



AAN 72nd ANNUAL MEETING ABSTRACT

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EMBARGOED FOR RELEASE UNTIL 4 P.M. ET, TUESDAY, FEBRUARY 25, 2020

Abstract Title: Table tennis exercise for patients with Parkinson disease: a prospective pilot study

Press Release Title: Study Finds Picking up a Pingpong Paddle May Benefit People with Parkinson's

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Objective: To prove the efficacy of table tennis exercise on motor and non-motor symptoms of patients with Parkinson disease (PD).

Background: Although it has been known that high intensity exercise might attenuate motor and non-motor symptoms in patients with PD, it is not clear what kind of exercise is suitable. Table tennis is a popular sport around the world, but it has not been examined whether it is effective for patients with PD as an exercise.

Design/Methods: We conducted a 6-month prospective trial to aim to prove that our table tennis program would improve motor and non-motor functions of patients with PD. Patients diagnosed as PD with Hoehn & Yahr stage of three or less were recruited. The patients participated in 5-hour exercise sessions once a week for 6 months. All the patients were assessed with MDS Unified Parkinson's Disease Rating Scale (MDS-UPDRS) part I-IV, Montreal Cognitive Assessment (MoCA), Frontal Assessment Battery (FAB), Self-Rating Depression Scale (SDS), Apathy Scale, at baseline, 3, and 6 months. Adverse events were also assessed.



Results: MDS-UPDRS part II and part III were significantly improved at 3 months ($p < 0.001$ / $p = 0.002$) and 6 months ($p < 0.001$ / $p < 0.001$), whereas MDS-UPDRS part I and IV, MoCA, FAB, SDS, and Apathy scale were not changed during the study period. Among the UPDRS part II, subscores of speech, saliva and drooling, dressing, handwriting, doing hobbies and other activities, getting out of bed, a car, or a deep chair, and walking and balance were significantly improved. Among MDS-UPDRS part III, subscores of facial expression, rigidity, postural stability, posture, bradykinesia, and kinetic tremor of the hands were significantly improved. Adverse events included fall and backache for one patient each.

Conclusions: Our findings suggest table tennis exercise may improve the motor symptoms of patients with PD. A national multi-center study to prove the finding is under preparation.