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 has 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 force 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, rotation, and 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.

REFERENCES:

Disclosure of Interests: None declared.

AB1493 REHABILITATION OF PATIENTS WITH OSTEARTHROPSIS 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 baneological factors are successfully applied: magnetotherapy, electrotherapy, telerehabilitation.

Objectives: Evaluation of the effectiveness of rehabilitation using magnetotherapy for osteoarthrosis of the knee joints at the second radiological stage.

Methods: The study included 75 patients with primary osteoarthrosis of the knee joints of the II X-ray stage, who were on outpatient rehabilitation in the sanatorium “Chuvashyakurort”, 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 the 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 «Pulus-2» apparatus using solenoid inductors, mode - continuous, frequency - 50 Hz, power - 20 mT. The assessment of cervical sensory motor control: A systematic review focusing on measurement methods and their clinimetric characteristics. Gait Posture. 2013;38(1):1–7.