Abstract

Background: Walking speed seems to be related to aerobic capacity, lower limb strength, and functional mobility, however it is not clear whether there is a direct relationship between improvement in muscle strength and gait performance in early postmenopausal women. Objective: To evaluate the effect of muscle strengthening exercises on the performance of the 6-minute walk test in women within 5 years of menopause. Methods: The women were randomized into control group (n=31), which performed no exercise, and exercise group (n=27), which performed muscle strengthening exercises. The exercises were performed twice a week for 3 months. The exercise protocol consisted of warm-up, stretching, and strengthening of the quadriceps, hamstring, calf, tibialis anterior, gluteus maximus, and abdominal muscles, followed by relaxation. Muscular strength training started with 60% of 1MR (2 series of 10-15 repetitions), reaching 85% until the end of the 3-month period (4 series of 6 repetitions each). Results: The between-group comparisons pre- and post-intervention did not show any difference in distance walked, heart rate or blood pressure (p>0.05), but showed differences in muscle strength post-intervention, with the exercise group showing greater strength (p<0.05). In the within-group comparison, there were differences in final heart rate and quadriceps and hamstring strength pre- and post-intervention in the exercise group (p<0.05). Conclusion: The results suggest that muscle strengthening of the lower limbs did not improve performance in the 6-minute walk test in this population of postmenopausal women. Trial registration ACTRN12609001053213.

Keywords

Physical therapy, post-menopause, exercise program, muscle strength, 6-minute walk test.