

Evaluation of Functional Capacity and Rate of Perceived Exertion through Six Minute Walk Test in Pre and Post Hemodialysis Patients with Chronic Kidney Disease: A Prospective Observational Study

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ABSTRACT

Introduction: Chronic Kidney Disease is a single organ dysfunction ultimately leading to a multi-organ dysfunction especially, the respiratory system. Hemodialysis is the most frequently used therapy for end-stage renal disease. It causes various respiratory issues, reduced muscle strength, decreased functional capacity and decreased quality of life. 6-minute walk test is widely accepted test to assess functional capacity in patients with CKD. Purpose of the study was to evaluate the difference in the functional capacity and rate of perceived exertion (RPE) in pre and post hemodialysis session on the same day.

Methodology: 73 patients were included in this prospective observational study according to the eligibility criteria. Gait speed, functional capacity and RPE were assessed through six-minute walk test and modified Borg scale before and after the hemodialysis session. Statistical analysis was done using Paired t-test, one way ANOVA test.

Results: Walking distance was found to be significantly reduced (mean of 85 meters) and rate of perceived exertion and fatigue level ($p=0.001$) in the post hemodialysis were significantly increased in comparison to the pre hemodialysis session. Also, significant difference in the gait speed ($p<0.05$) was found in pre and post hemodialysis was found.

Conclusion: The result of this study suggests that there is significant reduction in the distance walked in post-dialysis, significant increase in rate of perceived exertion and fatigue level in the post dialysis when compared to pre dialysis session.

Keywords: End Stage Renal Disease, Hemodialysis, Functional capacity, Rate of perceived exertion

