Neurocognitive rehabilitation in Parkinson's disease: Case report

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Keywords: Parkinson’s disease; Standardized therapy program; Getting up from the ground

Objective.– Hypometry and bradykinesia alter mobility in Parkinson’s disease (PD), making standing up from the floor difficult. We evaluated the effects of a standardized, intensive home rehabilitation program.

Methods.– Twenty-one PD patients (age 68 ± 10) were evaluated using the Global Mobility Test (GMT, including filming and timing of the task of standing up from the floor) in the practically defined OFF-state before and after an 8-week intensive home therapy program involving aerobic and strengthening exercises, 1 hour 3 times a week for 8 weeks, and re-assessed 3 months after the end of the program (n = 10).

Results.– Time to stand up from the floor was improved at 8 weeks (D1, 37.8 ± 7.4 s; D60, 26.9 ± 4.6 s, P < 0.05; Wilcoxon). The most improved part was the getting up from “knight position” (D1, 12.3 ± 4.1 s, D60, 5.2 ± 1.3 s, P < 0.01). Improvements persisted at D150 (n = 10; D1 39.2 ± 9.9 s; D60 25.6 ± 5.1 s; D150 19.6 ± 4.7 s, P < 0.05).

Conclusion.– An 8-week intensive home therapy program in PD involving appears to produce functional effects comparable to those of dopaminergic drugs. This study also suggests persistence of these effects 3 months after the end of the program, probably as patients retained the teaching of exercises that they continued to practice at home.

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Posters

P401-e
Neurocognitive rehabilitation in Parkinson’s disease: Case report
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Keywords: Gait; Neurocognitive rehabilitation; Balance

Objective.– Our aim is to verify the validity of neurocognitive rehabilitation grounding on the observation of perceptive as well as motor disorders in Parkinson’s disease (PD).

Methods.– A 49-year-old woman with a clinical history of PD since 2001 was enrolled. She attended twenty sessions (1 hour each) of neuro-cognitive rehabilitation, twice a week over 3 months. Outcomes included self-confidence in gait (primary), the course of disease and pain as a freezing’s prodrome (secondary), Unified Parkinson’s Disease Rating Scale, Timetti Balance and Gait Evaluation, Visual Analogue Scale, at the beginning (T0) and at the end of the treatment (T1), with a follow-up 3 months after the end (T2).

Results.– A decrease in the risk of falling, both when standing and during gait, was observed between T0, T1 and T2.

Discussion.– Neuro-cognitive rehabilitation may be considered effective in people with PD.

Further reading
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P402-e
tDCS to treat freezing of gait in Parkinson’s disease: A single-case design
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Keywords: Parkinson’s disease; Transcranial direct current stimulation; Freezing of gait

Objective.– We investigated the effects of transcranial Direct Current Stimulation (tDCS) in a 50-year-old subject suffering from Parkinson’s disease, complicated by drug-resistant freezing of gait (FOG).

Methods.– Three sessions of 2.0 mA cathodal tDCS were carried out, 30 days apart from each other. In the first session, tDCS was delivered to the prefrontal cortex, in the second one to the parietal cortex, while in the last, a sham-stimulation of the prefrontal cortex was done. Right and left hemispheres were separately stimulated in each session. Outcomes included performance time and number of FOG events during the Timed Up-and Go test, UPDRS-III and cognitive performances.

Results.– Prefrontal stimulation abolished FOG events, though providing a lower effect on TUG time than parietal stimulation. Parietal cortex tDCS improved single-TUG time up to 34%, with minor impact on dual-task time, and negligible effect on FOG events. UPDRS-III decreased after both prefrontal and parietal stimulation (by 31% and 36% respectively). Cognitive task scores increased after prefrontal stimulation, though not after parietal stimulation. No changes in motor or cognitive outcomes resulted from sham stimulation.

Discussion.– Prefrontal cortex tDCS may improve specific motor and cognitive performances in Parkinson’s disease.

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P403-e
Comparative efficacy and safety of botulinum toxin type A and B in treating Parkinson’s disease-related sialorrhea: A pre-test post-test study
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Keywords: Parkinson’s disease; Botulinum toxin; Sialorrhea

Objective.– We compared the efficacy and safety of botulinum toxin type A (BTX-A) and B (BTX-B) in Parkinson’s disease (PD) patients suffering from disabling drooling.

Methods.– Forty-four subjects (PD duration: 14.8 ± 6.6 years) with severe drooling were randomized into two groups, either receiving BTX-A (50 U Botox in each side) or BTX-B injections (2000 U Neurobloc in each side) in the parotid glands. Outcome measures included visual analogue scale for the assessment of drooling-related family (VAS-FD) and social (VAS-SD) distress, the Sialorrhea Scoring Scale (SSS), UPDRS-ADL score of speech and dysphagia items to appraise side effects, immediately before treatment and after one month.

Results.– At one month, all subjects reported an improvement of VAS-FD (time effect: F = 82.7, P < .0001) and VAS-SD (F = 74.5, P < .0001) following drooling reduction; the SSS score improved by 60% (F = 197, P < .0001). A greater impact of BTX-B was appreciated for both the VAS-SD score (time x treatment effect: F = 8.1, P = .005) and the SSS score (F = 17.2; P < .0001). Neither swallowing ability nor speech worsened after treatment.