**Effect of Transcranial Electromagnetic Stimulation on Modulation of Wrist Flexors Spasticity in Stroke Patients.**

**تأثير التحفيز الكهرومغناطيسي عبر الجمجمة على تعديل تصلب عضلات ثنى المعصم في مرضى السكتة الدماغية**

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**Abstract**

The **purpose** of the study was to determine whether rhythmical transcranial low frequency electromagnetic stimulation could improve wrist flexors spasticity and hand function in Stroke patients or not. 30 male and female Stroke patients of ages ranged from 50 to 77 years with mean age of (56.±6.6) years were randomly participated and selected from outpatient clinic of King Khalid hospital and outpatient clinic of Neuromuscular and Neurosurgical Disorders, Department of Physical Therapy, Najran University, King Dom of Saudi Arabia. Patients were randomly divided into two equal groups of 15. **Group I** received a designed program of physical therapy only (Stretching exercises, strengthening exercises, Proprioceptive neuromuscular facilitation, gait training, weight bearing exercises and hand functions exercises) as a control group, while **Group II** received the same designed program of physical therapy of group 1 and transcranial low frequency electromagnetic stimulation with frequency of 0.5 Hz, 30% intensity and duration of 20 minutes. Both groups were clinically **assessed** through Modified Ashworth Scale for degree of wrist flexor spasticity, Digital goniometer for wrist flexion and extension range of movement, they were electrophysiolgically assessed for activity of flexor carpi radialis longus and hand functions through Purdue pegboard before and after treatment program. **Results** showed a statistical significant difference between both groups with GII best results, regarding to clinical and electrophysiological parameters.

**Key words:** Spasticity, Wrist Joint, Range of Motion, Digital Goniometer, Purdue Pegboard, Hand Function, Electromagnetic, Electromyography and Stroke.