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ASPECTS OF DISBALANCE MACRO- AND MICROELEMENTS IN CHILDREN WITH AUTISM SPECTRUM DISORDERS IN BELARUS

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Introduction: Determination of macro-and microelements disbalance in children with autism spectrum disorders (ASD) provides us with opportunity to understand the etiology and pathogenesis.
Objectives: We performed research on the macro-and microelement status of 65 children with ASD and their parents. We investigated 130 samples of hair (65 children: 18 girls and 47 boys and 65 parents).
Aims: The purpose of this study was to identify and determine the nature of the disbalance of macro-and microelements of children with ASD in Belarus.
Methods: As a biological substrate we used hair. For carrying out researches using a laser multi-atomic emission spectrometer LSS-1.
Results: Diselementose on aluminum in 35.4% of the children and their parents 33.85% . Calcium in children found in 100% a deficiency. Iron content occurred in 50.8% children, and in 65% parents. In 26.1% children and parents 13% had a deficiency. 23.1% children and 18.5% parents had diselementose towards above norma. Copper content found in 87.7% , a deficiency in children and parents. Excess of the level occurred in 4.6% among parents and 7.7% among children. In 55.3% children have zinc deficiency. Reduction of zinc was noted and the parents in 44.6%. Exceeding concentration of zinc was noted in 7.7% in children and in 10.8% among parents.
Conclusions: Diselementose had children with ASD and parents. Given that the change in the content of copper and zinc is an indirect marker of the exchange protein metallothionein suggests violation of the content of this protein, which is alleged etiopathogenetic factor for ASD.

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