



Improving Cognitive Assessment and Treatment in Children's Cerebral Palsy

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Received 22nd Nov 2022,
Accepted 22nd Dec 2022,
Online 27th Jan 2023

Abstract: Children's Cerebral Palsy is becoming more common in the population every year. It is often associated with hypoxic-ischemic brain damage in newborns. In addition to movement disorders, such children develop cognitive disorders that often go unnoticed by parents. Early detection and timely treatment of cognitive disorders helps children adapt more effectively to the social sphere.

Key words: cerebral palsy, cognitive functions, neuropsychological tests.

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Introduction: In our country CCP and other paralytic syndromes with morbidity 20 20 - year for 10,000 children 55 of them organize is enough There are trends of increasing morbidity and disability. In cases where ChCP manifestations persist into adulthood, the nosological diagnosis is similar to residual encephalopathy.

In the last ten years, the urgency of the ChCP problem is not only due to the increase in incidence, but also to the improvement of the organization of medical and social care for children and the development of complex and systematic rehabilitation.

Early detection of cognitive and speech disorders in patients with BTs F is still relevant. The progress made is improving and requires further study as ChCP becomes more common. In this regard, the development of early methods of diagnosis of motor-psychic disorders, if they are adequately treated and rehabilitated, will help to minimize the detected defects.

Purpose: to evaluate cognitive activity in children with cerebral palsy and to implement early correction of identified changes.

Materials and examination methods: 40 patients (25 boys, 15 girls) aged 3 to 14 years (average age 8.8 ± 1.3) were examined. The scientific work was carried out from 2020 to 2022 in Andijan regional multidisciplinary children's hospital. All patients were divided into 2 groups.

21 patients with a confirmed diagnosis of cerebral palsy and cognitive disorders were allocated to 1 group (G80 according to XKT-10). Group II consisted of 19 patients diagnosed with cerebral palsy, but without cognitive impairment (G80 according to ICT-10). 14 relatively healthy children were

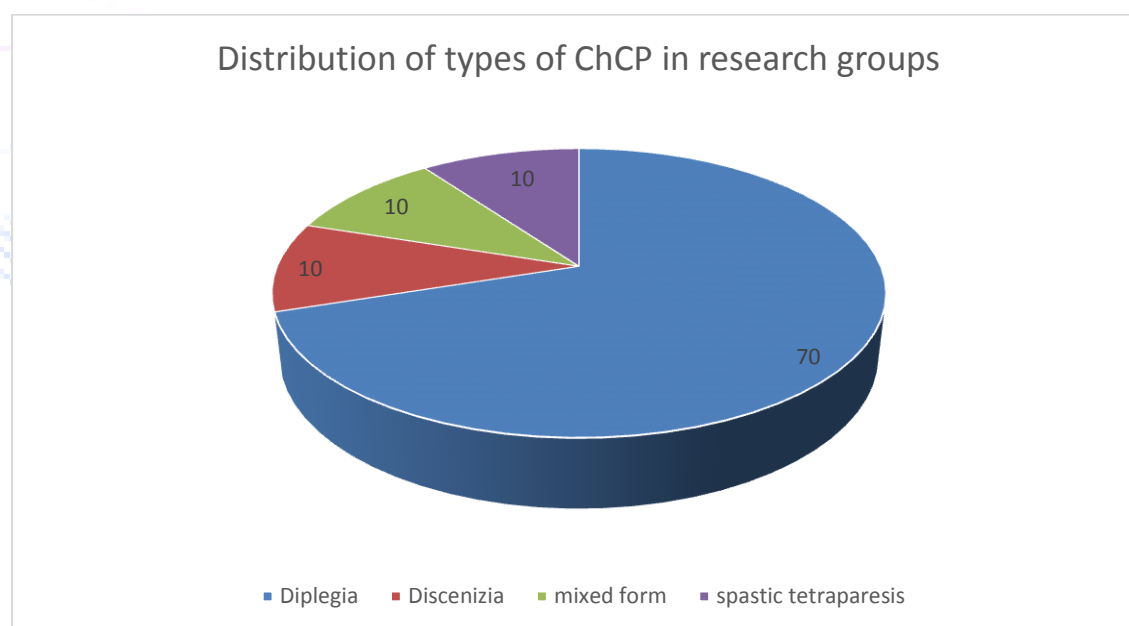
included in the control group. All patients underwent clinical-neurological, neurovisualization and neuropsychological (test with Raven color progressive matrices) examination methods.

Results and Discussion: All patients were evaluated for underlying cause. In the analysis of this, it was found that among the reasons that led to the development of ChCP in all children, the most common reason in both groups was the mother's toxicosis during pregnancy: in particular, it was 90% in the first group, and 79% in the second group. In addition, severe anemia was observed in both groups, in 57% of cases in the first group, and in 37% of cases in the second group. It should be noted that in both groups, multiple causes were identified, with severe anemia and birth trauma in one patient, and other diseases that may have led to the development of ChCP .

