

Effect of Intradialytic Exercise on Fatigue, Electrolytes level and Blood pressure in Hemodialysis Patients: A Randomized Controlled Trial

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Abstract:

Background. Hemodialysis is a physically stressful procedure and most of the patients will have fatigue and thereby an alteration in the electrolytes ,hemoglobin level. Physical Exercises provided during Hemodialysis session do not cost patients extra time and will be effective in reducing fatigue level and enhancing potential for performing their activities of daily living & may increase the waste removal .

Objective: This study was conducted to determine the impact of an eight-week Intradialytic Range of Motion Exercise program (consisting of 15 minutes low-intensity exercise during the first 2 hours of Hemodialysis) on Fatigue , electrolytes levels ,Hemoglobin and Blood pressure.

Materials and Methods. A randomized controlled pre test post test design was utilized in this study in a haemodialysis unit, a total of 30 haemodialysis patients were enrolled into the study and randomly allocated into two groups: The experimental (The exercise group) (n=18)and the control group (n=12).Range of Motion Exercises were done in the experimental group for 15 min/day, three times a week for 2 months. Fatigue was measured via a Iowa Fatigue Scale (IFS)and Physiologic Parameters Form to measure serum electrolyte level ,hemoglobin and blood pressure pre and post as well as at the end of each month after the intervention in both groups.

Results. After an 8-week of Intradialytic Range of Motion Exercises programme ,a significant reduction were seen in fatigue level ,serum phosphate and potassium, calcium, urea ,creatinin and a slight increase in hemoglobin level. Systolic and diastolic blood pressure change significantly in the exercise group.

($p < 0.05$).

Conclusions. A simplified physical exercise program may be considered as a safe, and effective clinical nursing modality in patients with end-stage renal disease on Hemodialysis.

Key words : Intradialytic Exercise, Hemodialysis, Electrolytes levels, Fatigue ,Blood pressure.