

# CENTRAL ASIAN JOURNAL OF THEORETICAL AND APPLIED SCIENCES

Volume: 02 Issue: 10 | Oct 2021 ISSN: 2660-5317

# **Optimization of Tactics for Treatment of Epileptic Paraxism in Children**

# Djurabekova Aziza Taxirovna<sup>1</sup>, Togaeva Gulmira Xasanovna<sup>2</sup>, Gaibiev Akmal Axmatjonovich<sup>3</sup>, Nurullaeva Dinara Asadovna<sup>4</sup>

<sup>1</sup>Professor, Head of the Department of Neurology, Samarkand Medical Institute
<sup>2</sup>Master student of Neurology Department, Samarkand Medical Institute
<sup>3</sup>Candidate of Medical Science, Assistant at the Department of Neurology
<sup>4</sup>Clinical Resident of the Department of Neurology Samarkand Medical Institute

Received 17<sup>th</sup> Aug 2021, Accepted 4<sup>th</sup> Sep 2021, Online 12<sup>h</sup> Oct 2021

**Abstract:** The concept of epilepsy includes recurrent paroxysmal seizures, with different prevalence (5, 6). According to WHO for children accounts for about 2% of all cases. In the etiology and pathogenesis of the disease, a hereditary predisposition plays an important role, then only exogenous exposure, through the transferred neuroinfectious, including intrauterine; traumatic brain injury, metabolism-dysfunction.

*Key words: metabolism-dysfunction, neuroinfectious, treatment of epileptic paraxism in children, MSCT.* 

The seizures themselves in children can manifest themselves at any time, gradually. Literary scientific research leaves a debatable issue of mental changes, in the interictal period, optimization of treatment (1, 2, 4). A favorite question of all pediatric neurologists is taking anticonvulsants, dosage, duration. Doubt is caused by the possible transformation and clinical and neurological undifferentiation of epilepsy in children, the incomplete formation and heterochromosome of the child's brain. In recent years, a problem has been raised with the newly formed provocative factors, an autoimmune reaction associated with a rather difficult situation with a viral infection, leading to a greater number of epilepsy resistance to anti-epileptic drugs (5, 3, 7). Conversation with parents, their participation in the stages of the treatment process, modern early diagnosis and treatment methods, all this is aimed at minimizing seizures, full recovery of children. And since the complexity of diagnosing an immature brain masks focal symptoms, especially cognitive deficits, it is necessary to expand the scope of research in this direction, and, accordingly, the problem of epilepsy in children needs further study.

**Target.** To study the results of neuroimaging studies and to compare them with clinical and neuropsychological disorders in children with epilepsy.

Material and research methods. The study was carried out on the basis of the 1-Clinic Samarkand Medical Institute, the Department of Pediatric Neurology and Neurosurgery. For the period 2019-2021,

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62 children, the age of children from 6 to 10 years old, 20 healthy children. The ratio of boys and girls was 1.5: 1. The main complaint according to the parents is the detection of seizures with a different nature, type, duration and frequency. Anamnestic data of the period of pregnancy, chronic diseases of the mother, hereditary predisposition to epilepsy, the course of childbirth, the functional usefulness of the growth and development of the child, neurological status, and the main factor leading to the disease, that is, somatic well-being, were studied in detail. The diagnostic study included traditional electroencephalographic examination and neuroimaging examination using magnetic resonance imaging (MRI), multi-spiral computed tomography (MSCT).

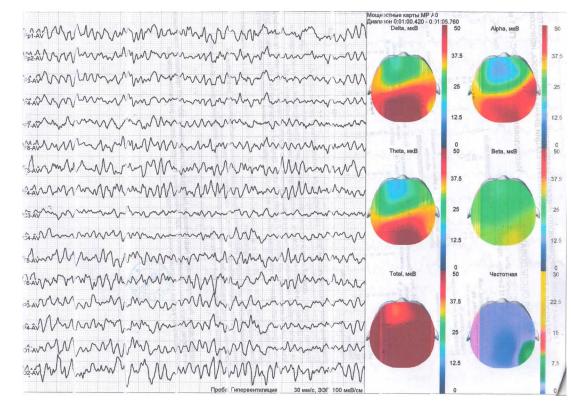
After the stage of the therapeutic treatment proposed in the study, the dynamic examination was repeated. In some cases, there was a need to check cognitive and psych emotional development, in these cases, additional specific testing was carried out. Statistical processing of the research results was carried out on an individual computer with the student's computational arithmetic criterion.

**Research result.** In accordance with the tasks and purpose, the anamnesis of mothers for the period of pregnancy and childbirth of this examined child showed that almost all mothers had a burdened obstetric history to one degree or another. Thus, the threat of termination of pregnancy in the first trimester was observed in 8 women, in the third trimester in 5 women. Toxicosis (histosis) of mild pregnant women in 10 women, histosis of pregnancy in the second half of pregnancy with a stable increase in blood pressure, edema, was observed in 3 women, preeclampsia in 2 women. In 4 women, a history of family cases of convulsive seizures was found, from the side of blood relatives, Rh conflict and according to the blood group was found in 1 woman. The nature of the delivery itself, there were complications: rapid delivery in 2 cases, placental abruption followed by cesarean section in 1 woman; functional narrow pelvis in the mother in 5 cases, large fetus in 8 cases. Signs of hypoxic insufficiency during and after childbirth were noted in 60% of cases of children of the main group.

