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CLINIC OF THE INITIAL PERIOD OF SALMONELLASIS CAUSED BY SALMONELLA TYPHIMURIUM IN CHILDREN

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ABSTRACT: Until now, the proportion of salmonella in the incidence of intestinal infections in children remains high. Despite numerous studies, a number of issues have been poorly studied. Thus, the symptoms of the initial period have been little studied, which makes it very difficult to differentiate salmonellosis from other gastrointestinal diseases. Salmonellosis is an anthropozoonous acute infectious disease caused by numerous salmonella serovars. In children, salmonellosis infection often has a course in the form of gastrointestinal, less often — septic and typhoid-like forms. Salmonella produces exotoxins that disrupt the secretion of fluid and salts into the intestinal lumen and inhibit protein synthesis in enterocytes[2]. When salmonella is destroyed, endotoxins are released, which cause significant intoxication of the body.

Keywords: Infection, salmonellosis, symptoms, enterocolitis.

RELEVANCE.

Salmonella spp. infections can be particularly challenging when they manifest as acute abdominal problems and lead to emergency surgery. Examples of such serious conditions are Salmonella-related intestinal perforation, gallbladder involvement, salpingitis, and peritonitis. Mesenteric lymphadenitis associated with Salmonella typhimurium mimics acute appendicitis and can make it difficult to establish a timely and definitive diagnosis in young patients who present with right lower abdominal pain. Paralytic ileus is a fairly common manifestation of Salmonella infection at all ages, but complete intestinal obstruction requiring surgical intervention is very rare [2]. Because of the nature of the diagnostic process, a significant number of patients with Salmonella infection present with acute abdomen and undergo needless operations.

The purpose of the study. To study the clinical features of salmonellosis caused by S. Typhimurium in children of different ages with an emphasis on the initial period.

Materials and methods of research. During the period from 2018 to 2023, we analyzed 271 case histories of children with Salmonella infection caused by S.Typhimurium. The diagnosis of salmonella in these patients was confirmed bacteriologically in 55%, bacteriologically and serologically in 45% of cases. By age, the patients were distributed as follows: 37 people (13.6%) under 6 months, 61 people (22.5%) 6-12 months, 127 people (46.9%) 1-3 years old, 46 people (17.0%) over 3 years old. All children have a contact and household infection pathway.

The results of the study. The study of the initial period (3-4 days) allowed us to identify two main variants of the disease.

The first variant, characterized by symptoms of respiratory damage (flu-like form of salmonella), was detected in 47.7% of children. The disease began acutely: the majority of children (78.4%) had a subfebrile temperature, at the same time shortness of breath, cyanosis of the lips, earlobes and nasolabial triangle appeared, as well as dry cough with an asthmoid component, emphysematous chest swelling, boxy percussion sound, small and medium bubbly wheezes. This

symptom increased within 2-3 days, the nature of the stool and the frequency of defecation did not change. Only 2-3 days after the onset of the disease, against the background of the developed "respiratory" symptoms, the nature of the stool changed, impurities of mucus and greens with the color of spinach (the color of marsh mud) and blood appeared in it. Blood in the stool was noted in almost 1/3 of children, in most cases there was a small amount of it ("streaks") and only a few children had so much of it that they had to differentiate salmonella from other diseases (intussusception, intestinal injuries). By day 3-4, the intestinal syndrome had reached such a development that it made it possible to diagnose enterocolitis in 57.8% of children, enteritis in 17.4%, gastroenteritis in 9.7% and gastroenterocolitis in 15.1%. Respiratory syndrome in the early days of the disease made it difficult to diagnose salmonella. Acute respiratory infection, influenza, and small-focal pneumonia were usually diagnosed, and only the appearance of "intestinal" symptoms suggested salmonella or other intestinal infection[7].

