

**ELECTRONIC GUIDE TO THESES APPROVED BY
PHYSICAL THERAPY DEPARTMENT FOR NEUROMUSCULAR
AND NEUROSURGICAL DISORDER AND ITS SURGERY
PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and Its Surgery

Master Degree
2006

Author	:	Adel Ahmad Hassan Emad EI Geoshy.
Title	:	Comparison of Ground Reaction Force between Normal Subjects and Parkinsonian Patients.
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Usama Mohamad Rashad.
	2.	Faisal Abd El Wahhab Atta.
	3.	Hoda Mohamad Zakaria.
Degree	:	Master.
Year	:	2006.
Abstract	:	
<p>The purpose of this study was to evaluate the ground reaction force components in Parkinsonian patients and to compare them with that of age matched normal subjects. Twenty Parkinsonian patients and ten normal subjects participated in this study. This study calculated kinetic quantities of human gait, by using all components of the ground reaction force (vertical load, horizontal shear forces in the fore-aft and mediolateral directions), both in normal subjects and Parkinsonian patients by using force plate form. The results of this study showed a highly significant reduction of ground reaction force in all parameters of ground reaction force of Parkinsonian patients when compared with control group, except the reduction of the mediolateral component of the first peak which is non significant. So assessment of ground reaction force should be considered as a valuable tool in diagnosis, rehabilitation and prognosis of Parkinsonian patients.</p>		
Key words	1.	Parkinson's disease.
	2.	gait analysis.
	3.	ground reaction force.
Arabic Title Page	:	مقارنة قوة رد فعل الأرض لمرضى الشلل الرعاش و الأشخاص الطبيعيين.
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Author	:	Ayman Anwar Nassif.
Title	:	Transcranial Electromagnetic therapy efficacy on spasticity in Stroke patients.
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Nawal Abd El-Raouf Abou Shady.
	2.	Fadl Mohamed Ali.
	3.	Enas El Sayed.
Degree	:	Master.
Year	:	2006.
Abstract	:	
<p>Back ground: The purpose of this study was to examine the effect of low frequency and low intensity pulsed magnetic field therapy on spasticity in Stroke patients. Thirty hemiplegic patients were assigned randomly into two equal groups. Subjects in the study group (n = 15) received traditional physical therapy program (stretching, strengthening, balance and gait training exercises) as well as low frequency and low intensity pulsed magnetic field. Whereas subjects in the control group (n = 15) received traditional physical therapy program and sham magnetic therapy. The following parameters including muscle tone, time of "Timed up and go" test, laboratory examinations (3-D motion) were measured before and after six weeks of treatment program. Results: there was non significant improvement in the study group in comparison to control group. Conclusion: it can be concluded that the suggested physical therapy program is effective in improving the control over spasticity and consequently could improve gait in stroke patients. The transcranial electromagnetic therapy (with the frequency and intensity used in this study) adds no benefits other than those gained by physical therapy program.</p>		
Key words	1.	Stroke, Spasticity.
	2.	3-D Measurements.
	3.	Pulsed Magnetic Therapy.
Arabic Title Page	:	كفاءة العلاج الكهرومغناطيسي عبر الجمجمة علي التنشج العضلي لمرضى السكتة الدماغية.
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Author	:	Bassam Abd El-Mageed Mohammad Refaat.
Title	:	Kinematic and Electromyographic Analysis of Reaching Pattern in Stroke Patients.
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Nawal Abd El-Raouf Abou Shady.
	2.	Maha Atif Zaki.
	3.	Abeer Abo Bakr Elwishy.
Degree	:	Master.
Year	:	2006.
Abstract	:	
<p>Background: A major prerequisite for successful rehabilitation therapy after stroke is the understanding of the mechanisms underlying motor deficits common to these patients. Objectives: Objectives of this study were to determine the influence of altered muscle activity amplitudes on active ROM and the level of motor impairment of reaching pattern. Methods: thirty stroke patients participated in the study. Their mean age was 48.5 ± 5.27. Analysis was conducted from sitting on a chair. The patients were instructed to reach for a target placed within their arm's length in forward horizontal plane by the affected then the non affected arm. Shoulder flexion, elbow extension and wrist extension ROM were analyzed by using three-dimensional motion analysis system. Muscular EMG amplitudes were recorded from the clavicular head of pectoralis major, anterior deltoid, lateral head of triceps and radial wrist extensors. The level of motor impairment was measured by the reaching performance scale. Results: There was a significant decrease in EMG amplitudes of the selected muscles and in ROM of shoulder flexion, elbow and wrist extension in the affected arm than the non-affected which intern affect the motor performance of reaching pattern in the affected arm of stroke patients. Conclusion: Reduction of EMG activity amplitudes of the selected muscles was considered as an important cause of limited ROM and increased level of motor impairment of reaching pattern in stroke population.</p>		
Key words	1.	Stroke.
	2.	EMG.
	3.	3-D Motion Analysis.
	4.	Reaching Pattern.
Arabic Title Page	:	تحليل الحركة الديناميكية ورسم العضلات الكهربى لأنموذج وصول اليد فى مرضى السكتة الدماغية.
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Author	:	Ehab Mohamed Sayed.
Title	:	Efficacy of Using Electromagnetic Field Therapy on Chronic Low Back Pain Patients.
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Abd-Ulalem Abd-Ulfattah Atteya.
