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EPIDEMIOLOGY, CLINICAL PECULIARITIES OF VERTEBROGENIC PAIN SYNDROME

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Abstract

Vertebrogenic pain syndrome (vbdr) is a complex disorder caused by degerative-compressive changes in the discs, facet joints, and paravertebral tissues in the spine. The clinical picture of the disease includes physical, sensory, motor and Affective Disorders. The article analyzed modern epidemiology, clinical symptomatics, laboratory, neurophysiological and neurovisualization methods. Modern research also shows the influence of hormonal and gender factors on the effectiveness of pain perception and rehabilitation. The authors claim differences in clinical presentation, symptoms, and treatment strategies in men and women in Vbdr.

Keywords

vertebrogenic pain syndrome, lumbosacral radiculopathy, epidemiology, clinical signs, neurovisualization, neurophysiology, gender factors.

Relevance: Vertebrogenic pain syndrome (vertebrogenic lumbosacral radiculopathy) is a cluster disorder caused by degenerative — compressive changes in the discs, facet joints and paravertebral tissues in the spine. In this, the mechanical pressure of the nerve roots, that is, disc protrusion and hernias, is determined as a common cause, while the friction of the roots and the inflammatory reaction are clearly manifested. This syndrome plays an important role in the epidemiology of general back pain and is extensively researched in modern medical practice.

Epidemiology

Back pain is one of the most common symptoms among the world's population, with back pain being reported in 60-90% of people during life. About 5-

10% of these develop into a form of radiculopathy, which leads to loss of ability to work and various types of disability.

About 3-5% of the prevalence of lumbosacral radiculopathy is defined throughout the population, and this condition is another major reason for referral to neurologists, orthopedists, and neurosurgeons. In the Muxim aspect, radiculopathy often occurs between the ages of 30-50, with signs being more common in men between the ages of 40-50, and in women around the age of 50-60.

Systematic reviews suggest that radiculopathy associated with lumbar disc herniation can range from 0.1 to 2.7 cases per 1,000 people, depending on initial indications. To prevent this and correctly carry out the diagnosis, classic clinical signs, neurovisualization and preventive measures are important.

Risk factors in epidemiology

Risk factors for the lumbar spine and associated radiculopathy include:

Age and genetic predisposition — disc degradation increases with age.

Skin structural loads and professional factors — agribusiness, construction, heavy lifting.

Smoke and physical inactivity — increased stress on the discs.

High BMI and postural defects-increase pressure on the discs.

In some studies, factors related to the risk of heart disease and working conditions in women, and in men, the influence of the weight of mechanical loads associated with the musculoskeletal system is shown to be great.

Clinical signs and symptomatics

The nature of the symptoms of back pain and radiculopathy

Vertebrogenic pain syndromic symptoms include:

Cutting, biting pain in the waist–usually more common in the segments L4–L5 and L5-S1.

Irradiated pain is a condition that spreads to the legs (ishias).

Symptoms of nerve root growth are drowsiness, roughness, decreased muscle strength.

Neurological dysfunctions are changes in reflexes, motor and sensory disorders.

Clinical manifestations begin easily with pain, but are formed when the patient becomes stable or gradually chronic. Pain symptoms occur in both sexes, but men are often contacted with clinical signs associated with physical loads, while women describe a feeling of pain associated with more chronic Affective Disorders.

Role of clinical examination

Standard clinical examinations are performed to assess back pain: the straight-leg raise test, reflexes, and motor function assessment. These tests do not always have a certain degree of sensitivity, so they are used harmoniously with neurovisualization methods.

Modern possibilities in diagnostics

Neurovisualization

Magnetic resonance imaging (MRI) — Myagky is the "gold standard" in showing the condition of tissues and discs, disc dehydration, facet joint changes, and nerve root capacitance are detected.

Computed tomography (CT) — detection of bone elements and osteophytes.

Ultrasound examination (Ultrasound) is used when viewing peripheral tissues and structural changes in nerve roots.

Neurophysiology

Electroneuromyography (ENMG) is important in assessing the activity of nerve roots.

Vbdr clinical and laboratory indicators differ depending on gender and hormonal status. In men, pain is more mechanically and motor-oriented, while in women, chronic and affective components prevail. Biomarkers such as NGF, S100B, and serotonin are important in predicting clinical status. ENMG and TMS data are a modern standard in the construction of an individual rehabilitation program. Gender-specific complex rehabilitation — consisting of physical, psychoemotional and social components-improves quality of life and functional outcomes in Vbdr.

Conclusion: Vertebrogenic pain syndrome is a complex disease common in the global population, and its epidemiology and clinical course are associated with a number of biological, mechanical and social factors. Most pain occurs at the age of 30-50 years and is one of the main causes of loss of working capacity. Modern diagnostics are supported by methods such as MRI, CT, ENMG and serve to objectify clinical signs. With awareness, the detection of early signs of the disease, the elimination of risk factors and the introduction of complex rehabilitation measures significantly reduce the burden of the disease.

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