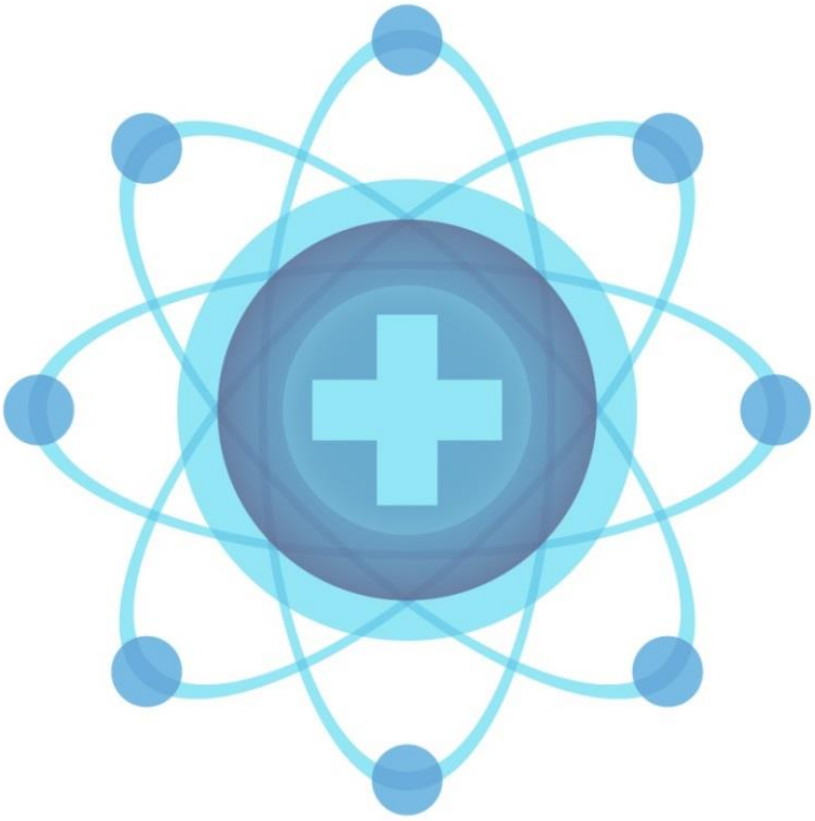

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Differentiated approach to the treatment of intervertebral hernias of the lumbosacral spine

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Relevance . About 30% of the population in developed countries suffer from chronic back pain [5, 10]. One of the causes of back pain is degenerative-dystrophic changes in the spine and intervertebral disc with the formation of a hernia leading to narrowing of the spinal canal and creating conditions for the development of compression or vascular spinal syndrome [1, 9]. The level of disability in degenerative diseases of the spine is 0.4 per 100,000 of the population and ranks first in terms of proportion among people with disabilities with other diseases of the musculoskeletal system, and in 2/3 of patients the ability to work is completely lost [6, 8].

Pathogenetically justified is the use of funds aimed, firstly, at limiting the flow of nociceptive impulses from the damaged area to the CNS, secondly, to suppress the synthesis of inflammatory mediators, and thirdly, to activate the structures of the antinociceptive system that controls the conduction of nociceptive impulses in the CNS [3, 4]. For this, a whole range (depending on the clinical task) of medicamentous and non-drug agents that reduce pain sensitivity and negative emotional experience can be used, including a complex of physical factors, reflexology, psychotherapy, etc. [2, 7].

Purpose of the study. To evaluate the use of surgical interventions in combination with medications for the treatment of intervertebral hernias of the lumbosacral spine.

