Surgical management of cervical spondylotic myelopathy
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The purpose of this study to define efficiency of application methods exact differentiated surgical decompression for cervical spondylotic myelopathy.

Methods: Research is based on the clinical outcome, results of neuroimaging and neurophysiologic investigation of 673 patients with cervical spondylotic myelopathy were surgically treated in The Burdenko Neurosurgical Institute and Neurology Center, Moscow. Direction of surgical decompression and parameters of instrumentation planning according to vector of compression, depending on character and extension of compression. All circular stenosis myelopathic patients subdivided in the groups according to spine deformity (kyphosis, hyperlordosis, normal curvature). The electrophysiological data (transcranial magnetic stimulation – TMS; somato-sensor evoked potentials – SSEP; etc.) to localize primary compressive force were performed. According to spine deformities, direction of primary cord compression, electrophysiological data - differentiated surgical decompression (anterior approaches with instrumentation – 295; anterior multilevel discectomy – 92; laminoplasty – 124; laminectomy with instrumentation 71; combined approach – 91) were performed.

Results: We founded significant increasing Recovery Rate - 56% (JOA score) and Nurick restoration – 2-4 (3.43 ± 0.327) as follow up after differentiated surgical decompression (with electrophysiological investigation and algorithm controlling) in comparison with previous clinical outcome (165 cases) patients without differentiated surgical decision (Recovery Rate – 44%; Nurick – 2.75 ± 0.459; p < 0.001).

Conclusion: For the first time, on the big clinical material the advantages algorithm of the choice a surgical method adequate decompression for the compressive spondylotic myelopathy was shown. The modern approach in surgery of degenerative cervical spine demands unification of terminology, standardization of surgical approaches and scales.