

Etiological factors of secretory and invasive diarrhea and measures to improve their treatment

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Abstract. Acute intestinal infections (AII) remain one of the most important problems of children's infectious pathology, as this disease is diagnosed with severe forms and the mortality remains in high rate. Among patients with acute intestinal infection, children account for 60-70%. Severe forms of the disease are still noted to lead to death in young children. In addition, in recent years, there has been an increase in acute intestinal infections, an increase in their clinical manifestations and a long-standing uneven trend. The severity of the disease often occurs due to the development of viral-bacterial and bacterial-bacterial Complex in young children. V.F. Uchaikina et al. According to (2004), the main criteria for diagnosis include the following forms: gastritis, enteritis, gastroenteritis, colitis, enterocolitis, gastroenterocolitis, distal colitis. In the initial period of the disease (until the results of laboratory tests are obtained), for the construction of rational etiotropic and pathogenetic-based therapy of the OII, it is necessary to first determine the pathological process (enteritis, colitis) by taking into account the severity of the disease (mild, moderate, severe). Even with the severe course of the disease in childhood, acute intestinal infections contribute to their formation, especially in children with a decrease in the health index, prone to other infectious and somatic diseases. About the role of OIC in the pathogenesis of chronic diseases of the digestive system, leading to overeating and decompensation of diseases of the gastrointestinal tract. At present, the etiological structure of the AII has changed. Now the leading role among them in the world is undoubtedly that 50-80% of AII in children belong to viruses. Currently, intestinal infections are associated with representatives of at least 8 different types of viral oylases: Reoviridae, Saliceviridae, Adenoviridae, Astroviridae, Picornoviridae, Cobovirus, Coronaviridae, ovoviridae, Picornaviridae agent. The etiology of viral diarrhea is similar in developed and developing countries. The spectrum of possible etiological agents of acute gastroenteritis continues to increase, since previously unknown viruses were detected in patients, but it is necessary to confirm their significance in this pathology. This article aims to study the etiotropic treatment measures aimed at inhibiting the development of acute intestinal infection bacteria or virus.

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1 Introduction

Among patients with acute intestinal infection, children account for 60-70% [1-7]. It is noted that severe forms of the disease still lead to death in young children [8, 9]. In addition, in recent years, there has been an increase in acute intestinal infections, an increase in their clinical manifestations and a tendency to long-term uneven course [10-15]. The severity of the disease often occurs due to the development of viral-bacterial and bacterial-bacterial Complex in young children [11, 16-18].

According to the etiological structure of acute intestinal infections in young children who came to treatment at the Andijan regional infectious diseases hospital in the scientific research, differentiated and targeted burns were applied to the treatment. The tasks of the scientific research were determined and carried out;

1-epidemiological characteristics of acute intestinal infections in Andijan region studied;

Aims and tasks of the work: The etiological and clinical characteristics of acute intestinal infections in young children who came to treatment at the 2-Andijan regional infectious hospital;

3-acute intestinal infection studied etiotropic treatment measures aimed to bypass the carob on the bacterium or virus-causing factor.

In the scientific study, the clinical course in patients with diarrhea was based on the results of laboratory tests, which revealed an increase in the activity of alkaline phosphatase in neutrophils in bacterial diarrhea, a decrease in viral diarrhea, and, at the same time, reported that the disease pathologist was viral or bacterial, helped to apply the method of natriuretic etiotropic treatment. To compare the activity of ischemic phosphatase in patients with neutrophils, we investigated the activity of ischemic phosphatase in children aged 10 to 1-1 years for control. From Special Studies, along with Bacteriological Methods, the activity of ischemic phosphatase in patients' mine neutrophils was investigated. In this method, the solution of naphthyl-phosphate ether decomposes into alkaline phosphatase, which reacts with diazoniumtuzi to give a precipitate. In the neurophils that are made of Sog people, 20 pheromones give a stagnant positive reaction.

2 Methods

The index in healthy people was $32,9 \pm 2,1$ Ed. equally aged. During the first-second days of follow-up patients' treatment in the hospital, the activity of ischemic phosphatase in neurophils was investigated (Table 1).

Table 1. All alkaline phosphatase indicators $M \pm m$.

