ABSTRACT

PURPOSE: The purpose was to test the effect of robot-assisted gait therapy with the Lokomat system in one representative individual with Parkinson's disease (PD).

METHODS: The patient was a 67-year-old female with more than an 8-year history of PD. The manifestations of the disease included depressive mood with lack of motivation, moderate bradykinesia, rigidity and resting tremor, both involving more the right side of the body, slow and shuffling gait with episodes of freezing and risk of falling. The patient underwent six sessions of robot-assisted gait training. The practice included treadmill walking at variable speed for 25-40 min with a partial body weight support and assistance from the Lokomat orthosis.

RESULTS: After the therapy, the patient increased the gait speed, stride length and foot clearance during over ground walking. She reduced the time required to complete a 180° turn and the latency of gait initiation. Improvements were observed in some items of the Unified Parkinson's Disease Rating Scale including motivation, bradykinesia, rigidity, freezing, leg agility, gait and posture.

CONCLUSIONS: Although the results supported the feasibility of using robot-assisted gait therapy in the rehabilitation an individual with PD, further studies are needed to assess a potential advantage of the Lokomat system over conventional locomotor training for this population.

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