

Research of vegetative support of activity
in patients with pain syndromes
by the method of segmental bioelectronic functional diagnostics
NS. Kirgizova¹, A.V. Miller², Z.M. Mizieva²

(¹Center "IMEDIS", ²GOU VPO MMA them. THEM. Sechenov, Ministry of Health and Social Development of the Russian Federation, Moscow, Russia)

Within the framework of assessing the possibilities of the adaptive function of the nervous system in the process of rehabilitation, it becomes necessary to determine its parameters, namely, the initial autonomic tone, autonomic reactivity and autonomic support in numerical equivalents [1, 4].

Earlier, in order to determine the initial autonomic tone (IVT) and autonomic reactivity (VR), we conducted studies using segmental bioelectronic functional diagnostics (SBFD), as a result of which the integral coefficient of instability (ICI) was determined [7, 9].

However, the most important indicator of the state of the reserves of the adaptive nervous system, which determines the possibilities of rehabilitation, is the autonomic support of activity (VOD) [4, 8].

VOD is the ability of the ANS to maintain long-term VR at a certain level, which mainly reflects the state of the autonomous regulatory system.

In clinical neurology, to assess VOD, a clinorhthostatic test is performed with the processing of the results of blood pressure, heart rate, and respiratory rate before and after the test.

The authors of this article propose to use the capabilities of the APK "IMEDISEXPERT" (LLC "CIMS" IMEDIS, Moscow), which makes it possible to conduct studies of FOS using the SBPD method with a functional load. To do this, it is proposed to calculate the patient's CNI index before the initial session of SBPD, and then after carrying out a functional load and a second session of SBPD with the definition of CNI. It is proposed to determine sufficient VOD while maintaining the IQN in the norm corridor, or changing the indicators towards the norm corridor.

Purpose of work: to investigate VOD in patients of various groups with pain syndromes using the FBS method to determine the prognosis of the prospects for recovery.

Materials and methods

Examination by the SBPD method was carried out using an apparatus for electropunctural diagnostics, drug testing, adaptive bioresonance therapy and electro-, magnetic and light therapy according to BAT and BAZ computerized "IMEDIS-EXPERT", manufactured by LLC "CIMS" IMEDIS "(reg. 022a2005 / 2263-05 dated September 16, 2005).

The study of SBPD indicators was carried out in patients with severe and less severe pain syndromes before and after functional load. A session of bioresonance therapy lasting from 15 to 45 minutes was used as a functional load.

Two study groups and one control group were formed according to generally accepted criteria [1, 3, 5, 6, 10].

The first group of the study was represented by 30 patients, including 24 women, 6 men, with severe pain syndromes, pain syndromes in the area of the lumbar spine, the average age in the first group was 44.17 ± 13.39 . The second group of the study was represented by 30 patients, of whom women - 18, men - 12, with less pronounced pain syndromes in the lumbar spine with an average age of 40.87 ± 9.93 . The control group was represented by 30 patients, including 16 women, 14 men, with an average age of 44.43 ± 12.95 , who did not complain of pain. The distribution by sex and age is presented in table. one.

Table 1

Patient groups	Average age	Ratio m	
		suppers and women	husband.
Control group (n = 30)	44.43 ± 12.95	fourteen	sixteen
Group of patients with severe pain (n = 30)	44.17 ± 13.39	6	24
Group of patients with less severe pain (n = 30)	40.87 ± 9.93	12	18

results

All patients underwent SBPD, baseline CNI was determined ... Average IQN for the group of patients with severe pain syndrome initially was 38.5 ± 4.52, the average CNI in the group of patients with less severe pain syndrome was 9.31 ± 4.48 initially, the average CNI in the control group was 15.43 ± 4.56 at baseline.

