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Conference Abstract

Aerobic-Based Cardiac Rehabilitation Improves Functional Capacity After Coronary Artery Bypass Grafting: A Focused Comparison with Conventional Care

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ABSTRACT

Background: Functional recovery is a central goal of rehabilitation after coronary artery bypass grafting (CABG). The six-minute walk test (6MWT) is widely used because it is practical, prognostically relevant, and closely reflects real-world walking capacity. However, comparative data from South Asia on post-CABG rehabilitation strategies remain limited. **Objective**: To present a focused comparison of aerobic-based cardiac rehabilitation (Group A) versus conventional post-CABG care (Group B) on functional capacity measured by the 6MWT. **Methods**: This abstract reports a focused pairwise comparison from a three-arm randomized controlled trial involving 30 clinically stable post-CABG patients allocated equally to resistance-based rehabilitation, aerobic-based rehabilitation, or conventional care. The present analysis compares aerobic-based rehabilitation with conventional care. Functional capacity was assessed before and after a 10-week intervention. Post-intervention 6MWT distance was analyzed using ANCOVA with baseline 6MWT as a covariate. **Results**: At 10 weeks, unadjusted post-intervention 6MWT distance was 412.87 ± 13.86 m in the aerobic rehabilitation group and 348.80 ± 31.12 m in the conventional care group. After baseline adjustment, estimated marginal means were 409.89 m and 348.68 m, respectively. The adjusted mean difference was 61.21 m (95% CI 50.10 to 72.32; $p<0.001$). The ANCOVA showed a large group effect ($F=96.744$, $p<0.001$, partial $\eta^2=0.825$). **Conclusion**: Aerobic-based cardiac rehabilitation was associated with significantly greater improvement in functional capacity after CABG than conventional care. These findings support aerobic rehabilitation as an effective outpatient strategy for improving walking ability after CABG. **Keywords**: Coronary Artery Bypass; Cardiac Rehabilitation; Aerobic Exercise; Exercise Therapy; Six-Minute Walk Test; Recovery of Function

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