Effects of Intensive Repetition of Trunk Muscle Facilitation on Motor Functional Recovery after Stroke: A Randomized Controlled Trial

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Objective: The purpose of this study was to investigate the effects of repetitive facilitation exercise of trunk (RFE-T) on the function of trunk and gait in post-stroke patients.

Methods: An assessor-blinded randomized controlled trial was carried out at 2 inpatient stroke rehabilitation centers. Twenty-one patients (age = 63.7 ± 12.1 years; mean ± standard deviation) were assigned to a control group (CG; n = 10) or an exercise group (EG; n = 11). The EG underwent RFE-T in which a physical therapist provided the trunk rotation and lateral flexion (100 repetitions each of 2 types of facilitation exercise per day). All of the subjects participated in a conventional stroke-rehabilitation program 5 times a week for 8 weeks. Baseline and post-intervention measurements included the trunk rotation muscle strength, the Functional Assessment for Control of Trunk (FACT) score, the Berg Balance Scale (BBS) score, the 10-m walk test, and the Functional Independence Measure (FIM) score.

Results: The EG demonstrated a significant improvement in all measurements, whereas the CG demonstrated a significant improvement in four of the five measurements excluding the trunk rotation muscle strength. The increases in the trunk rotation-muscle strength and the 10-m walk test were greater in the EG than those in the CG (p < 0.05).

Conclusions: These findings suggest that RFE-T will promote recovery of trunk function and improve gait ability in post-stroke patients.