Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and Its Surgery

Doctoral Degree
2006

Author	**:**	**Neveen Mohamed Mohamed Ghareeb.**
Title	**:**	**Electromyographic study of selected muscles controlling pelvic stability in stroke patients during gait.**
Dept.	**:**	**Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.**
Supervisors	**1.**	**Naiema Hamdy Hassan.**
	2.	**Hussein Ahmad Shaker.**
	3.	**Magdy Ahmad Arafa.**
Degree	**:**	**Doctoral.**
Year	**:**	**2006.**
Abstract	**:**	

The purpose of this study is to evaluate pelvic stability during gait after stroke and its effect on the patient's gait and balance. Thirty stroke patients and ten normal subjects participated in this study. The patients were divided into two equal groups according to the degree of spasticity of the affected lower limbs. All subjects were assessed for; the root mean square of selected muscles controlling the pelvis, pelvic range of motion during gait, some selected gait parameters, and standing balance. The results of the present study showed significant differences in the electromyographic findings among the normal subjects, the patients with mild spasticity and those with moderate spasticity. There was significant decrease in pelvic forward rotation and posterior tilting, as well as unequal obliquity of the pelvis which were more marked in moderately spastic patients. I 'here was impairment in all selected gait and standing balance parameters. It was concluded that stroke patients suffer from instability around the pelvis due to muscular imbalance that results in impairment in standing balance and gait parameters.

Key words	**1.**	**Electromyography.**
	2.	**pelvis.**
	3.	**balance.**
	4.	**gait.**
	5.	**stroke.**
Arabic Title Page	**:**	*دراسة النشاط الكهربي لعضلات مختارة تتحكم في ثبات الحوض أثناء المشي في مرضى السكتة الدماغية.*
Library register number	**:**	**1309-1310.**

Author	**:**	**Waleed Talat Mansour.**
Title	**:**	**Influence of partial body weight suspension on gait efficiency for stroke patients.**
Dept.	**:**	**Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.**
Supervisors	**1.**	**Nawal Abd El Raof Abo Shady.**
	2.	**Salah Abd El Monem Sawan.**
	3.	**Osama Mohamed Rashad.**
Degree	**:**	**Doctoral.**
Year	**:**	**2006.**
Abstract	**:**	

The purpose of the study is to evaluate whether treadmill training during partial body weight suspension can improve gait parameters in stroke patients, and to determine the optimum percentage of suspension for gait in those patients. Forty-five male hemiparetic stroke patients, aged from 42 to 64 years. They were randomly assigned into three equal groups (GI, GII and GIII). GI is a control group and was treated over the treadmill only without any suspension, GII is an study group and was treated by 30% body weight suspension (BWS), GIII is also an study group and was treated by 45% BWS. All subjects received rhythmical gait training for 30 minutes (five minutes training& five minutes rest respectively), this means 15 minutes training and 15 minutes rest, three days per week every other day for six weeks on a motor -driven treadmill with fixed speed control, equals 2.25m/sec. Vital signs (Blood pressure, tem.perature, pulse rate and respiratory rate) for all patients were measured before, during and after the treatment sessions. Patients were assessed by functional ambulation category, motion analysis system and force plate-form before and after the last treatment session. Statistically, the results showed that significant improvement occurred in all three groups with the best results for GIII, regarding the clinical, kinematics and kinetics parameters. According to the statistical analysis, BWS with 45% is considered more effective in rehabilitating hemiparetic stroke patients.

Key words	**1.**	**Ambulation.**
	2.	**Gait analysis.**
	3.	**stroke.**
	4.	**Treadmill.**
	5.	**Treadmill.**
	6.	**Body Weight Suspension.**
Arabic Title Page	**:**	**التعليق الجزئي للجسم وتأثيره على كفاءة المشي في مرضى السكتة الدماغية.**
Library register number	**:**	**1265-1266.**