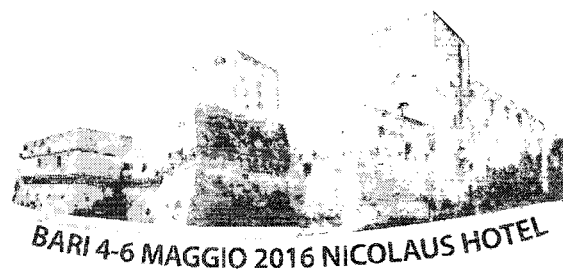


2° Congresso Accademia LIMPE-DISMOV

ACCADEMIA ITALIANA PER LO STUDIO DELLA MALATTIA DI PARKINSON
E I DISORDINI DEL MOVIMENTO



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Efficacy of a computer-assisted cognitive rehabilitation protocol on walking in Parkinson's disease patients with freezing of gait: a pilot study

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Background: The interplay between cognitive functions and gait is usually investigated by evaluating a secondary task while walking. Despite the growing interest on gait and cognition, to date there are no studies demonstrating the effect of a cognitive rehabilitation protocol on gait disorders in Parkinson's Disease (PD).

Objectives: To evaluate if a computer-assisted cognitive rehabilitation protocol may improve walking as single task and during double task performance in people with PD and freezing of gait (FOG).

Methods: Patients affected by PD with FOG participated to the study. Patients were treated twice a week for 1-h sessions for six consecutive weeks by a computer-assisted training of attention ability and information processing tasks. Gait parameters in single and dual-task were recorded at baseline, after six weeks and three months.

Results: Seven patients completed the evaluations at six weeks, six at three months. In single-task, we observed at six weeks a significant reduction in the cycle length in both legs with an increment in mean velocity and cadence. In dual task, we found a positive trend for all gait parameters, with slight decrement in dual-task cost. Most of gait parameters returned to baseline values after three months.

Discussion: A computer-assisted rehabilitation protocol based on executive functions training may improve walking in PD with FOG. This approach should be part of a multidisciplinary rehabilitation program to obtain prolonged results.