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MODERN METHODS IN THE TREATMENT OF BACTERIAL DIARRHEA

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ABSTRACT: The article is devoted to modem characteristics of the clinical course of intestinal bacterial infections in inpatient children at the age of 6-18 years, the efficiency of bactistatin in the therapy of invasive intestinal infections was analysed.

Keywors: Anti-bacterial medications, Acute intestinal, infections, Prebiotics, Probiotics, Sorbents.

INTRODUCTION

The relevance of the problem of acute intestinal infections (AI) is due to the high morbidity of the child population and significant economic losses; lack of coordinated approaches to therapy; the risk of developing chronic gastroenterological diseases [1, 2].

An open comparative study of the effectiveness and safety of Baktistatin (a dietary supplement) prescribed for the etiopathogenetic treatment of bacterial acute intestinal infections in children aged 7 to 18 years was conducted. The purpose of this study was to examine effectiveness.

Bactistatin in the treatment of children with acute intestinal infections of bacterial etiology, and its effect on intestinal microbiocenosis.

Materials and research methods

The study included 40 patients aged 7 to 18 years with a moderate form of acute intestinal infection of bacterial etiology. Children were hospitalized from the 1st to the 3rd day of illness, the majority - in the first two days - 60% of cases (35 patients). The reasons for the need for hospital treatment for those admitted on days 1-2 were febrile fever - 78% of cases (39 patients), repeated vomiting - 32% of cases (16 patients) and the appearance of blood in the stool - 18% of cases (9 patients). Children hospitalized at a later stage had the main complaint of prolonged diarrhea, persistent fever in 76% of cases (38 patients) and hemocolitis in 10% of cases (5 patients). The average age of patients included in the study was 9.7 ± 0.7 years. There were no differences by gender: boys and girls accounted for 52% (26 patients) and 48% (24 patients), respectively.

The first group (n = 25) received Bactistatin 1 capsule 2 times a day for 7 days during the acute period of the disease against the background of basic therapy. Patients in the comparison group (n = 25) received Hilak Forte at an age-specific dose for 7 days as part of basic therapy. Basic therapy included oral rehydration or infusion therapy, diet therapy, and antimicrobial drugs were prescribed according to indications [6, 7]. Enterosorbents were not prescribed.

The incidence of clinical symptoms of acute intestinal infections (general infectious diseases and gastrointestinal lesions) was the same in the groups of patients receiving Bactistatin and in the comparison group. The compared groups were representative of gender, age, timing of admission and basic therapy; initial peripheral blood parameters also did not differ significantly.

All patients underwent standard laboratory examination, including a clinical blood test, clinical urine test, biochemical blood test, and coprocytogram.

Results and discussion

Temperature reaction was observed in 100% of sick children with invasive diarrhea; its duration reached 3.61 ± 0.65 days. The maximum increase in temperature was 39.2 ± 0.19 °C, and hyperthermia above 40 °C was observed in 24% of patients. The duration of fever above 38.5 °C was observed on average for 1.41 ± 0.14 days. In all patients, the leading one was intoxication syndrome, which persisted during therapy for 2.18 ± 0.31 days, which was characterized by lethargy, weakness, adynamia (1.88 ± 0.21 days), refusal to eat (2.53 ± 0 ,54 days). Repeated vomiting was noted in 34%, but its duration did not exceed two days (1.65 ± 0.31 days); as intoxication decreased, vomiting stopped.

In addition to the intoxication syndrome, the severity of invasive diarrhea was determined by the depth of damage to the gastrointestinal tract: colitis syndrome occurred in 100% of children (50 patients), while gastroenterocolitis was detected in 38% of cases (19 patients), enterocolitis - in 62% of cases, in 18% (9 patients) developed hemocolitis. The frequency of defecation 10 or more times a day was noted in 56% of children (28 patients), defecation less than 5 times a day was observed in 12% of patients (6 people). Abdominal pain syndrome was present in 80% of patients (40 people), and the pain was of moderate intensity and diffuse in nature. In 44% (22 patients) of children, pain was localized in the left iliac region. Bloating, rumbling and pain on palpation of the abdomen were observed in 76% (38 patients) of children. The picture of the peripheral blood test was characterized by moderate leukocytosis, neutrophilia with band shift and increased erythrocyte sedimentation rate (ESR). Coprocytological changes in the acute phase of invasive diarrhea were characterized by manifestations of enzymatic deficiency in 84% of cases (42 patients), the appearance of mucus (100% of cases), a significant number of leukocytes (84%), and erythrocytes (24%). In 12% of children (6 patients), upon microscopic examination, leukocytes and erythrocytes covered all fields of vision.

Antimicrobial therapy was prescribed in accordance with the principles of etiotropic treatment of invasive acute intestinal infections in children. The starting antimicrobial drugs were cefotaxime, nifuroxazide, reserve drugs were ceftriaxone, amikacin, rifaximin. According to the timing of antimicrobial therapy, children were divided into two groups: those who received therapy from 1-2 days of hospitalization and those who received etiotropic therapy from 3-5 days of hospitalization. The most significant effect of Bactistatin use in invasive acute intestinal infections was a reduction in the frequency of prescription of antimicrobial therapy in the group of patients treated with Bactistatin to 48% versus 76% in the comparison group ($p < 0.05$). The inclusion of Baktistatin in the complex therapy of invasive acute intestinal infections led to a decrease in the frequency of unsmooth course of the disease (superinfection, exacerbation) and contributed to a less frequent formation of convalescent bacterial excretion [5]. It was revealed that the use of Baktistatin led not only to earlier relief of the main symptoms of the disease, but also had a proven effect, expressed in a change in the microbiocenosis of the colon due to an increase in the proportion of obligate and facultative microflora and a decrease in the number of opportunistic bacteria [6].

Thus, rational therapy for acute intestinal infections: helps reduce the duration of the disease; prevents prolonged infection; prevents prolonged release of the pathogen; leads to normalization of the microbial landscape of the colon; reduces the risk of developing allergic manifestations.

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