

BRAIN-DERIVED NEUROTROPHIC FACTOR LEVEL IN CEREBROSPINAL FLUID OF ADULT PATIENTS WITH ACUTE BACTERIAL MENINGITIS AND MENINGOENCEPHALITIS

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Aim of the work is to determine the level of brain-derived neurotrophic factor (BDNF) in the CSF of adult patients with bacterial meningitis and meningoencephalitis.

Materials and Methods. We measured level of BDNF in CSF of 11 patients with meningococcal and 10 pneumococcal meningitis, 25 patients with meningococcal and 35 pneumococcal meningoencephalitis, 11 non survivors. In the control group, we selected 15 patients with acute respiratory diseases and meningismus. The CSF was determined on the day of admission to hospital using the ELISA method (Merck Millipore, Germany).

Results. The CSF level of BDNF in the control group was $75,43 \pm 1,32$ pg/ml. The highest BDNF levels were obtained in patients with meningococcal ($91,12 \pm 3,85$ pg/ml) and pneumococcal ($83,46 \pm 3,83$ pg/ml) meningitis ($p < 0,05$). The level of BDNF in group of meningoencephalitis was significantly lower compared with the meningitis ($p < 0,05$) (meningococcal – $71,62 \pm 1,12$ pg/ml, pneumococcal – $72,21 \pm 1,01$ pg/ml), but was not significantly differ from the control group indicators ($p < 0,05$). Level of CSF BDNF in non survivors was $70,30 \pm 4,85$ pg/ml – significantly lower than in the control and meningitis groups ($p < 0,05$), but not different from the levels of survivors with meningoencephalitis.

Conclusions. We can assume that in patients with bacterial meningitis, increased expression of BDNF protects the CNS cells and reduces the number of affected neurons. Such an effect may reduce the severity of neurological manifestations of neuroinfection. In meningoencephalitis BDNF levels have been reduced. Such changes can be a confirmation that during acute bacterial neuroinfections the development of lesions of the central nervous system is associated with the decompensation of neuroprotective mechanisms. Obviously, determining the diagnostic and predictive role of BDNF levels in the CSF in patients with acute neuroinfection needs further research.

Key words: brain-derived neurotrophic factor, CSF, bacterial meningitis, bacterial meningoencephalitis.

DOI: 10.29256/v.03.01.2019.escbm67

FEATURES OF THE KI-67 EXPRESSION IN THE KIDNEYS OF THE NEWBORNS WHICH DEVELOPED UNDER THE MATERNAL PREECLAMPSIA CONDITIONS

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At present, preeclampsia is considered as a frequent multifactorial complication of pregnancy [1–3]. The influence of maternal preeclampsia on the offspring kidneys is unknown and unexplored. The aim is to identify the expression features of the Ki-67 marker in the kidneys of newborns that developed under conditions of maternal preeclampsia of varying severity.

Materials and Methods. The material of the study was the tissue of the kidneys of full-term newborns. All material was divided into the following groups: I – newborns