About the possibility of relief of phantom pain syndrome in the mode of multiresonance therapy using biologically active points on APK "IMEDIS-EXPERT"

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Phantom limb pain is one of the most serious painsyndromes. They were first described in 1552 by Ambroise Paré, but until now the mechanisms underlying them are not fully understood, and the prospects for their quick elimination are very sad.

Phantom pain syndrome (FBS) of amputated limbs (Greek phantasma, French fantome - ghost, imagination) is an imaginary sensation, an illusion of the presence of a lost limb. The frequency of its occurrence varies from 40 to 85% (A. Ovechkin, 1995; T. Jensen et al., 1985; T. Pohjolainen, 1991; M. Jahangiri et al., 1994; W. Zuurmond, 1996). This variation is due to differences in pain assessment methods and pain duration.

In persons who have undergone limb amputation after trauma, FBS develops much less frequently than in patients with long-term pain syndrome caused by ischemia in cardiovascular diseases. This is probably due to imprinting, a trace reaction in the cerebral cortex. Therefore, in recent decades, in parallel with the increase in the number of amputations for occlusive vascular diseases and malignant neoplasms of the extremities, there has been a trend towards an increase in the number of patients with FBS. Patients in this category represent a high-risk group in terms of the likelihood of developing FBS.

One of the most important properties of phantom pain is the presence of trigger zones, zones of biologically active points that can spread to healthy areas on the same or opposite side of the body. A light touch on the other limb, or on the head at a certain point, can trigger an attack of severe pain in the phantom limb. Obviously, pain away from the stump can cause phantom pain. For example, angina pectoris that develops within 25 years after amputation can provoke severe pain in the phantom limb with each attack [1, 2, 4].

In domestic medicine, the theory of generator and systemic mechanisms of Academician of the Russian Academy of Medical Sciences G. Kryzhanovsky has gained recognition, according to which pathological neurogenic pain is based on the formation of generators of pathologically enhanced excitation in the structures of the nociceptive system, which are aggregates of hyperactive neurons with weakened inhibitory control and the ability to self-sustaining excitement. One of the conditions for the formation of HPUV is the emergence of stable depolarization of neurons, which is observed both with prolonged nociceptive stimulation (CJ Woolf, 1991) and directly with damage to peripheral nerves (PD Wall, 1991). The GPUV in the dorsal horns, as in the supraspinal parts of the nociceptive system, are complex formations consisting of various nerve elements with different

nonsynaptic and, probably, synaptic mechanisms that work as network generators capable of developing long-term self-sustaining activity without additional external stimulation [2].

Comparison of the subjective assessment of pain in patients with FBS with the nature of the bioelectric cortical activity according to the EEG revealed a clear correlation between the characteristic features of the EEG pattern and the clinical manifestations of pathological pain [4].

The mild clinical form of FBS in most patients was manifested by the predominance of the alpha rhythm on the EEG, irregular in frequency (from 9 to 12 Hz), with an amplitude of up to 40–80 μV, with a sharpened waveform and smoothed zonal distribution. At the same time, moderately pronounced slow and fast activity was noted, mainly in the anterior regions of the brain.

The severe clinical form of FBS was characterized on the EEG by the dominance of fast activity of 13.5–32 Hz in almost all leads, superimposed on synchronous slow oscillations (1–3 Hz), presented most regularly in the frontal and central leads, as well as by irregular alpha and theta potentials -activity. The maximum amplitude values of fast and slow EEG signals in different patients varied from 30–40 to 60–100 μV. Alpha activity was represented by individual, pointed waves. It should also be noted that the theta activity is relatively low, represented on the EEG by individual high-amplitude potentials.

In patients with moderate pain syndrome, the EEG pattern was something in between the above extreme features of the bioelectrical activity of the cerebral cortex. The EEG pattern was characterized by relative desynchronization of bioelectrical activity, polymorphic or dysrhythmic oscillations. The EEG lacked a clearly defined leading rhythm, but high-amplitude slow potentials and high-frequency beta discharges up to 50 μV appeared. In some areas of the recording, they prevailed over the generation of the alpha rhythm and periodically replaced it in the general EEG picture, mainly in the frontal-central regions of the brain [4].

It is known that in patients with FBS, a positive therapeutic effect can be achieved when using a course of complex therapy, including percutaneous electroneurostimulation (TENS) with a program for generating packets of impulses with a frequency of 125 Hz and a repetition rate of 4 Hz, applied to trigger and indifferent points of the stump in the mode of random generation of impulses lasting 10 s during a 30-minute session, as well as acupuncture effects using the Su-Jok method [3, 5].

