

ASIAN JOURNAL OF PHARMACEUTICAL
AND BIOLOGICAL RESEARCH

AJPBR



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Influence of drug preparations in combination with non-drug agents on the course and prognosis of fibromyalgia syndrome .

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Relevance. According to studies, one of the most common chronic pain syndromes is pain in the lumbosacral region [3 , 5]. Throughout life, this pain of varying intensity is experienced by 48% to 100% of adults, and annually from 31% to 50% of the middle-aged population [12]. Chronic back pain affects about 30% of the population in developed countries [6]. It is on them that up to 75% of health care resources are spent on the treatment of back pain in general [8]. Acute pain in the back and lower extremities is one of the most common causes leading to temporary disability [11].

Most researchers consider the spinal roots, intervertebral discs, intervertebral joints, muscles to be the main source of pain in the lower back (LBP), as well as pathology of the pelvic organs as one of the important causes [1 , 7].

Most often, the syndromological diagnosis of " lumbalgia " or " lumboischialgia " prefers the lumbar region in the development of pain in the lower back, ignoring the significance of the pelvic region, especially the sacroiliac joint and pathobiomechanical changes that lead to dysfunction of this joint [4] . Perhaps this is also due to the fact that the majority of domestic and foreign authors have studied the pathology of the lumbar spine and its structures since [9] . While a few works are devoted to the study of the pathology of the sacrum and adjacent joints [2, 10] .

Purpose of the study. To study the role of functional pathology of the pelvic region as a cause of fibromyalgia development , to determine its place in the structure of pain in the lower back and to identify clinical variants of the course of fibromyalgia .

Materials and research methods . A total of 60 patients referred for consultation from healthcare institutions were examined. After a detailed history of the disease and a neurological, neuroorthopedic examination, these patients were diagnosed with sacralpi in 34.7% of cases . Of these, in accordance with the exclusion criteria, 133 patients were selected for further study, aged 16 to 80 years (mean age 39 ± 0.7 years), who were divided into two groups: the main group (PO patients) 1 comparison group (23 patients). In addition, a control group was formed, which included 20 healthy volunteers. Thus, 80 subjects took part in the study. Depending on the duration of the course of the disease, clinical manifestations and pathobiomechanical changes in the pelvic region, lumbar region and lower extremities, the main group was divided in turn into three groups. The first group included 16 patients with acute variant of fibromyalgia , the second group consisted of 29 patients with subacute variant of fibromyalgia , the third group consisted of 65 subjects, this group was designated as chronic variant of fibromyalgia and was

divided into two subgroups. Third group A: 43 patients with a chronic form of fibromyalgia in the acute stage, i.e. patients who had a functional blockade of the SIJ, with the presence of MFTZ in the periarticular tissues. Third group B: 22 subjects with functional blockade of the SIJ in the acute stage, with the presence of MFTH in the periarticular tissues and with a history of chronic lumboischialgia with the presence of MRI-verified herniated lumbar intervertebral discs and clinically proven, EMG- verified residual radiculopathy L₅, S₁. The comparison group consisted of 23 patients with MRI-verified lumbar disc herniation and radiculopathy L₅, S₁ in the acute stage.

Research results . An important diagnostic point in the diagnosis of " fibromyalgia " is the location of the pain. From 95% to 100% of patients with sacralgia pointed to the area of the sacrum and SIJ as a source of pain, in contrast to the patients of the comparison group, in whom the pain was localized in the lumbar region ($p < 0.05$) . in the subjects of the main group (56.3% of the first, 37.9% of the second, 14.0% of the third A, 13.6% of the third B groups). The pain practically did not descend below the knee area in the first group (6.3%), and in the second and third groups the pain radiated to the foot (3.4% and 7.0%). In the comparison group, in all cases, patients complained of pain in the distal lower extremities ($p < 0.05$).

According to the nature of pain in the first group, stabbing (87.5%) and shooting (75.0%) pains prevailed. The subjects of the second and third A groups complained of pulling pains (89.7 % and 95.3%, respectively), and in patients of the third B group and the comparison group, a combination of pulling (100% and 95.7%) and shooting (90.9%) % and 100%) pain. The data obtained indicate that patients with sacralgia may have the same type of pain as patients in the comparison group, where, in addition to the nociceptive component of pain, there is also a neuropathic type of pain. There was a significant decrease in pain in patients with sacralgia on the background of movement (from 18.8% in the first group to 69% in the second group, $p < 0.05$) in relation to the comparison group (only in 8.7%, $p < 0.05$) The influence of thermal factors (heat, cold) on the reduction of pain was not statistically significant. Taking NSAIDs in the main group and the comparison group had a different effect on pain reduction. So, in the first group, pain decreased only in 25% of the subjects, in the second - in 27.6%, in the third group A - in 30.2% of cases, which is significantly significant ($p < 0.05$) with the comparison group, where pain reduction occurred in 65.2% of patients. The results of pain intensity according to VAS significantly differed ($p < 0.05$) among themselves in the first, second and third A groups. There was no statistically significant difference in the severity of pain between the first group and the comparison group, which indicates the presence of severe pain in both groups. Moreover, the maximum number of points (up to 8 points) was only in these two groups. The lowest indicator of 5-6 points was found only in the second group (37.9%). The data obtained suggest that patients with sacralgia can have the same severe pain as patients with a herniated disc and the presence of radiculopathy .

