

The 2MWT is as informative as the 6MWT for assessing gait in Parkinson's disease

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Introduction: Parkinson's disease (PD) is one of the commonest neurodegenerative diseases in human and it is progressively debilitating [1]. According to epidemiological projections, in the next two decades there will be twice as many cases [2] and therefore it is urgent to find simple, reliable, and inexpensive methods to monitor these patients.

Objective: This study aims to investigate the validity of the 2-minute walk test (2MWT) for motor assessment of patients with PD, as an alternative to the 6-minute walk test (6MWT).

Methods: Patients (n = 62) affected by PD in their middle phase (H&Y 2-3) were studied as part of an observational study considering motor evolution of the disease during time (Clinical Trial.gov Identifier: NCT04297800). Among different assessments, patients performed the 6MWT while wearing an inertial sensor (G-walk ®) around their waist; data for 2MWT were pulled out from the records of this device.

Results: Initial data on baseline assessment of 43(69.3%) patients were considered. The mean walking distance for the 2MWT was 111.6 meters (range 67.20-146.2) and for the 6MWT 327.5 meters (range 80.60-438.6). The distance walked in the 2MWT was highly correlated to the distance walked in the 6MWT (r = 0.89, p < 0.001). There was no significant difference in walking mean speed between 2MWT and 6 MWT (1.37 VS 1.37 m/s, p=0.734).

Conclusions: Beyond the absolute values reflecting the algorithm underlying the accelometric data processing software, these results are consistent across patients and should be considered for reproducibility. Despite the limited number of analysis respect the overall sample, the 2MWT appear to be a workable alternative to the 6MWT for describing gait motor characteristics in patients with PD and would save considerable time for clinical evaluation (248 minutes only for the assessments considered in this study at baseline).

References:

[1] Bloem BR, Okun MS, Klein C. Parkinson's disease. Lancet. 2021 Jun 12;397(10291):2284-2303.

[2] Dorsey ER, Sherer T, Okun MS, Bloem BR. The Emerging Evidence of the Parkinson Pandemic. Journal of Parkinson's disease. 2018;8(s1):S3-S8.