

Possibilities of MRI in the Diagnosis of Lumbar Vertebral Stenosis

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Abstract. This article highlights work devoted to the study of the possibility of MRI in the diagnosis of lumbar spinal stenosis.

Key words : MRI, tumor, protrusion , stenosis.

According to the World Health Organization (WHO), "back pain" is the second leading cause of visits to a doctor and the third leading cause of hospitalization. Among neurological 80% of patients are patients with degenerative-dystrophic diseases of the spine. "Currently, degenerative spinal stenosis is one of the most common causes of temporary disability among people over 45." At the same time, lumbar localization of degenerative lesions occurs in more than 60% of patients.

One of the most urgent problems in medicine today is the fact that low back pain causes inconvenience to patients and causes many problems in diagnosis and treatment. At the same time, the quality of life of patients worsens and disability increases. The solution to these problems is early and accurate diagnosis of the disease. To solve this problem, we need a modern method of tomography.

Since the first days of our country's independence, systematic measures have been taken to organize a completely new, high-quality medical care for the population, and effective models of the healthcare system are being introduced. As a result, positive results were achieved in improving the quality of diagnosis of various diseases of the spine through the introduction into clinical practice of the latest systems of radiation diagnostics, such as magnetic resonance imaging (MRI) and multislice computed tomography (MSCT), which allows a detailed study of various diseases of the spine.

Today, there are a number of problems in the healthcare system, including radiation diagnostics, despite targeted measures.

The Action Strategy for the five priority areas of development of the Republic of Uzbekistan for 2017-2021 sets the task of developing and improving the system of medical and social assistance to ensure a full life for pensioners, the disabled, lonely elderly people and other vulnerable groups. Accordingly, the study of clinical and functional changes in the spinal cord in spinal canal stenosis and the optimization of medical care is one of the topical areas of research.

Until now, the problem of diagnosing lumbar spinal stenosis as a result of degenerative-dystrophic diseases of the spine retains its significance not only in the medical, but also in the socio-economic aspect. According to WHO, 90% of people experience back pain at least once in their lives.

Degenerative processes of the lumbar spinal segment, such as protrusion of the intervertebral disc, antelithesis, retrolithesis and laterolithesis of the vertebrae, osteophytes of the vertebral bodies and facet joints, and other intracanal pathologies of the spine lead to a decrease in the size of the spinal canal, i.e. to lumbar spinal stenosis. To understand the causes of the development of lumbar spinal stenosis and the principles of its diagnosis, it is necessary to study the basics of the normal anatomy of the lumbar spine. Comparing the above pathological conditions of the lumbar spine with the norm, the severity of lumbar spinal stenosis is determined.

With all the variety of clinical manifestations of lumbar spinal stenosis in modern clinical practice, as a rule, their diagnosis is carried out by methods of radiation diagnostics. Lumbar spinal stenosis has specific X-ray, computed tomography (CT) and magnetic resonance imaging (MRI) signs. With the advent of high-tech research methods (CT with SCT and MSCT, MRI), there is an increase in the quality of diagnosis, but many issues of differentiation of individual variants of lumbar spinal stenosis remain unresolved. The problems of early, reliable and at the same time non-invasive diagnosis of central lumbar spinal stenosis are far from their final solution.

Researchers have no consensus on many metric parameters of central stenosis. The study of these problems

with the pathology of the spine is the most urgent task, it requires special knowledge and its solution is the main task of a vertebrologist specialist.

The aim of the study was to establish the normal and pathological values of the bone and soft tissue structures of the lumbar spine using the possibilities of radiodiagnosis methods and comparing the magnitudes of pathological structures with the norm, to develop an improved version of radiodiagnosis that allows for the pathogenetic characterization of lumbar spinal stenosis. The object of the study were 45 patients (30 patients and 15 controls). The patients were divided into the following groups: 20 patients with degenerative-dystrophic diseases of the lumbar spine causing central stenosis; 10-c intracanal masses causing central stenosis.

We, using the MRI method, studied the normal anatomical dimensions of the parameters of the contents of the spinal canal and intervertebral disc. They were the starting a point to compare them with the pathological parameters of degenerative and other lesions of the POP leading to spinal stenosis. Also, using MRI, the parameters of the contents of the spinal canal and intervertebral disc were studied in degenerative-dystrophic lesions and volumetric formations of the lumbar spine, contributing to spinal stenosis, the results were compared with the normal values of these structures and the degree of severity of central stenosis of the lumbar spine was determined .

As a result of our study, we came to the conclusion that central and lateral stenoses are diagnosed by X-ray in the late stages, early signs are better recorded by MRI methods. MRI devices are equipped with a special program that improves the determination of the severity of stenosis. In this regard, when choosing methods for diagnosing spinal stenosis, preference should be given to the MRI research method.

Bibliography

1. Ablyazov O.V. Complex radiation (X-ray and magnetic resonance imaging diagnostics of lesions of the intracanal ligamentous apparatus in degenerative-dystrophic diseases of the lumbar spine: Abstract of the thesis ... candidate of medical sciences . -Tashkent: RONTTS, 2004.- 20 p.
2. Akramov V.R., Shirinov Zh.N., Zariyova Sh.S., Mardanov Zh.Zh. Comprehensive treatment of osteochondrosis of the lumbar spine and intervertebral discs// Bulletin of the Association of Doctors of Uzbekistan. Tashkent , 2006.- No. 1.- P. 62 - 64.
3. Antonova A.M., Balashov A.T., Cheremisin V.M., Kondrichina S.N. Diagnostic efficiency of the use of radiation methods for the study of the spine in multiple myeloma// Medical visualization. - Moscow, 2007. - No. 1. - S. 127-133.
4. Botirov N.T., Khudoyberdiev K.T., Khasanov D.M. and others. The role of nuclear and magnetic resonance imaging in the diagnosis of stenosis of the lumbar spinal canal// Traumatology and orthopedics in the modern spectrum: Proceedings of reports . VII Congress of traumatologists-orthopedists of Uzbekistan. Tashkent, 2008.- S. 185.
5. Thome C, Börm W, Meyer F. Degenerative lumbar spinal stenosis: current strategies in diagnosis and treatment// Dtsch Arztebl Int. -2008. -vol.105, no.20. -pp.373-379.
6. Yano S., Hida K., Seki T. et al. A new ceramic interspinous process spacer for lumbar spinal canal stenosis. /Neurosurg. -2008. -vol.63, Ne1. -Pp. ONS108-113.
7. Koc Z, Ozcakir S, Sivrioglu K, et al. Effectiveness of physical therapy and epidural steroid injections in lumbar spinal stenosis. Spine. -2009. -vol.34, no.4. -pp.985-989.