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ДИАГНОСТИЧЕСКИЕ КРИТЕРИИ КИШЕЧНЫХ ИНФЕКЦИЙ У ДЕТЕЙ ДО ПЕРВОГО ГОДА ЖИЗНИ

Резюме: Острые кишечные инфекции (ОКИ) по частоте заболеваемости и тяжести клинических проявлений у детей являются одной из наиболее актуальных проблем практического здравоохранения. У детей раннего возраста ОКИ нередко протекают с синдромами токсикоза и эксикоза, что представляет особую проблему в связи с возникновением состояний, угрожающих жизни ребенка.

По данным ВОЗ ежегодно в мире регистрируется около 1 млрд случаев ОКИ, из них около 5 млн заканчиваются летальными исходами. Согласно литературным источникам последних лет зарубежных и отечественных исследователей, вирусы являются первой по значимости причиной ОКИ у детей раннего возраста с ведущей ролью ротавирусов.

В то время как особенности течения вирусных диарей у детей первых месяцев жизни освещены недостаточно полно, актуальным представлялось изучение клинических особенностей наиболее часто встречающихся ОКИ у данных пациентов.

Ключевые слова: дети, ротавирусные, смешанные и бактериальные кишечные инфекции, диареи.

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DIAGNOSTIC CRITERIA OF INTESTINAL INFECTIONS IN CHILDREN BEFORE THE FIRST YEAR OF LIFE

Resume: Acute intestinal infections (AEI) in terms of the incidence and severity of clinical manifestations in children are one of the most pressing problems of practical health care. In young children, AEI often occurs with toxicosis and exicosis syndromes, which is a particular problem in connection with the occurrence of conditions that threaten the child's life.

According to the WHO, about 1 billion cases of AEI are registered annually in the world, of which about 5 million end in deaths. According to the literature sources of recent years, foreign and domestic researchers, viruses are the first most important cause of AEI in young children with the leading role of rotaviruses.

While the features of the course of viral diarrhea in children in the first months of life are not fully covered, it seemed relevant to study the clinical features most often in

Key words: children, rotavirus, mixed and bacterial intestinal infections, diarrhea.

Introduction. Acute intestinal infections (AII) in terms of incidence and severity of clinical manifestations in children are one of the most urgent problems of practical public health. In children of early age, OCs often occur with syndromes of toxicosis and excision, which is a particular problem in connection with the emergence of conditions that threaten the life of the child. According to the WHO, about 1 billion cases of AII are registered annually in the world, of which about 5 million result in deaths [2]. According to the literary sources of recent years of foreign [3] and domestic [2] researchers, viruses are the first most important cause of OCD in children of early age with the leading role of rotaviruses. While the features of the course of viral diarrhea in children of the first months of life are not fully covered, the study of the clinical features of the most commonly occurring AII in these patients was considered relevant.

Purpose of the study. To study modern methods of studying intestinal infections in children before the first year of life.

Materials and methods of research. We examined 67 sick children aged 0 to 3 months hospitalized in the infectious-intestinal department of the regional children's hospital of the city Andijan.

The etiological diagnosis of AII in the examined children was established in the laboratory of the clinical hospital by traditional methods of bacteriological studies of feces for pathogenic, conditionally pathogenic flora, ELISA for the detection of rotavirus antigen in feces and parallel testing of PCR stool samples for viruses and enteropathogenic microorganisms.

Results and its discussion. The use of the most informative method of PCR diagnostics of feces has determined the significant role of rotaviruses in AII in children of the first months of life, both in the form of mono- and mixed infections.

Pathogens AII in children in the first months of life were often viruses. The prevailing role of rotaviruses in the etiology of AII was noted, including in mixed forms. As a monoinfection in the examined patients, rotavirus diarrhea was more common (32.8%) than rotavirus diarrhea (7.5%), and bacterial (25.4%) AII.

Using the PCR method for the diagnosis of faeces, the children tested by us also found a significantly high incidence of rotavirus in mixed virus-viral and viral-bacterial infectious diarrhea ($p < 0.05$).

Carried out etiological interpretation of AII in children of the first three months of life allowed to assess the clinical features of the course of infectious diarrhea in this age group.

There were no significant differences in the sex composition of the children surveyed. Breastfeeding groups were mostly children with viral diarrhea, while in viral-bacterial AII, nutrition was artificial in 62.5% of patients.

Assessing in the observation groups in children the manifestation of AII, we note a number of differences. In all etiological groups of AII, in addition to

norovirus infection, the onset of the disease in children of the first three months of life was both acute and gradual. With rotavirus, including its combined form of viral-bacterial and bacterial AII in the first day of the disease, an increase in body temperature and the appearance of liquid rapidity stool were noted at 75.0, respectively; 68.8 and 73.5% of children. Vomiting in these patients joined the next day or was absent. Children with viral-and-viral AII became ill with the appearance of vomiting and diarrhea, the latter gradually prevailing in the dynamics of the disease, but they did not notice a rise in body temperature in these patients. Acute illness developed in children of the first three months of life with norovirus infection than rotavirus. In patients with norovirus infection and fever, and vomiting, and a change in frequency, the consistency of the stool appeared on the first day of the disease.

