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BIOCHEMICAL BLOOD PARAMETERS IN FEMALE PATIENTS WITH DEGENERATIVE PATHOLOGY OF THE SPINE

M.M. Usmonov

Bukhara State Medical Institute, Uzbekistan

ABSTRACT: - This article discusses biochemical blood parameters in female patients with degenerative pathology of the spine. The main causes of musculoskeletal pain in the groups were degenerative changes in the spine without signs of compression of the spinal nerves and stenosis of the spinal canal according to MRI and static and functional disorders. Patients with degenerative changes in the spine were more likely to lead a sedentary lifestyle and have an increased body mass index.

KEYWORDS: biochemical blood, parameters, female patients, degenerative pathology, musculoskeletal pain, spinal nerves, spinal canal, functional disorders.

INTRODUCTION

Nonspecific low back pain is a common complaint in primary care and emergency care settings. Most patients with acute/subacute low back pain respond well to treatment. Unfortunately, there is no data to suggest the superiority of one non-pharmacological method over another. There is some agreement that the use of non-steroidal anti-inflammatory drugs (NSAIDs) should be the first-line pharmacological therapy for patients with non-specific low back pain, with the addition of other methods (both pharmacological and non-pharmacological) as needed. The health worker should continuously recognize pathologies (red flags) requiring more urgent follow-up through a detailed history and physical examination. This process can help reduce unnecessary imaging, which can lead to increased costs as well as inaccurate diagnoses (1,2).

Purpose of the study. To identify clinical and laboratory parameters associated with the development of chronic musculoskeletal pain syndrome in degenerative changes in the spine.

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Material and methods. The study included 125 patients aged 24 to 67 years (mean age 38.7±9.2 years) with moderate to severe vertebrogenic lumbosacral radiculopathy (VCR), VAS scores from 5 to 9. The patients were divided into two groups. Group I consisted of men - 69 (55.2%) people, group II consisted of women - 56 (44.8%), the ratio of the number of men to the number of women was 1.2:1.0. In accordance with the diagnosis M54.5 "Pain in the lower back" (ICD-10).

MRI was performed to verify degenerative changes in the spine. The intensity of the pain syndrome, the neuropathic component of pain, and affective disorders were assessed. Blood levels of osteocalcin, parathyroid hormone, thyroid-stimulating hormone, vitamin D, vitamin PP and 17-hydroxyprogesterone, interleukins-1β (IL-1β), IL-6, IL-8 and tumor necrosis factor alpha (TNF -α).

RESEARCH RESULTS

The main causes of musculoskeletal pain in the groups were degenerative changes in the spine without signs of compression of the spinal nerves and stenosis of the spinal canal according to MRI and static and functional disorders. Patients with degenerative changes in the spine were more likely to lead a sedentary lifestyle and have an increased body mass index. Smoking was noted in 23.2% of patients in the main group and 67.9% in the comparison group (p=0.080). Pain in patients of both groups was characterized by a moderate degree of severity, the neuropathic component of pain was not detected. Levels of asthenia, situational and personal anxiety were moderate or elevated in both groups of patients. In the study of blood biochemical parameters in the main group of patients, an increase in the levels of pro-inflammatory factors (C-reactive protein, TFN-α, IL-1β, IL-6 and IL-8), as well as decreased levels of osteocalcin.

CONCLUSION

The revealed increase in the levels of pro-inflammatory factors in the blood confirms the role of inflammatory reactions in the pathogenesis of degenerative changes in the spine and the associated musculoskeletal pain syndrome. A decrease in the level of osteocalcin with a normal content of parathyroid hormone in the blood in female patients with degenerative pathology of the spine, apparently, is associated with a violation of remodeling and activation of bone resorption against the background of hormonal changes in the body.

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Published: June 10, 2022 | Pages: 248-250

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