(P23) VALIDITY, RELIABILITY, AND SENSITIVITY OF THREE GAIT MEASURES IN MULTIPLE SCLEROSIS
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Background: Multiple sclerosis (MS) presents in individual patients with a variety of clinical manifestations that can affect functional mobility, especially ambulation. The importance of walking and functional mobility is increasingly recognized from the patient perspective and as a contributory factor in productivity at home and in the workplace. Establishing gait measures that are sensitive to change in the patient’s ability to ambulate are important for clinical decision-making related to rehabilitation as well as medical management. Objectives: Assess the validity, reliability, and sensitivity of three gait measures—Timed Up and Go (TUG), Dynamic Gait Index (DGI), and 2-Minute Walk—in relation to the gold standard Expanded Disability Status Scale (EDSS) and Timed 25-Foot Walk (T25FW), as well as to the patient self-assessment report as measured by the 12-Item MS Walking Scale.

Methods: Fifty patients were identified who met the inclusion criteria: age between 20 and 70 years, EDSS score 2.0 to 6.5, ability to walk a minimum of 65 feet, and no indication of active disease or relapse within the past 30 days. Exclusion criteria were limited active range of motion, less than 3/5 manual muscle testing in extensor muscles, presence of neuropathic pain in lower extremities, or inability to rise from a chair, walk 10 feet, turn around, and return to the chair (TUG). All participants completed the following two items prior to performing the walking test: 1) a questionnaire describing their health history, symptoms associated with MS, current medications, and the 12-Item MS Walking Scale; and 2) a baseline physical therapy evaluation. All participants completed the walking tests in the following specific order: T25FW (two trials), TUG (two trials), Dynamic Gait Index, and 2-Minute Walk. Participants were seen 2 weeks later on the same day of the week and at the same time of day and repeated the self-report 12-Item MS Walking Scale and the four walking tests. Results: The results of this pilot study will establish concurrent and convergent validity and test-retest reliability of gait metrics that can be used specifically for people with MS to better quantify different aspects of their ambulation. Conclusions: Data are currently under analysis.

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