

INVESTIGATION OF REFLEX EXCITABILITY OF THE SEGMENTAL APPARATUS OF THE SPINAL CORD IN PATIENTS WITH FIBROMYALGIA

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Abstract: Fibromyalgia (FM) has taken a strong place in recent years among the most urgent and complex problems of medicine. There is no doubt about the practical significance of its study, since FM is the most common form of chronic myalgic syndromes. Meanwhile, there are many unresolved issues in the problem of FM; it is called a myth, calling into question the reality of it as an independent disease.

Key words: Fibromyalgia, myofascial pain syndrome.

The purpose of the study: To study the reflex excitability of the segmental apparatus of the spinal cord in patients with fibromyalgia

Material and methods: Clinical and electrophysiological examination of 54 FM patients (9 men and 45 women) aged 21 to 50 years was carried out. The diagnosis of FM was established on the basis of generally accepted criteria and methodological recommendations. Along with neurological and vertebro-neurological examinations, all patients underwent manual testing of musculoskeletal and fascial ligamentous structures of the locomotor system.

The results of the study: A neuroorthopedic analysis of the FM patients we examined showed that a significant number of musculoskeletal structures of the axial skeleton and limbs can be the source of pain. The following areas and frequency of pain were identified: craniovertebral junction area — 100%, neck area — 82%, shoulder-scapular area — 87%, interscapular area — 93%, anterior chest wall area — 69%, lumbar spine — 95%, gluteal area and hip area — 87%, the anterolateral surface of the thigh is 65%, the area of the posterior surface of the shin is 72%. Localization is diffuse, symmetrical, or dominated by specific algic zones. Next, we conducted a clinical analysis of the muscles involved in the design of the clinical picture of MFBS. Analysis of the results of this section of the study revealed the most typical variants and frequency of painful muscle syndromes: suprascapular syndrome (24%), interscapular pain syndrome (21.4%), sclerotomic cephalgia (11.1%), anterior chest wall syndrome (8.3%), anterior stair muscle syndrome (7.4%), scapula-lifting muscle syndrome (2.8%), interdigital-brachial plexopathy was observed in only 1 patient (0.9%), piriformis muscle syndrome (14.8%), ilio-lumbar muscle syndrome (6.5%), syndrome of the muscle stretching the wide fascia of the thigh (2.8%). The average values of the muscle syndrome index were 8.6 points in patients with FM, and 12 points in patients with FM with topical MFBS. The average values of the phenomenon of vibrational recoil were 6.2 points in patients with FM, and 8 points in patients with FM with combined MFBS.

Pathological motor stereotype was revealed in 31.5% of the FM patients we observed: upper cross syndrome (17 patients — 15.7%); lower cross syndrome (10 patients — 9.3%); storey (layered) syndrome (7 people — 6.5%). The results of this fragment of the study showed that FM is characterized by an increase in the excitability of elements of the mononeuron pool. This is indicated, in particular, by a decrease in the threshold of the reflex response, as well as a reduction in the range of increase in the amplitude of the reflex from the threshold to the maximum value. The results of the study of the amplitude-time parameters of MR in FM patients

showed that for FM with MFBS, the most characteristic is an increase in the reflex excitability of neurons involved in the implementation of the late component of the blinking reflex. It is known that the reflex arc of MR includes afferents of the first branch of the trigeminal nerve, efferents of the facial nerve, the nuclei of these cranial nerves, as well as neurons of the reticular formation of the brainstem. Obviously, the changes in MR parameters we found in FM patients indicate a violation of the reflex excitability of propriobulbar neurons of the brain stem and a weakness of inhibitory effects from supra-segmental structures on the motor neuron pool of the segmental apparatus of the brain.

Conclusions

1. In patients with fibromyalgia, along with sensitive points, latent and active myofascial trigger points are identified, which are involved in the design of the clinical picture of myofascial pain.
2. In 92% of patients with fibromyalgia, there is a modulation of the reflex excitability of the spinal cord. Its most characteristic variant is hyperreflexion (2%) of spinal motor neurons.
3. Patients with fibromyalgia (7%) are characterized by an increase in the reflex excitability of propriobulbar neurons involved in the implementation of the R2 component of the blinking reflex.
4. The combined technique of registering the H-reflex and the blinking reflex makes it possible to effectively assess the reflex excitability of the spinal and supraspinal parts of the nervous system in patients with fibromyalgia.

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