The purpose of the current study was to investigate the effect of an early graduate high-repetition closed kinetic chain exercises on the rate of callus formation and functional outcome in patients who underwent unilateral tibial lengthening by ilizarov's method. Twenty patients completed the proposed exercise program and /or the assessment. These patients were divided into a study group (GI, n= 11) and a control group (GII, n= 9). Both groups were further subdivided into two age subgroups. Callus formation was assessed using the indirect digital radiography method, while functional outcome was assessed using the physical subset of the children health information service rand scale. G I (GIa G Ib) showed a significant improvement in the rate of callus formation and in functional outcome was assessed using the physical subset of the children health information service rand scale. G I (GIa G Ib) showed a significant improvement in the rate of callus formation and in functional outcome compared with G II (G Ia,G Iib). There was also a moderate negative correlation between bone density and functional outcome. It could be concluded that early weight bearing closed kinetic chain exercises enhance the rate of callus formation and promote patients functional outcome.

Abstract

The purpose of the current study was to investigate the effect of an early graduate high-repetition closed kinetic chain exercises on the rate of callus formation and functional outcome in patients who underwent unilateral tibial lengthening by ilizarov's method. Twenty patients completed the proposed exercise program and/or the assessment. These patients were divided into a study group (GI, n= 11) and a control group (GII, n= 9). Both groups were further subdivided into two age subgroups. Callus formation was assessed using the indirect digital radiography method, while functional outcome was assessed using the physical subset of the children health information service rand scale. G I (GIa G Ib) showed a significant improvement in the rate of callus formation and in functional outcome was assessed using the physical subset of the children health information service rand scale. G I (GIa G Ib) showed a significant improvement in the rate of callus formation and in functional outcome compared with G II (G Ia, G Iib). There was also a moderate negative correlation between bone density and functional outcome. It could be concluded that early weight bearing closed kinetic chain exercises enhance the rate of callus formation and promote patients functional outcome.

Key words
1. physical rehabilitation.
2. closed kinetic chain exercises.
3. bone formation.
4. distraction osteogenesis.
5. ilizarov's method.

Arabic Title Page

تأثير تمارين السلسلة المغلقة المبكرة على معدل تصلب العظام (تكون الجسمة) خلال التظنب (تكون العظام) بالتباعد بطريقة البيزاروف.

Library register number: 902-903.
The purpose of this study was to develop and evaluate a suggested physical therapy program (ultrasonic therapy, stretching, and strengthening exercises) for the management of patients with failed back surgery syndrome after lumbar disc surgery. The study included 30 patients (17 males and 13 females) randomly selected and divided into two groups, the experimental group that received the suggested program, and the controlled group that received the traditional physical therapy program (infra red, massage, skin rolling, and stretching for lower limb muscles). The program duration was 10 weeks for both groups, the assessment for both groups included the visual analogue scale, the modified scooper test, the Oswestry disability questionnaire, and the isometric dynamometer. The results showed that there were significant differences between the two groups in post-treatment status in favor of the experimental group regarding the pain intensity, the distance of walking, the lumbar range of motion, the functional disability level, and the back muscles torque.

Key words: 1. failed back surgery  2. Physiotherapy program.  3. lumbar disc prolapses.
The purpose of this study was to investigate the effect of chronic rotator cuff tendonitis on shoulder proprioception and to identify the relation between shoulder pain and proprioception and between age and shoulder proprioception. Forty patients suffering from unilateral chronic rotator cuff tendonitis participated in the study. The sound shoulder was used as a control for testing. Patients were evaluated for pain by using visual analog scale (VAS) and for shoulder proprioception by using active reproduction tests. The results of the present study revealed that there were significant differences between involved and uninvolved shoulder in proprioceptive ability and there was a positive weak correlation between pain and shoulder proprioceptive deficit and between age and shoulder proprioceptive deficit.

### Key words

1. shoulder proprioception.
2. Pain.
3. Age.
4. chronic rotator cuff tendonitis.

### Arabic Title Page

تقييم مستقبلات الكتف الحسية العميق في حالات الالتهاب المزمن ل]*) العضلات المدوره لمفصل الكتف.

