

Original Paper

Comparison of rehabilitation plus joystick verses routine rehabilitation treatment on hand muscles stiffness in hemiplegic patients

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Abstract

Background and Objective: Disabilities in upper limb due to stroke are the major problems in hemiplegic patients. Recently, joystick method as new method is applied for the improvement of upper limb disabilities. This study was carried out to compare the effect of joystick in combination verses routine rehabilitation and routine rehabilitation program on hand muscles stiffness in hemiplegic patients.

Methods: In this clinical trial study, 12 hemiplegic patients were randomly divided into two control and interventional groups. Subjects in the control group were received rehabilitation program with placebo joystick. Patients in interventional group were received joystick treatment with routine rehabilitation program for 10 sessions, 3 times a week. Pre and post-treatment evaluation was performed based on Wrist Robo Hab method.

Results: Flexion and pronation muscle stiffness in control patients showed non significant improvement, but in the interventional group, significant improvement were observed ($P < 0.05$). At the end of study, there was not any significant difference between control and interventional group.

Conclusion: According to this finding, there was not any significant difference between the combination of joystick and rehabilitation treatment and routine rehabilitation program on the hand muscle function in hemiplegic patients.

Keywords: Stroke, Hemiplegia, Joystick, Rehabilitation, Hand muscles stiffness, Wrist Robo Hab

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