E-Poster

EP-485

Effects of Exercise-Based Rehabilitation program on Pain and Function in Patients With Cervicobrachial Neuralgia: A Prospective Study

Topic: Health Conditions (Nervous System, Musculoskeletal System, Cardiopulmonary System)

Jihad El Achkoura, Doaa El Mahil, Papa Ndiouga Lo, Ryme El Beloui, Hasnaa Boutalja, Nada Kyal, Fatima Lmidmani, Abdellatif El Fatimi

Physical and Rehabilitation Medicine, CHU Ibn Rochd, Casablanca, Morocco

BACKGROUND

Cervicobrachial neuralgia (CBN) is a painful condition affecting the cervical spine and upper limbs, primarily due to nerve compression. It manifests as chronic pain, reduced mobility, muscle weakness, and impaired quality of life. The main objective of this study was to evaluate the impact of a reconditioning program on pain reduction, cervical mobility improvement, muscle strengthening, and quality of life enhancement in patients suffering from CBN.

METHODS

This was a prospective, interventional, monocentric clinical study conducted at the Department of Physical Medicine and Rehabilitation (PMR) of CHU Ibn Rochd in Casablanca, Morocco. Patients with confirmed CBN by imaging (MRI) and/or electromyography, suffering from chronic pain (≥ 3 months), were included after initial treatment. The reconditioning program lasted eight weeks, with two weekly sessions of 50 minutes each. Each session included a 10-minute warm-up, followed by 30 minutes of specific exercises—incorporating the use of an ergocycle in the initial phase to improve upper limb endurance, as well as targeted muscle strengthening and functional rehabilitation exercises—and ended with 10 minutes of recovery. Therapeutic education sessions were also provided. Assessments were conducted before the program (T0), at the end (T1), and three months later (T2) using the Visual Analog Scale (VAS), the DN4 questionnaire, cervical mobility measurements, muscle strength tests, the QuickDASH, and the SF-12.

RESULTS

The study included 45 patients aged 18 to 65 years. A significant pain reduction was observed, with VAS scores decreasing from 7.5 at T0 to 4.2 at T1, and 3.8 at T2 ($p < 0.001$). The prevalence of neuropathic pain decreased from 42% at T0 to 22% at T2 ($p < 0.01$). Additionally, cervical mobility improved, muscle strength in the cervical, scapular, and upper limb muscles increased, and QuickDASH and SF-12 scores showed a significant improvement in functional disability and quality of life. These improvements confirm the program's effectiveness.

CONCLUSION

This study demonstrates that exercise-based rehabilitation, including early-stage ergocycle use to improve upper limb endurance, is an effective approach for managing NCB. It reduces pain and enhances mobility, muscle strength, and quality of life, supporting its complementary integration in rehabilitation programs.

Statement of Disclosures

None

Doi: 10.5606/archisprm.2026.EP-485

Corresponding Author:
Jihad El Achkoura
Physical and Rehabilitation Medicine, CHU Ibn Rochd, Casablanca, Morocco
Email: miss.elachkoura@gmail.com