

Physical Therapy Department for Growth and Development Disorder in children and Its Surgery

**Master Degree
2008**

Author	:	Amira Hussein Hussein Mohamed.
Title	:	Instantaneous Effect of Prolonged Stretch on Monosynaptic Excitability in Hemiplegic Cerebral Palsied Children.
Dept.	:	Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.
Supervisors	1.	Amira Mohamed Al-Tohamy.
	2.	Bothina Mohamed El-Naggar.
	3.	Ehab Mohamed Abo El-Soad Abd El-Kafi.
Degree	:	Master.
Year	:	2008.
Abstract	:	
<p>The purpose of this study was to evaluate changes of motor neuron excitability and to clarify the instantaneous effect resulting from consequent repetitive sessions of passive stretching applied to the planter flexor muscles of spastic hemiplegic cerebral palsied children. Twenty children of spastic hemiplegic cerebral palsied aged from 4 to 6 years participated in this study. All children participated in this study as a one group. Their degree of spasticity ranged from 1 to 2 according to Modified Ashworth scale. All children were subjected to measure the ratio of Huffman reflex to myotatic reflex (H/M ratio) using computerized electromyographic (EMG) apparatus. The measurement procedure (H/M ratio) was measured from triceps soleus muscle. This measurement was done before and after applying stretching. The after stretching measurements include the first measurement after 30 min of stretching, the second measurement after one hour of stretching, and the third measurement after two hour of stretching. The stretching was applied through using Knee-ankle foot orthoses. The results of this study revealed a significant H/M ratios reduction. The results also showed a significant increasing in the H/M ratios reduction with increasing the time of stretching. From the obtained results it can be concluded that the prolonged stretch had an instantaneous reductive effect on motor neuron excitability and this effect increased by increasing the time of stretch</p>		
Key words	1.	Spastic cerebral palsy.
	2.	motor neuron excitability.
	3.	prolonged stretch and H/M ratio.
	4.	Children.
Arabic Title Page	:	التأثير اللحظي للشد على التشنج العضلي في حالات الفالج الشقي عند الأطفال.
Library register number	:	1701-1702.

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DEVELOPMENT DISORDER IN CHILDREN AND ITS SURGERY
PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Amira Mahmoud Abd El-Kader.
Title	:	Static and Dynamic Plantar Pressure Measurement in Hemiparetic Children in Relation to Normal.
Dept.	:	Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.
Supervisors	1.	Faten Hassan Abd El-Azeim.
	2.	Yehia Nour El-Din Tarraf.
Degree	:	Master.
Year	:	2008.
Abstract	:	
<p>The purpose of this study was to evaluate the plantar pressure distribution of hemiparetic children and compare it with normal children. Sixty-five children aged between 4 and 6 years old participated in this study. They were classified into two groups, group A contain 50 hemiparetic children and group B contain 15 normal children and the static and dynamic plantar pressure distribution was measured for both group using Foot Scan Plate System. The results of this study revealed that there is a significant differences between plantar pressure distribution in the affected foot and normal foot, also the unaffected foot show a significant differences from the normal foot distribution. When compare plantar pressure distribution of both the affected and unaffected foot there were significant increase in the unaffected foot. This abnormal plantar pressure distribution is a compensatory mechanism to the affected foot pathology.</p>		
Key words	1.	Cerebral Palsy.
	2.	Hemiplegia.
	3.	Foot pressure.
	4.	Children.
Arabic Title Page	:	قياس الضغط الاخمصى السكونى والديناميكى عند الأطفال المصابين بالفالج الشقى مقارنة بالأصحاء.
Library register number	:	1873-1874.

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Author	:	Amira Mahmoud Abd ELMonem Eid.
Title	:	Effect of low intensity low frequency pulsed magnetic field on the bone density in spastic diplegic children.
Dept.	:	Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.
Supervisors	1.	Emam Hassan Elnegamy.
	2.	Rokaya Abd Elshafy Soliman.
Degree	:	Master.
Year	:	2008.
Abstract	:	
<p>The purpose of this study was to investigate the effect of low intensity low frequency pulsed magnetic field on bone density in spastic diplegic children. Twenty children with age ranged from 2 to 4 years, >10 months according to Denver Developmental Screening Test participated in this study, divided randomly into two groups of equal numbers (A&B). Dual Energy X-ray Absorptiometry device was used to measure bone density before and after three months for both groups, group A received a specially designed exercise program, while group B received low intensity low frequency pulsed magnetic field in addition to same program given to group A. Results: revealed significant improvement in bone density in both groups ($P<0.05$) when comparing pre and post-treatment results but in favoring to group B.</p>		
Key words	1.	Low Intensity Low Frequency Pulsed Magnetic Fields.
	2.	Bone Density.
	3.	Spasitic Diplegia.
	4.	Children.
Arabic Title Page	:	تأثير المجال المغناطيسي المنخفض التردد و الشدة على كثافة العظام عند الأطفال المصابين بالشلل التقلصي المزدوج.
Library register number	:	1803-1804.

