

Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and Its Surgery

**Master Degree
2008**

Author	:	Ahmed Metwally El-Shinnawy.
Title	:	Moment changes of lower limb during gait in stroke patients.
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
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	2.	Magdy Ahmed Arafa.
	3.	Nashwa Sayed Hamed.
Degree	:	Master.
Year	:	2008.
Abstract	:	
<p>The purpose of this study was to evaluate moment changes during gait in stroke patients (affected and none affected side) and compare them with normal subjects. Twenty stroke patients and ten normal subjects were assigned into two groups. This work studied kinetic quantities of human gait, by calculating moment of hip extensor, adductor, internal rotators, knee extension and ankle planter flexion both in normal and stroke. This study revealed highly statistically significant difference of analysis of variance with increased moment of stroke patients than normal subjects and of affected side of stroke patients was higher than none affected side. Moment could be considered as a method for assessment and follow up.</p>		
Key words	1.	Stroke.
	2.	Moment.
	3.	lower limb.
Arabic Title Page	:	تغيرات العزم في الطرف السفلى أثناء المشي في مرضى السكتة الدماغية.
Library register number	:	1767-1768.

**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**

Author	:	Karim Mohamed Kamel Ghonaim.
Title	:	Influence of the severity of lumbar discogenic lesion on kinematic gait parameters.
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Nahed Ahmad Salem.
	2.	Usama Mohammad Rashad.
	3.	Hassan Esmail EL Shafi.
Degree	:	Master.
Year	:	2008.
Abstract	:	
<p>Purposes: This study was conducted to investigate the effects of lumbar discogenic lesion on kinematic parameters of gait and difference between gait kinematic parameters in normal subjects and patients with the different degrees of L4-L5 lumbar discogenic lesion. Materials and methods: Forty five subjects "males only" were involved, aged between 30-45 years; they were divided into three equal groups. Group (A) normal subjects, group (B) patients with L4-5 lumbar disc prolapse with sensory manifestations and group (C) patients with L4-5 lumbar disc prolapse with sensory and motor manifestations. 3-D motion analysis lab was used to measure the kinematics gait parameters of the lower extremities of hip, ankle joints and stride length and cadence were measured for all groups. Results: There were significant differences among the three groups in hip motion at frontal plane (abduction and adduction) at the midstance. And In ankle motion at sagittal (dorsiflexion and planter flexion) plane at the midswing, with the lowest mean value was in patients with motor affection in both. However there was no significant difference between patients with sensory affection and normal subjects, in hip motion at frontal plane (abduction and adduction) at the midstance and in ankle motion at sagittal (dorsiflexion and planter flexion) plane at the midswing. Also, there was a significant difference among the three groups for both stride length and cadence measurements. The lowest mean value was in patients with motor affection. And also, there was a significant decrease in mean value in patients with sensory affection compared with normal subjects. Discussion and Conclusion: There was significant difference in angular kinematics at hip & ankle joints, stride length and cadence between patients with lumbar discogenic lesion and normal subjects. The significant differences of results of this study were clearly appeared between normal subjects and patients with motor affection. On conclusion, lumbar discogenic lesion can change the kinematics parameters of the gait.</p>		
Key words	1.	kinematics.
	2.	lumbar disc prolapse.
	3.	gait parameters.
Arabic Title Page	:	تأثير شدة إصابة الغضروف القطني على القياسات الكينماتيكية للمشي.
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Author	:	Mahmoud Yassin El Zanaty.
Title	:	Influence of Ankle Training Program on Dynamic Balance in Patients with Diabetic Peripheral Neuropathy.
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Moshera H. Darwish.
	2.	Mona M. Abd Elmonem Nada.
	3.	Enas Elsayed.
Degree	:	Master.
Year	:	2008.
Abstract	:	
<p>Background: The purpose of this study was to determine the influence of the training program to ankle region on dynamic balance in thirty females diabetic peripheral neuropathy patients. In addition, to investigate the validity of using multi-directional reach test as a tool in assess dynamic balance. The patients were assigned randomly into two equal groups (GI & GII). The patients in the control group received selected balance exercise whereas, the patients in the study group received selected balance exercise in addition to a design program directed mainly to ankle muscles from different positions. The following parameter including rhythmic weight shift test and tandem walk test through Computerized Posturography Device and Clinically by Multi-Direction Reach Test. Results: There was significant differences between both groups at all different testes. While in forward-backward direction of rhythmic weight shift there was no significant difference at slow speed and also in end-sway of tandem walk test. There was significant differences between both groups in four reach directions of Multi-Direction Reach Test. Conclusion: The suggested ankle training is effective in treatment of balance disturbance and consequently could decrease risk of fall in diabetic peripheral neuropathy patients. The multi-directional reach test is a valid and inexpensive tool in assesses dynamic balance.</p>		
Key words	1.	Diabetic Peripheral Neuropathy.
	2.	Dynamic Balance.
	3.	Computerized Posturography Device.
	4.	Multi-Direction Reach Test.
Arabic Title Page	:	تأثير برنامج تدريبي للكاحل على الإلتزان الحركى فى مرضى إلتهاب الأعصاب الطرفية السكري.
Library register number	:	1879-1880.

