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ORIGINAL ARTICLE

Association of Intradialytic Hypertension and Dietary Elements: A Case-Control Study

Parirokh Mahmoudi[1], Maryam Shafiee[2]*, Maryam Ekramzadeh[3], Seyed Alireza Zomorodian[2,4], Elham Ashrafi Dehkordi[5], Maryam Hamidian Shirazi[3,4], Maryam Ranjbar Zahedani[6]

1. Internal Medicine Department, School of Medicine, Shiraz University of Medical Sciences, Shiraz, Iran
2. Shiraz Nephro-Urology Research Center, Shiraz University of Medical Sciences, Shiraz, Iran
3. Nutrition Research Center, Department of Clinical Nutrition, School of Nutrition and Food Sciences, Shiraz University of Medical Sciences, Shiraz, Iran
4. Student Research Committee, Shiraz University of Medical Sciences, Shiraz, Iran
5. Nutrition Research Center, Department of Food Hygiene and Quality Control, School of Nutrition and Food Sciences, Shiraz University of Medical Sciences, Shiraz, Iran
6. Department of Nutrition Sciences, School of Health, Larestan University of Medical Sciences, Larestan, Iran

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**Corresponding author:*
Maryam Shafiee, MD;
Shiraz Nephro-Urology Research Center, Shiraz University of Medical Sciences, Shiraz, Iran.
Tel: +98-9173311849
Email: maryamshafiee92@gmail.com
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ABSTRACT

Background: Intradialytic hypertension (IDH) is defined as a rise in blood pressure during or immediately after hemodialysis that is associated with increased mortality in these patients. This study aimed to evaluate the association between IDH and the nutritional intake of trace and micromineral elements in maintenance hemodialysis patients.

Methods: Patients with chronic renal failure treated with maintenance hemodialysis were assessed in this case-control study. The participants who had IDH were selected as the case group. The Food Frequency Questionnaire (FFQ) was used to collect nutritional data; and then, the diets of the two groups were analyzed. Totally, 23 patients with IDH and 23 without IDH were included in the analysis.

Results: Although there was no significant difference in daily calorie intake between the two groups, the mean dietary intake of sodium, calcium, phosphorus, and total fat was significantly higher in the IDH group than the control group ($p<0.05$). In the group with IDH, the phosphorus intake was higher than the recommended amount, while the control group consumed significantly less oral phosphorus.

Conclusion: Advising limiting oral phosphorus and sodium consumption along with low-fat diet may help to reduce blood pressure in IDH patients and the subsequent mortality.

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Introduction

The incidence of chronic kidney disease (CKD) and end-stage renal disease (ESRD) is rising worldwide. Patients with ESRD finally need peritoneal dialysis or hemodialysis before a kidney transplant. Hemodialysis has serious complications such as intradialytic hypotension with an incidence of 5-40% (1), anaphylactoid reaction, transient ischemic events or stroke, and hemostasis problems (2). Although hemodialysis is life-saving for renal

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Authors' Contribution

P.M. Mahmoudi and M. Shafiee were responsible for designing and interpreting data and writing the manuscript. M. Ekramzadeh, S.A. Zomorodian and M. Ranjbar Zahedani contributed to writing the manuscript, and E.A. Dehkordi analyzed the data. M.H. Shirazi contributed to the data acquisition and drafting of the manuscript. All authors read and approved the final manuscript.

Conflict of Interest

None declared.

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