

Abstract Submission No.: A-1183**The Effect of Home-Based Tele-exercise on Sarcopenia and Physical Function in Peritoneal Dialysis Patients: A Randomized Controlled Trial**

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Objectives : Sarcopenia frequently occurs in end stage renal disease patients, affecting their quality of life and increasing the risk of mortality. Although studies demonstrate the effect of intradialytic exercise on improvement of sarcopenia indices in hemodialysis patients, previous studies have not focused on peritoneal dialysis (PD) patients. Therefore, this study aimed to evaluate the effects of home-based tele-exercise on sarcopenia in patients with PD.

Methods : This study is a multi-center, randomized, controlled, 6 months trial. Participants were 56 PD patients with dialysis history of more than 3 months. A synchronized home-based tele-exercise program was applied 3 sessions a week for intervention group (n=28, 16 male, mean age = 59.4 ± 5.6 years), while the control group (n=28, 19 male, mean age = 62.5 ± 4.2 years) received the usual care and was placed on the waiting list. The primary outcomes were rate of changes of handgrip strength (HGN), lean mass index (LMI) and physical function measured by gait speed and SPPB test. The resulted data was analyzed using linear mixed-effect models, adjusting for age, sex, dialysis history and comorbidities.

Results : Statistical analyses revealed that home based tele-exercise resulted in significant improvement in sarcopenia indices such as HGN ($\beta=2.4$, 95% CI: 1.9_2.8) and LMI ($\beta=0.58$, 95% CI: 0.41_0.75) as well as physical performance indicated by gait speed ($\beta= -2.4$, 95% CI: -3.5_ -1.3) and SPPB test ($\beta=1.7$, 95% CI: 1_2.5). In the control group, there was a non-significant decreasing pattern in LMI ($\beta= -0.3$, 95% CI: -0.2_0.3) and SPPB ($\beta=-1.1$, 95% CI: -0.8_1.1) and a significant change in HGN ($\beta= -2.5$, 95% CI: -1.5_-3.5) and gait speed ($\beta= 1.9$, 95% CI: 1_2.7) during the study.

Conclusions : Home-based tele-exercise performed thrice weekly sessions can improve sarcopenia and physical function in adult patients receiving PD. This may decrease the worse outcomes like disability and all-cause mortality.