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Author	:	Moataz Mohamed Talaat El Semary.
Title	:	Biomechanical Analysis of Sit-To-Walk Movement in Parkinson's Patients.
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Nawal Abd El-Raouf Abou Shady.
	2.	Hayam Mahmoud Sayed.
	3.	Mohamed El Said Al Awaady.
Degree	:	Master.
Year	:	2008.
Abstract	:	
<p>The aim of this study was to evaluate the ankle-knee-hip interaction during sit-to-walk (STW) movement and clinical functional abilities of the lower limbs in Parkinson's patients. Methods: Twenty male patients, ages ranged from 55 to 70 years, stage II & III according to modified Hoehn and Yahr (1997) classification of disabilities and ten male healthy elderly subjects, ages ranged from 55 to 70 years ,participated in this study. All subjects were assessed for; clinical functional abilities of the lower limbs, ground reaction force (GRF) & spatiotemporal data and range of motion (ROM) of hip, knee and ankle joints during STW movement. The results showed very significant differences in the GRF among the normal subjects and Parkinson's patients during STW movement. There was significant differences in hip, knee and ankle joints ROM during STW. There was significant differences in spatiotemporal findings during STW movement. The Parkinson's disease patients did not merge the two tasks of STW while the elderly subjects merged it. There was an impairment in clinical functional abilities of the lower limbs in Parkinson's patients. Conclusion: A continuum of STW performance and clinical functional abilities whereby the healthy elderly people performed the task more efficiently than PD patients.</p>		
Key words	1.	Parkinson's disease.
	2.	GRF (ground reaction force).
	3.	3-D motion analysis.
	4.	joints interaction.
	5.	STW (sit-to-walk).
	6.	Spatiotemporal parameters.
Arabic Title Page	:	التحليل الميكانيكى الحيوى للحركة من الجلوس حتى المشى فى مرضى الشلل الرعاش.
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Author	:	Shaimaa Abd El Alim Mahmoud.
Title	:	Efficacy of ultrasound Conduction velocity in peripheral diabetic neuropathy.
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Nahed Ahmmed Salem.
	2.	Hayam Mahmmoud Sayed.
	3.	Ayatallah Faruk Ahmmed.
Degree	:	Master.
Year	:	2008.
Abstract	:	
<p>Background: Peripheral diabetic neuropathy is reported to be a major health problem worldwide. Purpose: To investigate the ultrasound efficacy in peripheral diabetic neuropathy. Study Design: A pre and post test design. Materials and methods: Thirty patients with peripheral diabetic neuropathy from both sexes were involved, aged between (45-65) years. They were randomly divided into two equal groups, fifteen patients each. Patients in the first group received hypoglycemic drugs in addition to placebo ultrasound treatment (control group). Patients in the second group hypoglycemic drugs in addition to a therapeutic ultrasound treatment (study group). Treatment sessions were done three times per week for seven weeks. Electrophysiological studies for (Peroneal & Sural nerves) and pain assessment were performed bilaterally before and after treatment. Results: there were significant differences ($P < 0.05$) between the two groups in sensory and motor (increased conduction velocity, decreased distal latency and increased amplitude), and in reduction of neuropathic pain. Conclusion: ultrasound therapy proved to be beneficial in improving nerve functions (increased conduction velocity, amplitude and decreased distal latency), and neuropathic pain control in patients with symmetrical peripheral diabetic neuropathy.</p>		
Key words	1.	Diabetic neuropathy.
	2.	Ultrasound therapy.
	3.	Conduction studies.
Arabic Title Page	:	تأثير إذابة الدهون كهربياً مقابل الميتفورمين في علاج متلازمة تكيسات المبايض.
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Author	:	Wael Issa Jebreal Abu Fayyad.
Title	:	Effect of a Cognitive Task on Voluntary Step Execution in Stroke Patients.
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Nawal Abd El Raouf Abu Shady.
	2.	Sadek Mohamed Helmy.
	3.	Waleed Talat Mansour.
Degree	:	Master.
Year	:	2008.
Abstract	:	
<p>Background: During everyday locomotion, one may often be required to quickly initiate a step to avoid potentially threatening situations such as collisions, obstacles, and falls. Objectives: To investigate voluntary step execution of stroke patients during single and dual task conditions and to compare it with those of older adult subjects. Methods: Fifteen stroke patients (study group) and fifteen healthy older adults (control group) from both sexes participated in this study. The age ranged from 50 to 60 years for both groups. Rapid forward voluntary stepping was performed as a reaction time task while standing on a force platform and (1) awaiting a cutaneous cue (single task) and (2) awaiting a cutaneous cue while performing an attention-demanding Strop task (dual task). The step initiation phase, preparatory and swing phases were extracted from ground reaction force data. Results: Stroke patients were significantly longer than healthy older adults in all step parameters duration during dual task condition, particularly step initiation phase duration. Conclusion: The significant increase in step initiation time during the dual task in stroke patients suggests that they lacked sufficient attentional capacity to divide attention between a voluntary postural task and a cognitive task or their capacity was limited by slowness of information processing speed.</p>		
Key words	1.	Stroke.
	2.	Attention.
	3.	Strop task.
	4.	Force platform.
Arabic Title Page	:	تأثير المهمة الإدراكية على التنفيذ الإرادي للخطوة في مرضى السكتة الدماغية.
Library register number	:	1807-1808.