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Ultrasonographic Insights of Matrix Rhythm Therapy for Adhesive Capsulitis: A Randomized Controlled Study

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Research Objectives

To investigate the effects of MRT on soft tissue remodeling in patients with adhesive capsulitis, utilizing ultrasonography for detailed assessment.

Design

Randomized controlled trial was undertaken in the study for the patients diagnosed with adhesive capsulitis with CHL thickening, the duration of treatment was 2 weeks.

Setting

90 patients diagnosed with adhesive capsulitis were enrolled in this study. The recruitment of the patients was done at Out Patient Department Dr. D.Y.Patil college of Physiotherapy, Pune.

Participants

Screening of 100 patients were done according to inclusion criteria, 90 patients diagnosed with adhesive capsulitis were enrolled in this study. The participants were randomly allocated using computerized random allocation methods. Participants were allotted in 3 groups, Group A who received MRT along with conventional therapy, MRT in Group B, and conventional therapy alone in Group C, over 2 weeks, respectively.

Interventions

Group A who received Matrix Rhythm Therapy along with conventional therapy, MRT in Group B, and conventional therapy alone in Group C, over 2 weeks, respectively.

Main Outcome Measures

Clinical and functional outcomes included the range of motion (ROM), and pain levels (Numerical pain rating scale), and functional outcome(SPADI), along with the changes in the thickness of the coraco-humeral ligament (CHL)were recorded, pre and post-intervention

Results

The most prominent result was a notable reduction in the thickness of the coracohumeral ligament (CHL). In Group A, CHL thickness decreased from an average of 1.2 mm to 0.8 mm; in Group B, from 1.6 mm to 0.7 mm; and in Group C, from 0.9 mm to 0.7 mm. These reductions were statistically significant ($p < 0.05$). Clinically, substantial improvements were observed in shoulder range of motion (ROM) across all groups. Forward flexion increased by an average of 40 degrees, while external rotation improved by 25 degrees ($p < 0.01$), indicating enhanced joint mobility post-intervention. Pain intensity, measured using the Visual Analog Scale (VAS), showed a marked reduction. The average VAS score declined from 7.5 to 3.2 across all groups ($p < 0.01$), reflecting significant relief in shoulder discomfort.

Conclusions

The therapy effectively reduces CHL thickness and enhances soft tissue elasticity, and inflammation contributing to improved joint mobility and decreased pain. These results suggest that matrix rhythm therapy is a viable non-invasive treatment option for adhesive capsulitis.

References (0)

Cited by (0)

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