

Comparison Of The Efficacy Of Interfascial Hydrodissection With A Mixture Of Lidocaine And Physiological Saline Solution With 10% Dextrose In Patients With Chronic Neck Pain Associated With Resistant Myofascial Trigger Points In The Upper Trapezius

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Objective: This study aimed to investigate the effects of fascial hydrodissection with 10% dextrose or lidocaine-saline on pain, neck functions, and quality of daily life in patients with chronic neck pain due to resistant myofascial trigger points in the upper trapezius muscle unresponsive to conservative treatments, and to determine whether one solution is superior to the other.

Materials and Methods: This prospective, comparative clinical study began with the evaluation of 193 patients diagnosed with chronic neck pain secondary to myofascial pain syndrome (MPS). A total of 119 patients who met the inclusion criteria were enrolled, and analyses were performed on 96 patients who completed the follow-up. Patients were divided into two treatment groups according to their own preferences. The first group underwent interfascial hydrodissection with 10% dextrose, and the second group with lidocaine-saline. All participants were instructed in self-massage and stretching exercises to perform at home to support treatment efficacy. Interventions were performed under ultrasound guidance, targeting the specified interfascial plane. Evaluations were conducted at baseline, at 10 minutes posttreatment (visual analog scale (VAS), servical range of motion (ROM); and at 1-month and 3-month follow-ups (VAS, ROM, neck disability index (NDI), short form (SF)-12).

Statistical Analysis

The SPSS (Statistical Package for Social Sciences for Windows) 27.0 program was used for statistical analyses when evaluating the findings obtained in the study. Before starting the study, the sample size was calculated using the G*Power 3.1.9.6 (Franz Faul, University of

Kiel, Kiel, Germany) software package. Accordingly, considering a 5% α error margin and an effect size of 0.80, it was predicted that at least 28 patients (56 patients in total) would be included in each group at a 90% power level to detect differences between the groups. In line with clinical predictions, it was planned to include 40 patients in each group (80 patients in total) for an effect size of 0.80. 3.4.2.

Descriptive statistics for continuous variables are presented as mean and standard deviation, while descriptive statistics for categorical data are presented as frequency and percentage. Independent samples t-tests and Mann Whitney U tests were used for the comparative analysis of continuous data. Friedman tests and Wilcoxon Signed Ranks tests were used to compare pre- and post-measurements of continuous variables. Correlation analysis was performed for the relationship of continuous variables. The chi-square test was used for the relationship analysis of categorical variables. $p < 0.05$ is considered statistically significant.