Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and Its Surgery

Master Degree 2009

Author	:	Mohamed M. Reda Mahmoud Hassan Sharaf.
Title	:	Bilateral Symmetrical Arm Training: Its Effect on Elbow
		Muscles Co-Contraction in Stroke Patients.
Dept.	:	Physical Therapy Department for Neuromuscular and
		Neurosurgical Disorder and its Surgery.
Supervisors	1.	Nawal Abd El-Raouf Abou Shady.
	2.	Ann Ali Abd El-Kader.
	3.	Abeer Abo Bakr Elwishy.
Degree	:	Master.
Year	:	2009.
Abstract	:	

Objectives: The objectives of this study were to determine the influence of bilateral symmetrical arm training on the co-contraction of the elbow joint flexor and extensor muscles and to find out if there was a correlation between the co-contraction index and the upper extremity functional activity in stroke patients. *Subjects and methods:* Thirty stroke patients were assigned into two equal groups, a control and a study group. The control group received traditional physical therapy program, whereas, the study group received traditional physical therapy program, whereas, the study group received traditional physical therapy program, in addition to bilateral symmetrical arm training. The patients were assessed clinically with the Brunström-Fugl-Meyer scale which was recorded twice (before and after treatment) and the co-contraction index was calculated four times; before, after two months, after four months and after six months of treatment. *Results:* There was a significant difference between both groups in The Brunström-Fugl-Meyer scale scores and co-contraction index before and after treatment. Additionally, a high negative correlation was detected between Brunström-Fugl-Meyer scale scores and Co-contraction index. Conclusion: Bilateral symmetrical arm training is effective in improving motor functions of the upper extremity in stroke patients.

Key words	1.	Stroke.	
	2.	Bilateral Symmetrical Arm Training.	
	3.	Co-contraction.	
	4.	EMG.	
Arabic Title Page	:	التدريب الثن ائي المتماثل للذراع: تأثيره علي الانقباض المشترك لعضلات الكوع في	
		مرضي السكتة آلدماغيه.	
Library register number	:	2013-2014.	

Author	:	Mohamed Rasmi Moursi.
Title	:	Influence of transcranial magnetic stimulation on elbow and wrist flexors spasticity during reaching performance in stroke patients.
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Abul Alim Abdul Fattah Atteya.
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Degree	:	Master.
Year	:	2009.
Abstract	:	

The purpose of this study was to evaluate the influence of transcranial magnetic stimulation on elbow and wrist flexor muscles spasticity and subsequently reaching performance in Stroke patients. Thirty hemiparetic patients were assigned randomly into two equal groups. The patients in the study group (n = 15) received traditional physical therapy program for the affected upper extremities including (stretching, strengthening, weight bearing exercises) as well as transcranial magnetic stimulation. Whereas the patients in the control group (n = 15) received traditional physical therapy program only. The following parameters including reaching performance scale, muscle tone, muscle power and extension range of motion of elbow and wrist joints by (3-D motion analysis) were measured before and after six weeks of the treatment program. The results revealed that there was significant improvement in the study group in comparison to control group. It was concluded that the suggested physical therapy program is effective in improving elbow and wrist flexors spasticity and consequently could improve reaching performance in stroke patients. Moreover TMS adds benefits other than those gained by physical therapy program only.

therapy program only		
Key words	1.	Stroke.
	2.	Spasticity.
	3.	Transcranial magnetic stimulation.
	4.	reaching performance.
Arabic Title Page	:	فاعلية التنبيه المغناطيسي عبر الجمجمة علي الشلل التشنجي لعضلات ثنى الكوع
		والرسغ أنثاء الأداء الوصولي في مرضى السكتة الدماغية.
Library register number	:	2041-2042.

Author	:	Nagwa Ibrahim Mohammed Rehab.
Title	:	Segmental trunk and hip joint motion analysis during sit –to- stand task in stroke patients.
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Abdulaleem Abdulfattah Atteya.
	2.	Nevein Mohammad Gharib.
	3.	Nirmeen Adel Abdel-Gaffar.
Degree	:	Master.
Year	:	2009.
Abstract	:	

The purposes of this study were to evaluate the segmental trunk (including thoracic and lumbar spine) and hip joint movements during sit-to-stand task, and to assess balance in both stroke patients and healthy normal subjects. Thirty stroke patients and ten normal subjects participated in this study. Patients were divided into two equal groups according to the degree of spasticity of the affected lower limb measured by Modified Ashworth Scale. All subjects were assessed for balance by Berg balance scale and for the range of motion of thoracic, lumbar spine and hip joint by three- dimensional motion analysis system during sit-to-stand task. The results showed significant differences in balance score and in thoracic, lumbar spine and hip joint range of motion (during the two phases of sit-to-stand movement except the second phase for the hip joint) among the three groups. It was concluded that stroke patients had altered pattern of movements of thoracic, lumbar spine and hip joint during sit-to-stand task that appear in the form of increasing thoracic, lumbar spine and hip joint flexion during pre buttock lift-off phase and a longer sit-to-stand duration as compared to normal subjects.

Key words	1.	Stroke.
PHISICA	2.	sit-to-stand.
	3.	segmental trunk.
LIB	4.	hip.
	5.	three-dimensional motion analysis.
	6.	balance.
Arabic Title Page	:	تحليل حرك <mark>ة الجذع الجزئية ومفصل الفخذ أثناء مهمة القيام من وضع الجلوس في</mark> مرضى الس <mark>كتة الدماغية.</mark>
		مرضى الس <mark>كتة الدماغية.</mark>
Library register number	:	2005-2006.

Author	:	Zizy Mostafa Youssof.
Title	:	Efficacy of Pulsed Electromagnetic Therapy on Neck Pain in
		Cervical Spondylosis.
Dept.	:	Physical Therapy Department for Neuromuscular and
		Neurosurgical Disorder and its Surgery.
Supervisors	1.	Nawal Abd El-Raouf Abou Shady.
	2.	Shereen Fathi Shaer.
	3.	Waleed Talat Mansour.
Degree	:	Master.
Year	:	2009.
Abstract	:	

Background: The purpose of this study was to examine the effect of pulsed electromagnetic field therapy on pain in cervical spondylosis. Forty five patients of both sexes, their age ranged between 35 and 52 years were assigned randomly into three equal groups. Subjects in the group I (n = 15) received pulsed electromagnetic field in addition to traditional physical therapy program (Infrared radiation, Ultrasound therapy, and therapeutic exercises. Whereas subjects in group II (n = 15) received Pulsed electromagnetic field therapy only and subjects in group III (n = 15) received Pulsed electromagnetic field therapy only and subjects in group III (n = 15) received traditional physical therapy program only The following parameters including pain intensity on Visual Analog Scale, Neck Pain And Disability scale, cervical range of motion using Cervical Range of Motion device were measured before and after six weeks of treatment program. Results: There was as significant improvement inside each group I. Conclusion: It can be concluded that the suggested Pulsed electromagnetic field therapy program is effective in relieving neck pain in cervical spondylosis and the results were magnified significantly when it is combined with the traditional physical therapy program.

Key words	1.	Cervical spondylosis.
	2.	Pulsed electromagnetic field.
	3.	Pain.
Arabic Title Page	:	كفاءة المجال الكهرومغناطيسي النابض على الام خشونه الرقبة.
Library register number	:	1967-1968.