

Acupuncture in the treatment of vegetative-vascular disorders in  
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Acupuncture in therapy of vegetative vascular disorders in cases of cervical  
osteochondrosis  
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#### RESUME

The authors studied the influence of acupuncture (reflextherapy) on the blood supply of the brain against the background of vegetative-vascular disorders in 45 patients with osteochondrosis of the cervical spine. Patients suffered from syndrome of vertebrobasilar insufficiency, cervi-cobrachialgia, cervico-cephalgia. Survey methods: Doppler ultrasound and duplex scanning of blood vessels of head and neck, magnetic resonance tomography of the head and neck using vascular opacification. All patients underwent 10 sessions of corporal acupuncture. Consequently, the blood flow improved in the vertebral arteries and the vertebrobasilar and venous flow in the periorbital and basal age. Also, the clinical symptoms decreased.

Keywords: osteochondrosis of the cervical spine, cerebral blood flow, reflexology, acupuncture

#### SUMMARY

The authors studied the effect of acupuncture (reflexotherapy) on the blood supply to the brain against the background of vegetative-vascular disorders in 45 patients with osteochondrosis of the cervical spine. The patients had a syndrome of vertebrobasilar insufficiency, cervicobrachialgia, cervicocephalgia. Examination methods: Doppler ultrasound and duplex scanning of the vessels of the head and neck, magnetic resonance imaging of the head and neck with vascular contrast.

All patients underwent 10 sessions of corporal acupuncture. As a result, an improvement in blood flow in the vertebral arteries and in the vertebrobasilar basin, as well as in venous blood flow in the system of periorbital and basal veins, was stated. In parallel, clinical symptoms regressed.

Key words: osteochondrosis of the cervical spine, cerebral blood flow, reflexology, acupuncture.

The problem of osteochondrosis of the spine attracts a lot of attention of domestic and foreign doctors of various specialties [1]. Clinical manifestations of osteochondrosis of the cervical spine are one of the most common causes of temporary disability, second only to osteochondrosis of the lumbar localization. The greatest severity and frequency of clinical manifestations is observed in people of the most efficient age of 30-50 years. Cervical clinic

osteochondrosis is largely due to the anatomical and physiological features of the cervical spine. Degenerative changes in the disc are more common in the most mobile lower cervical spine (C5, C6, C7). There are some peculiarities in the mechanism of compression of nerve and vascular formations in osteochondrosis. Due to the high density of the central part of the posterior longitudinal ligament, posterior hernias in the cervical region are extremely rare. Slip of the disc in the lateral and posterolateral directions is characteristic. The proliferation of osteophytes in the region of the hook-shaped processes of the cervical vertebrae are directed towards canal a. vertebralis and often causes irritation or squeezing. In this regard, cerebral circulation failure is often provoked by turning the head and overextension of the neck [1, 2].

#### Purpose of the study

Our task was to determine the effect of reflexology on cerebral blood flow in patients with osteochondrosis of the cervical spine. The studies were carried out in the neurological department of the St. Petersburg Medical Academy of Postgraduate Education.

#### Materials and methods

The study involved 45 patients (31 men and 14 women) aged 40 to 62 years with a diagnosis of cervical spine dorsopathy. For diagnostics, doppler ultrasound and ultrasound duplex scanning of the vessels of the head and neck (before and after treatment) were used to assess the effectiveness of acupuncture; X-ray of the cervical spine; magnetic resonance imaging (MRI) of the head and neck; magnetic resonance angiography (MRA) of the head and neck.

The neurological syndrome of dorsopathy was represented by: the syndrome of vertebro-basilar insufficiency (18 patients); cervicobrachialgia syndrome (15 patients); cervicocephalgia syndrome (12 patients). Against the background of generally accepted drug treatment (thioctacid, milgamma, cavinton, cerebrolysin, dexamethasone, midocalm, ketans, mexidol, and in some cases manual therapy), all patients underwent acupuncture.

Complaints at admission were of dizziness (28 people), headache in the occipital region (20 people), pain in the cervical spine (19 people), "flies" before the eyes (15 people), noise in the head (2 people). people), numbness in the fingers (26 people), increased blood pressure (9 people), unsteadiness when walking (12 people), pulling pains in the interscapular region (10 people), pulling pains in the shoulder area (15 people) .).

The results of the ultrasound Doppler sonography of the vessels of the head and neck, ultrasound duplex scanning of the vessels of the neck, revealed insufficient blood supply to the brain in the vertebrobasilar basin (VBB); there were signs of extravasal compression of both vertebral arteries (PA) in the V2 segment; signs of difficulty in the outflow of blood in the vertebrobasilar basin (VBB); signs of a moderate extravasal effect on the left PA; and signs of venous circulation in the system

## periorbital veins, in the system of basal veins and in the vertebrobasilar basin (VBB), vertebrogenic effects on the PA, hypoplasia of the right PA.

