

**DIFFICULTIES IN THE DIAGNOSIS AND THERAPY OF ULNAR TUNNEL
NEUROPATHY**

Associate Professor **Mamatov M.A.**,

Candidate of Medical Sciences,

Assistant **Rahmatullayev F.A.**,

Mamasadikov A.R.

3rd year master's student

Department of Neurology of Andijan State Medical Institute.

Annotatsiya: Tunnel neuropathy of the ulnar nerve is an urgent problem in medicine. This condition often accompanies injuries to the elbow joint area. Neuropathy of the ulnar nerve is manifested by weakness when trying to squeeze the hand into a fist and hold objects with the brush, lack of sensitivity of the skin of the V and partially IV fingers, atrophy of the hypotenor and small muscles of the hand.

Keywords: Ulnar nerve, tunnel syndrome, compression, nerve infringement, peripheral nerves, vessels.

Pathogenesis of tunnel neuropathies. Tunnel neuropathies belong to mononeuropathies and are often observed against the background of endocrine diseases (diabetes mellitus, hypothyroidism, acromegaly), joint diseases (gout, deforming osteoarthritis, rheumatoid arthritis), volumetric formations of the nerves themselves (schwannoma, neuroma), paraneoplastic polyneuropathies (sarcoma, lipoma), depository neuropathies (amyloidosis), with a hereditary tendency to paralysis from compression, as well as with some physiological changes in hormonal status (pregnancy, lactation, menopause), taking oral contraceptives.

Tunnel syndromes cause a complex of sensory, motor and trophic disorders caused by compression, nerve infringement in narrow anatomical spaces (anatomical tunnels). The walls of the tunnel are natural anatomical structures (bones, tendons, muscles), normally peripheral nerves and vessels freely pass through the tunnel.

Vegetative-vascular reactions also play a significant role in the pathogenesis of tunnel neuropathies.

The main tunnel neuropathies of the shoulder girdle include:

Neuropathy of the ulnar nerve and its branches. Compression of the ulnar nerve at the level of the elbow joint can be localized in two typical places: in the ulnar nerve hannel (cubital canal), formed by the ulnar nerve furrow located behind the medial condyle of the shoulder, and a fibrous plate stretched between the medial condyle of the shoulder and the ulnar process, and at the exit of the ulnar nerve from the cubital canal, where it is compressed a fibrous arch stretched between the two heads of the elbow flexor of the wrist. Prolonged compression of the ulnar nerve, which occurs when prolonged bed rest (especially in patients in an unconscious state), often leads to neuropathy of the ulnar nerve due to compression of its trunk between the arm and the edge of the bed. Prolonged use of the phone leads to dysfunction of the ulnar nerve. An early sign of neuropathy is paresthesia, pain or itching along the ulnar edge of the hand, in the 5th and ulnar half of the 4th finger. Palpation and percussion of the trunk of the ulnar nerve at the level

of the elbow joint are accompanied by its soreness and paresthesia in the area of innervation of the ulnar nerve on the hand.

As the disease develops, motor disorders occur, manifested by weakness of the abduction and reduction of the 5th and 4th fingers, the typical position of the fingers of the clawed hand, atrophy of the hypotenar muscles and interosseous muscles, especially the first interosseous muscle. Guyon's bed syndrome: manifested by pain and paraesthesia in the area of innervation of the palmar branch of the ulnar nerve, weakness of adduction and abduction of the 5th and 4th fingers of the hand. In the late stage of the disease, atrophy of the hypotenar and interosseous muscles occurs. In case of infringement of the palmar branch of the ulnar nerve in the Guyon bed sensitivity remains in the innervation zone of the dorsal branch of the ulnar nerve on the ulnar half of the back surface of the hand. In the vast majority of cases, Guyon's bed syndrome is caused by chronic professional, household or sports traumatization of the palmar branch of the ulnar nerve at the level of the wrist joint and hand: bicycle (motorcycle) paralysis, developing from compression of the ulnar nerve with steering handles, pressure with working tools, prolonged use of a crutch.

