Original Paper

Effect of adjustable wrist hand splint on upper limb spasticity in post stroke patients

Tutunchi E (MSc)*[1], Javanshir MA (MSc)[2], Akbar-Fahimi M (MSc)[3], Kamali M (PhD)[4]

[1]MSc of Orthotics and Prosthetics, Faculty of Rehabilitation Sciences, Tehran University of Medical Sciences, Tehran, Iran. [2]Academic Instructor, Deparment of Technical Orthopedy, Faculty of Rehabilitation Sciences, Tehran University of Medical Sciences, Tehran, Iran. [3]Academic Instructor, Deparment of Occupational Therapy, Faculty of Rehabilitation Sciences, Tehran University of Medical Sciences, Tehran, Iran. [4]Associate Professor, Department of Rehabilitation managment, Faculty of Rehabilitation, Tehran University of Medical Sciences, Tehran, Iran.

Abstract

Background and Objective: Spasticity is common problem in stroke patients. Spasticity couse dysfunction and restricted activity. The most of patients have hand dysfunction due to stroke. This study was done to determine the effect of adjustable wrist hand splint on upper limb spasticity in post stroke patients.

Materials and Methods: This randomized clinical trial study was carried out on 15 patients with stroke referred to rehabilitation centers in Tehran-Iran during 2009. Patients randomly were divided into interventional (4 female, 3 men) and control (5 female, 3 men) groups. Common occupational therapy practice was carried out for 4 weeks for both groups equally. In treatment group intervention was based on the use of adjustable wrist hand splint moreover common occupational therapy practice. Upper limb spasticity pre and post intervention based on the Modified Ashworth Scale was evaluated. Data were analyzed by SPPS-17 software, pair-t-test and independent t-test.

Results: Mean age of patients in interventional and control groups were 61.37±4.10 and 58.85±5.01 years respectively. After 4 weeks of treatment, the mean of spasticity was not significant between interventional and control groups, but internal analysis of spasticity were significant in interventional and control groups ($P<0.05$).

Conclusion: This study showed that the adjustable wrist hand splint is not useful in reduction of upper limb spasticity in post stroke patients.

Keywords: Adjustable wrist hand splint, Spasticity, Stroke

*** Corresponding Author: Tutunchi E (MSc), E-mail: tutunchy_to@yahoo.com**

Received 24 February 2010 **Revised** 19 January 2011 **Accepted** 9 February 2011

This paper should be cited as: Tutunchi E, Javanshir MA, Akbar-Fahimi M, Kamali M. [Effect of adjustable wrist hand splint on upper limb spasticity in post stroke patients]. J Gorgan Uni Med Sci. Spring 2010;13(1):23-8. [Article in Persian]