Physical Therapy Department for Musculoskeletal Disorder and Its Surgery

Doctoral Degree
2015

Author	**:**	**Abdelgalil Allam Abdelgalil**
Title	**:**	**Cervical Manipulation versus Sustained Natural Apophyseal Glides in Patients with Mechanical Neck Pain**
Dept.	**:**	**Physical Therapy Department for musculoskeletal disorder and its Surgery.**
Supervisors	**1.**	**Alaa-Eldin Abd-Alhakim Balbaa**
	2.	**Hatem Mohamed Elazizi**
Degree	**:**	**Doctoral.**
Year	**:**	**2015.**
Abstract	**:**	

Background: mechanical Neck pain is a very common musculoskeletal disorder in which zygapophyseal joint is a common source of disorder. Purpose of the study: To explore and compare effects of cervical high velocity low amplitude (HVLA) manipulation versus sustained natural apophyseal glides (SNAGs) on pain, intervertebral mobility and cervical range of motion. Subjects: Forty patients with chronic mechanical neck pain participated in this study, their age ranged from 21 to 40 years with a mean (26.33 ± 5.45) years. Methods: Patients were randomly assigned into two groups group I (cervical manipulation) and group II (SNAGs). Variables were evaluated pre and immediately after treatment, including pain intensity (by Visual Analogue Scale), Fluoroscope was used to assess intervertebral mobility in lateral bending to the affected side (IVMLBAS), Intervertebral Mobility in Lateral bending to the contralateral Side (IVMLBCS), intervertebral mobility in flexion "IVMF", intervertebral mobility in extension "IVME". CROM device was used to assess range of motion of lateral bending to the affected side (ROMLBAS), range of motion of lateral bending to the contralateral side (ROMLBCS), range of motion in flexion "ROMF", and range of motion in extension (ROME). Results: Within-group comparison revealed that in group-I and group-II there were significant improvement of mean values and percentage of change between the pre and post evaluation for pain intensity, IVMLBAS, IVMLBCS, IVMF, IVME, ROMLBAS, ROMLBCS, ROMF, and ROME, while Between-groups comparison revealed that there were statistically significant differences in mean values of pain intensity between groups at post treatment; but in favor of the SNAGs group. Furthermore, there were statistically non-significant differences in mean values of IVMLBAS, IVMLBCS, IVMF, IVME, ROMLBAS, ROMLBCS, ROMF, and ROME between groups at post treatment. Conclusion: Both cervical HVLA and SNAGs proved to be effective in improving pain intensity, IVMLBAS, IVMLBCS, ROMLBAS, ROMLBCS. SNAGs yielded more favorable effects on pain intensity than manipulation.

Key words	**1.**	**Mechanical Neck Pain**
	2.	**Cervical Manipulation**
	3.	**SNAGs**
	4.	
	5.	
Classification number	**:**	**000.000.**
Pagination	**:**	**151 p.**
Arabic Title Page	**:**	**التحريك العنقى مقابل التحريك المفصلي المستمر للفقرات العنقية في مرضى آلام العنق الميكانيكية.**
Library register number	**:**	**4385-4386.**

Author	:	**Ahmed Barakat Bekheet**
Title	:	**Low Level Laser Therapy Versus Median Nerve Mobilization After Carpal Tunnel Release**
Dept.	:	**Physical Therapy Department for musculoskeletal disorder and its Surgery.**
Supervisors	**1.**	**Khaled Elsayed Ayad**
	2.	**Mahmoud Abd El Rahman Ali**
Degree	:	**Doctoral.**
Year	:	**2015.**
Abstract	:	

