

BALANCE EXERCISE FOR PATIENTS WITH PARKINSON'S DISEASE

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Background and Aims

Parkinson's disease is the second most common neurodegenerative disease and occurs in 2-3% of the population over the age of 65. Postural instability occurs early in the course of Parkinson's disease. Specific balance disorders include postural swaying, gait instability, slow turning, decreased trunk rotation, decreased ability to maintain balance in a tilted position, impaired anticipatory postural adjustment and decreased reactive postural responses. Reduced speed and amplitude of postural adaptation contribute to reduced stability during gait initiation and transition from sitting to standing, while impaired reactive postural responses contribute to an increased risk of falling. The aim of the study was to evaluate the effect of balance exercises in patients with Parkinson's disease.

Methods

Balance was assessed in nineteen patients ($N = 19$) with Parkinson's disease using the Berg Balance Scale (BBS) on the first and last day of rehabilitation. Rehabilitation included balance and proprioception exercises on the ground and training on a computerized balance platform. Physical therapy was performed five days per week for four weeks.

Results

The BBS score improved significantly after the balance exercises. The median BBS score before training was 50 (IQR 6) and after training 52 (IQR 6). The median difference was 3 (IQR 4). A paired t-test showed a statistically significant difference between the BBS scores before and after training: $t(18) = 2.28$, $p < 0.035$.

Conclusion

Rehabilitation based on balance exercises in patients with Parkinson's disease had a significant positive effect on balance. These results support the effectiveness of balance exercises in improving postural stability.

Keywords: Parkinson, postural instability, balance exercise