

SCAPULAR MOBILIZATION IN SUBACROMIAL IMPINGEMENT SYNDROME: A DOUBLE BLIND RANDOMIZED TRIAL

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Background: Subacromial Impingement Syndrome (SAIS) is the most prevalent diagnosis (44-65%) in a physically active population in patients complaining of shoulder pain. Manual therapy is used with other intervention to regain motion and improve function. Scapular mobilization is commonly used by physical therapists during shoulder rehabilitation to improve much impairment, unfortunately this intervention has limited scientific evidence to support its use.

Purpose: To determine the long term effects of scapular mobilization in patients with subacromial impingement syndrome.

Design: A double blind randomized placebo trial.

Patients: 32 female and 12 male totally 44 subjects with subacromial impingement syndrome participated.

Methods: Patients were referred from a physician with the diagnosis of SAIS. To confirm this evaluation potential participants had to demonstrate at least 3 of the following findings; (1) a positive Neer impingement test, (2) a positive Hawkins impingement test, (3) pain with active shoulder elevation, (4) pain with palpation of the rotator cuff tendons, (5) pain with isometric resisted abduction, and (6) pain in the C5 or C6 dermatome region. Patients were randomized into two groups; scapular mobilization (SM) (n=22, mean age=52.27±2.67 years) and sham scapular mobilization (SSM) (n=22, mean age= 52.45± 4.04 years) conditions. Single physical therapist blinded to treatment group took all outcome measures at baseline and 3 weeks. A universal goniometer was used to measure active shoulder flexion, internal and external rotation range of motion (ROM). Quick Dash was used to measure the shoulder function. Pain severity was assessed Visual Analogue Scale. An independent physical therapist who was blind to outcome measures applied all treatments. Patients in both groups received hot pack and transcutaneous electrical stimulation at the beginning of all treatment sessions. Patients performed therapeutic interventions for 3 days/week for 3 weeks. SM consisted of the application of superior and inferior gliding, rotations and scapular distraction to the scapula of affected shoulder. SSM replicated the treatment condition except for the hand positions and pressure.

Results: There was no significant differences between scapular mobilization and the sham conditions in the shoulder ROM, Quick DASH and pain scores (p>0.05). There were significant improvements for shoulder ROM and Quick Dash score and

decrease in pain severity between pre and post treatments after both treatment conditions ($p < 0.05$).

Conclusion: There was not a significant advantage of scapular mobilization on range of motions, function and pain with patients with subacromial impingement syndrome.

Clinical Relevance: Scapular manual techniques are not vitally required when designing a rehabilitation program for subacromial impingement syndrome patients. These results can only be applied to patient meeting the criterion established for subacromial impingement in this study. Other pathologies or impairments may have differing results with this intervention technique.