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Effectiveness of Mechanical Diagnosis and Therapy (MDT) approach enriched with comprehensive physical therapy on pain and disability of patients with shoulder local pain which originated from cervical Derangement

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Considering the prevalence of shoulder local pain which originated from cervical derangement, the aim of this pilot case-series (single group pre-test/post-test design) was to evaluate the effect of MDT approach enriched with evidence-based physical therapy on pain and disability of patients with upper limb local pain which originated from cervical derangement.

Method: 25 patients with shoulder local pain which was originated from cervical derangement participated in 10 session of physical therapy. For differential diagnosis we used Mechanical Diagnosis and Therapy (MDT) approach and used the Evidence-based physical therapy for treatment. Evidence-based physical therapy comprised MDT individualized exercise, manual therapy techniques (mobilization and distraction techniques, stretching techniques), stretching and strengthening exercise, coordination exercise and Proprioceptive Neuromuscular Facilitation exercise (PNF). The Numerical Pain Rating Scale (NPRS), Global Rating Of Change (GRC), Shortened Disability af Arm, Shoulder, Hand (Quick-DASH) and frequency of discharge was evaluated before and 4 weeks treatment., immediately after end of treatment sessions.

Result: pain was significantly reduced after treatment ($p<0.001$) and paired t-test analysis revealed that all outcome measures improved significantly for 22 patients after the treatment ($p<0.001$). So that mean Quick-DASH difference was 40.79 ±15.28 and mean NPRS difference between pre intervention and post intervention was 4.30 ±1.10In GRC scale 19 patients reported improvement more than average.

Conclusion: The present results provide preliminary evidence that mechanical diagnosis and therapy approach combined with Evidence-based physical therapy could significantly reduce pain and improve function.

Recent Publications

1. Daghiani M, Negahban H, Ebrahimzadeh MH, Moradi A, Kachooei AR, Raeesi J, et al. The effectiveness of comprehensive physiotherapy compared with corticosteroid injection on pain, disability, treatment effectiveness, and quality of life in patients with subacromial pain syndrome: a parallel, single-blind, randomized controlled trial. Physiotherapy Theory and Practice. 2022:1-15.
2. Daghiani M, Negahban H, Mostafaee N, Saidi A, Ebrahimzadeh MH, Moradi A, et al. Psychometric properties of Full and Shortened Persian-version of western Ontario rotator cuff index questionnaires in Persian-speaking patients with shoulder pain. The Archives of Bone and Joint Surgery. 2022.
3. Yosephi MH, Ehsani F, Daghiani M, Zoghi M, Jaberzadeh S. The effects of trans-cranial direct current stimulation intervention on fear: A systematic review of literature. Journal of Clinical Neuroscience. 2019; 62:7-13.

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