

Measurements of Jaw Movements and TMJ Pain Intensity in Patients Treated with GaAlAs Laser

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The aim of this study was to evaluate the effectiveness of low-level laser therapy (LLLT) on the improvement of the mandibular movements and painful symptoms in individuals with temporomandibular disorders (TMD). Forty patients were randomly divided into two groups (n=20): Group 1 received the effective dose (GaAlAs laser λ 830 nm, 40 mW, 5J/cm²) and Group 2 received the placebo application (0 J/cm²), in continuous mode on the affected condyle lateral pole: superior, anterior, posterior, and posterior-inferior, twice a week during 4 weeks. Four evaluations were performed: E1 (before laser application), E2 (right after the last application), E3 (one week after the last application) and E4 (30 days after the last application). The Kruskal-Wallis test showed significant more improvements ($p < 0.01$) in painful symptoms in the treated group than in the placebo group. A significant improvement in the range of mandibular movements was observed when the results were compared between the groups at E4. Laser application can be a supportive therapy in the treatment of TMD, since it resulted in the immediate decrease of painful symptoms and increased range of mandibular movements in the treated group. The same results were not observed in the placebo group.

Key Words: jaw movements, GaAlAs laser, articular pain.