

ENTRAPMENT NEUROPATHIES OF THE UPPER EXTREMITIES
AND NEW TRENDS IN PHYSIOTHERAPYV. KNAP^{1,2}, P. TAKÁČ¹, P. ONDOVÁ¹, M. IŠTOŇOVÁ^{1,2}, K. ORAVCOVÁ¹

¹University of Pavol Jozef Safarik, Faculty of Medicine,
Department of Physiatry, Balneology, and Medical Rehabilitation,
Louis Pasteur University Hospital, Tr. SNP 1, Košice, Slovak Republic,

²St Elizabeth University of Health and Social Work,
Palackého 1, Bratislava, Slovak Republic,
e-mail: viliam.knap@upjs.sk

Introduction. Nerve entrapment syndromes belong to the individual group of compressive syndromes of the nerve system, so called entrapment neuropathies. This term is used because there is an evident impression of peripheral limb nerves in physiological areas where the nerve is gripped by other less-malleable tissues.

The pathological overgrowth of connective tissue, inflammation, oedema, abnormal tendon distances, mechanical muscle overloading, joint blockages, fractures of bones, and endocrine and metabolic disorders involved in the compression of the nerve.

In the field of physiotherapy, it is important to focus on the root causes of nerve or blood vessel impairment. A narrow anatomical area may become even narrower, thus compressing other nerve and vascular structures. The peripheral nerve is the most sensitive tissue in the area of impairment. The basic principle behind physiotherapeutic procedures in the treatment of nerve entrapment syndromes is to remove the cause of disease, which necessarily affects all of the structures which have induced compression – neighbouring structures included.

A diagnosis is based on the exclusion of other serious diseases, a careful taking of the patient's history, a physical examination, and an assessment of auxiliary examinations.

Purpose. The purpose of this work was to highlight the importance of targeted physiotherapy in the treatment of nerve entrapment syndrome in the upper limb using the latest physiotherapeutic techniques.

Material and methods. In this work, 56 patients are presented as diagnosed with nerve entrapment syndrome in the upper limb. 45 of them are women and 21 are men, ranging in age from 26–72 years old with an average age of 49 years. We evaluated the pain condition, pain intensity, and also functional deficits before and after rehabilitation treatment over a duration of four weeks.

Results. After four weeks of complex rehabilitation treatment based on the elimination of nerve entrapment syndrome in the upper limb, the pain of the upper limb decreased and its function was recovered.

Conclusion. As a result of targeted therapy towards nerve entrapment syndrome in the upper limb, the functional condition of the majority of our patients has improved and their pain was reduced.

The expected mechanism of this kind of physiotherapy is to improve blood circulation in the affected area, adjust the biomechanical forces that affect joint structures, improve the functional condition, and prevent a relapse of the disease from occurring.

Keywords. Entrapment neuropathies, upper extremities, pain, physiotherapy.