A COMBINATION OF ROBOT-ASSISTED AND BODY WEIGHT–SUPPORTED TREADMILL TRAINING IMPROVES GAIT IN PEOPLE WITH MULTIPLE SCLEROSIS

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Background: The majority of multiple sclerosis (MS) patients experience problems with gait and characterize them as highly disabling symptoms that adversely affect quality of life. Currently, none of the disease-modifying medications halt or reverse gait disability; thus other forms of intervention must be explored. Objectives: To determine whether combination gait training, using robot-assisted treadmill training followed by body weight–supported treadmill training within the same session, is effective for improving gait. Methods: This randomized pilot trial tested combination gait training in seven MS patients (Expanded Disability Status Scale score, 3.5–6.0). Outcome measures included velocity, cadence, double-support time, Timed 25-Foot Walk (T25FW) test, 6-Minute Walk (6MW) test, and functional reach test (FRT). Results: Combination gait training resulted in significant improvements in 6MW (P = .077) and FRT (P = .034) and trends toward improvements in T25FW time and velocity when compared with the control group. Significant longitudinal improvements following combination gait training were found in 6MW (P = .018), FRT (P = .063), and double-support time (P = .018), and trends toward improvement were found in T25FW time, velocity, and cadence. Conclusions: Combination gait training is well tolerated by MS patients and improves walking ability.

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