Background: Carpal tunnel syndrome (CTS) is the most common of all entrapment syndromes. Open carpal tunnel release (CTR) is associated with considerable morbidity, including prolonged tenderness of the scar and weakness of hand grip. Purpose: The aim of the present study was to investigate and compare between the effect of low level laser therapy (LLLT) versus median nerve mobilization in treatment of patients after CTR. Methods: Forty five patients with unilateral carpal tunnel release participated in the study. Their ages ranged from 25-55 years. They were equally divided and randomly assigned into three groups, each group consisted of 15 patients, Patients in group (A) received a program of Infra-Red (IR) Gallium Arsenide LLLT (wavelength 904 nm, and average power 20 mw, laser probe 7 mm diameter). Patients in group (B) received a program of median nerve mobilization while patients in group (C) was the control group. Data obtained from the three groups pre operative and 6 weeks post operative regarding pain, hand grip, pinch grip, Distal Motor Latency (DML) and Distal Sensory Latency (DSL) of median nerve were statistically analyzed and compared. Results: The results showed a statistical significant improvement in the median values of pain level in Numeric pain intensity scale (p = 0.001) in both group A and B when compared with that of group C, and a statistical significant improvement in the median values of DML in group A when compared with group B and group C (p = 0.013 and 0.028 respectively). However, there were no statistical significant differences (P>0.05) between the three groups regarding the other measures. Conclusion: It was concluded that both LLLT and median nerve mobilization are effective in treatment of patients after CTR regarding pain measure, hand grip strength, pinch strength, DML, and DSL. However, LLLT is more effective in reduction of DML than median nerve mobilization.

Key words	**1.**	**carpal tunnel release**
	2.	**low level laser therapy**
	3.	**median nerve mobilization**
	4.	
	5.	
Classification number	:	**000.000.**
Pagination	:	**VIII,108,2 p.**
Arabic Title Page	:	العلاج بالليزر منخفض الشدةمقابل تحريك العصب الاوسطبعد تحرير النفق الرسغى
Library register number	:	**4235-4236.**

Author	**:**	**Alshaimaa Kadry Abd Elaal**
Title	**:**	**Effects of Correcting Positional Faults of Distal Fibula in Chronic Ankle Sprain**
Dept.	**:**	**Physical Therapy Department for musculoskeletal disorder and its Surgery.**
Supervisors	**1.**	**Khaled El Sayed Ayad**
	2.	**Hatem Mohamed Elazizi**
Degree	**:**	**Doctoral.**
Year	**:**	**2015.**
Abstract	**:**	

Background: Patients with chronic ankle sprains have a tendency to produce repeated ankle sprain associated with positional faults of the distal fibula which contributes to abnormal physiologic motions. Purpose of the study: This study was conducted to detect the effects of correcting the positional faults of distal fibula using mobilization with movements (MWM) followed by taping on the range of motions of the ankle joint complex, pain and balance control in patients with chronic ankle sprain Subjects: Thirty patients with chronic ankle sprain participated in this study, their age ranged from 18 to 35 years, with a mean (24.5 ± 5.6) years. Methods: The patients' ankles (affected and non affected sides) were examined by Omni Diagnost Fluoroscope to detect anterior positional faults of distal fibula, and then the ROM of ankle joint complex was assessed. Ankle pain intensity was assessed by Numerical Pain Rating Scale and balance control by Balance Master System including unilateral stance, limit of stability and all variables were measured pre and immediately post treatment comparing with non affected side. Results: Correction of positional faults of distal fibula by mobilization with movement (MWM) and taping showed immediately significant improvement of anterior positional faults, also significant improvement in ankle dorsiflexion, subtalar inversion and eversion range of motions (ROMs). Results showed also, significant reduction of pain intensity and also, in balance control there were significant improvement in unilateral stance eyes open (USEO), unilateral stance eyes closed (USEC), and directional control (DCL) but no significant improvement in reaction time (RT), movement velocity (MVL), endpoint excursion (EPE), and maximum excursion (MXE). Conclusion: MWM followed by taping is effective in improving the positional faults of distal fibula with significant improvement in ankle joint complex ROM, balance control mainly US, DCL and reduction in ankle pain intensity immediately post treatment.

Key words	**1.**	**Positional Faults of Distal Fibula**
	2.	**Mobilization with Movement**
	3.	**Chronic Ankle Sprain**
	4.	
	5.	
Classification number	**:**	**000.000.**
Pagination	**:**	**169 p.**
Arabic Title Page	**:**	**تأثيرات تصحيح العيوب الموضعيه لعظمة الشظيه فى الالتوا ء المزمن لمفصل الكاحل**
Library register number	**:**	**4175-4176.**