Diseases that led to the development of ChCP in the study groups

№	Reasons that led to the development of the disease	1 group n= 21		2 groups n= 19	
		n	%	n	%
1	Severe anemia	12	57%	7	37%
2	Acute viral diseases	8	38%	5	26%
3	Birth trauma	8	38%	2	10.5%
4	Severe toxicosis in the mother	19	90%	15	79%

that ChCP was manifested in all children with various clinical and neurological symptoms. This information is displayed in the diagram. According to him, the most common type is shown to be spastic diplegic type, or Little's disease. Other types of pyramidal deficits were equally distributed: spastic dyskinetic type accounted for 10%, mixed type for 10%, and spastic tetraparesis for 10%.

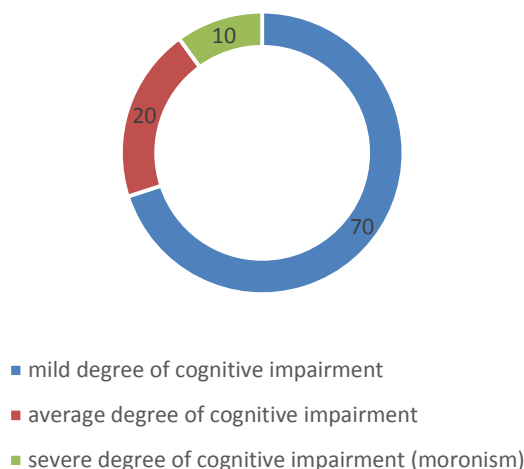


In the first group of patients (children with ChCP with cognitive impairment), three levels of cognitive impairment were revealed, namely, 70% had a mild level of mental retardation, 20% had an average level of intellect, and 10% had a level of mental retardation.

In children with ChCP , the main rehabilitative treatments focus on the pyramidal deficit, with an emphasis on restoring movement. It is necessary to pay attention to early detection of identified cognitive disorders and pay attention to their correction by conducting this Raven test.

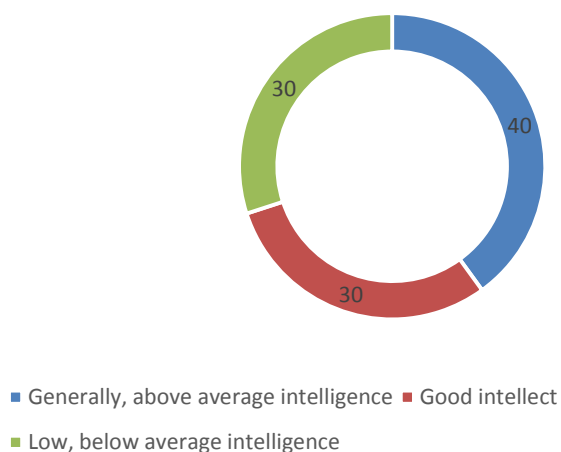
The status of identified cognitive disorders is shown in the diagram below.

Level of intellectual deficit in ChCP patients with cognitive impairment



In addition, among children with ChCP without cognitive impairment, mental activity was evaluated using Raven's test. The result of this neuropsychological test was shown in the diagram.

Intellectual status in children without cognitive impairment



It appears that children with ChCP , but without cognitive impairment, also have changes in intellect. In particular, it was found that 30% of children have preserved intellect and have good learning ability. They performed the given tasks with ease and the 12-option answers were almost error-free. 40% of children were found to have above-average intelligence, in which 12 options were answered without error with some difficulty. And the last 30% of children were found to have a below-average level of intelligence or performed 12-option tasks with errors. Therefore, in patients with ChCP , cognitive disorders are observed in many cases and increase as children grow older. In our opinion, such children may be the result of insufficient attention during the study process.

When the cognitive activity of the children in the control group was checked, it was found that the intellectual level was high and all the assigned tasks were fully completed. Children in this group scored 120 and above, and it was observed that they were typical of their intellectual age.

When conducting psychophysiological tests, there was good reaction speed, low fatigue, and distraction, which indicates a balance of inhibitory and excitatory mechanisms in the central nervous system, low interhemispheric asymmetry (up to 10%). The obtained data will not only help to objectively assess the level of development of higher mental functions by automating the process of drawing conclusions based on test results, but also help to identify brain disorders in children with neuropsychiatric pathology, develop an individual treatment program of rehabilitation measures for such children, and further increase its effectiveness.

Conclusion:

1. The leading clinical syndromes in the structure of spastic forms of ChCP are disorders that occur in 100% of scores. Other frequent syndromes: cerebrostenic syndrome-85%, cerebrospinal fluid hypertension-65%, vegetative dystonia-42%, sensory disturbances-38%, dyscoordination-31%, epileptic syndrome-30%, hyperactivity and attention deficit-23%.
2. Neuropsychophysiological examinations conducted before rehabilitation of patients with spastic forms of ChCP significantly ($r < 0.01$), graphomotor, constructive and serial tests, reduced verbal auditory memory, average reaction speed, affective and expressive speech (70%, 60.6%, 45.2%, 30.3%, 72.2%, 22.9% and 52.2%, respectively).

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