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TMJ/Orofacial Pain & Dental Sleep Medicine

Winter 2015

Treating Temporomandibular Disorders in Adolescents: a Randomized, Controlled, Sequential Comparison of Relaxation Training and Occlusal Appliance Therapy

Wahlund K, Nilsson IM, et al.

J Oral Facial Pain Headache. 2015 Winter;29(1):41-50

The purpose of this study was to compare the effects of occlusal appliance therapy (OA) and therapist-guided relaxation training (RT) on temporomandibular disorder (TMD) pain in adolescents, thereby replicating a previous randomized controlled trial, and to explore whether additional therapy administered in a crossover sequential design improves treatment outcomes. The study involved 64 adolescents, aged 12 to 19 years, experiencing TMD pain at least once a week and diagnosed with myofascial pain in accordance with the Research Diagnostic Criteria for TMD. For phase 1 of the study, subjects were randomly assigned to OA or RT; nonresponders were offered the other treatment in phase 2. Self-reports of TMD pain and clinical assessments were performed before and after treatment in each phase and 6 months after the last treatment phase. Differences in outcomes between treatment groups across the different phases were analyzed using appropriate statistical analysis.

After phase 1, a significantly higher proportion of adolescents treated with OA (62.1%) than those treated with RT (17.9%) responded to treatment, defined as a subjective report of "Completely well/Very much improved" or "Much improved." Similar differences in self-report of treatment effect occurred after phase 2. About two-thirds of all adolescents in both phases reported such an improvement level at the 6-month follow-up, including a somewhat higher proportion of phase 1 responders (79.2%) than phase 1 nonresponders (60%).

The findings suggest that, for adolescents with TMD pain, use of standardized clinical treatment with OA is more effective than RT on self-evaluation of treatment improvement. For nonresponders, subsequent crossover treatment might be useful to improve subjective TMD pain.