Diagnostics

1. Tinel test — when percussion occurs in the area of damage above the projection of the nerve, pain and / or paresthesia appear in the area of nerve innervation, distal to the percussion site.
2. Falen test: Bending (or extending) the hand by 90 degrees leads to numbness, tingling or pain in less than 60 seconds. A healthy person may also develop similar sensations, but not earlier than after 1 minute.
3. Goldberg finger compression test — similar to Tinel's test, compression is performed with a large with a finger or elbow for 1 minute of the examined nerve. In response, paresthesia and pain occur along the course of the compressed nerve.
4. Turnstile (cuff) test —a tonometer cuff is applied proximal to the place of the alleged compression of the nerve and the pressure in it is increased to the level of normal systolic or slightly higher than it. They wait 1 minute. In the presence of tunnel syndrome, paresthesia appears in the area of innervation of the compressed nerve. This test can also be used to judge the severity of the disease, if you measure the time from the beginning cuff compression before the appearance of paresthesia. It is equally applicable for monitoring the effectiveness of treatment.

In order to determine the degree of nerve conduction disorder, clarify the nature of the pathological process and its localization, as well as with dynamic observation of patients during treatment, a number of additional research methods are used: radiography, electroneuromyography (ENMG), ultrasound diagnostics, computed tomography (CT), magnetic resonance imaging (MRI). Among the instrumental diagnostic methods, electroneuromyography is the most informative, which allows us to more reliably judge the severity of the lesion and the processes of nerve recovery. With ENMG, a decrease in the amplitude and speed of the pulse along the motor and sensory fibers and an increase in residual latency at the site of nerve compression and distal is determined. Volumetric processes inside the tunnel (neoplasms, aberrant muscles and vessels, proliferation of connective tissue, etc.) are detected by CT and MRI. A relatively new, but very promising technique evaluation of morphological changes in peripheral nerves is ultrasound diagnostics. During the scanning process, the anatomical integrity of the nerve trunk, its structure, the clarity of the nerve contours and the condition of the

surrounding tissues are evaluated. The method of ultrasound diagnostics allows not only to detect volumetric neoplasms (schwannomas, neurinomas) that cause nerve damage, but also to assess the mobility of the nerve in the tunnel during dynamic tests, the presence of cicatricial-adhesive changes, inflammatory edema or, conversely, nerve atrophy when compared with the nerve of an intact limb.

Treatment. It is based on the use of nonsteroidal anti-inflammatory drugs, decongestants, analgesics, anticholinesterase, demyelinating agents, as well as physiotherapy (ultrasound with hydrocortisone on the tunnel canal area), acupuncture and physical therapy. In the absence of an effect, glucocorticoids are used in the form of blockade (injections are carried out directly into the tunnel zone or into the tissues surrounding the nerve) or systemic therapy (repeated courses for one to two months). For blockades, as a rule, kenalog or diprospan is used (2 ml per 5 ml of 0.5% novocaine or 2% lidocaine); the number of blockages is determined by the duration of the disease and the degree of nerve dysfunction, but no more than 4 with breaks of two weeks.

Conclusion. Despite great success and quite a long experience in the study and treatment of tunnel neuropathies, there are many unresolved issues. The etiology and pathogenesis of tunnel lesions of nerve trunks have not been fully studied. The outcome depends on the timeliness and adequacy of treatment, correct preventive recommendations, orientation of the patient in choosing or changing a profession predisposing to the development of tunnel neuropathy. All this determines the relevance of this topic and the need for further research in this direction.

Literature

1. Eckert M., Schejbal P. Therapy of neuropathies with a vitamin B combination // FortschrMed. — 1992, Oct 20. — № 110(29). — Pp. 544-548.
2. Gelberman R.H., Szabo R.M., Williamson R.V. et al. Sensibility testing in peripheral-nerve compression syndromes. An experimental study in humans // J. Bone Joint Surg. Am. — 1983. — № 65(5). — P. 632-638.
3. Graham R.G., Hudson D.A., Solomons M. A prospective study to assess the outcome of steroid injections and wrist splinting for the treatment of carpal tunnel syndrome // Plast Reconstr. Surg. — 2004. — № 113(2). — P. 550-556
4. Barinov A.N. Neuropathic pain: clinical recommendations and algorithms // Doctor. — 2012. — No. 9. — pp. 17-23.