

## Editorial

# Rehabilitation Procedures in the Management of Parkinson's Disease

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Parkinson's disease (PD) is a chronic and progressive neurodegenerative condition characterized by a progressive depletion of dopaminergic neurons in the substantia nigra pars compacta [1]. It affects approximately 7 million, primarily elderly, people worldwide [2]. Motor cardinal signs of PD include bradykinesia, rigidity, resting tremor, and postural instability, as well as deterioration of muscle strength, cardiorespiratory fitness, performance of balance, gait, and mobility tasks [2–4]. In addition to motor symptoms, people with PD may suffer from nonmotor complications such as sensory complaints, autonomic dysfunction, fatigue, apathy, sleep disturbances, depression, and cognitive decline (i.e., executive function) [2, 4]. Disability can occur at all stages of PD leading to decreased independence, inactivity, social isolation, and reduced quality of life by performance of activities of daily living and various aspects of mobility such as gait, transfers, balance, and posture [5].

The management of PD has traditionally centered on drug therapy with levodopa viewed as the “gold standard” treatment [5]. However, even with optimal medical management, people with PD experience deterioration in bodily functions as well as limitations in daily activities and participation [5, 6]. On these bases, the role of rehabilitation has gained a prominent place in the overall management of

PD. Specifically, there is a move towards using rehabilitation procedures as an adjunct to pharmacological and surgical treatments with an emphasis on multidisciplinary management of this multidimensional condition [5, 7]. Rehabilitation for PD aims to maximize functional ability and minimize secondary complications by focusing on improving balance, posture, gait, upper limb function, physical capacity, and cognition, as well as minimizing falls, in order to optimize individuals' independence, safety, and well-being, thereby enhancing quality of life [7].

In this special issue of Parkinson's disease, we invited investigators to submit their contributions about rehabilitation procedures in the management of people with PD. We particularly focused on articles proposing some evidence for innovative rehabilitation protocols (including treatments based on motor-cognitive approaches) and comparing the effects of different rehabilitation therapies. Other articles explored rehabilitation strategies such as physical activity, physiotherapy, electromechanical and robot-assisted training, virtual reality, and telerehabilitation. Finally, we focused on the role of cognitive dysfunction in PD rehabilitation. This issue highlights the emerging and important role that rehabilitation plays in the management of motor and nonmotor symptoms of PD. The wide range of topics included in this

issue demonstrates the complexity of the disease and the need for a multidisciplinary approach to rehabilitation for PD.

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