Almost all patients of the main group presented subjective complaints of sensory impairment, however, an objective neurological examination revealed a discrepancy between complaints and neurological status data. Neurological examination of the first, second and third A groups examined revealed an objective impairment of sensitivity in the form of hypesthesia and/or hyperesthesia, which, however, did not fit into the zone of the dermatome and neurotome . In the first group, 3 (18.8%) patients had hypesthesia, 2 (12.5%) patients had hyperesthesia; in the second group, 3 (10.3%) subjects had hypesthesia, and 1 (2.5%) patient had hyperesthesia; in the third A group, 5 (11.6%) patients had hypesthesia, 3 (7%) patients had hyperesthesia, which did not fit into the map of the dermatome and neurotome . In the third group, 11 (50%) patients with residual radiculopathy Ls , 7 (31.8%) examined patients with residual radiculopathy Si and 4 (18.1%) patients with combined lesion of roots Ls , Si . In the same group, 3 (13.6%) patients were identified with hypesthesia in the sacrum and gluteal region, which did not fit into the topography of the dermatome and neurotome . Limitation of range of motion in the lumbar spine was important in making a diagnosis of fibromyalgia . A sharp limitation in the range of motion (up to 111 degrees) in all planes was detected only in the first group (62.5%) and the comparison group (73.9%). Only with lateroflexion to the right and left (37.5% and 36.5%) patients of the first group had more freedom than patients of the comparison group (8.7% and 4.3%, to the right and left, respectively, $p < 0.05$) between types pelvis in different groups. Only in the third A group and the comparison group found a statistically significant ($p < 0.05$) Thus, the normal type of the pelvis was more common (27.9%) in the third A group and in the comparison group (8.7%). Interesting data emerged in the control group.

It turned out that in the group of healthy volunteers, a high assimilated type of pelvis was most common (45%), and only 30% had a normal pelvis .

There were no obvious ($p > 0.05$) intergroup differences in the main group and the comparison group. The twisted pelvis was the most common (from 31.3% to 65.1%). In second place in terms of frequency of occurrence was the oblique pelvis (the first group - 56.3%). Also, the presence of an oblique pelvis significantly differed significantly ($p < 0.05$) between the first (56.3%), second (34.5%), third B (40.9%), comparison group (47.8%) and the group control (10%). The so-called oblique-twisted pelvis was the most rare (from 5% to 12.5%).

Table 1. Type of pelvis according to Erdmann and Gutmann .

Type of pelvis	1 group	2 group	3 A group	3 B group	comparisons	control
Normal	25.0	24.1	27.9	36.6	8.7	30.0
High assimilated	43.8	34.5	41.9	40.9	39.1	45.0
Horizontal	31.3	41.4	30.2	45.5	52.2	25.0

The most common ratio of the horizontal type of the pelvis and twisted. In second place was the combination of a high assimilated pelvis with a twisted pelvis configuration. Somewhat less common was a high assimilated type of pelvis, combined with an oblique pelvis. In all the studied groups, the normal type of the pelvis and the obliquely twisted configuration of the pelvis were least detected. Moreover, the combination of the normal configuration of the pelvis and the normal type of the pelvis was detected only in the control group, which consisted of healthy volunteers.

Table 2. Functional specific tests.

tests	1 group	2 group	3 A group	3 B group	comparisons	control
Symptom Lasegue	75.0	10.3	16.3	27.3	one hundred	0
Lead Phenomenon	81.3	one hundred	one hundred	one hundred	69.6	55.0
Vest Test	one hundred	93.1	one hundred	one hundred	60.9	15.0
Patrick's test	one hundred	one hundred	one hundred	one hundred	17.4	15.0
Minnel sign	one hundred	one hundred	one hundred	one hundred	21.7	one hundred

In almost all cases, there were significant differences ($p < 0.05$) between the main groups and the comparison and control groups. Lasegue's symptom was detected in the first group in 75%, in the second in 10.3%, in the third A in 16.3%, in the third B in 27.3% and only in the comparison group in 100% of cases. The "advance phenomenon" was detected in 100% of cases in the second, third A, third B groups, in 81.3% it was found in the first group, in 69.6% of cases in the comparison group and in 55% of cases in the control group ($p < 0.05$) A similar picture was revealed during the vest test (in the first, third A, third B - 100%, in the second - 93.1%, the comparison group - 60.9%, the control group - 15%, $p < 0.05$) Patrick's test was most often (65.1%) positive in the third A group, less common (26.1%) was found in the comparison group and was detected in two (10%) patients in the control group. The test for SIJ elasticity in 100% of cases was positive in the main group and only in 17.4% of cases was detected in the comparison group and in 15% in the control group, however, in this group, the test did not cause severe pain ($p < 0.05$) Minnel's symptom also turned out to be positive in all patients of the main group, in the comparison group in 21.7%, and in the control group in 10.0%.

Conclusions: Thus, the diagnostic criteria for the acute variant of sacralgia include: sharp shooting pain in the area of the SIJ, sacrum; aggravated by small movements. The pain radiates to the gluteal region, along the back of the thigh, inguinal region. Moderately expressed vertebral syndrome, expressed extravertebral

syndrome (myopically 2-3 degrees). Sharp pain, swelling of the SIJ and lumbar-iliac ligaments. Sharply positive specific tests: Lasegue's symptom , SIJ elasticity test, Vest test, Patrick's test.

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