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# **Conference Proceedings**



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## **CARPAL TUNNEL SYNDROME – A COMPREHENSIVE TREATMENT OPTION**

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Carpal tunnel syndrome (syndrome of median nerve entrapment in the carpal tunnel, stenotic ligamentosis of the transverse ligaments), tunnel syndrome is quite common. As a rule, diseases develop in people whose work is associated with heavy loads on the wrist joint - flexion, extension, rotational movements that cause traumatic impact on the transverse ligament of the palm. This leads to compression of the median nerve in the carpal tunnel, and sometimes the ulnar nerve. Women - seamstresses, milkmaids, etc., as well as specialists who spend a lot of time at the keyboard, aged 45-60 years are more often ill [1,2].

Patients complain of paresthesia of the fingers; pain may join later. At the very beginning of the disease, changing the position of the hands and shaking helps. Over time, the symptoms intensify. Positive symptoms are Tinel's sign - increased paresthesia and pain syndrome when raising the hand and Phalen's test - increased symptoms when bending the hand. The diagnosis is based on clinical examination, electroneuromyography (ENMG), X-ray and MRI examination of the joint.

Treatment of carpal tunnel syndrome should be primarily aimed at reducing compression of the median nerve. This can be achieved by changing working conditions with a decrease in the load on the joint area, unloading with orthoses, immobilizing bandages at night. Non-steroidal anti-inflammatory drugs and analgesics are used. The use of hormonal anesthetic blockades (HAB) is effective.

A female patient K., 46, a seamstress, came to our clinic complaining of severe numbness and pain in the first, second and third fingers of her left hand for 4 months, and pain in the wrist area. The complaints appeared after a heavy load – she sewed for more than 9 hours without a break. The condition is progressing, the numbness has also started to bother her at night, which is why the patient sleeps poorly. During the examination: Tinel's sign and Phalen's test are positive; according to ENMG data –

damage to the median nerve of the left hand in the carpal tunnel area. The severity of the pain syndrome according to VAS is 8-9 points. No concomitant diseases were found.

We used the following algorithm for complex treatment of carpal tunnel syndrome: point and segmental massage, post-isometric and post-reciprocal relaxation of muscles of the muscle groups concerned (according to K. Lewit, G. Ivanichev); physiotherapeutic treatment – magnetotherapy, Darsonval, laser therapy. In addition, we used HAB twice with an interval of 3 days. The duration of the course of treatment was 10 days.

After the treatment, the patient stopped being bothered by pain and numbness in the hand. Tinel's sign and Phalen's test are negative, movements in the joint are painless. In the future, it is recommended to observe the work and rest regimen, periodically conduct courses of therapeutic massage, an individual set of therapeutic physical training was selected, and ENMG is recommended - a study of the upper limbs in dynamics.

Thus, we consider it possible to recommend the algorithm we proposed for treating patients with carpal tunnel syndrome.

#### **References:**

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2. M. Hanson, B. Charmer, J. Pinedo, A. Paterson. Carpal tunnel syndrome: identification and management. The Pharmaceutical Journal. October 2021.