Streszczenie w języku angielskim

The best known tick-borne diseases are tick-borne encephalitis (TBE), which is caused by Flaviviridae virus and Lyme borreliosis caused by spirochetes belonging to the Borrelia burgdorferi sensu lato. Tick-borne encephalitis usually has a biphasic course. After a 1-2 week of incubation period flu-like symptoms appear (first phase). Ca. 1/3 of patients develop second phase with central nervous system involvement in the form of meningitis, encephalitis, meninoencephalomyelitis.

Clinical manifestations of NB usually appear 2-18 weeks after tick bite, most often in the form of meningitis, facial nerve palsy and Bannwarth syndrome. Diagnosis of TBE and NB is based on cerebrospinal fluid (CSF) examination, in which lymphocytic pleocytosis, increased protein concentration and positive results of serological tests are observed. A two-stage diagnostic protocol in Lyme borreliosis is used: ELISA and Western blot tests. Symptomatic treatment is used in TBE and antibiotic therapy in the course of NB.

The aim of the study was to compare the clinical course of TBE and NB between children and adults. A retrospective analysis of medical records of 669 patients with TBE and 181 with NB was performed. Patients were divided into groups of children and adults. Medical data were analyzed: age, sex, place of residence, time since a tick bite, reported complaints, neurological and psychiatric sequelae, results of laboratory tests, treatment.

Analysis of TBE patients showed more frequent occurrence of the disease in the form of meningitis in children, while in adults in the form of meningoencephalomyelitis. CSF pleocytosis did not differ significantly between age groups, whereas protein concentration was significantly higher in adults. Children who received dexamethasone for over 7 days had a significantly higher pleocytosis II to pleocytosis I ratio than adults. Dexamethasone treatment correlated with pleocytosis in the CSF control examination. The sequelae in the course of TBE occurred in 6 (27%) children and in 253 (42.1%) adults. Significant differences between all groups of sequelae except early subjective sequelae between children and adults were observed. The most common symptoms in the course of NB in children were: headache 89.5%, nausea and vomiting 56.1%, while in adults: headache - 77.4%, facial nerve palsy - 59.7%, dizziness - 41.9% and lumbosacral region of spine pain - 37.1%. CSF pleocytosis in children was higher than in adults, protein concentration was significantly higher in adults. After treatment tendency towards normalization of CSF pleocytosis and protein concentration in both

groups was observed.

Results of my study show a significant difference in the occurrence of clinical symptoms and the severity of the course of neuroinfection after tick bite in children and adults. The course of TBE in children is milder, nausea and vomiting are more common symptoms, while in adults neurological symptoms and sequelae occur more frequently. NB in children presents more often as meningitis and in adults as Bannwarth syndrome.

The use of dexamethasone for TBE prolongs the disease course in both children and adults, but does not affect the development of sequelae. Treatment of NB with III generation of cephalosporins is equally effective in children and adults.