Rehabilitation

AB1491 ACUTE EFFECTS OF AN INSTRUMENT ASSISTED SOFT TISSUE MOBILIZATION TECHNIQUE ON CHRONIC NECK PAIN: A DOUBLE-BLIND, RANDOMIZED CONTROLLED TRIAL

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Background: Individuals with chronic neck pain, proprioceptive afferent information from the cervical spine may be impaired due to the presence of pain. Instrument-assisted soft-tissue mobilization (IASTM) is used to reduce pain and improve range of motion (ROM) and function. Cervical sensorimotor control includes the central integration and processing of all afferent information and the execution of the motor program through the cervical muscles and contributes to the maintenance of head posture and balance(1). In individuals with chronic neck pain, proprioceptive afferent information from the cervical spine may be impaired due to the presence of this pain(2). Many treatment modalities such as instrument-assisted soft-tissue mobilization (IASTM) have been used to reduce pain and increase proprioception(3). IASTM is used to reduce pain, increase soft-tissue mobility, and improve range of motion (ROM) and function. These instruments cause microtrauma to restore normal elasticity and function in soft-tissue(4). Kivlan has shown that significant and rapid changes in muscle function can occur with only a single IASTM application and have suggested the following mechanisms of action: an increased fascial motility, a proliferation of extracellular matrix fibroblasts, and an increased blood flow to the area close to the injured tissue, with decreased cellular matrix adhesion and localized ischemia(5).
Objectives: Aim of this study, to determine the acute effects of single-session, IASTM on cervical joint position error (JPE) and pain in individuals with chronic neck pain.
Methods: A total of 39 individuals (mean age=40.18±11.10 years) with chronic neck pain were included in this study. We divided the participants into IASTM, sham, and control groups of 13 members each. In the IASTM group, intervention was applied to the sternocleidomastoid and trapezius muscles with an application time of 45 seconds and a frequency of 60 beats/min. In the sham group, IASTM was applied at a 90° angle without pressure. The control group received no intervention. The pain severity and joint position error were evaluated before and after the intervention, by using the visual analog scale (VAS) and a cervical range of motion device.
Results: The effects of time and treatment group on VAS score were statistically significant. The effect of time and treatment for VAS score was statistically significant (p=0.001). When the post-test was examined according to application, a statistically significant difference found in VAS scores (p=0.001), with the lowest pain score in the IASTM group and the highest pain score in the control group. The significant improvements found in JPE in all aspects of the cervical region in the IASTM group (p<0.05). In the sham group, significant improvements observed in cervical extension, left rotation, and left lateral flexion movements in JPE (p<0.05).
Conclusion: Single-session IASTM is effective for improving the acute pain and JPE in individuals with chronic neck pain.
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Disclosure of Interests: None declared
DOI: 10.1136/annrheumdis-2022-eular.134

AB1492 COMPARISON OF TELEREHABILITATION METHODS FOR SYSTEMIC SCLEROSIS PATIENTS IN THE COVID-19 ERA: A RANDOMIZED CONTROLLED STUDY

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Background: Scleroderma (SSc) is an autoimmune connective tissue disease progressing with fibrosis. SSc patients need to be protected from epidemic diseases as well as rehabilitation needs. For this reason, it is important for them to continue their exercises in an environment where they can be both rehabilitated and protected from infectious diseases.
Objectives: In this study, it was aimed to reveal the effects of exercises performed by telerehabilitation on individuals with Scleroderma with hand involvement and to compare the effects of real-time telerehabilitation (RTT) and asynchronous telerehabilitation (AT).
Methods: Forty-two participants with a mean age of 44.17±11.05 years were included in the study. The patients were divided into three groups and followed for 8 weeks. RTT was applied to the 1st group and AT was applied to the 2nd group, and the 3rd group was the control group. Participants' finger and wrist joint range of motion (ROM) were evaluated with a goniometer, upper extremity functions were evaluated with Scleroderma Hand Mobility Test (HAMIS), Disabilities of the Arm, Shoulder and Hand (DASH) questionnaire and 9Hole Peg Test (9HPT), grip strength was evaluated with a dynamometer, superficial sense of touch was evaluated with the Semmes Weinstein Monofilament test, activities of daily living (ADL) were evaluated with the Michigan Hand Outcomes Questionnaire (MHQ), and general health status was evaluated with the Scleroderma Health Assessment Questionnaire (SHAQ).
Results: There were improvements in finger and wrist ROM, upper extremity functions and ADL parameters in the RTT group; and there were improvement in finger ROM and hand functions in the AT group (p<0.05). Wrist radial deviation ROM decreased in the control group (p<0.05). Significant differences were noted between the groups in finger ROM and upper extremity functions after treatment (p<0.05).
Conclusion: Our study shows that exercises performed via RTT and AT are effective in individuals with Scleroderma with hand involvement, and RTT has additional benefits.
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Disclosure of Interests: None declared
DOI: 10.1136/annrheumdis-2022-eular.155

AB1493 REHABILITATION OF PATIENTS WITH OSTEOARTHRITIS OF THE KNEE USING MAGNETIC THERAPY

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Background: Currently, along with the basic treatment at the outpatient stage of rehabilitation, methods using physical and balneological factors are successfully applied: magnetotherapy, electrotherapy, peloidtherapy.
Objectives: Evaluation of the effectiveness of rehabilitation using magnetotherapy for osteoarthritis of the knee joints at the second radiological stage.
Methods: The study included 75 patients with primary osteoarthritis of the knee joints of the II X-ray stage, who were on outpatient rehabilitation in the sanatorium "Chuvashiyakurort", including 45 women and 30 men aged 50 to 65 years with a disease duration of 15 to 20 years. Rehabilitation was carried out by a multiprofessional team led by a physical and rehabilitation doctor. All patients were divided into two groups by simple randomization. The main group (n = 50) received basic treatment (chondroprotectors) + non-steroidal anti-inflammatory drugs (NSAIDs on demand) and a course of apparatus magnetotherapy. Magnetic therapy was applied to the area of the knee joints using the «Polus-2» apparatus using solenoid inductors, mode - continuous, frequency - 50 Hz,