

Acute Effect of the New Device on Dialysis Adequacy, Physiological and Metabolic Response in
Peritoneal Dialysis Patients

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Abstract

Many of the known benefits of exercise in the general population are of particular relevance to the ESRD population. Therefore, the objective of this study to investigated acute effect of exercise on dialysis adequacy, physiological and metabolic response in peritoneal dialysis patients. 8 peritoneal dialysis patients, men, age between 40 and 65 years old participated in this study. The randomly 2 group: Callisthenic group (CG: n =4) and LBL group (LG: n=4). The protocol was resting 30 min, exercise (Calisthenic or LBL) 30 min ,Recovery 30 min.. EKG was records through this study but arterial elasticity, Expired gas were measured in 5 minutes the end of each phase. BP, HR and O₂ saturation were measured in resting, post-exercise, recovery phase. RPE, RPD was recorded in post-exercise. Blood sampling (Hb, Hct , WBC /BUN, Cr ,Na , K,) in resting, post-exercise and recovery phase. 8 men and middle-age with peritoneal dialysis patients (mean age 51.38 ±6.05 years) and randomly to calisthenic group (CG, n=4, 51.75±5.12yrs) and LBL group (LBLG,n=4, 51±6.98yrs). Baseline characteristics were not difference in both groups. The results shown that the LBL group was increased significantly creatinine in fluid more than the calisthenic group. (p=0.03.) Although, acute effect was not change to Hb, Hct WBC and clinical chemistry. VO₂ at resting, exercise and recovery phase were similar in both groups. The LBL group increased HR more than calisthenic group but at the end of exercise was similar in the both groups. But HR at 5 minutes of the end of exercise, the C group was higher than the LBL group. $\dot{V}O_2$ and HR were similar at 5 minutes at the end of exercise in both groups. RPE was increased not significantly, but RPD was increase significantly in LBL group. (p=0.04) Therefore, the LBL during dialysate flow-out and flow-in was help to remove waste product to dialysate and prevent cardiovascular disease.

Keywords: Acute effect, New device, Dialysis adequacy, Physiological and metabolic response, PD patients