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PREDICTORS OF THE SEVERITY OF MENINGOENCEPHALITIS IN CHILDREN

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Actuality. Meningoencephalitis (ME) is a serious condition in which inflammation of the membranes of the brain and its substance develops. Meningoencephalitis in children is characterized by special severity, high frequency of neurological complications and high mortality.

Aim: to determine the predictors of the development of severe meningoencephalitis in children.

Materials and methods. The observation group consisted of 37 children who were treated at the Municipal Children's Infectious Diseases Clinical Hospital of Minsk, in the Department of Anesthesiology and Intensive Care (ICU) in the period from January l , 2024 to December 31, 2024.

Results and the discussion. Among the 37 children, there were 7 girls (18.9%) and 30 boys (81.1%), with an average age of 4.9±1.2 years. The children were admitted to the hospital 3± 4.5 hours after the first signs of the disease appeared, bypassing the emergency department, four patients (10.8%) were admitted due to seizures.

The etiological pathogens of ME were identified as parvovirus B-19 (2.7%), herpes simplex virus-I (HSV-I) (8.1%), enterovirus virus (16.2%), Epstein-Barr virus (EBV)-2.7%.

Meningoencephalitis occurred in children with a premorbid background of anemia (32%, n=12), previous illnesses, including pneumonia (21.6%, n=12), otitis media (13.5%, n=5) and a history of sepsis (6.25%, n=2).

In HSV and EBV, the first symptom was a combination of convulsive syndrome in the form of a generalized attack or tonic-clonic attack, with an enterovirus nature, a combination of intoxication syndrome and cerebral symptoms was noted.

Impaired consciousness was one of the early signs of the involvement of the nervous system in the pathological process and amounted to 13 [8;15] points on the Glasgow coma scale.

Of the focal symptoms of varicella encephalitis, symptoms such as decreased muscle tone, instability in the Romberg pose, shaky gait, the presence of nystagmus and titubation in combination with a pronounced pattern of cerebral symptoms were observed.

During MRI of the brain with contrast, the following were revealed: with varicella, enterovirus ME-nonspecific changes, with EB-ME -bilateral damage to the cerebral cortex of the GM and basal nuclei, HSV- damage to the parenchyma of the temporal lobes.

There were no changes on the EEG in enterovirus ME, in patients with HSV and EBV-associated ME, diffuse EEG changes (alpha rhythm index decreased, zonal differentiation smoothed), polymorphic activity of the alpha-theta range.

During the recovery period of enterovirus ME and varicella-associated ME, complete regression of symptoms was noted; after HSV- and EBV-associated ME, pyramidal and extrapyramidal disorders, psychotic and dysmnestic disorders persisted.

Conclusions. The severity and prognosis of ME development depends on the presence of a premorbid background, the age of the patient, the presence of convulsive syndrome from the first days of the disease, a decrease in the level of consciousness on a scale of less than 10 points, an etiological factor (HSV and EBV-associated ME), as well as the severity of the pathological process according to MRI of the brain with contrast.