

EVALUATION OF THE EFFICACY OF MAGNIVIT IN CHILDREN WITH BRONCHIAL ASTHMA ON THE BACKGROUND OF COVID-19

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ABSTRACT: Coronavirus infection has affected not only the adult population of the planet, but also children. This virus in sick people with chronic somatic diseases such as bronchial asthma (BA) caused a violation of the psychological status in many people, especially in children. The outbreak of the corona virus pandemic has become a reason to study the role of macro and micronutrients, especially magnesium, in the treatment and prevention of COVID-19. This was especially noticeable among sensitive, anxious, suspicious children, with a developed sense of responsibility, compassion and empathy, as a rule, children with low self-esteem and frequent vegetative disorders.

KEYWORDS: Bronchial asthma, COVID-19, vegetative disorders, magnesium.

INTRODUCTION

The relevance of the work: At the beginning of 2020, a corona virus pandemic began around the world. And it seemed to be a new type of virus for many scientists. This pathogen of the virus affected not only the adult population of the planet, but also children. This virus in sick people with chronic somatic diseases such as bronchial asthma (BA) caused a violation of the psychological status in many people, especially in children. During asthma attacks, children often experience anxiety, embarrassment, sadness and irritability, sometimes a feeling of fear of death [3], on the body of some mineral elements [5,6].

The outbreak of the corona virus pandemic has become a reason to study the role of macro and micronutrients, especially magnesium, in the treatment and prevention of COVID-19. There are many scientific studies on the effectiveness of magnesium in the treatment and prevention of BA. A deficiency of not only magnesium, but also zinc, omega-3 and other vitamins in the body is a risk factor for infection with COVID-19. The normal intake of micro- and macronutrients, vitamins

through supplementation can reduce the risk of clinical progression of COVID-19 and may help to reduce the anxiety-aggressive state in children [1,6,7].

Magnesium is an essential microelement that occupies a subposition in the body for the main biochemical reaction[3], energy metabolism, protein and nucleic acid synthesis[4], and it also has anti-inflammatory[4], antioxidant[6], antispasmodic action [5,6] and is involved in neuroprotection [2].

In numerous scientific studies, it is said that magnesium is of great importance in depression and anxiety [2]. Depletion of magnesium reserves in the body leads to increased depression [7].

Purpose of work: Evaluation of the effectiveness of the use of the drug Magnavit in children with bronchial asthma against the background of COVID-19.

MATERIALS AND METHODS

we studied 87 children aged 7 to 12 years who had COVID-19 during an exacerbation of asthma. The sex ratio was: girls 42% (n=37), boys 58% (n=50).

All children divided into three groups: 1 - a group of children with BA who did not have COVID-19; 2 - a group of children with BA who had been ill with COVID-19; Group 3 - control group (40 children), practically healthy children of the same age.

Prior to the start of treatment, the level of magnesium trace element in the blood serum was checked in all children, after which magnesium containing the drug Magnavit was added to the treatment regimen for all children and given to all children. In addition, we determined the psychosomatic state of all the children studied. Determination of the psychosomatic state carried out using a questionnaire specially developed by us.

RESULTS AND DISCUSSION

The results of the study showed that in children with asthma, the most noted were: stressful situations in society (for example, changing schools). In family circumstances, conflict situations, quarrels between parents and other family members were 1.5-2.0 times more likely to be noted by the child than by their parents. This indicator compared with healthy peers is pronounced.

After the use of the drug Magnivita, conflict situations in the family were 1.3-1.5 times noted by the child, in groups of children with BA.

According to the “extraversion-introversion” scale, introversion prevailed in children with BA who had COVID-19 (up to 71.29%), and only 26.38% and 33.35% (respectively, in groups I and III) had a tendency to extraversion . After treatment, the indicator of extraversion in groups I and III, respectively, was (in children of group I, the indicator of introversion was 69.47%) 30.53%, and in the third group there was almost no change - 35.68% (p<0.05).

Before treatment with a magnesium-containing drug, the following indicators were characteristic: children who suffered COVID-19 against the background of asthma were more characteristic of introversion, while for children with asthma without COVID-19, extroversion mainly recorded. Children of group II were more withdrawn, irritable, and often showed fear. Children of group I responded adequately to the exacerbation of the disease.

After the course of treatment: in children of first and second groups there was no significant change on the scale “extroversion – introversion”.

The results of the study of the amount of magnesium in the blood serum before treatment amounted to groups I and II, respectively, 0.1 and 0.3 mmol/l (normally 0.7-0.9 mmol/l). After treatment, the amount of magnesium in the blood serum was characteristic of the groups: 0.48-0.67 mmol/l. ($p < 0.05$).

The results of the studies showed that the decrease in magnesium levels did not depend on the transferred coronavirus infection.

CONCLUSION

In the studied groups of children, before the use of a magnesium-containing drug, the course of the disease was more severe, the degree of introversion was higher than in BA patients who had not recovered from COVID-19. This was especially noticeable among sensitive, anxious, suspicious children, with a developed sense of responsibility, compassion and empathy, as a rule, children with low self-esteem and frequent vegetative disorders.

In children, the prevalence of sensitivity, anxiety, compassion and empathy, low self-esteem and frequent vegetative disorders, after the use of Magnesium B6, the indicators of the severity of introversion were already slightly higher than in patients with asthma who had not recovered from COVID-19, but indicators of anxiety, suspiciousness, compassion and empathy, low self-esteem and frequent autonomic disorders remained unchanged.

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