

Effectiveness of Exercise and TENS in the Treatment of Temporomandibular Joint Disorders

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Abstract : Overview: Temporomandibular disorders (TMDs) are chronic musculoskeletal pain conditions. Clinical indicators of discomfort are related to the use of the joint stiffness during first motions after extended rest and restricted joint range of motion can cause substantial pain and disability. There is little evidence that physical therapy methods of management cause long-lasting reduction in signs and symptoms. Exercise programs premeditated to improve physical fitness have beneficial effects on chronic pain and disability of the musculoskeletal system. Objective: The aim of this study was to assess the effectiveness of physical therapy interventions in the management of temporomandibular disorders. Materials and Methods: A prospective comparative study with a 2-month follow-up period was conducted between April 2016 and June 2016 at the Physical Medicine and Rehabilitation Clinic in Prishtina. Forty six patients with TMDs, (more than three months duration of symptoms) were randomized into two groups: the TENS therapy group (n=24) and combination of active exercise and manual therapy group (n=22). The TENS therapy group patients were treated with twelve sessions of TENS. The treatment period of both groups was 3 weeks at an outpatient clinic. Following main outcome measures were evaluated: (1) pain at rest (2) pain at stress (3) impairment (4) mouth opening at base-line, before and after treatment and at 3 month follow-up. Results: Significant reduction in pain was observed in both treatment groups. In the TENS group 73% (16/22) achieved at least 80% improvement from baseline in TMJ pain at 2 months compared with 54% (13/24) in the exercise group (difference of 19%; 95% confidence interval 220 to 30%). Active and passive maximum mouth opening has been greater in the TENS group ($p < 0.05$). Conclusion: Exercise therapy in combination with TENS seems to be useful in the treatment of temporomandibular disorders.

Keywords : temporomandibular joint disorders, TENS, manual therapy, exercise

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