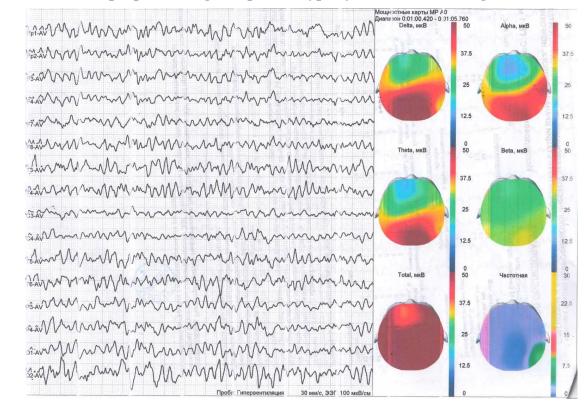
The main point of hospitalization of children in the Department of Pediatric Neurology was convulsions. First of all, it was necessary to find out in the initial manifestations what provoked the attack. At 7 children appeared immediately after birth, the children were in the intensive care unit of obstetrical department, where they received anticonvulsants, basically it was phenobarbital, during the week of, attacks were stopped. On the recommendation of the doctors, the parents continued to take anticonvulsants for a while and canceled them on their own, thus, the seizure in children was provoked by the withdrawal of drugs, in 3 cases out of 7. In 16 cases at the age of 8-9 months, against the background of neuro infection (in in particular ARVI), against the background of high temperature, convulsive symptoms were noted for the first time. In the main group of children, 78% of cases were diagnosed at an early age, with a certain frequency, in other cases they were newly diagnosed. The frequency of attacks varied from 1 to 3 times a month, they were considered frequent, and rare attacks up to 2 times a year, in the autumn spring periods. Frequent seizures prevailed in the examined children (in several cases the seizures were of a serious nature, 2 children with status epilepticus were hospitalized in the intensive care unit of the 1-Clinic of Samarkand Medical Institue). Clinical and neurological manifestations of the disease revealed a delay in psycho-speech development in 57% of cases; damage (in various angles) of the oculomotor nerves 33%; in 4 cases ataxic instability. No gross pyramidal disorders were found in the examined children, if we do not take into account some difference in reflexes on the sides, an unstable pathological Babinski reflex in several cases.

Additional diagnostic examination of children of the main group on electroencephalography makes it possible to make a full diagnosis. Thus, the EEG revealed focal epileptiform activity in 23% of cases, delayed maturation of the child in almost 40%, and paroxysmal activity in 11%. The peak of the wave is only in 3 children, in 100% of cases there are general diffuse changes in the bioelectrical activity of the brain.

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Rice. Patient A. 7 years old. Specific EEG phenomena were noted in the form of conditionally epileptiform high-amplitude hypersynchronous discharges



Rice. Patient L. for 5 years. Specific EEG phenomena were noted in the form of conditionally epileptiform high-amplitude hypersynchronous discharges.

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As a result, the diagnosis of the examined children of the main group was made to a greater extent as idiopathic or symptomatic epilepsy, to a lesser extent cryptogenic generalized epilepsy. In 79% of the main group, children underwent neuroimaging using magnetic resonance imaging (MRI) of the brain. Of the children who underwent an MRI study, in 38% of cases, subarachnoid expansion of the space was found, signs of vetriculomegaly were noted in 19% of cases, only 3 children had cerebral malformations in combination with ventriculomegaly and expansion of the subarachnoid space.

Comprehensive examination prompted the conduct of neuropsychiatric testing to check the level of cognitive potential in the main group, in comparison with healthy children. The interest in cognitive processes is based on memory function, respectively, in our opinion, the study of auditory-speech memory was appropriate, especially given the close connection with speech function. Auditory-verbal memory was investigated according to the test "5 words" control of a given order with detached reproduction. Auditory-verbal memory, its decrease in our study was noted in children with a long history of the disease, and a control defect was characteristic of children with early signs of epilepsy. Thus, in the main group of children, almost all children had cognitive impairment to one degree or another. The next step in the study was therapy, correction of antiepileptic drugs, switching to monotherapy, and supporting the brain with neuroprotective drugs. For this, the patients of the main group were divided into two subgroups, 62 children with epileptic seizures. In one subgroup of 28 children included children continue to receive therapy for hospitalization during 2 subgroup of 34 patients, it was proposed to replace antiepileptic drugs, only on reception of valproate, in particular Konvuleks (administered depends on the age and seizure frequency), a second drug in the same subgroup proposed, Cortexin for 2 weeks intramuscularly, then taking pantocalcin in a drinking form for 3 months. Re-examination at the end of taking pantocalcin (Konvulex continued to take). The results of treatment of children with epileptic seizures in subgroup 2 turned out to be better than in subgroup 1, a decrease in seizures by 60%, longterm remission in almost all patients.

Thus, optimization of the treatment of children with epileptic paraxisms, taking into account the diversity of forms, age, gender characteristics, influence on the nature of cognitive, psycho-speech functions is necessary, the basis is the positive indicators in the form of a decrease in remission of seizures, the dynamics of electroencephalography and neuroimaging data. I would like to emphasize the validity of the use of valproate, as the least toxic drug, acceptable for children, the use of which is desirable in monotherapy. For the correction of neuropsychiatric deficits, we recommend the use of the drug pantocalcin, to increase the effectiveness of treatment, both epileptic seizures and their complications.

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