



Monochromatic Infrared Energy Versus Neuromuscular Electrical Stimulation In Post Burn Tarsal Tunnel Syndrome

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Abstract: Purpose: to evaluate the efficacy of monochromatic infrared energy (MIRE) versus neuromuscular electrical stimulation (NMES) in post burn tarsal tunnel syndrome. **Methods of evaluation** (Measurement of the motor and sensory conduction velocities of the medial and lateral plantar branches of the tibial nerve). **Methods:-** Forty patients with ages ranging from 20 to 35 years and suffering from burns at chronic phase (post-hospitalization period), affecting lower limbs, with the percentage of total body surface area (TBSA) ranging from 20% to 30% and their early diagnosis was a burn of 2nd or 3rd degree and complicated with post-burn tarsal tunnel syndrome. They were divided into two groups. Group (A) composed of 20 patients received the MIRE and the traditional physical therapy were applied. Group (B) received the NMES and the traditional physical therapy were applied. All patients received the traditional physical therapy in the form of ice massage, pulsed ultrasonic, stretching exercises for the cuff muscles and ankle pump exercises. The treatment program was conducted for 20 minutes, 3 times / week for six weeks. Measurements were conducted before starting the treatment as a first record and at the end of the six week of treatment as a second (final) record. **Results and conclusion:-** Results showed that application of both the MIRE and NMES had a valuable improving effects on the post burn tarsal tunnel syndrome as evidenced by the highly significant decreases in the prolonged motor distal latency and sensory distal latency of the medial and lateral plantar branches of the posterior tibial nerve. So both MIRE and NMES were effective and nearly equivalent in improving the post burn tarsal tunnel syndrome as manifested by the highly significant decreases in the prolonged motor distal latency and sensory distal latency of the medial and lateral plantar branches of the posterior tibial nerve.

Key words (Monochromatic infrared energy, Neuromuscular electrical stimulation, Post burn tarsal tunnel syndrome, Motor and sensory distal latencies and Posterior tibial nerve).