

## EFFECT OF CONVENTIONAL THERAPY AND LOW-LEVEL LASER THERAPY ON PAIN AND LIMITATIONS OF DAILY FUNCTIONS IN PATIENTS WITH TEMPOROMANDIBULAR JOINT DYSFUNCTION

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### ABSTRACT

**Background:** Temporomandibular joint dysfunctions (TMJDs) are considered the most common chronic orofacial pain condition characterized by pain in the temporomandibular joint (TMJ) area, masticatory muscles and associated musculoskeletal structures with the affection of mouth opening. Conventional therapy and low-level laser therapy (LLLT) are safe and noninvasive modalities that each therapist focuses on to relieve pain and increase function.

**Objective:** The purpose of this study was to investigate the effect of conventional therapy and low-level laser therapy on pain and limitations of daily functions in patients with temporomandibular joint dysfunction (TMJD).



**Methods:** Sixty patients (45 females and 15 males) with myofascial pain syndrome of TMJ were divided randomly into study and control groups. The study group received conventional therapy consisting of active and stretching exercises for mandibular muscles with ultrasound and LLLT application on TMJ area. Control group received conventional therapy only. Pressure pain threshold was evaluated using hand-held pressure algometer and pain-related limitations in daily functions were evaluated by the limitations in daily functions-temporomandibular disorders questionnaire (LDF-TMDQ) at baseline and 4 weeks after the treatment.

**Results:** There was a significant decrease ( $p < 0.05$ ) in limitations in daily functions, with a significant increase ( $p < 0.05$ ) in pressure pain threshold for TMJ, masseter and anterior temporalis muscles at both sides in the study group compared with control group.

**Conclusion:** The combination of conventional therapy with LLLT was more effective in pain relief and improvement of limitations in daily functions than does conventional therapy alone for patients with temporomandibular joint dysfunctions.

**KEY WORDS:** Temporomandibular joint, Conventional therapy, Low-level laser therapy.

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