In the examined children in the clinic of the disease, such supporting symptoms of AII as fever, vomiting and loose stools in the frequency of occurrence in each etiologic group and their duration were different (Table 3).

In children with rotavirus infection, the body temperature did not rise above the low-grade digits, but the duration of the reaction was the longest and amounted to 2.95 ± 0.47 days. In the group of children with norovirus infection, body temperature often increased to febrile numbers, but with a shorter duration of fever (2.0 ± 0.95 days). Intoxication in patients of all observed groups was manifested by a decrease in appetite and lethargy. This syndrome was less often observed in children with rotavirus infection than in patients with acute intestinal infections, the cause of which was enteropathogenic bacteria (in 52.9%) or their combination with viruses.

With rotavirus infection, vomiting was found in only 22.7% of those surveyed, and with norovirus infection, this symptom was observed in 60% of children. The dependence of the frequency of emesis on the etiological group of subjects was reliably noted ($p < 0.05$).

Thus, in patients with rotavirus, norovirus and viral-bacterial intestinal infection, in the clinic of diseases of which vomiting was recorded, the symptom was noted for its abundance and repetition up to 3-4 times a day. In 15% of patients with mixed viral infection, vomiting was repeated multiple times (6 or more times). In the group of children with bacterial intestinal infections, the frequency of vomiting did not exceed 2 times a day and was uninvested. The duration of vomiting was highest in children with norovirus infection $1,2 \pm 0,49$ days compared with the same index for rotavirus AII (0.41 ± 0.18 days).

According to the literature data [1-3], viral intestinal infections are characterized by watery diarrhea. According to our results, typical for viruses, osmolar diarrhea in children of the first three months of life was found in each etiological group of AII in a small percentage of cases. With rotavirus and combined viral-viral diarrhea, the share of watery stools was only 18.2 and 14.3%, which is higher than in other compared groups.

The stools of the children of these groups were often of a different consistency: liquid feces, undigested, with a moistening zone on the diaper and an admixture of mucus, sometimes greens. Multiplicity of stool in 59% of patients with rotavirus infection and in 43% of patients with viral-diarrhea exceeded 10 times a day. In the group of patients with norovirus infection, watery diarrhea was not recorded, liquid stool was observed more than 10 times a day in only 1 child.

The dependence of the toxicity of the digestive tract in the examined children on the types of pathogens of the AII and their combination ($p < 0.05$) was revealed. According to clinical data, taking into account the results of the coprological examination, the disease manifested itself in the gastroenteritis variant in 36.4% of the examined patients with rotavirus infection and in 42.9% of the combined viral-viral AII.

The gastroenterocolitis variant of rotavirus infection was noted in 45.5% of cases. In children with norovirus infection, the gastroentero-coli clinical form

of the disease was predominantly recorded, while in gastric ulcer infections, gastroenterocolitis was not observed as often, but in 17.7% of cases. Bacterial and combined viral-bacterial diarrhea in 41.2 and 43.8% of children, respectively, occurred in the form of enterocolitis.

With rotavirus gastroenteritis in children, signs of secondary lactase deficiency developed quite often (in 45.5%). This secondary syndrome of malabsorption was noted in 58.8% of children with bacterial AII.

In the patients examined, meteorism was frequently observed, which was manifested by rumbling along the bowel and bloating. The duration of this clinical symptom in children with combined viral-viral diarrhea is greatest, the average value was 6.0 ± 0.65 days, while in patients with rotavirus diarrhea the duration of flatulence was no more than 3.95 ± 0.47 days, with norovirus - 4.0 ± 1.05 days, and for bacterial intestinal infection - no more than 3.59 ± 0.49 days.

Catarrhal phenomena from the upper respiratory tract, such as hyperemia of the throat, uninvolved mucous discharge from the nose, preceded by diarrhea, were registered in 41% of children with rotavirus infection. In the compared the catarrhal syndrome was more often observed in children with norovirus infection and with the greatest duration.

Against the background of an increase in stool size, vomiting, regurgitation and intoxication, the development of dehydration syndrome was noted with rotavirus infection in 18% of cases, which is somewhat less frequent than with noroviral AII. In groups of children with viral diarrhea, unlike AII caused by bacterial pathogens, an exacerbation of the second degree was diagnosed twice as often.

Estimation of the severity of intestinal infection in the acute period in children aged 0 to 3 months was carried out taking into account the severity and duration of general infectious, local symptoms of the disease, the presence and severity of the syndrome of exsiccosis. There was no dependence of the

frequency of registration of severe forms of AII in children of the first months of life from the etiologic structure of pathogens.

Conclusions. In children of the first three months of life, the viruses predominate in the etiological structure of acute intestinal infections, with the leading role being played by rotaviruses.

For rotavirus infection and its associated viral-bacterial variant is characterized by a gradual onset of the disease with a rise in body temperature to subfebrile digits and the appearance of a liquid stool with an admixture of water, mucus, sometimes greens. Catarrhal syndrome with rotavirus diarrhea in children of the first months of life is found in less than half of patients, not often in the clinic of the disease there is vomiting, which during the day is repeated.

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