



#### **V 4 Progressive course of neurological disorders after acute tick-borne encephalitis: a case description**

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According to official statistical data from different regions of Russia, in 1.5–1.8% of the patients with acute TBE the disease takes a progressive course. Despite some research of virological and immunological aspects, the pathogenesis is not clear and needs further investigation. With the aim of demonstrating the typical progression of neurological disorders after acute TBE, we present the following clinical case.

The patient B., 3 years of age, was bitten by a tick on 27<sup>th</sup> May, 2009. Twelve days later, the disease manifested in fever, meningeal syndrome, and focal motor seizures with secondary generalization. The patient was treated in the Kemerovo regional hospital from the first day of the disease, 8<sup>th</sup> August, 2009, till 6<sup>th</sup> July, 2009. Tetraparesis, cognitive disorders, and cranial nerve's dysfunctions were detected. Seizures were coped partially, and the anticonvulsive treatment was prolonged. Two months later, acute TBE seizures restarted, and a new type of them (oromandibular myoclonus with secondary generalization) appeared. The liquor analysis from 10<sup>th</sup> June, 2009, showed a neutrophils' cytolysis with 117 cells/ $\mu$ l. Serologically, the IgG titer to TBE virus was 1:200 (9<sup>th</sup> June, 2009), the IgM coefficient of positivity was 8.8. In the sample from 24<sup>th</sup> June, 2009, IgG titers reached up to 1:400, and it was even 1:980 4 months later (21<sup>th</sup> October, 2009). The IgM coefficient of positivity increased up to 9.4 and then decreased down to 1.6. Electroencephalography did not show any epileptic activity during the acute period of the disease. Slowly-waving activity in the left fronto-temporal part of the brain dominated. Three months later, the epileptic activity as sharp-slow complexes in fronto-temporal brain parts with negative myoclonuses was detected by EEG videomonitoring. A tomography on the 26<sup>th</sup> October, 2009, did not show any destruction in the brain. Six months after acute TBE, the myoclonic hyperkinesias in the tongue, facial muscles, arms, and fingers with periodical negative myoclonuses appeared and were resistant to the therapy. The presented case shows the progressing damage of central nervous system following a suffered acute TBE.