E-Poster

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Effectiveness of Complex Rehabilitation for Pain Relief in Patients With CRPS

Topic: Pain

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BACKGROUND

International clinical guidelines for the management of complex regional pain syndrome (CRPS) advocate for a diverse array of rehabilitation therapies. Alongside exercise programs, manual therapy techniques, and CRPS-specific rehabilitation, interventions such as mirror therapy and neurocognitive rehabilitation are widely used. However, there is currently a lack of literature evaluating the effectiveness of emerging technologies, such as augmented and virtual reality, as a treatment approach for individuals with CRPS.

The main aim of our study was to assess the effectiveness of complex rehabilitation using the functional rehabilitation system with biofeedback in relieving pain in patients with CRPS involving the upper limb.

METHODS

Thirteen patients with CRPS were included in our study. Patients were previously diagnosed according to the Budapest criteria of CRPS, and patients were screened for neuropathic pain using the painDETECT scale, where a score higher than 18 (out of 38) indicated neuropathic pain. Patients were also assessed using the McGill Pain Questionnaire (MPQ) and the Visual Analog Scale (VAS). All patients were asked to complete the DASH (Disabilities of the Arm, Shoulder, and Hand) questionnaire.

Patients underwent rehabilitation, which included manual therapy techniques, electrotherapy, and balneotherapy. Ten patients were assigned to the group with the complex functional upper limb rehabilitation module using biofeedback Neuroforma (Meden-Inmed, Poland). Three patients were assigned to the group without this device.

RESULTS

Six of 10 participants and one of three participants who completed the study reported subjective improvement in pain and daily function. The mean VAS pain scores of all participants showed lower scores after rehabilitation in the first group compared to the group without biofeedback. The change in the mean pain intensity in the first group was 3.6 ± 0.6 points compared to 1.7 ± 0.7 in the second group. Significant changes in DASH scores were registered only in the first group.

CONCLUSION

The use of the biofeedback-based system can provide subjective pain improvement, reduced pain ratings in chronic neuropathic pain, and functional improvement in selected patients with CRPS of the upper limb.

Statement of Disclosures

None

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