Author	**:**	**Amany Mahmoud Helmy Mohamed**
Title	**:**	**The Efficacy of Kinesio Taping as an Adjunct to Therapeutic Exercises in Treatment of Postural Scoliosis**
Dept.	**:**	**Physical Therapy Department for musculoskeletal disorder and its Surgery.**
Supervisors	**1.**	**Nadia Abd Elazim Faiaz**
	2.	**Mohamed Goda Montaser**
	3.	**Ghada Mohamed Koura**
Degree	**:**	**Doctoral.**
Year	**:**	**2015.**
Abstract	**:**	

Background: postural scoliosis is a common problem which affect the population specially female subjects. Back pain, and functional disabilities tend to show the common symptoms in scoliotic patients in addition to the cobb's angle. Purpose of this study was to examine the efficacy of kinesio taping as an adjunct to therapeutic exercises on patients with postural scoliosis. Subjects and Methods: Thirty patients were assigned randomly in to 2 groups : patients in the group A (n=15) received kinesio tape, stretching and strengthening exercises of the back, and patients in the group B (n=15) received stretching and strengthening exercises of the back only. The following parameters including pain severity, functional disability and back range of motion (flexion, extension, right side bending and left side bending) and cobb angle were measured before and after 6 weeks of treatment. Results: The results showed significant improvement of pain severity in group A compared with those at group B but not in functional disability, back range of motion and cobb angle. Conclusion: we concluded that kinesio taping is effective as a method of reducing pain in treatment for postural scoliosis.

Key words	**1.**	**kinesio tape**
	2.	**Postural scoliosis**
	3.	**Therapeutic Exercises**
	4.	
	5.	
Classification number	**:**	**000.000.**
Pagination	**:**	**107 p.**
Arabic Title Page	**:**	**فاعلية شريط كينزيو كمساعد للتمرينات العلاجية فى علاج الجنف القوامى.**
Library register number	**:**	**4539-4540.**

Author	**:**	**Ezzat El Sayed Elawh Moubarak**
Title	**:**	**Effect of Inflatable Traction on Reducibility of Disc Herniation in Cervical Radiculopathy**
Dept.	**:**	**Physical Therapy Department for musculoskeletal disorder and its Surgery.**
Supervisors	**1.**	**Khaled El Sayed Ayad;**
	2.	**Mohamed Safwat Shalaby**
Degree	**:**	**Doctoral.**
Year	**:**	**2015.**
Abstract	**:**	

Introduction: Cervical radiculopathy (CR) is a common condition that usually results from compression and inflammation of the cervical nerve root or roots in the region of the neural foramen. **The purpose** of this study was conducted to know effect of inflatable traction on reducibility of disc herniation in CR. **Methods:** Thirty patients suffering from cervical disc herniation at the level of C5-C6 and C6-C7 or C6-C7; with unilateral cervical radiculopathy, they were distributed randomly and equally into two groups. Group (A) which consisted of 15 patients with a mean age of 36.46 years, received traditional physiotherapy (infrared, ultrasound, and exercises) followed by cervical traction. Group (B) which consisted of 15 patients with a mean age of 36.26 years, received same traditional physiotherapy and collar. Patients in both groups were evaluated pre and post treatment for neck pain, arm pain, H reflex (amplitude& latency) and also pre-, mid (at end of sex session) and post treatment for (cervical elongation& disc reduction) by using MRI. Patients in both groups received 12 sessions (three sessions every week for 4 weeks). **Results**: Comparison of the results from pretreatment to posttreatment showed there was significant difference in group (A) in all measured variables even in midtreatment for cervical elongation and disc reduction, and significant difference in group(B) in all measured variables. On comparing both groups after treatment, the results showed significant improvement in all measured variables and there was significant difference between groups except arm pain (no significant difference between groups) in favor of traction group (A).**Conclusion**: Both groups had a significant effect on disc reduction ratio and in all measured variables. However, efficacy of inflatable cervical traction in treating patients with cervical radiculopathy was more effective than using collar.