The second variant of the initial period of salmonellosis, noted in 52.3% of children, manifested symptoms of gastrointestinal disease. On the 1st day of the disease, 32.1% of children had one or two vomiting and loose stools (3-5 times). In 67.9% of children, the disease began with an increase in temperature and deterioration of the stool, in which impurities of mucus and greenery appeared, in 9.3% of patients – blood in the form of veins. In the next 2-3 days, the symptoms increased, stools became more frequent, the temperature rose, and symptoms of a violation of the water-salt balance developed. Salmonella no 134 is characterized by "stool without counting". So, in 13.5% of children, the stool frequency did not exceed 3-4 times a day, in 23.7% - 5-6 times, in 20% - 7-8 times, in 25% - 8-10 times, in 17.8% - 10-15 times. Colon lesion dominated the intestinal syndrome clinic. In 69.9% of children, it was manifested not only in the presence of mucus, greens and pus in the stool, but also often (in almost 1/3 of children) in the appearance of blood in the form of veins, and in some in the form of intestinal bleeding. Spasm of the sigmoid colon, paretic weakness of the anus were noted in all patients, some had a gaping anus and a straining syndrome. Thus, the "intestinal" syndrome reached its maximum development by 3-4 days of illness. By the same time, there was a real opportunity to assess the localization of the inflammatory process. 69.9% of children developed enterocolitis syndrome, 18.3% - enteritis, 6.2% - gastroenteritis and 5.6% - gastroenterocolitis, as for "respiratory" symptoms, in many children (37.4%) it was determined quite clearly, especially in infants, but did not determine the severity of the condition. The "pure" flu-like variant (without intestinal dysfunction) has never been detected. It is noteworthy that in infants salmonellosis was most often manifested by symptoms of respiratory infection, in older children by symptoms of intestinal infection. Based on the study of the symptoms of intestinal and respiratory lesions, the nature of the temperature reaction, symptoms of intoxication (lethargy, anxiety, convulsions, degree of dehydration, hemodynamic condition, etc.), the severity of the disease was established.

Conclusions. The mild form of salmonella, which was diagnosed in 18% of children, included those variants in which the condition of patients was slightly impaired, the temperature did not exceed 38.5 ° C, stools were no more than 5-6 times a day, the phenomena of hemocolitis, exicosis and hemodynamic disorders were absent. In the moderate form of salmonellosis (58%), almost all children (87%) had fever up to 38.5 ° C, stool disorder (enterocolitis, gastroenterocolitis), frequent stools (7-9 times), one or two vomiting (43.4%), moderate hemocolitic syndrome (39%). In addition, almost half of the patients (47.2%) showed signs of respiratory damage, moderate shortness of breath, cyanosis of the face and lips, hard breathing and a boxy shade of percussion sound. In the moderate form, 27.8% of children showed

symptoms of grade 1 exicosis. The severe form of salmonellosis (28%) was characterized by the most diverse symptoms, the symptoms of intoxication were most pronounced, hemodynamic disorders developed (vasomotor collapse, heart failure, etc.). Almost half of the patients (46.2%) had symptoms of hemocolitis and impaired water-salt balance. Neurotoxic syndrome was found in 6.7% of children. In infants, the severity of the condition was mainly due to damage to the respiratory and cardiovascular systems, in older children - damage to the gastrointestinal tract. At the same time, severe forms of the disease were most often recorded in infants. The age-related features of the clinic of the initial period include the high frequency of hemocolytic syndrome in infants. So, in children aged 1-3 months. hemocolitis was noted in 32.2% of cases, 3-6 months – in 34.7%, 6-9 months – 29.2%, 9-12 months - 25.7%, 1-3 years – in 16.3%, 3-7 years – in 9.5% and in children over 7 years – in 4.9%. 135

Summary. The clinical picture of the inital period of salmonellosis caused by S.typhi murium in children of different age was studied in infants the disease most oftem manifested itself in symptome with involvement of the respirotory organs; ―intestinall symtoms appeared later. In older children the disease started with symptoms affecting the gastro – intestinal tract.

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