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PEDIATRICS

Bacillus clausii in treatment of rotavirus infection in children

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Background. Every year, 2 million patients are hospitalized with a severe form of rotavirus infection (RVI), 25 million need medical assistance of a doctor and 111 million cases are treated at home. The most severe illness occurs in children at the age of 4–36 months of life. Rotavirus infection still remains the cause of more than 215 000 deaths annually, especially in low-income countries. Probiotics are widely known to be used in acute diarrhoea in children and adults. Today, in clinical practice the use probiotic drugs that are normal residents of the intestinal tract, such as lactic acid bacteria and spore-forming, mainly representatives of the genus *Bacillus*.

Objective. The purpose of our research is to study the effectiveness of the use *Bacillus clausii* in children with rotavirus infection by assessing the duration of clinical symptoms.

Methods. We have studied 42 children with RVI between the ages of 1 and 5 years, group I consisted of 20 patients received standard treatment and group II – 22 patients received additional probiotic, which includes *Bacillus clausii*. The control group consisted of 15 healthy children, representative of age and gender. Diagnosis of rotavirus infection was verified according to results of the immuno-chromatographic test.

Results. In the examination of patients, DVF syndrome, characterized by diarrhoea, vomiting, and fever, was the leading symptom, in addition, the reduction of turgor of skin, pain in the epigastric and umbilical areas with palpation of the abdominal was determined. When comparing the duration of these symptoms, it was found that in children of group II the fever lasted for 0.61 days, vomiting for 0.65 days and diarrhoea for 1.09 days less than for the patients in group I ($p < 0.05$).

Conclusions. The inclusion of *Bacillus clausii* in the treatment of children with rotavirus infection reduced the duration of the main clinical symptoms. Furthermore, the use of a probiotic preparation containing *Bacillus clausii* in the complex treatment of rotavirus infection contributed to the improvement of treatment efficiency.

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