

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL
THERAPY DEPARTMENT FOR NEUROMUSCULAR AND
NEUROSURGICAL DISORDER AND ITS SURGERY
PREPARED BY NERVEEN ABDEL SALAM ABDEL KADER AHMED**

**Physical Therapy Department for Neuromuscular and
Neurosurgical Disorder and Its Surgery**

Master Degree
2012

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| Author | : | Rania El-Sayed Abd El Alim. |
| Title | : | monochromatic infrared photo energy on sensory and motor impairments in patients with diabetic neuropathy. |
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| | 2. | Salah Abdel-Monem Sawan. |
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| Degree | : | Doctoral. |
| Year | : | 2012. |
| Abstract | : | <p>The objective of this study was to evaluate the effect of monochromatic infrared photo energy (MIRE) on sensory and motor impairments in patients with diabetic neuropathy. Forty patients participated in this study. They randomly divided into two equal groups (study and control groups). The program consisted of monochromatic infrared photo energy (MIRE) and selected physical therapy program. The program was conducted three times/ week for four weeks for both groups. Methods: Patients in the Study group(A) (n=20) received MIRE for 30 minutes to each limb in addition to selected physical therapy program but patients in control group (B) (n=20) received sham MIRE in addition to the same physical therapy program as in group (A). The following assessment including for VAS, dynamometer, monofilaments, Nerve conduction studies that all measured before and after four weeks of treatment. Results: Before treatment there was no significant difference between the two groups. After treatment there was a very highly significant improvement in the study group as compared with control group in pain intensity, dorsiflexors strength, superficial sensation, amplitude, distal latency and conduction velocity of deep peroneal and posterior tibial nerves. Conclusion: MIRE is effective in improving sensation and motor power in diabetic neuropathy patients .</p> |
| Key words | 1. | Monochromatic infrared photo energy |
| | 2. | nerve conduction |
| | 3. | Diabetic neuropathy. |
| | 4. | sensory impairments. |
| | 5. | motor impairments. |
| Arabic Title Page | : | تأثير الطاقة الضوئية تحت الحمراء احادية اللون علي ضعف الاحساس والحركة في مرضى التهاب الاعصاب السكرى. |
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| Year | : | 2012. |
| Abstract | : | <p>Background: Trunk performance is directly related to disability. Evaluating the trunk could be helpful in establishing a rational treatment plan in the physical therapy rehabilitation of people with stroke. Objectives: The aims of this study were to assess the strength of trunk flexors and extensors and to measure trunk kinematics in chronic stroke patients as to compare the results with healthy control subjects. Methods: Thirty stroke patients and 20 matched healthy subjects participated in the study. All participants were right handed male and with age ranged between 40 to 56 years. Stroke patients had moderate spasticity, able to walk independently, with a score less than or equal 11 according to the Trunk Impairment Scale (TIS). Biodex Isokinetic dynamometer was used to measure the peak torque of trunk flexor and extensor muscles and Extensor/Flexor ratio. A digital camera and Auto CAD computer software were used to measure trunk ROM in standing and seated postures from three planes (Sagittal, frontal and transverse planes). Results: Stroke patients showed significant decrease in trunk flexors and extensors peak torques with more reduction in the extensors as compared to the healthy subjects ($P<0.05$). Also stroke patients showed significant decrease in trunk ROM when been measured from the three planes. In addition a strong correlation was observed between trunk muscle torque and flexion-extension ROM. Conclusion: Stroke induced motor impairment of trunk muscle strength that may limit the chronic stroke patients to perform functional activities.</p> |
| Key words | 1. | Stroke |
| | 2. | Trunk |
| | 3. | Torque |
| | 4. | Isokinetic |
| | 5. | Kinematics |
| | 6. | Auto CAD. |
| | 7. | Chronic Stroke. |
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