

## The Role of Neurotrophic Protein S100 in the Pathogenesis of the Chronic Cerebral Ischemia Development

D. Usmanova<sup>1</sup>

<sup>1</sup>Neurology, Tashkent institute for postgraduate medical education, Tashkent, Uzbekistan

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**Background.** The leading role in the development of chronic cerebral ischemia (CCI) is occupied by neurospecific protein S100.

**Purpose.** To study neurotrophic protein S100 in patients with CCI with regard to genesis of development.

**Material and methods.** The content of protein S100 and antibody titers (AT) was measured in the peripheral blood serum of 160 patients with CCI, divided into 2 groups. Group 1 consisted of 80 patients with CCI of hypertonic genesis, group 2 included 80 patients with CCI of atherosclerotic genesis. Control group included 20 subjects.

**Results.** In group 1 content of protein S100 was  $0,76 \pm 0,09$  nmol/l, in group 2 –  $0,97 \pm 0,12$  nmol/l. The differences in content of protein S100 in the both groups were reliable ( $P < 0,001$ ) in comparison with control group ( $0,50 \pm 0,06$  nmol/l). Titer AT to protein S100 in group 1 was  $1:427 \pm 0,8$ , in group 2 –  $1:691 \pm 1,6$ , in control group –  $1:210 \pm 0,2$ . There were noted reliable differences in contents of AT to protein S100 between control group and groups 1 and 2 ( $p < 0,001$ ), between groups 1 and 2 ( $p < 0,01$ ). The higher content of protein S100 and the highest titers AT was revealed in the patients from group 2.

**Conclusions:** The higher level of protein S100 and titer AT was found in patients with CCI of atherosclerotic genesis in comparison with CCI of hypertonic genesis, that indicate about chronic neurodegenerative process in brain in cerebral atherosclerosis.