As a functional load, a session of individually selected bioresonance therapy was carried out, after which a repeated study was carried out using the SBPD method and a repeated determination of the ICN was carried out. The data obtained were processed using the MS program Excel using statistical methods and values with mean calculating the arithmetic mean deviation (Table 2).

table 2

	Average original IQN by groups	Average initial TSC values by subgroups	Average TSC values after load by subgroups	Difference indicators before and after load
Control group	18.07 ± 3.38	18.07 ± 3.38	15.47 ± 3.20	4.87 ± 2.18
A group of patients with severe pain	37.76 ± 4.57	38.10 ± 5.12	22.17 ± 6.22	16.33 ± 6.12
		35.75 ± 3.36	43.85 ± 1.34	8.36 ± 3.99
A group of patients with less pronounced pains	8.96 ± 2.99	6.47 ± 1.69	14.63 ± 4.25	8.36 ± 3.75
		11.46 ± 3.48	4.34 ± 1.76	7.12 ± 4.17

In the control group, the initial average IQI indices correspond to the interval of 11–25 conventional units, after the functional load, the IQI indices remain in this interval.

In the group of patients with severe pain, most of the initial indices of the CNI lie in the range of 26–45; after the functional load, some of the indicators pass into the interval of the control group, some of the indices of the CNI increase and deviate from the interval of the control group.

In the group of patients with less pronounced pain syndrome, the initial indices of the CNI are in the range of 0-10 conventional units, after the functional load, some of the indicators go into the interval of the control group, some of the indices of the CNI decrease and deviate from the interval of the control group.

conclusions

VOD in the control group, according to the SBPD data, is characterized by IQI indices of 11–25 conventional units, sufficient positive dynamics in the difference in IQI indicators before and after functional load, which indicates a sufficient adaptive function of the ANS.

VOD in the group of patients with severe pain syndromes is characterized by indices of initial CNI in the range of 26–45 conventional units, high indices of difference in CNI before and after functional load. At the same time, part of the CNI in this group goes into the interval of indicators of the control group, which indicates the activation of the adaptive function of the ANS and rather a positive prognosis of the prospects for recovery, in some patients, the CNI increases and deviates from the interval of the control group, which indicates a decrease in the adaptive function of the ANS and rather unfavorable recovery prognosis.

VOD in the group of patients with less severe pain syndromes is characterized by low initial indices of CNI in the range of 0-10 conventional units, some of the CNI indices in this group increase after functional load and tend to the interval of the control group, which indicates the preservation of the adaptive function of the ANS and a rather favorable prognosis recovery. In some patients in this group, CNI indices decrease, deviate from the interval of the control group, which indicates insufficient adaptive function of the ANS and a rather unfavorable prognosis of recovery.

Literature

1. Alekseev V.V., Yakhno N.N. Pain. Diseases of the Nervous System: A Guide for Physicians / Under ed. N.N. Yakhno and D.R. Shtulman. - M.: Medicine, 2001. - T. 1. - P. 106-24.
2. Baevsky R.M., Kirillov O.I., Kletskin S.Z. Mathematical analysis of changes heart rate under stress. - M.: Science. 1984. - S. 39-93.
- 3 Vasiliev A.Yu., Vitko N.K. Computed tomography in the diagnosis of degenerative changes in the spine. - M., 2000. -- S. 243.
4. Vein A.M., Solovyova A.D., Kolosova O.A. Vegeto-vascular dystonia. - M.: Medicine, 1981. -- S. 320.
5. Danilov AB Neuropathic pain. Neuromedia. - 2003. -- S. 86.
6. Kukushkin M.L., Khitrov N.K. General pathology of pain. - M.: Medicine, 2004. -- P. 144.
7. Gotovsky Yu.V., Kosareva LB, Kempe N., Samokhin A.V. Segmental bioelectronic functional diagnostics: Method. recommendations. - M.: IMEDIS, 2005. -- S. 130.
8. Shilyaev R.R., Neudakhin E.V. Children's vegetology. - M. Medpraktika - M, 2008, 408 p.
9. Kirgizova N.S., Melnik A.V., Mizieva Z.M. Resource study of adaptation functions of the autonomic nervous system in patients with acute and chronic pain syndromes // In zhurn. Traditional medicine. - No. 4. 2009. - P. 49-52.
10. Borenstein D. Epidemiology, etiology, diagnostic evaluation and treatment of lumbar pain // International medical journal. - 2000. - No. 35. - P. 36-42.

NS. Kirgizova, A.V. Melnik, Z.M. Mizieva Research of autonomic support of activity in patients with pain syndromes by the method of segmental bioelectronic functional diagnostics

M.: "IMEDIS", 2010, v.1 - P.170-175