
# Low Level Laser Therapy & fibromyalgia clinical research

Lasers Med Sci. 2002;17(1):57-61. **Efficacy of low power laser therapy in fibromyalgia: a single-blind, placebo-controlled trial.** Gur A, Karakoc M, Nas K, Cevik R, Sarac J, Demir E.

Physical Medicine and Rehabilitation, School of Medicine, Dicle University, Diyarbakir, Turkey. alig@dicle.edu.tr

Low energy lasers are widely used to treat a variety of musculoskeletal conditions including fibromyalgia, despite the lack of scientific evidence to support its efficacy. A randomised, single-blind, placebo-controlled study was conducted to evaluate the efficacy of low-energy laser therapy in 40 female patients with fibromyalgia. Patients with fibromyalgia were randomly allocated to active (Ga-As) laser or placebo laser treatment daily for two weeks except weekends. Both the laser and placebo laser groups were evaluated for the improvement in pain, number of tender points, skinfold tenderness, stiffness, sleep disturbance, fatigue, and muscular spasm. In both groups, significant improvements were achieved in all parameters ($p<0.05$) except sleep disturbance, fatigue and skinfold tenderness in the placebo laser group ($p>0.05$). It was found that there was no significant difference between the two groups with respect to all parameters before therapy whereas a significant difference was observed in parameters as pain, muscle spasm, morning stiffness and tender point numbers in favour of laser group after therapy ($p<0.05$). None of the participants reported any side effects. Our study suggests that laser therapy is effective on pain, muscle spasm, morning stiffness, and total tender point number in fibromyalgia and suggests that this therapy method is a safe and effective way of treatment in the cases with fibromyalgia.

## Effects of low power laser and low dose amitriptyline therapy on clinical symptoms and quality of life in fibromyalgia: a single-blind, placebocontrolled trial.

Rheumatol Int 2002 Sep; 22(5):188-93

Gur A, Karakoc M, Nas K, Cevik R, Sarac J, Ataoglu S.

Department of Physical Medicine and Rehabilitation, Dicle University School of Medicine, 21280 Diyarbakir, Turkey, mailto:alig@dicle.edu.tr

The purpose of this study was to examine the effectiveness of low power laser (LPL) and low-dose amitriptyline therapy and to investigate effects of these therapy modalities on clinical symptoms and quality of life (QOL) in patients with fibromyalgia (FM). Seventy-five patients with FM were randomly allocated to active gallium-arsenide (Ga- As) laser (25 patients), placebo laser (25 patients), and amitriptyline therapy (25

patients). All groups were evaluated for the improvement in pain, number of tender points, skin fold tenderness, morning stiffness, sleep disturbance, muscular spasm, and fatigue. Depression was evaluated by a psychiatrist according to the Hamilton Depression Rate Scale and DSM IV criteria. Quality of life of the FM patients was assessed according to the Fibromyalgia Impact Questionnaire (FIQ). In the laser group, patients were treated for 3 min at each tender point daily for 2 weeks, except weekends, at each point with approximately 2 J/cm(2) using a Ga-As laser. The same unit was used for the placebo treatment, for which no\ laser beam was emitted. Patients in the amitriptyline group took 10 mg daily at bedtime throughout the 8 weeks. Significant improvements were indicated in all clinical parameters in the laser group (P=0.001) and significant improvements were indicated in all clinical parameters except fatigue in the amitriptyline group (P=0.000), whereas significant improvements were indicated in pain ( P=0.000),tender point number ( P=0.001), muscle spasm ( P=0.000), morning stiffness (P=0.002), and FIQ score ( P=0.042) in the placebo group. A significant difference was observed in clinical parameters such as pain intensity (P=0.000) and fatigue ( P=0.000) in favor of the laser group over the other groups, and a significant difference was observed in morning stiffness (P=0.001), FIQ ( P=0.003), and depression score ( P=0.000) after therapy. A significant difference was observed in morning stiffness ( P=0.001), FIQ (P=0.003), and depression ( P=0.000) in the amitriptyline group compared to the placebo group after therapy. Additionally, a significant difference was observed in depression score ( P=0.000) in the amitriptyline group incomparison to the laser group after therapy.

Our study suggests that both amitriptyline and laser therapies are effective on clinical symptoms and QOL in fibromyalgia and that Ga-As laser therapy is a safe and effective treatment in cases with FM. Additionally, the present study suggests that the Ga-As laser therapy can be used as a monotherapy or as a supplementary treatment to other therapeutic procedures in FM..

Qlaser Wellness Solutions
Michael F. Lagana, President
708 Route 35 N., Neptune, NJ 07753
732 866-4226
Michael@Qlaserws.com