All patients underwent acupuncture treatment (10 sessions), using disposable needles with a diameter of 0.3 mm and a length of 25 mm to 40 mm. It is known that acupuncture affects the exchange of neurotransmitters, changing the functional state of the brain, and normalizes trophic processes in the body. In addition, acupuncture affects the receptor formations of the cervical collar zone, the regulation of the level of blood pressure, which is due to the suppression of central sympathetic regulation, the latter correlates with a decrease in the content of noradrenaline in the monoaminergic nuclei of the brainstem [4, 5] Acupuncture points (TA) were selected for treatment local, locally segmental and distant on the extremities. The main principle for choosing TA was the anatomical and topographic approach, which was based on the peculiarities of innervation and vascularization of the zones of their location. Distant points of influence (on the limbs, front and back surfaces of the body) were used on the data of modern literature, personal experience, as well as on the instructions of traditional Chinese medicine. For example, on the middle line of the head, buy-hui (VG20). In this area are located the aponeurosis, superficial temporal and occipital aa., I branches of the trigeminal nerve; the occipital nerves, the junction of the cervical segments and the trigeminal nerve, the junction of the innervation and vascularization of the left and right halves of the head; in the area of the temple of tai-yang (N), this area is innervated by the 2nd and 3rd centuries. V n., There is a temporal muscle and a superficial temporal artery. In the collar zone are the nuchal ligament, the belt muscle of the neck, the occipital artery, the posterior c. cervical nerve, the large occipital and suboccipital nerves, as well as the entire zone, is innervated by the cervical sympathetic ganglia. These features determine the choice of TA: ya-men (VG15), feng-fu (VG16), feng-chi (VB20), etc. ; in the area of the upper limb are the brachioradial m., the radial artery, the radial nerve, the first interosseous m., the leading m. and the short flexor of 1 finger, aa. palmar arches, radial, median, ulnar nerves, thereby causing a significant reflex effect on the area of the cervical thickening and autonomic formations of the spinal cord, including vasomotor, for example, TA: qui-chi (GI11), shen-men (C7), especially he-gu (G14) the junction of the innervation of the three nerves of the upper extremities, etc. The choice of TA of the lower extremities is also due to the peculiarities of the innervation of the regions, where they are located is the sciatic tibial nerve rich in vegetative fibers, as well as large arterial trunks, which have rich innervation of the autonomic nervous system. Including centuries. arterial ankle network, gastrocnemius N., centuries. peroneal N. points such as: feng-long (V60), tai-si (R3), tszu-san-li (E36), wei-chzhong (V40), cheng-shan (V57), etc. ; on the front surface of the abdomen: shang-wan (VC3), zhong-wang (VC12), qi-hai (VC6), guan-yuan (VC4), in the back: xin-shu (V15) (used for cardiovascular pathology), shen-shu (V23), etc. All of these points are selected in accordance with the guidelines of traditional Chinese medicine. Method of exposure - exciting option II (exposure 20 min.) With dizziness; inhibitory option II (exposure 30 min.) for pain syndromes; transitional (exposure 25 as well as large arterial trunks, which have a rich innervation of the autonomic nervous system. 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min.) with a combination of symptoms [3, 4].

### Research results

As a result of the treatment with acupuncture and control of the vessels of the head and neck by ultrasound Doppler sonography, ultrasound duplex scanning of the neck vessels, it was noted that the blood flow and the level of cerebrovascular reactivity normalized through the vertebral arteries, which was expressed in the following:

- the blood flow is symmetrical, without signs of compression in the extravasal compression of both PAs in the V2 segment;
- after treatment, positive dynamics was expressed in the form of a decrease signs of venous discirculation in the vertebral-basilar basin;
- blood flow through the vertebral arteries is sufficient;
- after treatment of significant hemodynamic blood flow disorders

no intracranial arteries were found: the level of cerebrovascular reactivity was not changed, the level of peripheral resistance was within the normative values, and the speed indicators were within the age norm. Reduction of venous discirculation in the periorbital vein system, in the basal vein system and in the vertebro-basilar basin.

Against the background of the course of treatment (10 acupuncture sessions), the patients noted an improvement in their general condition, restoration of the volume of active movements in the cervical spine, 85% of patients completely stopped headaches, 57% noted the disappearance of dizziness, 23% of patients recovered the volume of active and passive movements in shoulder joint, in 10% of patients there was an improvement in vision in the form of an increase in the clarity of the object in question and the disappearance of photopsies ("flies").

Thus, reflexology improves blood flow in the vertebral arteries, reduces venous discirculation in the periorbital vein system and in the basal vein system of the vertebral-basilar basin, relieves pain and vestibular disorders. The results of our observations make it possible to consider it expedient to use acupuncture in the discussed pathology and, by indirect signs, to establish the effect of this method on the normalization of cerebral blood flow in general.

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