

Effect of Physical Therapy Training on Gait Initiation in Patients with Moderate Parkinson's Disease*

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ABSTRACT

The present study investigated the effects of physical therapy treatment on gait initiation in patients with Parkinson's disease (PD). Thirteen patients with PD were randomized into a treatment (n = 7) and control (n = 6) group. Participants were assessed for their severity level, using the Modified Hoehn and Yahr scale, and motor evaluation, using the Unified Parkinson's Disease Rating Scale (UPDRS), items III and IV. At pre- and post-assessments, gait initiation was assessed using a gait mat, synchronized with a video camera. The treatment group received a physical therapy training program based on the TrainingBIG™ technique and task-specific concepts, three times per week for four weeks. The control group received no physical therapy treatment. From analysis of the pre- and post-assessment variables, only the treatment group showed a significant decrease in preparatory phase time (p = 0.043) and increase in step length (p = 0.018). In addition, the treatment group had a significant increase in step length (p = .022) at post-assessment when compared to the control group. The present findings demonstrated that physical therapy treatment would be beneficial for patients with PD experiencing gait initiation problems.

Keywords: Parkinson's disease, Physical therapy, Gait initiation

INTRODUCTION

Parkinson's disease (PD) is a movement disorder disease, commonly found in the elderly (Guttman et al., 2003). Four clinical features of signs and symptoms are resting tremor, rigidity, bradykinesia and postural instability (Jankovic and Tolosa, 2007). In addition, patients with PD may have abnormalities in speaking, writing, facial expression, gait, posture and eyeball movement as well as in the

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