OPTIMIZATION OF DIAGNOSTICS AND TREATMENT OF HERNIATED DISCS OF THE LUMBOSACRAL SPINE

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Abstract. Intervertebral disc herniation in patients with lumbar osteochondrosis is diagnosed in 62.9% and is the most common disease of the lumbosacral spine. In 86% of cases, lumbosacral pain is caused by disc-radicular conflict. Removal of intervertebral disc herniations at the lumbar level is the most frequently performed elective surgery in all neurosurgical hospitals in our country and abroad in general. The concept of the "gold standard" as the optimal method for treating discogenic radiculitis has included microdiscectomy for many years.

Keywords: degenerative changes, intervertebral disc herniation, lumbar osteochondrosis, computed tomography and magnetic resonance imaging.

INTRODUCTION

According to the World Health Organization, back pain is the second most common reason for seeking medical attention after respiratory diseases and the third most common reason for hospitalization [1]. The most common type of pain is lumbar pain, which occurs in almost every person throughout life and is one of the main causes of temporary and permanent loss of working capacity in the most active creative age [2].

In the general structure of diseases of the peripheral nervous system, lumbosacral radiculitis accounts for more than 80% of the number of cases and up to 90% - by the number of days of incapacity for work [3].

Various problems of osteochondrosis of the lumbar spine - etiology, pathogenesis, clinical picture, diagnostics and treatment - are so important that they are comprehensively covered in numerous domestic monographs [4].

MATERIALS AND METHODS

Removal of intervertebral disc herniations at the lumbar level is the most frequently performed elective operation in all neurosurgical hospitals of our country and abroad in general. For example, the number of lumbar interlaminar discectomies in the USA annually reaches 250 thousand, and in the world at least 800 thousand lumbar discectomies are performed annually [5].

Up to 10% of patients from the total number of those suffering from lumbar osteochondrosis become disabled, and among the operated patients the general level of disability is 70.3%. Even after microdiscectomy no more than 61% of those operated can return to their previous work [1].

In recent years, there has been an increase in persistent loss of working capacity, especially due to pathological conditions united by the term "diseases of civilization". Among them, one of the leading places is occupied by lumbar osteochondrosis, which ranks 3rd in the structure of primary disability in diseases of the nervous system [2].

RESULTS AND DISCUSSION

It is known that patients with lumbar osteochondrosis are most often people of working age. Therefore, economic and moral losses due to permanent loss of working capacity due to this disease are very high [3]. This explains the interest in issues related to permanent loss of working capacity due to lumbar osteochondrosis. However, at present, there are no official statistics on the total number of disabled people with this disease, which complicates the planning of adequate measures for prevention, treatment and rehabilitation. At the same time, according to modern concepts, medical and social examination is a set of measures to determine the needs of the person being examined for social protection measures, including rehabilitation [4]. Neurological symptoms and, above all, pain syndrome that occur in discogenic radiculitis are caused by the following main pathogenetic mechanisms or their combination:

1) pressure on nerve structures (spinal cord, spinal nerve root) by a herniated intervertebral disc, scar tissue, bone growths with impaired blood circulation in these structures;

2) irritation of the receptors of the posterior longitudinal ligament, innervated by the meningeal branch of the spinal nerve;

3) instability of the spinal motor segment - vertebral listhesis;

4) reactive cicatricial adhesive and autoimmune inflammatory processes.

The anatomical structures of the spinal canal (the spinal cord, its nerves and their roots, intervertebral discs, etc.), various variants of arterial and venous circulation of the spinal cord have been studied quite well and their features are of decisive importance in the occurrence of clinical manifestations of lumbar osteochondrosis [4].

The process of intervertebral disc degeneration is characterized by complex biochemical changes. Under the influence of mechanical and other factors, the nucleus pulposus, consisting of polysaccharides, hyaluronic acid and proteins, depolymerizes and therefore loses its compactness and hydrophilicity. Consequently, osteochondrosis of the spine manifests itself in the drying of the nucleus pulposus of the disc, which leads to cracks in its fibrous ring and the subsequent displacement of the pulpy part of the nucleus into these cracks, and sometimes through them and beyond the disc. Rich innervation of the intervertebral discs and adjacent ligaments, as well as the proximity of the discs to the nerve and vascular formations located in the spinal canal, in osteochondrosis can often lead to pain and various reflex disorders, as well as to dysfunction of the spinal cord and its nerves.

CONCLUSION

One of the important measures to reduce persistent loss of working capacity due to lumbar osteochondrosis can be in-depth studies of the issues of its causes and tendencies to one or another dynamics after surgical intervention, which ultimately determines the appropriateness of this treatment. The questions posed, caused by the search for ways to improve the results of surgical treatment of

neurological manifestations of lumbar osteochondrosis, served as the basis for conducting this study.

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