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Author	:	Dalia Mohamed Abd El Wahab Mohamed El Baz.
Title	:	Posterior Selective Rhizotomy in Management of Children with Spastic Cerebral Palsy: Systematic Review.
Dept.	:	Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.
Supervisors	1.	Hoda Abd El Azim El Talawy.
	2.	Laiaa Mohamed Mohsen.
	3.	Manal Salah El Din Abd El Wahab.
Degree	:	Master.
Year	:	2008.
Abstract	:	
<p>Children with spastic cerebral palsy (CP) experience substantial disability which is attributed to their spasticity. Spasticity is the result of decreased inhibition from multiple upper motor neuron and interneuron inputs and possible increased excitability of alpha motor neurons. Sensory afferents from muscle which are thought to provide the primary input for the stretch reflex have a predominantly excitatory effect on alpha motor neurons. Selective posterior rhizotomy (SPR) has become a commonly used treatment to reduce spasticity and improve function. There is general agreement that SPR results in acute and often dramatic decreases in clinical spasticity in the lower extremities of children with spastic CP. Corresponding changes in deep tendon reflexes, clonus, and other manifestations of upper motor neuron injury have been documented.</p>		
Key words	1.	Cerebral palsy.
	2.	selective posterior rhizotomy.
	3.	spastic diplegia.
	4.	Children.
Arabic Title Page	:	شق الجذر الخلفى الإنتقائى لعلاج الأطفال ذوى الشلل الدماغى التقلصى: فحص منهجى.
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Author	:	Eman Abou-Bakr Ghabban.
Title	:	Effect of gravity force stimulation program on spinal curvatures in spastic hemiplegic palsied children.
Dept.	:	Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.
Supervisors	1.	Kamal Al Sayed Shoukry.
	2.	Manal Salah El Dein Abd Al Wahab.
	3.	Ehab Ragaa Abd Al Raof.
Degree	:	Master.
Year	:	2008.
Abstract	:	
<p>The purpose of this study was to determine the effect of gravity force stimulation program on spinal curvatures in spastic hemiplegic children. The study was conducted in the outpatient clinic of physical therapy faculty, Cairo University. Thirty hemiplegic palsied children participated in this study of both sexes ranging age from four to six years. They were divided into two groups equal in number; control and study groups (A and B) respectively, the control group received traditional physical therapy program and the study group received the same program plus standing and walking with less possible external support while wearing a 10 mm lift on the shoe of the unaffected lower limb. Both groups were subjected to the same evaluation procedure using for metric II to assess their spinal geometry before and after three successive months of treatment. The post treatment mean values for both groups revealed a statistically significant difference. In addition, the post treatment results indicated a significant difference in favor to the study group.</p>		
Key words	1.	Gravity.
	2.	spinal curvature.
	3.	hemiplegia.
	4.	Children.
Arabic Title Page	:	تأثير برنامج تنبيه بقوة الجاذبية على الانحناءات الفقرية عند الأطفال المصابين بالشلل الشقي.
Library register number	:	1869-1870.

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Author	:	Engy Ahmed Gamal El-Din.
Title	:	Effect of continuous passive movement on mechanical back pain in young female with idiopathic scoliosis.
Dept.	:	Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.
Supervisors	1.	Hoda Abd El-Azzim El-Talawy.
	2.	Hassan Galal Morad.
	3.	Khaled Ahmed Olama.
Degree	:	Master.
Year	:	2008.
Abstract	:	
<p>The purpose of this study was to determine the effect of continuous passive movement on mechanical back pain in young female with idiopathic scoliosis. Thirty idiopathic scoliotic children ranged in age from twelve to fourteen years participated in this study. They were classified randomly into two groups of equal numbers (control and study). A scoliometer for measuring differences in pelvic, level of pain, straight leg raising (degrees) and Cobb's angle (degrees) for measurement of scoliosis were used for both groups, before and after three months of application of the treatment programs. The control group received a specially designed physical therapy program while the study group received the same program given to the control group in addition to continuous passive movement. The pre treatment results revealed no significant differences in the parameters used for evaluation between the two groups. Comparing the pre and post-treatment mean values of the measuring variables of the two groups revealed significant improvement. However, comparing the post treatment results of the two groups revealed no significant difference.</p>		
Key words	1.	Idiopathic Scoliosis.
	2.	Spinal Column.
	3.	Continuous Passive Movement.
	4.	Children.
Arabic Title Page	:	تأثير الحركة السالبة المستمرة على الأم الظهر لدى الأطفال المصابين بالجنف.
Library register number	:	1847-1848.