Weightlevel	1-group		Group 2			Gastric Gas.Ent. Gas.Ent.
	Dysentery 31.2 ± 2.1	31.2 ± 2.1	$R < 0.05$ 30.1 ± 2.8	$R < 0.05$ -	Gas.Ent. Cal	32,9+2,1
Light	$37.1 \pm 2.8R < 0.005$	$28.3 \pm 2.9R < 0.005$ 26.5 ± 3.1	$R < 0.001$ 27.1 ± 2.9	$R < 0.001$	-	32,9+2,1
Medium	$R1 < 0.001$ $28.3 \pm 2.9R < 0.005$ 26.5 ± 3.1	$- 24.7 \pm 2.9$	$R < 0.001$ 25.4 ± 3.2	$R < 0.001$	$27,1 \pm 2,9$ $P < 0,001$	32,9+2,1
Heavy	$43.7 \pm 3.1R < 0.001$	Group 2	Gastric Gas.Ent. Gas.Ent.	Cal	$25,4 \pm 3,2$ $P < 0,001$	32,9+2,1

In 2018-2021, in order to analyze the characteristics of the clinical manifestations of viral and bacterial etiology OII on the basis of the "infectious diseases hospital" in Andijan region, we observed 44 children aged 3 to 3 years who were hospitalized for treatment in the hospital. The average age of the examined patients was $3,3 + 0,5$ years. It consists of 25 boys (56,4%) and 19 girls (43,6%) t (1-2 karang to the scheme). Children under 3 years of age were preferred in the composition, which accounted for more than three quarters of those admitted to the hospital (Fig. 1).

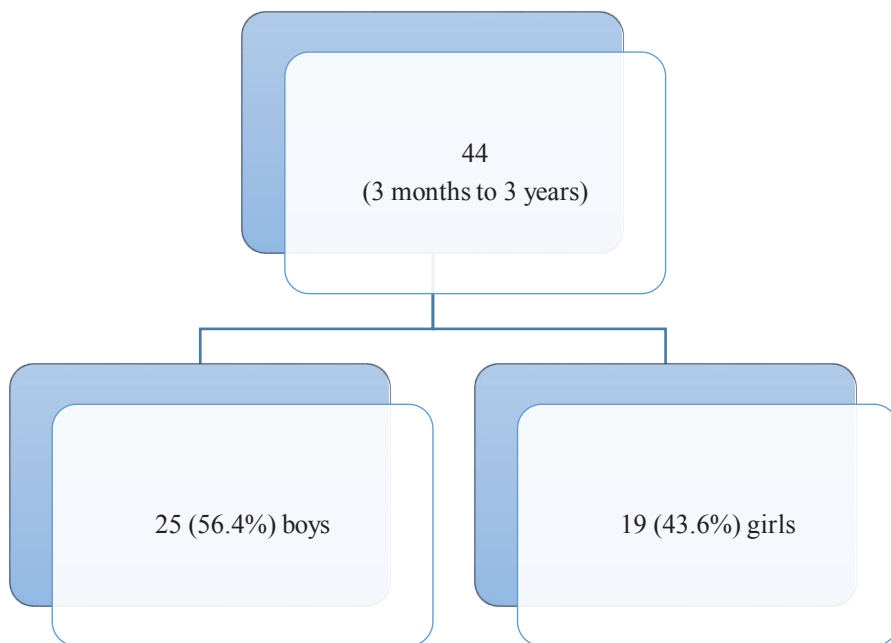


Fig. 1. Investigation of patients under examination by age and sex.

When evaluating the effectiveness of etiological therapy in children with follow-up patients, we randomly divided the patients into 2 groups. 1 group (comparison group) – patients with bacterial intestinal infection; 2 group of patients suspected of viral-induced intestinal infections (Fig. 2).

