g [0,63-7,90] (p<0,001) for sodium, +1,49g ± 1,84 (p<0,001) for potassium and +0,89g ± 0,91 (p<0,001) for phosphorous. Contrary to the assumption, the patients did not under-eat. Nevertheless, their diets did not align with the recommended values. These findings highlight the need for intervention and education among patients and that regular dietary monitoring could prevent unhealthy nutrition habits. The elaboration of individual references instead of standardized guidelines could increase the compliance to the advised diet so that interdisciplinary comorbidities do not develop or worsen.

Keywords : compliance, dialysis, end-stage renal disease, KDQOI, malnutrition, nutrition guidelines, questionnaire, salt intake
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