

TREATING LOWER EXTREMITY DYSFUNCTION WITH PARKINSON DISEASE INTERVENTION STRATEGIES

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Compliance Statement

The participant of this study provided written consent for treatment and participation in this case report.

Abstract (Limited to 300 Words)

Purpose This report documents outcomes of treating a 78 year old male with lower extremity dysfunction and symptoms, consistent with Parkinson's disease (PD), using PD intervention techniques. **Background:** Standard interventions for PD include cardiovascular training, progressive resistance exercises, and gait training, which focus on using full available movement. No research was found that used PD intervention strategies for a patient without a PD diagnosis, but with similar characteristics. At referral, the patient exhibited decreased lower extremity strength and range of motion, balance dysfunction, and decreased ambulatory endurance. Initial treatment included lower extremity strengthening and range of motion exercises. This did not yeild any marked improvements. During these sessions, the patient demonstrated a flat affect, difficulty initiating movement, and frequent freezing moments when ambulating. Due to these symptoms, PD treatment strategies were added to the plan of care. This included cardiovascular exercise on stationary bikes, progressive resistive exercises and stretches for the lower extremities, as well as balance and gait training with single point cane. **Outcomes** The primary outcome measure was the Tinetti where he improved from 9/28 with a four-wheel walker to 21/28, and 17/28 with a single point cane. He increased lower extremity strength from 3+ to -4/5 up to 4+ to 5/5. He improved flexibility in dorsiflexion from 1 to 6 degrees on the right and from -2 to 4 degrees on the left. The patient also improved gait quality and endurance. **Discussion** Decreased lower extremity strength, and symptoms similar to PD can lead to higher fall risk and overall decreased mobility. This report describes a patient with gait dysfunction that failed to improve with a traditional approach. Implementation of a multi-faceted treatment,, including intensive strengthening and gait training, similar to interventions used with Parkinson's disease, led to improved gait endurance, balance, and strength for a patient with findings similar to PD.