	2.	Abd El Rehman Mohamed.
	3.	Nashwa Sayed Hamed.
Degree	:	Master.
Year	:	2006.
Abstract	:	
<p>Purpose: this study was designed to evaluate the efficacy of electromagnetic field therapy on chronic low back pain patients. Methods: thirty four patients with chronic low back pain were randomly assigned into group I; (study) who received pulsed electromagnetic field of (64Hz), amplitude of 300G, duration of treatment was 45 minutes, with static bipolar magnetic therapy), and group II; (control) who received placebo pulsed electromagnetic field. The patients in both groups received traditional physical therapy in the form of superficial and deep heat, transcutaneous electrical nerve stimulation, and exercises therapy). Outcome measures included, pain intensity on visual analogue scale, functional disability on the Oswestry disability questionnaire, and lumbar range of motion by using modified-modified Schober test . These measurements were taken at baseline (pretreatment) and at the end of treatment (post-treatment). Results: the results showed that both groups were comparable and matched with no significant ($P>0.05$) differences for age, sex distribution, weight, height and duration of illness, pain intensity functional disability and lumbar range of motion at the entry of the study (pretreatment). Both pulsed electromagnetic field and control groups reported significant reduction of pain intensity and functional disability and increase of lumbar range of motion, when compared with their pretreatment values. Comparing the results of pain intensity, functional disability and lumbar range of motion between both groups revealed highly significant differences in favor of pulsed electromagnetic field. Conclusion: this study recommended the use of pulsed electromagnetic field as adjuvant methods for treatment of chronic low back pain, in addition to traditional therapy.</p>		
Key words	1.	Pulsed electromagnetic field.
	2.	Low Back Pain.
Arabic Title Page	:	كفاءة العلاج باستخدام المجال الكهرومغناطيسي في مرضى آلام أسفل الظهر المزمن.
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Author	:	Islam Mahmoud Abd-allah Al-Azab.
Title	:	The efficacy of peripheral manipulation for shoulder dysfunction in stroke patients.
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Moshera H. Darwish.
Degree	:	Master.
Year	:	2006.
Abstract	:	
<p>The aim of this work was to investigate the efficacy of peripheral manipulation for shoulder dysfunction in stroke patients. Subjects and Methods: Thirty male hemiparetic stroke patients were assigned randomly into two equal groups; the study group (G1) and the control group (G2). Their ages ranged from 45 to 61 years with mean age 52.27. Both groups received the designed program of treatment. The control group received traditional exercise therapy in addition to Proprioceptive Neuromuscular Facilitation technique. The study group received the same program of treatment as the control group plus peripheral manipulation for the shoulder girdle region. Both groups were treated three times per week for successive six months. Results: The data were collected pre and post treatment for both groups. Three Dimensional Analysis System was used for evaluation of shoulder range of motion. Pain was assessed by Visual Analogue Scale (VAS) and Activities of Daily Living functions (ADL) were examined by Quality of Life Index Scale (QoLI). The results shown that both groups were improved clinically and functionally with significant improvement of study group than control group subjects. Conclusion: peripheral manipulation is an effective treatment modality for shoulder dysfunction in stroke patients.</p>		
Key words	1.	Peripheral Manipulation.
	2.	Shoulder Dysfunction.
	3.	Stroke.
Arabic Title Page	:	كفاءة التحريك اليدوي الطرفي لإضطرابات الكتف الوظيفية لمرضى السكتة الدماغية.
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Author	:	Rasha Meselhy Abd Elnaby Hegazy.
Title	:	Motor Relearning of the Hamstring Muscles in Stroke Patients.
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Salah Sawan.
	2.	Hussien Shaker.
	3.	Eglal El Nesr.
Degree	:	Master.
Year	:	2006.
Abstract	:	
<p>The purpose of this study was to evaluate the efficacy of motor relearning program of the hamstring muscles on gait parameters in stroke patients. Forty recent stroke patients were included in this study for this purpose. Patients were divided into two equal groups; Study group1 and Study group2. Patients in the study group1 received the conventional program of treatment in addition to the motor relearning program to hamstring muscles, which consisted of biofeedback training as well as motor relearning exercises. While, patients in the study group2 received the conventional physical therapy treatment program only, this composed of neurodevelopmental techniques as well as tone modification methods (Bobath and Brunnstrom Techniques). Both groups were treated three times per week for six successive weeks. Two evaluations were performed pre-treatment and after six weeks (post treatment). The patients were assessed for the angle of knee flexion, hip extension, stride length, speed, cadence, swing and stance phase percent. The results of this study showed that both groups were improved in all measurements. However, the study group1 showed significant improvement than the study group2. It can be concluded that the motor relearning program applied to the hamstring muscles is essential in improving stroke patients' gait parameters.</p>		
Key words	1.	Motor Relearning.
	2.	Stroke.
	3.	Gait parameters.
Arabic Title Page	:	إعادة التعليم الحركي لعضلة الفخذ الخلفية في مرضى السكتة الدماغية.
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