Cognitive disorders in cerebral palsy with seizures

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Relevance: Current diagnosis of mental development of children and treatment of cerebral palsy (CP) are important tasks of childhood neurology. Along with conventional neuro-physiological research methods (EEG, Echo -ES, etc.) neuro-psychophysiological research methods in pediatric neurological practice are increasingly being used as a local topical diagnosis of brain damage, and in the assessment of non-verbal intelligence. Many patients with cerebral palsy, movement disorders combined with cognitive disabilities that still depend on the form of the disease.

Objective: To study cognitive deficits in different forms of cerebral palsy with seizures.

Materials and Methods: During a prospective study, cognitive function in 17 children (8 girls and 9 boys) with cerebral palsy with seizures was analyzed. The age of patients at the time of the analysis of clinical data ranged from 7 to 14 years. Held: EEG, video - EEG monitoring night’s sleep, brain MRI, neuropsychological testing (assessment test verbal intelligence (British Picture Vocabulary Scale/BPVS/), which is estimated at 100 mark system test and Raven ( colored version of the test used for children aged 7 to 11 years old, black and white - for children over 11 years) which is estimated as a percentage).

Results: Intrapartum brain injury - 10 cases; prematurity 28-32 weeks - 7 cases. In all patients at the time of inspection - rough speech retardation and cognitive decline were observed. In the neurological status: cerebral palsy, spastic diplegia - 4 cases, hyperkinetic form - 10, mixed - 3 cases. According to MRI: subatrophy right hippocampus - 1 case, perisylvian polymicrogyria in 2 cases, periventricular leukomalacia - 5 cases, cortical atrophy fronto- parietal- temporal lobe - 9 cases were observed. When tested by the method identified BPVS following changes; spastic diplegia -63.4 score hyperkinetic form - 68.2 grades, mixed - 69.3 score (at a rate of 100 points) were observed. According to test Raven (in percentage): spastic diplegia, 19.1, 26.4 - hyperkinetic form and mixed - 18.6 (normal 75-95 %) were observed.

Conclusion: When patients with cerebral palsy with seizures receive anticonvulsants, mainly depakine, cognitive disorders can occur in all forms, but they suffer more of spastic diplegia.

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