Key words	**1.**	cervical radiculopathy
	2.	disc herniation
	3.	flexor carpi radialis H-reflex
	4.	cervical collar
	5.	
Classification number	**:**	**000.000.**
Pagination	**:**	**155 p.**
Arabic Title Page	**:**	**تأثير التمرينات المتقطعه ذات الشده المنخفضه على الدهون فى مرضى ضغط الدم المرتفع**
Library register number	**:**	**4077-4078.**

Author	**:**	**Hamed Mohamed El Khozamy**
Title	**:**	**Effect of Correcting Muscle Imbalance in Treating Osteitis Pubis In Athletes**
Dept.	**:**	**Physical Therapy Department for musculoskeletal disorder and its Surgery.**
Supervisors	**1.**	**Alaa Eldin Abd El Hakim Balbaa**
	2.	**Khalid El Sayed Ayad**
	3.	**Waleed Mohamed Abd El Baky**
Degree	**:**	**Doctoral.**
Year	**:**	**2015.**
Abstract	**:**	

Background: Osteitis pubis (OP) in athlete is a serious injury that requires a prolonged rehabilitation period and time away from sport and its treatment is still the subject of search and study. Purpose: The purpose of the study was to investigate the effects of a suggested program to correct muscle imbalance on pain, isokinetic finding and functional status in patient with OP. Patients: Twenty patients diagnosed as OP participated in this study. They were randomly assigned into two groups. Group (A) consisted of (10) patients with mean age ±SD of 22.66±2.59 years, mean weight 73.3±5.47 kg and mean height 174.5±7.04 cm, this group was treated by suggested treatment program which consisted of post facilitation stretch, myofascial release, and individualized strengthening planed according to isokinetic ratios. Group (B) consisted of (10) patients with mean age ±SD 21.7±3.65 mean weight 72.5±9.36 kg and mean height 173.5±6.13 cm this group was treated by traditional program which consisted of therapeutic modalities in form of (heat application, Ultrasonic and electrical stimulation) and general strengthening and stretching exercises. Assessment: Patients of both groups were evaluated pre treatment and post-treatment for pain, muscle imbalance ratios at 180°/sec, crossover hop and 20 meters cutting drill. Results: The results showed significant improvement for pain, crossover hop and 20 meters cutting drill for both groups with no significant differences between groups. While ratios of muscle imbalance showed normalization of nearly all ratios of group (A) while group (B) showed inconsistent results of ratios. Conclusion: It can be concluded that the suggested treatment program was effective in restoring muscular balance around pelvis clinically which aided in reducing pain and improving function of patients complaining from OP when compared to traditional program.

Key words	**1.**	**osteitis pubis**
	2.	**muscle imbalance**
	3.	**isokinetic assessment**
	4.	
	5.	
Classification number	**:**	**000.000.**
Pagination	**:**	**158 p.**
Arabic Title Page	**:**	**تأثير تعديل اختلال الاتزان العضلي في علاج التهاب عظمة العانة في الرياضيين .**
Library register number	**:**	**4509-4510.**

Author	:	**Mohammed Ali Mohammed Sarhan**
Title	:	**Comparative Study Among three Physical Therapy Programs In Treatment of Shoulder Impingement Syndrome**
Dept.	:	**Physical Therapy Department for musculoskeletal disorder and its Surgery.**
Supervisors	**1.**	**Ibrahim Magdy Elnaggar**
	2.	**Ezzat Mohammed Kamel**
	3.	**Hatem Mohammed Elazizi**
Degree	:	**Doctoral.**
Year	:	**2015.**
Abstract	:	

Backgrounds: Shoulder impingement is a mechanical compression of the rotator cuff and subacromial bursa against the anterior undersurface of the acromion and coracoacromial ligament, particularly during elevation of the arm. In more recent literature, impingement has been described as a group of symptoms rather than a specific diagnosis. In this current opinion, it is thought that numerous underlying pathologies may cause impingement symptoms. Purpose: The purpose of this study was to compare among three physical therapy programs in treatment of shoulder impingement syndrome. Patients And Methods: Sixty patients diagnosed as shoulder impingement syndrome due to functional causes (stage II Neer classification) participated in this study. They were randomly distributed into three equal groups. The experimental group (A) with mean age of 36.60 (± 5.33) years, this group was treated by a program of physical therapy consisted of strengthening the rotator cuff muscles and stretching the posterior capsule. The experimental group (B) with mean age of 37.25 (± 3.67) years this group was treated by a combined program of stretching the posterior capsule and correcting scapular dyskinesis. The experimental group (C) with mean age of 39.20 (± 3.82) years, this group was treated by received a physical therapy program which consisted of strengthening the rotator cuff muscles and stretching the posterior capsule as well as correcting the scapular dyskinesis. Treatment was given 3 times per week, each other day, for 4 consecutive weeks. Patients were evaluated pretreatment and posttreatment for shoulder pain severity and functional disability using (SPADI). Shoulder flexion, abduction and internal rotation were assessed by using the stander universal goniometer. Posterior capsular tightness was evaluated by tape measurement. Furthermore shoulder acromio-humeral distance (AHD) in adduction and abduction was measured by ultrasonography. Results: All three groups showed significant improvement in all the measured variables. There was significant reduction of both shoulder pain severity and functional disability as well as significant increase of shoulder flexion, abduction and internal rotation motions. In addition to that there was also significant decrease in the posterior capsular tightness, and increase in shoulder (AHD) in adduction and abduction. However, the third program of treatment was the most effective one and the first program is more effective than the second one in improving all measured variables. Conclusion: From the findings of the current study we can conclude that the three physical therapy programs used in this study are effective interventions to improve all the measured variables .However, the third program is the best one and the first is better than the second one.