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Author	:	Georgina Ageeb.
Title	:	Efficacy of Constraint Induced Therapy on the Unaffected side on the Upper Extremity Function in Hemiplegic Children.
Dept.	:	Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.
Supervisors	1.	Amira Mohamed.
	2.	Manal salah, Marian yossry.
	3.	Georgina Ageeb.
Degree	:	Master.
Year	:	2008.
Abstract	:	
<p>Background & Purpose: There is some question as to the efficacy of current physical therapy treatment approaches to hemiplegic cerebral palsy. Until recently, few major theoretical or therapeutic advances were available to provide a basis for the development of new interventions for children with hemiplegia. The purpose of this study was to establish whether constraint induced movement therapy had specific efficacy in management of upper extremity function in hemiplegic children. <i>Subjects:</i> Thirty hemiplegic children, aged 3 to 6 years, with a history of insult of more than one year, participated in the study. <i>Method:</i> Subjects were randomly divided into 2 groups; group (I) was the control group that received traditional physical therapy treatment, 3 days/week for 4 weeks. Group (II), the study group received the same treatment in addition to constraint induced movement therapy, 3 days/week for 4 weeks. Upper extremity function was measured by the Quality of upper extremity skill test. Measurements were obtained in the first treatment session, pre-treatment and at the last session, post-treatment. <i>Results:</i> Data obtained was analyzed via paired and independent t-test. There were statistical differences between the 2 groups, where the study group showed greater improvement in upper extremity function with a t-value of (4.29) and p-value of ($P < 0.05$). <i>Discussion & Conclusion:</i> Constraint induced movement therapy was shown to be effective in improving upper extremity, in children with hemiplegia.</p>		
Key words	1.	Hemiplegia.
	2.	Cerebral Palsy.
	3.	Constraint Induced Movement Therapy.
	4.	Children.
	5.	QUEST.
	6.	Upper Extremity Function.
Arabic Title Page	:	تأثير تثبيت الذراع المواجهة علي أداء الطرف الأعلى الوظيفي عند الأطفال المصابين بالشلل النصفي.
Library register number	:	1741-1742.

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Author	:	Mostafa Soliman Mostafa Ali.
Title	:	Boston brace versus electrical stimulation on scoliosis in spastic hemiplegic children.
Dept.	:	Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.
Supervisors	1.	Faten Hassan Abd El-Ezim.
	2.	Omnia Afifi.
	3.	Gehan H. El-Meniawy.
Degree	:	Master.
Year	:	2008.
Abstract	:	
<p>The purpose of this study was to compare the effect of using Boston brace and electrical stimulation on the correction of scoliosis in spastic hemiplegic children. The study was conducted on thirty spastic hemiplegic children ranging in age from 6 to 8 years from both sexes. They were classified randomly into two groups of equal numbers group (A) and group (B). group A received Boston brace in addition to especially designed exercise therapy program, while group B received electrical stimulation on the convex side of scoliosis in addition to the same exercise . In all patients the posture was evaluated before and after the suggested treatment program by Formetric instrument system. The post treatment mean values showed significant improvement of both groups when comparing their pre and post treatment results. but upon comparing the post treatment results of both groups there was non significant improvement which confirms the importance of using Boston brace or electrical stimulation in the correction of scoliosis but the electrical stimulation can be used as an alternative to Boston brace to avoid the side effects of brace of spastic hemiplegic children.</p>		
Key words	1.	Hemiplegia.
	2.	Boston brace.
	3.	electrical stimulation.
	4.	Children.
	5.	Formetric.
	6.	scoliosis.
Arabic Title Page	:	جهاز بوسطن مقابل التنبيه الكهربائي على الانحناء الجانبي للعمود الفقري لدى الأطفال المصابين بالفالج الشقي التشنجي .
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Author	:	Omnia Mohamed Ezzat.
Title	:	Role of Hip Flexors Strengthening on Triceps Sura Shortening in Adolescent Female.
Dept.	:	Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.
Supervisors	1.	Amira El Tohamy.
	2.	Gehan El Meniawy.
	3.	Hala Ibrahim Kassem.
Degree	:	Master.
Year	:	2008.
Abstract	:	
<p>The purpose of the study was to determine the role of hip flexors strength by applying maximum resistance on triceps sura tightness in adolescent female. Thirty female children with age ranged from 12 to 14 years old, suffering from bilateral mild shortening of the triceps sura muscle participated in this study. They were evaluated using Opto-electronic motion analysis and Tensiometer before and after 3 months of treatment. The results of this study revealed highly statistically significant improvement in all the measuring variables of in group B when comparing the post treatment mean values of the two groups. It can be concluded that there is an interrelation between applying maximum resisted exercises to the hip flexors and facilitation of the ankle dorsiflexors.</p>		
Key words	1.	Triceps Sura.
	2.	Hip Flexors.
	3.	Adolescent Female.
	4.	Children.
	5.	Strengthening.
	6.	Shortening.
Arabic Title Page	:	تأثير تقوية عضلات الفخذ القابضة في علاج حالات قصر عضلة السمانة بين الفتيات في سن المراهقة.
Library register number	:	1787-1788.