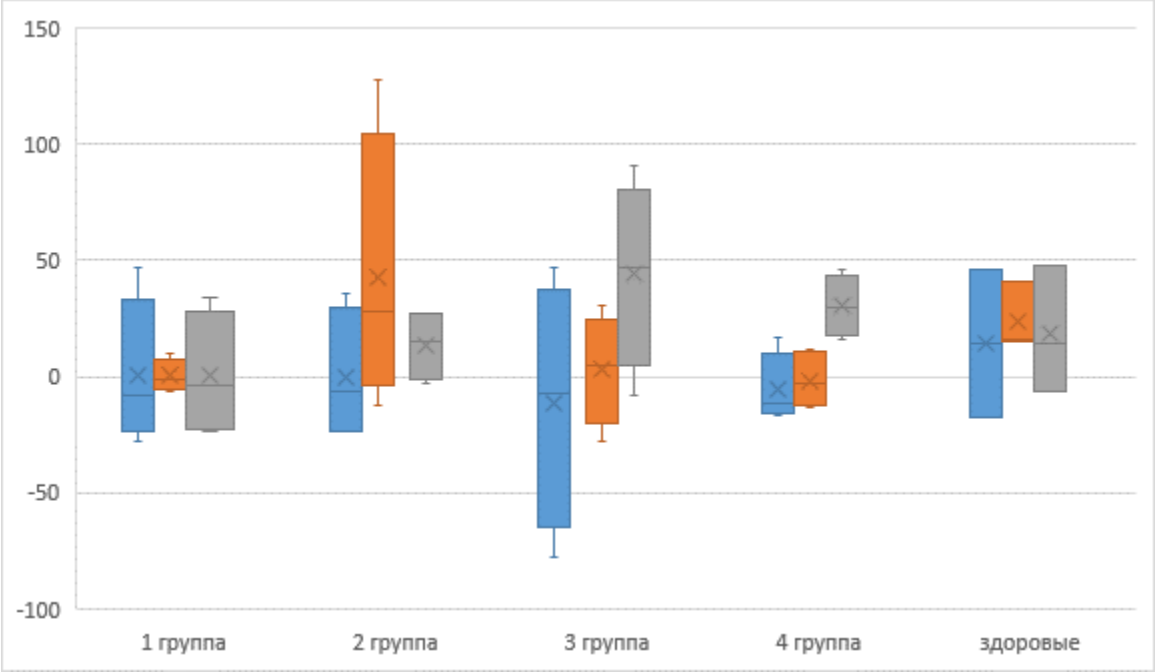
Materials and research methods. The object of the study were 120 patients aged 41 to 69 years, including 53 men and 67 women, who were operated on for a herniated disc in the lumbosacral spine using the posterior approach (interlaminectomy , removal of disc herniation, interspinous dynamic fusion using the Diam system) .) and were sent for rehabilitation 2-3 days after surgical treatment. By simple randomization, all patients were divided into 4 groups of 30 people. All patients in the postoperative period received basic drug therapy and for 2-3 days all patients received massage of the lower extremities and exercise therapy.

Statistical processing of the results was carried out using parametric and nonparametric methods.

Research results. On the 2nd-3rd day after the operation, all patients had pain in the lumbar spine with irradiation to the lower extremity. Patients described pain in different ways: burning, cutting, twisting, shooting. Reflex syndromes were most often unilateral. The most frequent complaints were pains in the lumbosacral region with irradiation: in one lower limb - 94% (78 people), both lower limbs - 6% (5 people), in the buttock area - 81% (67 people), in inguinal region - 8% (7 people). According to the four-component visual analog scale of pain, the values ranged from 5.6+0.4 to 7.9+0.3 points. Changes in motor activity were expressed in a decrease in muscle strength of the toes or the entire foot, which was assessed in points: no change

