Clinical trial of hippotherapy simulator on pain, disability and range of motion of spinal column in people with mechanical low back pain

Rahbar M, MD, Nirooumand A, MD.
Physical medicine and rehabilitation Department, Imam Reza Hospital, Faculty of Medicine, Tabriz University of Medical Sciences

Introduction: Back pain is a major disabling problem. Hippotherapy is a treatment approach for back pain treatment. Hippotherapy advantages persuaded scientists to make hippotherapy simulator. This study, for first time, evaluates the effects of hippotherapy simulator on pain, disability and range of motion of spinal column in people with mechanical low back pain.

Methods: In this randomized clinical trial, 80 patients with low back pain were randomly studied in hippotherapy (n=40) and control (n=40) groups. All patients underwent routine physiotherapy treatments for 15 sessions and intervention group, moreover, underwent hippotherapy with simulator for 15 sessions, each session for 15 minutes. Pain, disability and range of motion of spinal column of patients were measured at the beginning and at the last physiotherapy session. Also, pain of patient was measured at 4th, 8th and 12 days of treatment.

Results: In both groups there was significant improvement in disability, Schober test and pain severity score at the end of study in comparison to the basic values (p<0.001 in all). Intervention group had significantly higher improvement in disability score in comparison to control group (p<0.001), but the difference was no significant in Schober test between groups before and after the study. Pain severity was significantly lower in intervention group after 12th session and last session of treatment (p=0.01 and p=0.00 respectively). There was significant differences between groups in serial pain measurements in the study period (p<0.001).