

DIAGNOSIS OF PHOSPHORUS-CALCIUM METABOLISM IN CHILDREN WITH CONVULSIVE SYNDROME

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Abstract: Rickets is a social problem in pediatrics and is a disease of a growing organism. One of the main causes of seizures in children of the first year of life is a latent vitamin D deficiency. In the city children's hospital No. 1, we examined 65 children who were hospitalized in the intensive care unit for convulsions.

Keywords: young children, convulsive conditions, vitamin D, rickets, treatment.

Relevance. Seizures are one of the main neurological syndromes of the neonatal period. Their frequency is from 1.1 to 16 per 1000 newborns [3,7]. One of the main causes of seizures in children of the first year of life is a latent vitamin D deficiency and clinically pronounced rickets, in which there is a violation of the formation of cholecalciferol in the skin, a violation of phosphorus-calcium metabolism, a decrease in the formation of active vitamin D metabolites in the liver, kidneys, as well as insufficient intake vitamin D with food [1,4,8]. Rickets is a social problem in pediatrics and is a disease of a growing organism. But in modern conditions, a real deficiency of vitamin D, due to insufficient intake or formation of it in the body, is possible only in early childhood, in most cases in the first year of life, which is objectively related to the nutrition and lifestyle of the child in this age period [2,5,6].

Purpose of work: determination of phosphorus-calcium metabolism for the correct appointment of vitamin D in convulsive conditions in children.

Material and methods: In the city children's hospital No. 1, we examined 65 children who were hospitalized in the intensive care unit for convulsions. Among them, there were 38 boys and 27 girls. The age of the children ranged from 5 months to 10 months. The children underwent a complete blood count, the level of Ca and P in the blood, as well as EchoEg, and, if necessary, chest X-ray.

Discussion of the results: The results of the studies showed that 48 children had a decrease in Ca to 1.7 mmol / l, and in 17 children the level of Ca was on average 2.06 mmol / l. Often the first symptoms of rickets in these children were autonomic disorders. There were such symptoms as sleep disturbance, irritability, tearfulness, excessive sweating.

Due to the presence of an acidotic shift in the body and the acidic nature of sweat, skin irritation has been noted. The most frequent complaints were excessive sweating of the face, especially of the scalp. This, in turn, led to baldness of the back of the head in the majority of children. Urine acquired a sour smell, irritated the child's skin, diaper rash, pyoderma appeared. Compliance of the bones forming the edges of the large fontanelle was noted in 18 children, curvature of the legs in 13 children, severe muscle hypotension - in 10 children.

From the above, we can conclude that these children did not undergo rickets prophylaxis at the pediatric site.

Upon admission to the hospital, all children were included in the treatment complex vitamin D at a therapeutic dose of 4000 IU per day for 30-45 days. 5 children had repeated convulsions within 2 days. These were children whose blood Ca level was below 1.5 mmol/, and EchoEG showed signs of intracranial hypertension. The inclusion of magnesium sulfate in the treatment complex contributed to the elimination of seizures in this contingent of children. The observations showed that in children who received a sufficient prophylactic dose of vitamin D, even in the presence of intracranial hypertension, convulsions did not recur. All of the above was the basis for revising the methodology for the prevention of rickets. The staff of the Department of Pediatrics developed and implemented a new scheme for the prevention of rickets: Aquadetrim 8 drops or Devaron 6 tablets (4000 IU) 1 time per week from the age of one month to the end of 1 year of life.

Our observations have shown that about 5% of parents have a negative attitude towards the introduction of any drugs to healthy children, about the same number of parents are eager to do “something” to improve the growth and development of the child, and the majority of parents have a positive attitude, but do not realize the importance of the principles prevention and often do not clearly follow the recommendations of the pediatrician. Considering that in our republic there is a system of patronage monitoring of children of the 1st year of life, we recommend that drugs prescribed for preventive purposes is given to the child personally, once a week at the above dose during patronage.

This technique does not increase the workload of nursing staff and, along with it, the doctor is convinced that the child will really receive these drugs.

Conclusions: Thus, the problem of convulsive conditions in children caused by rickets does not lose its relevance at the present time. Timely and correctly carried out prevention of rickets is of particular importance. A big mistake is the refusal to prevent rickets with vitamin D, which leads to the development of the disease and, accordingly, to a deterioration in the quality of life of the child: a decrease in motor activity, a violation of the proper formation of the skeletal system, a decrease in immune defense, and a worsening of the course of bronchopulmonary diseases. The scheme developed by us guarantees the obligatory receipt of vitamin D by the child and hence a significant reduction in the convulsive state in children.

In conclusion, it should be emphasized that only complex prevention, including the use of vitamin D, will reduce the incidence of hypocalcemic seizures.

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