Neurological Characteristics Of Children With Autism

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ABSTRACT

Autism is a disorder of mental and psychological development, in which there is a pronounced deficit of emotional manifestations and the sphere of communication. In translation, the word "autism" means - a person who has gone into himself, or a person inside himself. A person suffering from such a disease does not show his emotions, gestures and speech to others, and in his actions, often, there is no social meaning. This article examines the neurological characteristics of children with autism.

Keywords: Autism, neurological changes, autism spectrum disorders

Currently, more and more attention is being paid by pediatric neurologists to autism spectrum disorders (ASD), as there is a tendency to increase the number of children with speech development disorders against the background of a decrease in emotional response, impaired attention, lack of generally accepted gestures and stereotypical motor activity. All established symptoms, according to the criteria for the International Classification of Diseases of the 10th revision, refer to general developmental disorders, which include childhood autism, atypical autism, Asperger's syndrome, Rett's syndrome, disintegral psychosis, and other unspecified developmental disorders [2, 3].

The interest of neurologists in ASD is characterized by the need to clarify the levels of damage to functional blocks in the brain, such as perceptual perception, emotional response, gnosis and praxis, in order to establish the neurological causes involved in the development of this pathology.

Some authors have found that disorders of neurovisciral integration and imbalance of the autonomic nervous system can serve as diagnostic criteria in the development of the pathological process in children with ASD [1, 4].

In this regard, there is a need to study the involvement of the nervous system in the early diagnosis of ASD and to create programs for the treatment of this pathology.

The purpose of the study : to assess the neurological status of children with ASD.

Materials and methods of the study : the study is based on the data of a survey of 120 children with ASD, of which 39 children with Asperger's syndrome and 43 children with Kanner's syndrome.

The diagnosis of childhood autism (DA) was based on the DSM - IV criteria for autistic disorders. According to ICD-10: Asperger's syndrome - F 84.5 and Kanner's syndrome - F 84.0.

As a result, 2 groups were formed: the main group of 82 children with ASD and 38 children without autistic disorders - the control group, comparable in age and gender (Table 1).

All children were examined according to the standard neurological examination, special attention was paid to the evaluation of

anamnestic data. The examination was carried out in a complex jointly with the participation of a psychiatrist, psychologist, neuropathologist and pediatrician.

Results of the study : when evaluating the results obtained, we found that the neurological status of children with ASD was characterized by the presence of scattered microsymptoms: dissociation of tone, mild asymmetry of tendon and periosteal reflexes, delayed speech development and disorders in social communication.

Table 1

Distribution of the examined children by sex and age depending on the selected groups

Age and gender structure	Asperger's syndrome (n =39)		kanner syndrome (n =43)		Control group (n =38)	
	n	%	n	%	n	%
3-6 years old	22	56.4	26	60.5	24	63.2
7-14 years old	17	43.6	17	39.5	14	36.8
boys	28	71.8	27	62.8	22	57.9
Girls	eleven	28.2	16	37.2	16	42.1

On the part of the cranial nerves, there was a decrease in cranial innervation (asymmetry and smoothness of the nasolabial folds - 17.2%), asymmetry of the palpebral fissures, deviation of the tongue from the midline (4%), etc. there were also violations of convergence and accommodation, which were recorded in 15.6% of cases.

In 14% of cases, there was a prolonged retention of food in the mouth against the background of a preserved swallowing reflex. Pathological reflexes, tone dissociation were recorded in 35.5% of cases, while coordination disorders - in 41.1%. In the control group, these neurological disorders were noted in 9.1% of cases.

There is a relationship of imbalance in the neurological status in children with DA depending on age, so in the age group of 3-6 years they were more pronounced. At the age of 7-10 years, these disturbances were smoothed out, but did not disappear.

We also considered neurological syndromes. As a result, it was found that sleep disorders in the form of dyssomnia, insomnia, somnolongvia, somnambulism and nightmares were noted in most cases in Asperger's and Kanner's syndrome, which occurred in 41.6% and 55.2%, respectively.

Muscular dystonia syndrome was recorded with a slight predominance in Kanner's syndrome (28.9%), while in Asperger's syndrome it was 25%.

The syndrome of peripheral cervical insufficiency was observed in 19.4% of cases with Asperger's syndrome and in 21.1% of cases with Kanner's syndrome.

Enuresis occurred with almost the same frequency in children with DA - 8.3% in Asperger's syndrome and in 7.8% of cases in Kanner's syndrome.

In 16.6% of cases, we recorded pyramidal and extrapyramidal symptoms in Asperger's syndrome and in 18.4% of cases in Kanner's syndrome.

In the comparison group, neurological syndromes occurred in 55.6% of cases with a predominance of muscular dystonia syndrome (20.2%).

In the control group, 42.7% of children had no pathological syndromes in the neurological status, while in children with Asperger's syndrome only 8.3%, and with Kanner's syndrome - 10.5%, which is a significantly significant indicator ($P< 0.05$).

Speech disorders occurred in 100% of cases in children with AD. In Asperger's syndrome, auditory gnosis, astereognosis, auditory-motor coordination, and dynamic praxis predominated (87%, 83%, 83%, and 77%, respectively). In Karnner's syndrome, these disorders were significantly less (57%, 43%, 30% and 23%, respectively). Drawing disorders and auditory-speech memory were approximately the same in both groups (67% and 83%, respectively).

Conclusion : The foregoing suggests that the identified neurological syndromes may develop as a result of a high frequency of subclinical

forms of CNS damage in the perinatal period, which occurred at a later age, approximately at the 2nd and 3rd year of a child's life, during the period when genetic and acquired metabolic defects.

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