

[Rheumatol Int.](#) 2002 Sep;22(5):188-93. Epub 2002 Jul 6.

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

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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/cm² 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 in comparison 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.**