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Author	:	Safy Mahmoud Mahmoud Ahmed.
Title	:	Measurement of femoral anteversion angle and hip abductors muscle torque in spastic hemiplegic cerebral palsy.
Dept.	:	Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.
Supervisors	1.	Faten Hassan Abd El-Azeim.
	2.	Khaled Ahmed Olama.
	3.	Ali Mostafa Abd El-Moniem.
Degree	:	Master.
Year	:	2008.
Abstract	:	
<p>The purpose of this study was to measure femoral anteversion angle and hip abductors muscle torque in spastic hemiplegic cerebral palsy. Fifty spastic hemiplegic children of both sexes ranged in age from eight to ten years participated in this study. Computed topography scan for measuring femoral anteversion angle and Biodex isokinetic dynamometer for measurement of hip abductors muscle torque including torque peak, average peak torque, peak torque at speed of 30°/sec. and 90°/sec. were used for both hips. Comparing the mean values of the measuring variables of the two hips revealed significant difference ($p < 0.05$) in favor to unaffected side. Studying correlation between femoral anteversion angle and torque peak revealed weak inverse proportion.</p>		
Key words	1.	Cerebral Palsy.
	2.	Spastic Hemiplegia.
	3.	Femoral Anteversion.
	4.	Children.
	5.	Muscle Torque.
Arabic Title Page	:	قياس زاوية الانحناء الامامي لعظمة الفخذ وعزم العضلات الجانبية للمصابين بالشلل النصفي.
Library register number	:	1765-1766.

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Author	:	Shaimaa Mahmoud Maaty Mohamed.
Title	:	Auditory feedback effect on hand functions in hemiparetic children.
Dept.	:	Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.
Supervisors	1.	Faten H. Abdelazeem.
	2.	Omneya Gamal Eldin Afify.
Degree	:	Master.
Year	:	2008.
Abstract	:	<p><i>The aim of this work was to investigate the effect of auditory biofeedback on hand functions in hemiparetic children. Subjects and Methods:</i> thirty-hemiparetic cerebral palsy children were assigned randomly into two groups of equal number; the study group and the control group. Their ages ranged from six to eight years old. The control group received selected exercise therapy in addition to Neurodevelopmental therapy. The study group received the same program of treatment as the control group plus auditory feedback on wrist extensors muscles. Both groups received three sessions per week for three successive months. <i>Results:</i> The data were collected pre and post treatment for both groups. Evaluation procedures were carried out to evaluate the degree of visual-motor integration and grasping through using Peabody Developmental Motor Scale Second Edition (PDMS-2), also using the Digital Goniometer to evaluate the wrist joint flexion and extension range of motion. The results shown that both groups were improved clinically and functionally after treatment period with significant difference of study group who received auditory biofeedback in favor of control group. <i>Conclusion:</i> auditory biofeedback is an effective treatment modality for hand dysfunction in hemiparetic cerebral palsy children.</p>
Key words	1.	auditory biofeedback.
	2.	hand functions.
	3.	hemiparesis.
	4.	Children.
	5.	cerebral palsy children.
Arabic Title Page	:	تأثير التغذية الصوتية المرتجعة على وظائف اليد في الأطفال المصابين بالشلل النصفي الطولي.
Library register number	:	1749-1750.

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PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Walaa Abd El – Hakiem Abd El – Nabi.
Title	:	Effect of dynamic suspension on back geometry in spastic diplegic children.
Dept.	:	Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.
Supervisors	1.	Amira Mohamed El – Tohamy.
	2.	Ali Mustafa Abd El – Monem.
Degree	:	Master.
Year	:	2008.
Abstract	:	
<p>The purpose of this study was to investigate the effect of dynamic suspension on back geometry in spastic diplegic children. Thirty spastic diplegic children ranged in age from five to seven years participated in the study. They were randomly divided into 2 groups of equal numbers; the control group received selected physical therapy program and study group received the same program in addition to gait training in the dynamic suspension. Evaluation of back geometry was conducted by using formetric instrumentation system for both groups before and after treatment. The results showed a significant improvement in all measured variables among both groups in favor to the study group.</p>		
Key words	1.	Dynamic suspension.
	2.	back geometry.
	3.	spastic diplegia.
	4.	Children.
Arabic Title Page	:	تأثير التعليق الديناميكي علي جومتيرية الظهر عند الأطفال المصابين بالشلل التقلصي المزدوج.
Library register number	:	1777-1778.

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