



**A NEW APPROACH TO THE PATHOMORPHOLOGICAL DIAGNOSIS
OF DYSTROPHY-DESTRUCTIVE DISEASES OF THE SPINE AND
CHEST AREA**

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<https://doi.org/10.5281/zenodo.7638151>

Key words: spine, chest, joint, disc herniation, fibrous membrane, nucleus pulposus, muscles, osteoarthritis, spondylosis, osteochondrosis.

The urgency of the problem. The development of thoracic dystrophic-degenerative diseases of the spine also consists of several periods. Appears in the form of protrusion, extrusion, sequestration. In the initial stage, i.e., protrusion, the thinned side of the fibrous ring surrounding the vertebral disc loses its strength and elasticity, and the vertebral disc develops a bulge of 1-5 mm thickness. However, the adhesive part of the disc retains its boundaries. This condition is a pre-hernia condition and can rupture and become a hernia in any case. Extrusion is an intermediate period of pathology, in which the integrity of the fibrous disc is broken and the pulpy substance leaks from the intervertebral space. In this area, the spinal nerves begin to show neurological symptoms. If the bulging pulp substance is 5-8 mm in size, it becomes a medium-severe hernia, and if it is 8 mm in size, it becomes a severe hernia. Sequestration is the last and most severe period, a part of the bulging pulp substance becomes necrotic, breaks off and falls into the spinal canal, and can cause severe damage to the nerve fibers and the spinal cord.

Material and methods. In fact, in the case of protrusion disease in the nucleus pulposus, where the fibrous structures are disordered, it is determined that the collagen aggregates are densely and darkly stained in some places, sparsely and palely stained in other places, and disintegrated and destroyed in other places. The fact that the intermediate substance also has light and dark areas is a disorganization of the mucopolysaccharides in it. Due to the presence of a protrusion in the nucleus pulposus, the cellular composition is sharply reduced, and histologically, chondrocytes are detected everywhere, which are destroyed everywhere and are isolated. Cytoplasm of these cells has increased dramatically due to swelling and vacuolar dystrophy, turned into a balloon, nuclei are in a state of karyopyknosis and karyolysis.





When the dystrophic-degenerative process in the chest area develops, in the initial period of dystrophic and degenerative changes in the intervertebral disc, pathological processes develop simultaneously in all morphofunctional parts of the disc. But the degree of development of pathological processes is determined differently. Pathomorphological changes, such as swelling, myxomatosis, and tying of the fibers, which are more visible, are observed in the external fibrotic ring. The elastic fibers contained in it break their normal position and appear as dark blue structures of different directions and different thicknesses. In the cellular layer below it, it is found that swelling and myxomatosis processes have developed a lot from these changes, and as a result, chondrocytes have also undergone dystrophy and necrobiosis. In the vibrating nucleus, it is observed that the bundles of collagen fibers change their directions and are slightly tightened, the amount of elastic fibers decreases, and they remain only around the cells. The real essence of these pathomorphological changes is the fusion of mucopolysaccharides such as proteoglycan in the interstitial substance of the disk into protein and carbohydrate dystrophy, and secondary destruction of surrounding fibrous structures.

Summary; During the initial period of dystrophic and degenerative changes in the intervertebral disc, when the protrusion process develops in the chest area, pathological processes develop simultaneously in all morphofunctional parts of the disc. Degenerative changes in thoracic intervertebral disc protrusion begin at once and in different degrees in all morphofunctional parts, swelling, myxomatosis, fibrous dystrophy predominates in the fibrous neck, and in the nucleus pulposus, bundles of collagen fibers change their directions due to swelling of the intervertebral disc, and the amount of elastic fibers in the content is confirmed to decrease.

Degenerative, that is, dystrophic and destructive changes in thoracic disc herniation cover all the structural elements of the disc tissue, inflammatory processes are added to these changes in the fibrotic neck, as a result of which fibrous structures meet necrobiosis, crack and become dehydrated, fibers become homogenized, necrotic, the interstitial material is swollen and calcinosis of the pulpous nucleus. it is determined that it bulges out.

In the sequestered hernia of the thoracic spine, the pulpous nuclear tissue has a polymorphic structure, it is destroyed, necrotic, covered with inflammatory infiltrate and fibrous tissue, in most cases, the necrosis has turned into coarse detritus without a structure, calcinosis chondromatosis and ossification processes have developed around it. We present a new approach to diagnosis





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based on the above-mentioned pathomorphological analysis, its relevance in evidence-based medicine, and high economic and social efficiency in the treatment of patients.

