Department of Basic Science

Master Degree 2000

| Author | : | Ashraf Sherif Gorgey. |
|-------------|----|---|
| Title | : | Laser therapy versus corticosteroids in acute bell's plasy. |
| Dept. | : | Department of Basic Science. |
| Supervisors | 1. | Wadida Hassen Abd El-Kader El-Sayed. |
| | 2. | Akef Abd El-Halim Khowalied. |
| | 3. | Mohamed Hussein El-Gendy. |
| Degree | : | Master. |
| Year | : | 2000. |
| Abstract | : | |

The purpose of this study was to compare between the effects of Laser and corticosteroids on Latency, amplitude, axonal Loss and facial function in acute Bell's palsy. Subjects : Forty patients of both sexes with more thane 50 % axonal loss were participated with age between 25 -45 years (X = 32.55, SD+-7.54). Patients were divided into two groups: Group I received laser therapy for 15 minutes daily from 5th day to the 14th day . Group II received oral corticosteroids daily from 3rd day to the 14th day. Methods: All patients were subjected to **Electroneuronography, Facial Grading scale-rest (0 - 20) and Facial Grading** Scale-movement (0 - 100) on the 5th and 14th days from the palsy onset. Results: T- test revealed non-significant decrease in latency after laser application and increase after corticosteroids. Regarding amplitude, there was no-significant change after laser application and after corticosteroids. For axonal loss, there was significant change in both Laser group and corticosteroids group and there was marked improvement in facial muscles function in Laser group. Discussion & **Conclusion :** This indicates that Laser has an effect on resolving edema and inflammation in facial nerve, manifested by decrease in latency and increase in functional activities of facial muscles in acute Bell's palsy. Laser therapy can replace corticosteroids in treatment of acute Bell's palsy.

| Key words | 1. | Laser therapy. |
|-------------------------|----|--|
| | 2. | Lasers. |
| | 3. | Corticosteroids. |
| | 4. | Bell's palsy. |
| | 5. | Latency. |
| | 6. | Facial function. |
| | 7. | Amplitude. |
| Arabic Title Page | : | العلاج بالليزر ضد الكورتيزونات في الشلل الوجهي الطرفي. |
| Library register number | : | 746-747. |

| Author | : | Salah El-Din Bassit Ahmed. |
|-------------|----|---|
| Title | : | Effects of ultrasound and diclofenac phonophoresis on |
| | | delayed-onset muscle soreness. |
| Dept. | : | Department of Basic Science. |
| Supervisors | 1. | Soad Mahmoud Mohamed. |
| | 2. | Nahed Ahmed Abd El-Ghany. |
| | 3. | Omaima Mohamed Aly Kattabei. |
| Degree | : | Master. |
| Year | : | 2000. |
| Abstract | : | |

The purpose of this study was to investigate the effects of ultrasound and iclofenac phonophoresis on the serumlevel of creatine kinase (CK) and lactata dehydrogenase (LDH), elbow active range of motion (AROM) and maximum isometric strength (MIS) of the elbow flexors in cases of experimentally induce delayed-onset muscle soreness (DOMS) . Repeated eccentric contractions were used to induce DOMS in the elbow flexors of forty healthy male subjects . Subjects were then assigned randomly to one of four groups : group 1 (n = 10) received diclofenac ophonphoresis using ultrasound with diclofenac gel as a coupling medium, group 2 (n = 10) received ultrasound with transmission gel as a coupling medium, group 3 (n =10) received topical application of diclofenac gel and group 4 (n = 10) a control group. Subjects were treated on three consecutive days. Measurements were taken daily prior to other procedures. Analysis of results using repeated measures and ANOVA with LSD tests showed significant differences between groups in relation to MIS of the elbow flexors, elbow AROM, and serum level of CK, with diclofenac phonphoresis group showed higher MIS of the elbow flexors, elbow AROM, and lower CK level than other groups, and non significant

differences between groups in relation to sreum level of LDH. It was concluded that ultrasound enhanced the development of DOMS but this enhancement was offset by the antiinflammatory action of diclofenac phonophoresis. This finding suggest rhat diclofenac phonophoresis may be useful in clinical situation in which it is desirable to administer ultrasound without increasing inflammation. Key Words : Delayed-onset muscle soreness, phonophoresis, diclofenac, ultrasound.

| Key words | 1. | ultrasound. |
|------------------------------|----|--|
| | 2. | diclofenac phonophoresis. |
| and the second second second | 3. | delayed-onset. |
| | 4. | muscle soreness. |
| Arabic Title Page | : | نأثير الموجات فوق الصوتية و مادة الديكلوفيناك المدخلة بواسطة الموجات فوق |
| | | لصوتية علي الألم العضلي الم <mark>تأخر.</mark> |
| Library register number | : | 744-745. |

| Author | : | Abeer Abd Alrhman Mahamed. |
|-------------|----|--|
| Title | : | Effect of lidocaine phonophoresis on motoneuron excitability |
| | | in normal subjects. |
| Dept. | : | Department of Basic Science. |
| Supervisors | 1. | Awatef Mohamed Labib. |
| | 2. | Mohamed Badawy El fiky. |
| | 3. | Omaima Mohamed Aly kattabei. |
| Degree | : | Master. |
| Year | : | 2000. |
| Abstract | : | |

The purpose of this study was to investigate the effect of lidocaine phonophoresis and pulsed ultrasound on motoneuron excitability in normal subjects, through measuring soleus H-reflex amplitude and H/M.thirty normal neurologically free male subjects assigned randomly into two equal groups. GroupI, received 5%lidocaine delivered to culf muscle by 1 MHz pulsed ultrasound with 1.5w/cm intensity for 7.5 miin soleus H-reflex was measured before treatment, immediately after and at interval of 5,10,15,20,35 and 50 min.Post treament.GroupII, received only pulsed ultrasound of the same parameters on the same area, while H-reflex was measured before treatment, immediately after and at interval of 5,10 and 15 min.after treatment.Analysis of results revealed significant decrease of H-reflex amplitude and H/M ratio after lidocaine phonophresis application and insignificant changes of two variables after pulsed ultrasound application. the study concluuded that lidocaine phonophoresis is safe and efficient modality to reduce motoneuron excitability.

| Key words | 1. | lidocaine phonophoresis. |
|-------------------------|----|---|
| | 2. | motoneuron excitability. |
| | 3. | excitability. |
| Arabic Title Page | : | تأثير عقار الليدوكايين بالموجات الفوق صوتية على استجابة الخلية الحركية في |
| III DICA | - | الأشخاص الأصحاء. |
| Library register number | : | 724-725. |

THESES 2000

| Author | : | Shimaa Nabil Abul-Azm. |
|-------------------------|----|--|
| Title | : | The effect of different isokinetic modes on torque of hamstring |
| | | muscles in normal subjects. |
| Dept. | : | Department of Basic Science. |
| Supervisors | 1. | Awatif M.Labib. |
| | 2. | Hesham M.Ezzat. |
| Degree | : | Master. |
| Year | : | 2000. |
| Key words | 1. | isokinetic modes. |
| | 2. | torque of hamstring muscles. |
| | 3. | muscles. |
| Arabic Title Page | : | تأثير الأنماط الختلفة للتمرينات الأيزوكينيتكية على عزم عضلات الفخذ الخلفية (التوأمية) في الأشخاص الطبيعيين . |
| | | (التوأمية) في الأشخاص الطبيعيين . |
| Library register number | : | 726-727. |

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