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The Effects of Mirror Therapy on Clinical Improvement in Hemiplegic Lower Extremity Rehabilitation in Subjects with Chronic Stroke

Authors : Hassan Abo-Salem, Huang Xiaolin

Abstract : Background and Purpose: The effectiveness of mirror therapy (MT) has been investigated in acute hemiplegia. The present study examines whether MT, given during chronic stroke, was more effective in promoting motor recovery of the lower extremity and walking speed than standard rehabilitation alone. Methods: The study enrolled 30 patients with chronic stroke. Fifteen patients each were assigned to the treatment group and the control group. All patients received a conventional rehabilitation program for a 4-week period. In addition to this rehabilitation program, patients in the treatment group received mirror therapy for 4 weeks, 5 days a week. Main measures: Passive ankle joint dorsiflexion range of motion, gait speed, Brunnstrom stages of motor recovery, plantarflexor muscle tone by Modified Ashworth Scale. Results: Results: No significant difference was found in the outcome measures among groups before treatment. When compared with standard rehabilitation, mirror therapy improved Ankle ROM, Brunnstrom stages and waking speed ($p < 0.05$). However, there were no significant differences between two groups on MAS ($P > 0.05$). Conclusions: Mirror therapy combined with a conventional stroke rehabilitation program enhances lower-extremity motor recovery and walking speed in chronic stroke patients.

Keywords : mirror therapy, stroke, MAS, walking speed
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