ROBOTIC-ASSISTED STEP TRAINING (LOKOMAT) NOT SUPERIOR TO EQUAL INTENSITY OF OVER-GROUND REHABILITATION IN PATIENTS WITH MULTIPLE SCLEROSIS.

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ABSTRACT

BACKGROUND: Robot-assisted gait training (RAGT) has been suggested as an intervention to improve walking capacity in patients with multiple sclerosis (MS).

OBJECTIVE: This study aimed to evaluate whether RAGT (Lokomat) is superior to over-ground walking training in terms of quality of life, activity level, and gait.

METHODS: A total of 67 patients with MS with the Expanded Disability Status Scale (EDSS) 3.0 to 6.5 were randomized to walking or RAGT, in addition to multimodal rehabilitation. Primary outcomes were walking speed, activity level (estimated metabolic equivalent, metabolic equivalents [METs], using an accelerometer), and quality of life (Well-Being Visual Analogue Scale (VAS) and EQ-5D European VAS.

RESULTS: In all, 49 patients finished the interventions. Mean age was 56 years (range 36-74 years), mean EDSS was 5.8 (3.0-6.5), and the preferred walking speed at baseline was 0.56 m/s (0.06-1.43 m/s). Before rehabilitation, participants spent on average 68 min/d at an MET ≥ 3. The walking group improved gait speed nonsignificantly more than the RAGT; the upper bound of the confidence interval (CI) did not exclude a clinically relevant benefit (defined as a difference of 0.05 m/s) in favor of the walking group; the lower bound of the CI did exclude a clinically important benefit in favor of the Lokomat. Quality of life improved in both groups, with a nonsignificant between-group difference in favor of the walking group. Both groups had reduced their activity by 8 weeks after the rehabilitation.

CONCLUSION: It is unlikely that RAGT is better than over-ground walking training in patients with an EDSS between 3.0 and 6.5.