

Reduced incidence of falling in a Parkinson's disease patient prone to falling after one-year outpatient rehabilitation

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Abstract

For patients with Parkinson's disease (PD), gait disturbance and falls are leading factors in limiting daily activities. A PD treatment guideline indicates that frequency of falls decreases through therapeutic exercise. In this case study, therapeutic exercises and a home exercise program were provided for gait disturbance and frozen gait as part of outpatient rehabilitation intervention. This intervention resulted in improving the patient's ability to ambulate and reduced the frequency of falls. It also reduced her fear of gait, resulting in increased participation in housekeeping activities and range of daily life. It is necessary to provide individualized programs based on the symptoms of each patient, and it is important to provide interventions suitable for each patient, including implementation of home exercise programs and follow-up to confirm the patient's adherence to the home exercise programs. Tottori J. Clin. Res. 8(2), 171-175, 2017

Key Words: Parkinson's disease (PD), rehabilitation, frozen gait, home exercise program, Cue exercise

I. Introduction

For patients with PD, gait disturbance and falls are the leading factors in limiting their daily lives. The effects of these factors include direct ones such as fractures and secondary ones such as decrease in physical functions and social isolation for fear of going out. Recently, the prevalence of PD is increasing due to the aging of the population, and it is important to address gait disturbance and falls among patients with PD.

The PD treatment guideline indicates that therapeutic exercises would reduce the frequency of falls. Here, we report on a patient with PD who improved gait ability and reduced frequency of falls through outpatient rehabilitation interventions. The patient also overcame the fear of walking, improved participation in housekeeping activities, and expanded the range of daily life.

II. Case

Age: Late 60s.

Gender: Female.

Chief complaint: Difficulty walking (frozen gait).

Past medical history: The patient has been receiving drug therapy for chronic rheumatoid arthritis for the past 25 years to the present. The patient was diagnosed with lumbar disc herniation eight years ago and spinal canal stenosis six years ago. The patient underwent spinal fusion due to lumbar spine scoliosis four years ago.

Present medical history: The patient has had resting tremors for the past 15 years. The patient was diagnosed with PD for the tremors 13 years ago despite the absence of other symptoms. The patient began drug therapy at our hospital 10 years ago. At that time, in addition to obvious tremors, muscular rigidity and postural reflex disturbance were only very mild, and bradykinesia was insignificant. Hoehn and Yahr (H&Y) stage was rated as I. Five years ago, wearing-off began to affect the patient, leaving her unable to move at all when the drug effects diminished. Frozen gait also appeared from this point in time. Three years ago, dysphagia and dysarthria became significant. One year ago, frozen gait exacerbated and falls became frequent, virtually confining the patient at home. She would fall about once a month. Outpatient rehabilitation started in order to improve her ability to ambulate

Medications: Stalevo Combination Tablets 100 mg, selegiline HCl 2.5 mg, Mirapex-LA 1.5 mg, Neupro patch 9 mg, clonazepam 0.5 mg.

III. Physical Therapy Evaluation (Table 1)

Body height, 148.0 cm; body weight, 42.0 kg.

Blood pressure, 113/80 mmHg; pulse rate, 96 bpm.

General impression: The patient was outgoing, and had strong motivation for rehabilitation.

H&Y stage: III.

Neurological findings: Under anti-PD medications,