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Effectiveness of Stabilisation Exercise along with Conventional Therapy on Pain, ROM, Muscle Strength, JPS and QOL in Diabetic Frozen Shoulder

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ABSTRACT

Introduction: Diabetic Frozen Shoulder (DFS) is characterised by pain and severe limited active and passive range of motion of the glenohumeral joint, particularly external rotation. Diabetes is frozen shoulder is due to the effects on collagen in the shoulder, which holds the bones together in a joint. Collagen gets triggered by the presence of high blood sugars.Interestingly, collagen gets sticky when sugar molecules become attached, leading to restricted movements and shoulder starting to stiffen. The prevalence of adhesive capsulitis in patients with diabetes in India was reported to be 11% - 29.61 %, in Saudia Arabia 6.7%, in Iran 13.30%, in Finland 14%, in UK around 10.8%. Whereas other studies identified around 20% Australians, 38.6% Americans, 27% Indians and around 40% British reported diabetes in patients with adhesive capsulitis.

Aim: To evaluate the effectiveness of stabilisation exercise along with moist heat therapy on pain, Range of Motion (ROM), proprioception, muscle strength and Quality of Life (QOL) in patients with DFS.

Materials and Methods: This article has been approved by the Institutional Ethics Committee (IEC).The confidence level – 95% and confidence interval - 5% were used to calculate sample size. Thirty-one patients were treated with stabilisation exercise and moist heat therapy. The patients were assessed in 0 (zero) week and reassessed in 4 (four) weeks and 8 (eight) weeks of treatment. These treatment protocols will be given five days per week for eight weeks.

Result and Conclusion: The data were analysed using the statistical software SPSS 15 version. Analysis of the Numerical Pain Rating Scale (NPRS), ROM, Shoulder Strength, Joint Position Sense (JPS) score & the World Health Organisation QOL (WHOQOL) was done using repeated measure ANOVA test. In 4 and 8 weeks of treatment, significant results were observed (p=0.05). Our study concluded that stabilisation exercise along with conventional therapy in patients with DFS showed significant improvement in reducing pain, improving ROM, increasing muscle strength, improving JPS and improving quality of life in 4th & 8th weeks of treatment.

Keywords: Muscle strength dynamometers, Pain scale, Thermotherapy.