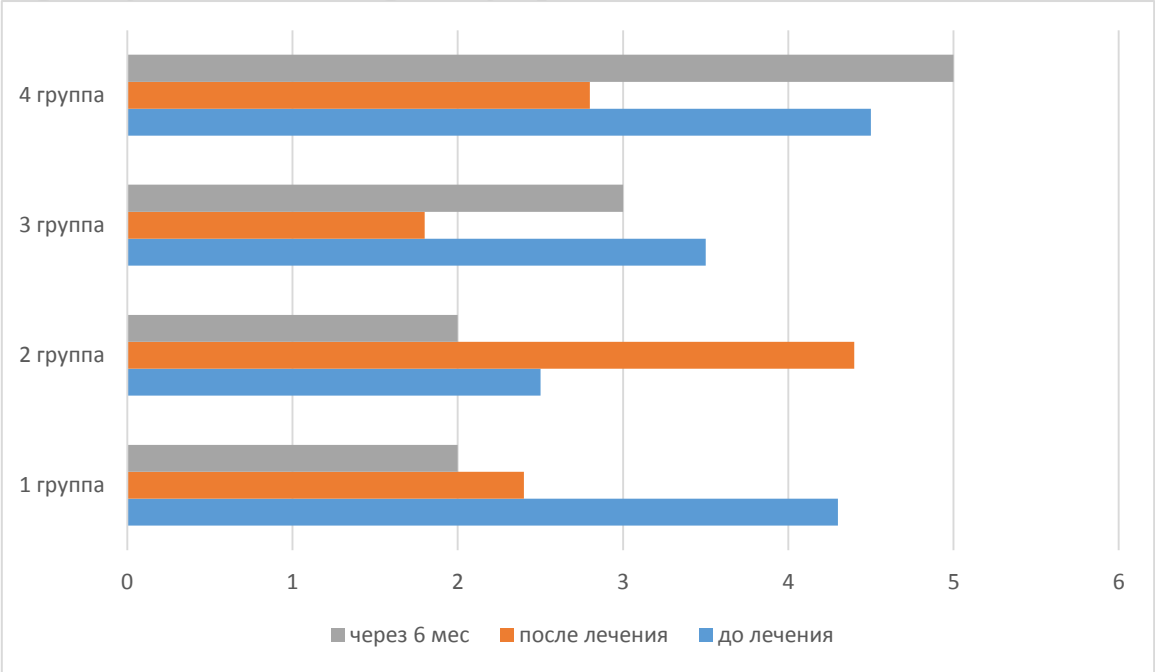
in muscle strength - in 76 people (0 points), decrease in muscle strength of the toe / toes in 33 patients (1 point), moderate foot paresis 11 people (2 points). Deep paresis was not identified. There was a violation of sensitivity according to the type of hypoesthesia in accordance with the level of damage in 74 people: along the entire lower limb - in 34% (25 people), a violation of sensitivity from the knee and below - in 45% (33 people), the back and plantar surface of the foot, and also toes - in 19% (14 people), gluteal region - in 1% (1 patient), along the outer edge of the thigh - 1% (1 patient), inguinal region - 10% (7 people). One of the indicative symptoms of nerve root irritation is the tension symptom - the straight leg raising test or the Lasegue symptom - detected in 98% of patients from 1.81±0.81 to 1.92 points. On the side of the lesion, vegetative-trophic disorders were noted, manifested by a change in the color of the skin, edema, impaired sweating, local changes in skin temperature, changes in the growth rate of nails and hair. During the electroneuromyographic examination, a decrease in the following indicators was noted: the bioelectrical activity of the muscles of the lower extremities, especially on the lower leg and foot, and the speed of impulse conduction along the motor fibers of the tibial and peroneal nerves on the side of the discradicular conflict compared to the " intact " side. The results of magnetic resonance imaging (in the preoperative period) showed the presence and location of herniated discs in the lumbosacral spine. When analyzing the data on the quality of life questionnaire, there is a decrease in indicators of both the physical component of health and the psychological component in comparison with healthy people. However, the largest percentage in the difference between the given numerical values was noted in terms of the physical component (pain intensity - above 60%) and the psychological component, in particular the social one (a decrease in social activity by more than 44%), role functioning due to the emotional state (a decrease of more than by 60%). During postoperative rehabilitation in all groups of patients who received laser therapy, in most cases , the nature of pain changed. They lost their original burning, cutting, twisting, shooting shade, became tolerable, more often had the character of aching, dull or squeezing sensations. The analgesic effect of the ongoing complex therapy began to appear after 5-6 procedures. After the end of the course of treatment, the severity of the pain syndrome: in the control group, improvement occurred in 33% of patients (9 people) - the pain disappeared, decreased in patients - 33%; when exposed paravertebral and along the sciatic nerve, complaints of pain disappeared in 58% (17 people) and decreased in 25% of patients (7 people); with paravertebral irradiation and the area of trigger points, the disappearance and reduction of pain occurred, respectively, in 44% and 33% of patients (13 and 10 people). Changes have occurred in the NVASS assessment system: already after five procedures in the groups where laser exposure was used, the intensity of the pain syndrome decreased by 2 times, and after the course by 6-5.6 times; in the control group, after 5 procedures, a decrease was noted by 1.4 times, and after the course, by 2.8 times. Recovery of sensitivity in group 1 was 80% of patients (15 people), in group 2 - 69% of patients (13 people), in group 3 - 58% of patients (10 people). In the control group, only 28% of patients (5 people).

Rice. 1. Main indicators of neurological status in patients of 4 groups.



Changes also occurred in the determination of the symptom of tension (symptom Lasegue): its significant improvement was noted and the best result was achieved in group 1, where the impact was carried out paravertebral and along the sciatic nerve.

Fig.2. Dynamics of Lasegue's symptom before and after treatment.



However, in the subsequent period, the values of this indicator again began to deteriorate slightly. After laser therapy, motor disorders leveled out, only 1 patient in the first group remained in the form of severe paresis, in group 2, 1 patient had mild paresis and one patient had severe paresis, in group 3, mild paresis was noted in 1 patient. There were no significant changes in the control group.

Conclusions: Thus, as a result of treatment, the greatest dynamics of the increase in the bioelectrical activity index was noted in the group of patients with exposure to infrared laser radiation paravertebral and along the sciatic nerve by 44 ±

5.2% of the short extensor "on the side of pain", in patients of the 2nd group - on 32±3.5%, in group 3 - by 30±4.0%.

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