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Comparative Study of Active Release Technique and Myofascial Release Technique in Patients with Upper Trapezius Spasm

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Abstract : Relevance: This qualitative study will educate the clinician in putting into practice the advanced method of movement science in restoring the function. Purpose: The purpose of this study is to compare the effectiveness of Active Release Technique and myofascial release technique on range of motion, neck function and pain in patients with upper trapezius spasm. Methods/Analysis: The study was approved by the institutional Human Research and Ethics committee. This study included sixty patients of age group between 20 to 55 years with upper trapezius spasm. Patients were randomly divided into two groups receiving Active Release Technique (Group A) and Myofascial Release Technique (Group B). The patients were treated for 1 week and three outcome measures ROM, pain and functional level were measured using Goniometer, Visual analog scale(VAS), Neck disability Index Questionnaire(NDI) respectively. Paired Sample 't' test was used to compare the differences of pre and post intervention values of Cervical Range of motion, Neck disability Index, Visual analog scale of Group A and Group B. Independent't' test was used to compare the differences between two groups in terms of improvement in cervical range of motion, decrease in visual analogue scale(VAS), decrease in Neck disability index score. Results: Both the groups showed statistically significant improvements in cervical ROM, reduction in pain and in NDI scores. However, mean change in Cervical flexion, cervical extension, right side flexion, left side flexion, right side rotation, left side rotation, pain, neck disability level showed statistically significant improvement ($P < 0.05$)) in the patients who received Active Release Technique as compared to Myofascial release technique. Discussion and conclusions: In present study, the average improvement immediately post intervention is significantly greater as compared to before treatment but there is even more improvement after seven sessions as compared to single session. Hence, this proves that several sessions of Manual techniques are necessary to produce clinically relevant results. Active release technique help to reduce the pain threshold by removing adhesion and promote normal tissue extensibility. The act of tensioning and compressing the affected tissue both with digital contact and through the active movement performed by the patient can be a plausible mechanism for tissue healing in this study. This study concluded that both Active Release Technique (ART) and Myofascial release technique (MFR) are equally effective in managing upper trapezius muscle spasm, but more improvement can be achieved by Active Release Technique (ART). Impact and Implications: Active Release Technique can be adopted as mainstay of treatment approach in treating trapezius spasm for faster relief and improving the functional status.

Keywords : trapezius spasm, myofascial release, active release technique, pain
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