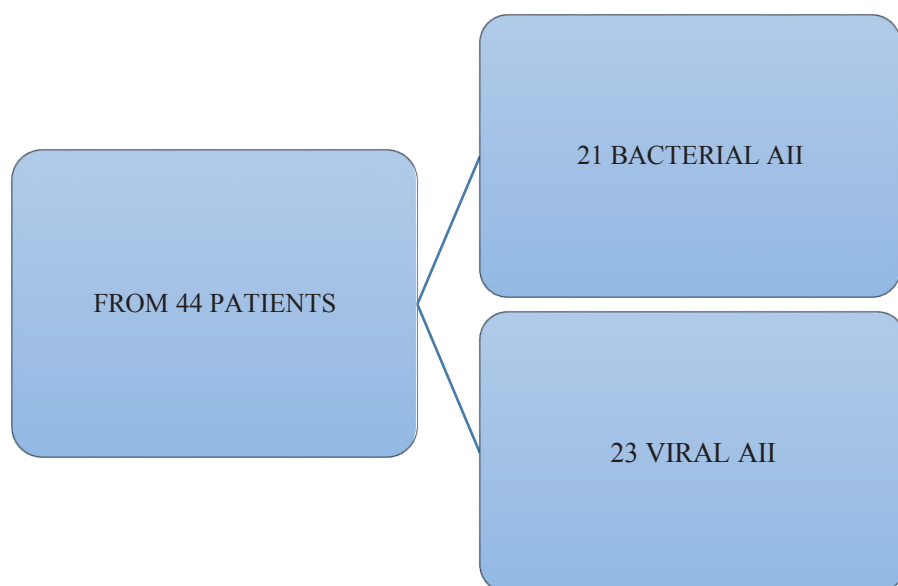


Fig. 2. Etiological distribution.

21 patients in the 1st group of our observations were obtained with bacterial intestinal infection. To determine the bacterial etiology of the disease, a bacteriological examination was performed in all patients (sowing feces and gastric lavage). Viral etiology diarrhea is diagnosed based on clinical course observations, epidemiological Anamnesis, negativity of bacteriological examination of feces, laboratory analysis of patients due to the limited spectrum of examination of pathogens in the hospital.

12 (51%) of patients suspected of viral etiology diarrhea were male children, 11 (49%) were female.

The etiological interpretation of intestinal infections showed that in children with bacterial intestinal infections, 7 (34%) patients who had a predominance of conditional patogen flora were diagnosed as having an anterobacteria, 4 (19.0%) patients who had a protein, *Staphylococcus aigeis* 3 (16.0%) patients. With the diagnosis of salmonellosis and shigellosis, 5 (24%) patients were treated in the hospital, of which 4 (21%) were allocated *Salmonella enteritidis* feces. All children who were observed were hospitalized for clinical reasons (Fig. 3).

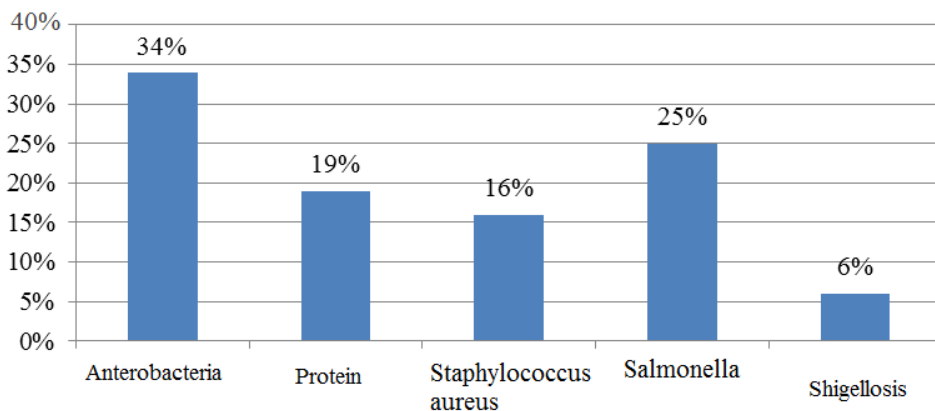


Fig. 3. Etiological interpretation of bacterial acute intestinal infections.

When studying sick children's anamnesis, among the accompanying pathologies against the background of BII, 11% of children suffered from clinical signs of acute respiratory viral infection, urinary tract infection in 3% of patients, 2% acute tonsillitis, 2% - dysmetabolic nephropathy, 2,0% - type hypotrophy. Comparative characteristics of clinical condition of intestinal infections with bacteria and virology in young children with burns (Table 2):

Table 2. Syndromes occur in%.

Syndromes	BII	VII
Rise in body temperature	87%	98%
Vomiting	59%	89%
Diarrhea	92%	100%
Dehydration syndrome	22%	33%
Abdominal pain syndrome	38%	18%
Flatulence	47%	60%
Encephalitic reaction, convulsive syndrome	1%	6%
Anemia	18%	13%

It helps with differential diagnosis between bacterial and viral diarrhea, especially with damage to the upper gastrointestinal tract (gastritis, gastroenteritis, enteritis). The addition of the colon to the process (enterocolitis, gastroenterocolitis) often indicates the presence of "pure" bacterial pathogens of gastrointestinal inflammation (Table 3).

