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Correlation between spinal nerves, anterolateral abdominal wall muscle tone and inguinal hernia

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Abstract

Background: The complete diagnosis of pathomorphological disorders in case of diseases of the spine determines the choice of effective treatment, pathogenetically argued in various diseases which, according to modern classifications, do not have a direct link with it. Continuous improvement of diagnostic and treatment methods in some pathologies, both surgical and therapeutical requires a more detailed study of clinical anatomy and spinal biomechanics. Thus, perhaps even revising concepts are well-rooted in the consciousness of scientists and modern practitioners. As we will try to analyze the anatomical-clinical component of the appearance and recovery of antero-lateral abdominal wall hernias, we will limit ourselves to some analysis and discussion of one of the predisposing factors, namely the lack of resistance or insufficient resistance of the abdominal muscles. This is closely related to the condition of the constituent elements of the abdominal wall, and in particular depends on the innervation and vascularization of the musculo-aponeurotic layers, which determine the strength and muscle tone.

Conclusions: One of the causes of inguinal hernias is the decrease in the tone of the abdominal muscles. It depends on several factors: the elasticity of the muscular tissue, state of neuro-muscular transmission, the state of peripheral nerve fibers and motor neurons in the spinal cord, superior motion control centers. Thus, the causes of muscle tone decrease can be both muscular in origin and generated by pathology of the nervous system at different levels. Because the causes are multiple, the treatment is different at certain stages of hernia development. In this way, our treatment – qualitative nutrition, vitamins, special exercises, spinal region work, paravertebral muscles massage fit perfectly into hernia etiology and pathogenesis. This treatment is physiologically accessible and can be performed and supervised by physicians with non-surgical specialties in stationary or outpatient settings, after prior consultation with the surgeon.

Key words: spinal nerves, anterolateral abdominal muscle tone, inguinal hernia.