Key words	**1.**	**Shoulder Impingement Syndrome**
	2.	**Therapeutic Exercises,**
	3.	**Joint Mobilization**
	4.	**Scapular Dyskinesia and Acromio-humeral Distance**
	5.	
Classification number	:	**000.000.**
Pagination	:	**134 p.**
Arabic Title Page	:	دراسة مقارنة بين ثلاثة من برامج العلاج الطبيعي فى علاج متلازمة انحشار الكتف .
Library register number	:	**4045-4046.**

Author	**:**	**Nader Ibrahim El Sayed Ali**
Title	**:**	**Supine versus Prone Intermittent Lumbar Traction in Treatment of Lumbar Disc Prolapse**
Dept.	**:**	**Physical Therapy Department for musculoskeletal disorder and its Surgery.**
Supervisors	**1.**	**Ibrahim Magdy Elnaggar**
	2.	**Ayman Ismail Kamel**
	3.	**Hassan Fouad Elhelaly**
	4.	**Ayman Mahmoud M. Hafez**
Degree	**:**	**Doctoral.**
Year	**:**	**2015.**
Abstract	**:**	

Introduction: Lumbar disc prolapse is a common cause of referral for therapy and lumbar traction is one of the most important therapeutic modalities of such cases. Purpose: was to compare between the effect of supine and prone intermittent lumbar traction on back pain severity, leg pain severity, functional disability, strength of ankle dorsiflexors, strength of ankle plantar flexor, extent of the disc prolapse beyond normal anatomical position and the vertical dimension of the intervertebral disc space in patients diagnosed as lumbar disc prolapse with one level disc prolapse L4/ L5 or L5 /S1, or double level L4/L5, L5/S1, with unilateral radiculopathy. Methodology: 40 patients were assigned into 2 experimental groups, group I using intermittent supine traction and group II using intermittent prone traction; then visual analogue scale (VAS) was used to assess the severity of low back pain and leg pain. Oswestry disability questionnaire (ODQ) was used in the assessment of functional disability. The manual muscle test was used to evaluate the strength of ankle dorsiflexors and plantar flexors muscles. Furthermore, magnetic resonance imaging (MRI) was used to evaluate the morphological changes of the prolapsed intervertebral disc. Results: The results of this study showed that both types of traction significantly reduced back and leg pain severity, improved functional disability, increased the strength of ankle doriflexors and plantar flexors, reduced the extent of disc prolapse and increased the vertical dimension of the intervertebral disc space with no significant difference between both types of treatment. Conclusion: Both supine and prone intermittent lumbar traction were effective in treatment of patients with one level posterolateral disc prolapse L4/ L5 or L5/ S1, or double level posterolateral disc prolapse L4/ L5, L5/ S1, with unilateral radiculopathy. There was no significant difference between both types of treatment.

Key words	**1.**	**lumbar disc prolapse**
	2.	**lumbosacral radiculopathy**
	3.	**lumbar traction**
	4.	
	5.	
Classification number	**:**	**000.000.**
Pagination	**:**	**101 p.**
Arabic Title Page	**:**	**الشد القطني المتقطع من وضع النوم على البطن مقارنة بالشد القطني المتقطع من وضع النوم على الظهر في علاج الانزلاق الغضروفي القطني .**
Library register number	**:**	**4373-4374.**