We used the method of relief of FBS from the standpoint of bioresonance therapy, based on the model of neuroinformation exchange in the system of the whole organism. This model assumes the existence and interaction of trigger zones of the central nervous system (centers) and trigger zones of other organs, including the skin surface with the so-called biologically active points. (BAP), which are essentially morphogenetic summation points of reflexogenic receptive sensory fields.

The database of the software "IMEDIS-EXPERT" on electropuncture therapy contains the values of the frequencies of biologically active points obtained by the founder of the method, R. Voll. Since the IMEDIS equipment reproduces neuron-like impulse signals in the electropuncture therapy mode, the main reference signals for testing by the method of autonomic resonance test (VRT) and subsequent therapy were BAP frequencies, but in a sequence based on the principle of increasing the frequency from 1 Hz to 98 Hz. I would like to note that all the above BAP frequencies are in the range of one or another rhythm of the human brain. Testing by the ART method was carried out simultaneously on devices
- hardware and software complex (AIC) "IMEDIS-EXPERT" and a therapeutic apparatus for establishing an individual order of BAP frequencies in the form of an individual induction therapy program by sequentially adding them to the selected group. In this case, a device for magnetic therapy "inductor" was used, which was located on the patient's cranial vault. That is, at the beginning, the first BAP frequency (on the APC) was determined, which directly gives the maximum decrease in the measurement level according to ART, then, against the background of exposure to this first frequency (already from the therapeutic device), the second frequency was selected, which synergistically with the first frequency gave the maximum decrease in the measurement level ... Then, against the background of simultaneous exposure to two frequencies (from the therapeutic apparatus), the third frequency was selected,

That is, we used the principle of summation of the impact, which was first described by I.M. Sechenov in 1863. The summation of the impact can be sequential or simultaneous (spatial). For these purposes, up to three "inductors" were used, connected in parallel to the apparatus and placed in the projection of the brain (on the cranial vault), in the projection of the corresponding zone of the spinal cord and the stump of the limb.

Thus, multiresonance therapy was composed as a sum of an individual induction program and endogenous bioresonance therapy with modulation according to the same individual induction program along the selected meridians. In some cases, the therapy in patients was of a monofrequency nature, while the greatest efficiency was tested at the frequency of the meeting point of all meridians - bai-hui (40.10 Hz ± 1%). The actual frequency of "phantom pain" is 18.5 Hz; 29.5 Hz; 49.5 Hz and 100 Hz from the base unit have also been shown to be effective.

Recording from the patient's stump was used as an autonosode. Additionally, post-traumatic homeopathic remedies were tested - Traumeel S, Arnica, Symphitum, serum of neurovascular bundles, organopreparations of remote organs, etc.

Clinical examples

1. Patient G., 62 years old, disabled at LPA ChNPP. Complains about periodic severe pain between the 2nd and 3rd fingers of the amputated lower limb (lower leg, ankle), especially when the weather changes. At

the testing determined the pronounced electromagnetic load and cicatricial interference fields. Recording was made from the patient's stump and from the symmetrical zone of the healthy limb. BAP frequency testing - 5.5 Hz; 5.9 Hz; 10.1 Hz; 12 Hz; 55.4 Hz; 55.6 Hz; 72 Hz. Multiresonance therapy was carried out along the meridian of nervous degeneration (subtraction and erasure of the record from the stump) with modulation at the above frequencies. The patient notes a decrease in pain syndrome. In a dream, he stopped feeling his amputated limb.

2. Patient M., 38 years old, in the postoperative period of amputation of the lower limbs to the knee due to thromboembolism and occlusion. Complaints of burning pain at a point in the middle of the back surface of the amputated lower leg. BAP frequencies were tested: 18.5 Hz; 18 Hz; 17 Hz; 14-13 Hz; 11 Hz; 10.1 Hz; 5.5 Hz; 3 Hz; 6.6 Hz; 7 Hz; 7.5 Hz; 7.6 Hz. Additional preparations were tested - Traumeel, Arnica, serum of neurovascular bundles. Meridians of nervous degeneration, blood circulation, liver, gallbladder. Complex multiresonance therapy with BAP frequency modulation was carried out. The patient noted a significant reduction in pain and, accordingly, reduced the intake of painkillers.

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D.D. Tikhomirov, T.Yu. Galunenko On the possibility of relief of phantom pain syndrome in the mode of multiresonance therapy using the frequencies of biologically active points on the APK "IMEDIS-EXPERT" // XIX