Table 3. Damage to the gastrointestinal tract.

Patient groups	Topical diagnosis				
	gastritis gastro-	gastroenteritis	enteritis	enterocolitis	gastroenterocolitis
Bacterial intestinal infections,	enteritis enteritisenterocolitis gastro-	-	-	32%	68%
n = 100	enterocolitis	89%	8%	3%	-

The frequency of severity of intestinal infections in children, which was observed depending on the speculators, tanned the result.

Table 4. Frequency of intestinal infections severity.

Patient groups	Mild degree	Moderately severe	Severe degree
Bacterial intestinal infections,	16%	70%	15%
n = 100	15%	80%	5%

In the treatment of intestinal infections with bacterial etiology, all patients are prescribed diet therapy. 60% of patients underwent oral rehydration. In 99% of cases, enterosorbents are prescribed, biological products in 87% of patients. In 27% of patients, enzyme therapy was used. Infusion therapy with glucose-physiologic Solutions was conducted in 25% of patients.

Antibiotic therapy is prescribed in 60% of cases. At the same time, cephalosporins are prescribed in 29% of cases, aminoglycosides 29% and Nitrofurans 2%, enterosorbents, probiotics. A second course of antibacterial drugs was required in four patients. At the same time, a combination of amikacin and cefotaxime was noted - in 1 patient, amikacin and ceftriaxone - in 1 patient, amikacin and enterofuril - in 1 patient. Combinations of antibacterial drugs with bacteriophages were also used: in 1 patient - the combination of enterophoryl with salmonella bacteriophage, in 1 patient-cefotaxime and intestinal bacteriophage.

In the group of patients with bii, which is under our control, there were no fatal outcomes of the disease, all of which were excluded from the hospital with significant clinical improvement or recovery.

In 100% of cases in the treatment of VII, a diet with lactose-free or hypolactose mixtures is prescribed. In 72% of cases, oral rehydration therapy was used. In 99% of cases, enterosorbents (polysorb) are prescribed. Infusion therapy was necessary for almost half of the patients - 43% of the children in this group. In 21% of cases, enzyme therapy was used. Etiotropic therapy was used in 65% of patients with polyoxydony. In addition, in 19% of cases prescribed antibiotic therapy. Infusion therapy with glucose-physiologic Solutions was conducted in 39% of patients. In the group of VII patients, there were no fatal outcomes of the disease; all of them were discharged from the hospital with significant clinical improvement or recovery.

Bacterial OII treatment algaritimi:

1-diet (Table 4).

2-antibiotic therapy is prescribed in 60% of cases.

- cephalororins in 29% of patients.

- aminoglycosides 29% in patients.
- Nitrofurans 2%,
3-enterosorbents,
probiotics are prescribed.
- Viral replication algarit:
 - 1-diet (lactose-free attachment hypolactose).
 - 2-rehydration therapy 72% to patients.
 - 3-etiotropic therapy polyoxidonium 73% in patients.
 - 4-enterosorbents (polysorb) 99%.
 - 5-enzyme therapy is prescribed to 21% of patients.

3 Conclusions

1. Bacterial diarrhea 53,3% of cases were observed in the summer-autumn period (June-October) of the year. And in 78,5% of cases of viral intestinal infections are noted in children in the winter-spring period (November-may) of the year.

2. It helps in the differential diagnosis of damage between bacterial and viral diarrhea, especially the upper gastrointestinal tract. The addition of the colon to the process (enterocolitis, gastroenterocolitis) often indicates the presence of "pure" bacterial pathogens of gastrointestinal inflammation. It was found that alkaline phosphatase activity in neutrophils increased in bacterial diarrhea, decreased in viral diarrhea.

3. Acute intestinal infection was pounded by etiotropic therapy aimed at inhibiting bacterial or viral activity of the causative factor, the duration of treatment of patients was kiskardi and gave a good effect.

The resulting examination was undertaken to ensure that patients were able to recover sooner, stretch the disease, give complications, become a source of infection and bring great economic benefits by facilitating the selection of an etiotropic drug used for the treatment of the spine, giving them the opportunity to recommend antibiotic or antiviral drugs.

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