Figure 1. Comparison regarding low back pain as measured by VAS before, after treatment and at 6 months follow up

Figure 2. Comparison regarding serum beta endorphin before, after treatment and at 6 months follow up

Conclusions: Epidural corticosteroid injection and Pulsed electromagnetic field stimulation are effective tools in management of chronic low back pain

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THU0543

COMPARISON OF THE EFFECTIVENESS OF LOW LEVEL LASER THERAPY AND STEROID INJECTION IN MODERATE CARPAL TUNNEL SYNDROME: A RANDOMISED CONTROLLED TRIAL

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Background: Recent studies have reported that low-level laser therapy (LLLT) reduces pain and improves function in carpal tunnel syndrome (CTS). However, to the best of our knowledge, there exist no studies that compares the effectiveness of LLLT and steroid injections in moderate CTS.

Objectives: Is to evaluate the effectiveness of LLLT and steroid injection in moderate CTS, by comparing the symptoms, the electrophysiologic and the Magnetic Resonance Imaging (MRI) findings of the patients.

Methods: 87 patients with moderate CTS were included in the study. 87 patients were randomised to the steroid or LLLT groups. LLLT was applied to the carpal tunnel area (6 joules/5 min) five times per week, for a total of 10 sessions. Steroid injections were performed once after randomization. Numbness and pain of the patients were assessed using a Visual Analogue Scale (VAS), disability was assessed using the Quick arm-shoulder-hand (Quick DASH) disability questionnaire. Rough and fine grasping strength tests, Tinel and Phalen tests and

electrophysiological test were performed. All the patients were evaluated by MRI in terms of median nerve cross-sectional area, median nerve intensity and intensity rate, and median nerve palmary spring rate. All tests were performed before the treatment, and 1. month and 6. months after the treatment, except the MRI evaluations, which were done before and after 6. months of the treatment.

Results: The study was completed with 80 patients, 133 wrists at the end of six months. There were no significant differences between the groups in terms of demographic and baseline clinic characteristics, electrophysiologic and MRI findings of the patients ($p>0.05$). While the VAS scores of numbness and pain and Quick Dash symptom scores were better in the steroid group in the first month, there were no significant differences between the groups in the sixth month. In both groups, there were similar significant improvements in the Phalen and Tinel tests, rough and fine grasping forces, median nerve motor distal latency value in the first and sixth months after the treatment in comparison to pretreatment values ($p<0.05$). Median nerve sensory distal latency and median sensory NCV showed significant improvements in the 1st and the 6th months after treatment in comparison to pretreatment only in the steroid group ($p<0.05$). In both groups, there were similar significant improvements in the median nerve intensity rate in the radioulnar plane and median nerve palmary spring rate on the MRI after the treatment. Median nerve intensity rate was improved in both groups also at the pisiform plane but this improvement was significant only in the steroid group.

Conclusions: It is possible to conclude that LLLT reduces the signs and symptoms of the patients who has moderate CTS as well as the steroid treatment. Our study offers a data regarding LLLT's efficiency in short-intermediate terms. Further studies are needed to make comments about long-term efficiency of LLLT. LLLT is a noninvasive treatment option in moderate CTS and with a similar efficacy as steroid treatment.

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THU0544

STUDY OF THE EFFECTS OF OZONE VERSUS STEROID INJECTION ON PATIENTS WITH RECALCITRANT TENNIS ELBOW; A CLINICAL TRIAL

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Background: Tennis elbow is a prevalent musculoskeletal disorder. In recent years ozone injection has been proposed as a treatment for many musculoskeletal disorders. This study aims to compare the effect of ozone injection with steroid in patients with recalcitrant tennis elbow.

Objectives: The aim of this study is to compare the effect of ozone with the standard treatment of steroid injection in patients with tennis elbow, resistant to conservative treatments. This comparison is made according to VAS score, Pressure pain threshold (PPT) and modified Mayo clinic performance index for elbow.

Methods: In this study 64 patients with tennis elbow, which have had the symptoms for more than 3 months and were resistant to conservative treatments, were randomised to two groups. In steroid injection group 40 mg of methylprednisolone acetate and in zone injection group 4 ml of ozone with concentration of 15mcg/ml was injected. 32 patients in steroid and 29 patients in ozone injection group finished this study. Data were gathered before injection and 2 and 6 months after that by VAS score, modified Mayo clinic performance index for elbow and PPT (measured by the means of an algometer). Variables were compared between the two groups and also the changes in each group have been measured in reference to baseline data.

Results: In both groups VAS score, Mayo clinic performance index and PPT improved significantly in 2 and 6 month follow up. Steroid injection was significantly better than ozone injection in improving 2 and 6 months pressure pain threshold and 6 months Mayo clinic performance index. Other data didn't show significant difference between the two groups.

Conclusions: Both steroid and ozone injection improved pain and function in patients with recalcitrant tennis elbow for at least 6 months. Steroid injection was superior to ozone injection in improving PPT during the 2 and 6 month follow up and function improvement in steroid group was significantly more than ozone group after 6 month.