

**MICRO- AND ASTROGLIA ACTIVITY IN THE SPINAL CORD VENTROLATERAL NUCLEUS AFTER SCIATIC NERVE INJURY IN RATS****A. A. Starinets<sup>a, b</sup>, E. L. Egorova<sup>a, b</sup>, A. A. Tyrtysyna<sup>a, b</sup>, I. V. Dyuzhen<sup>a</sup>,  
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The sciatic nerve injury is accompanied by the activation of inflammatory processes in nerve fibers and the spinal cord lumbar segment, contributing to the development of neuropathic pain syndrome. In our study, ligation and transection of the sciatic nerve lead to a local inflammatory response, expressed in swelling and damage to nerve fibers and impaired innervation of peripheral tissues. At the same time, there is an increase in micro- and astroglial activity in the ventrolateral nucleus of the spinal cord lumbar segment (L4–L6), while motor neurons are encapsulated by microglia cells. At the same time, neurodegeneration of motor neurons is observed only during transection of the sciatic nerve. Thus, the results of this study indicate the active participation of the spinal cord motor nerve cells in the pathophysiological process after sciatic nerve injury.

**Keywords:** sciatic nerve ligation, sciatic nerve transection, Schwann cells, motoneurons, neurodegeneration, microglia, astroglia, neuropathic pain