### Library register number

876-877.
**Abstract**

Forearm support band is a commonly used method for treating tennis elbow patients. The effect of the band on the wrist extensor strength of tennis elbow patients is controversial. Therefore, the aim of this study was to investigate the effect of using the forearm support band with various pressures on the strength of wrist extensors and on pain scores. Thirty patients with unilateral tennis elbow participated in this study. Wrist extensor strength was measured using the biodex isokinetic dynamometer. Pain scores were recorded using visual analogue scale. Peak torque and pain were measured without band, and with band at different pressures (20, 30, and 40 mmHg). Paired t-test was used to compare between pain scores with and without the band. One way ANOVA was used to compare between wrist extensors strength without the band and with the band at different pressures. Results of the current study showed that using the band significantly decreased pain scores and significantly increased wrist extensor strength. Varying the pressure of the band did not produce significant effect neither on pain nor on wrist extensor strength.

**Key words**

1. Tennis elbow.
2. Tendentious.
3. Forearm support band.
Author : Mona Selim Faggal.
Title : Effect of eye-head coupling exercises on cervicocephalic kinesthesia in chronic mechanical neck pain.
Supervisors 1. Ahmed Hassan Hussein.
3. Alaa Eldin Balbaa.
Degree : Master.
Year : 2002.
Abstract: The purpose of this study was to clarify the importance of an eye-head coupling based rehabilitation program in the treatment of chronic mechanical neck pain a comparison was held between two groups of neck pain patients (A, B) both groups received a traditional physical therapy program but group (B) received an eye-head coupling based rehabilitation program in addition treatment outcome was determined from: 1) scores of neck pain and disability scale (NPAD) as a self reported measure, 2) absolute angular error (AAE) in horizontal plane, and 3) absolute angular error (AAE) in sagittal plane the results showed a statistically significant decrease in the scores of (NPAD) scale in both groups (A, B) with greater decrease in group (B) no statistical significant decrease in the (AAE) in the group (A) in both horizontal and sagittal planes, while there was statistical significant decrease in the (AAE) in both horizontal and sagittal planes in group (B) it was concluded that combining a traditional physical therapy program with an eye-head coupling based rehabilitation program is important for improvement of chronic mechanical neck pain.
Key words 1. neck pain.
2. cervical, kinesthesia.
3. eye-head coupling exercises.
4. absolute angular error.
5. disability scale.
6. kinesthetic sensibility test.
7. proprioception.
Arabic Title Page: تأثير تمرينيات اقتران العين والرأس على الاحساس بالحركة في الاتجاه الرأسي العضقي في حالات الالام العضقي الميكانيكية المزمنة.
Library register number : 878-879.
The purpose of this study was to compare between diethyl amine salicylate phonophoresis and ultrasound in the treatment of patients with carpal tunnel syndrome (CTS). A comparison was held between two groups of patients with CTS. Group A received ultrasound with intensity of 1 w/cm², frequency of 1 MHz, pulsed mode 1:2, 10 minutes/session, for 20 sessions (5 sessions/week), while Group B received the same treatment program as Group A, but diethylamine salicylate gel was used as a couplant instead of Aquasonic gel (phonophoresis). Treatment outcome was determined from measuring the following variables pre-post-treatment: 1) pain perception measured by visual analogue scale (VAS), 2) motor distal latency (MDL), and 3) motor nerve conduction velocity (MNCV). The results showed statistically significant decrease in pain perception in both groups (A, B), but the decrease in Group B was more than the decrease in Group A. The MDL was significantly decreased in Group B, while in Group A there was a non-significant increase in MDL. The MNCV was significantly decreased in both group (A, B). It was concluded that diethylamine salicylate phonophoresis is more effective in the treatment of CTS than ultrasound.

**Key words**

1. Carpal tunnel syndrome.
2. Ultrasound.
3. Phonophoresis.
4. Diethylamine salicylate.

**Arabic Title Page**

مقارنة العلاج الطبيعي بالادخال بالموجات فوق الصوتية لعلاج الآثار الجانب يثبطاً سنتيمات علاج بالعلاج بالموجات فوق الصوتية في متلازمة النفق الرسغي.

**Library register number**

910-911.