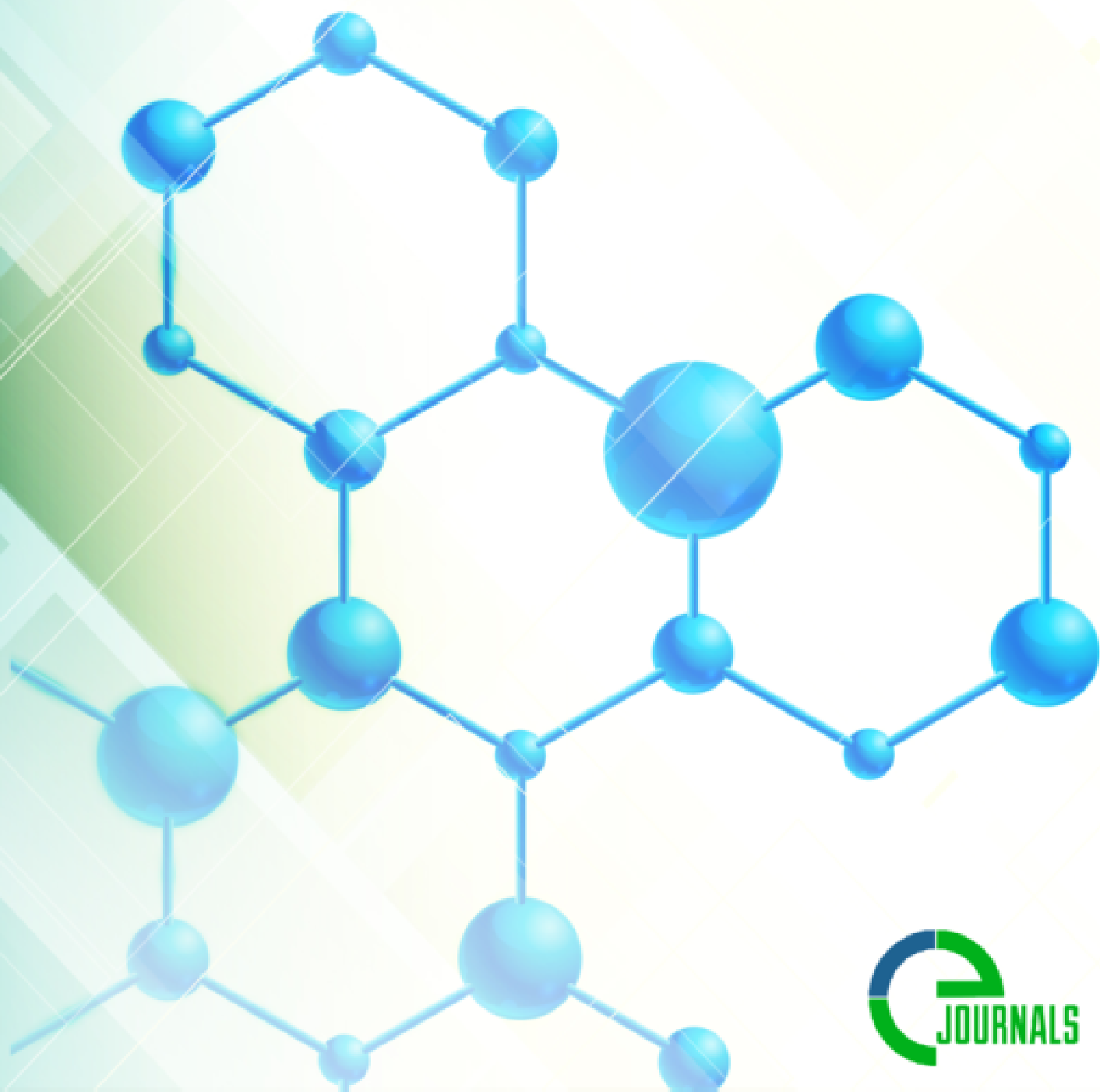


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FEATURES OF THE CLINICAL COURSE OF ACUTE DIARRHEA IN CHILDREN WITH CONSTITUTIONAL ABNORMALITIES

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Abstract: The article discusses the clinical features of acute diarrhea in children with constitutional abnormalities. The main pathogenetic mechanisms influencing the manifestation and course of the disease in this group of patients are analyzed. Particular attention is paid to diagnostic approaches and individualization of therapy taking into account the constitutional features of the child. The results of clinical studies demonstrating differences in the dynamics of the disease and response to treatment in children with various constitutional abnormalities are presented. The findings emphasize the need for a comprehensive approach to the treatment of acute diarrhea in this category of patients to improve the effectiveness of therapy and reduce the risk of complications.

Keywords: Acute diarrhea, children, constitutional abnormalities, clinical course, diagnosis, treatment, immune status.

Relevance: Acute diarrhea occupies one of the main places in pediatric practice. According to WHO, more than 1 billion children under 5 years of age suffer from acute gastrointestinal infectious diseases (diarrhea) every year. Viruses play an important role as an etiologic agent, but bacterial infections (salmonellosis, escherichiosis) have not lost their significance. In recent years, acute intestinal infections of combined etiology caused by two or more pathogens have become increasingly important. The dissertation examines the clinical features of various combinations of acute intestinal infections (rotavirus, norovirus infections, salmonellosis, escherichiosis). It is shown that the proportion of combined intestinal infections can reach 26% in the structure of all acute intestinal infections. The diversity of clinical manifestations of combined acute intestinal infections and the difference between these manifestations and those of monoinfections in clinical practice can lead to untimely diagnosis, which dictates a differentiated approach to each case. Currently, active accumulation and analysis of clinical data on the effect of hypovitaminosis D on the course of infectious diseases is underway. The study of methods for preventing morbidity and reducing the severity of infections of various etiologies, including the use of vitamin D, seems particularly relevant in light of the growth of acute intestinal infections. In this regard, important questions arise about the optimal methods for clinical practice of laboratory diagnostics and monitoring of the treatment of vitamin D deficiency and insufficiency.

The aim of the study was to investigate the clinical course of acute diarrhea in children with constitutional abnormalities.

Results: To achieve the set objectives and carry out an effective prospective study, multicomponent clinical and laboratory studies were carried out on 150 preschool children aged from 6 months to 6 years, hospitalized in the City Clinical Infectious Diseases Hospital No. 4 in Tashkent with acute intestinal infections. When distributed by age composition according to the WHO childhood gradation , 44 (29.3%) were children in their first year of life, 41 (27.3%) were from 1 to 3 years old, 65 (43.3%) were from 3 to 6 years old. The main group included 102 children who had previously been diagnosed with "Constitutional anomaly". The comparison group included 48 patients

without constitutional anomalies.

Number of cases and percentage distribution of types of constitutional anomalies depending on age

Type of constitutional anomaly	Main group (n=102)					
	Age 1-3 years (n=60)		Age 3-6 years (n=42)		Total (n=102)	
	abs.	(%)	abs.	(%)	abs.	(%)
Exudative-catarrhal diathesis	26	43.3	17	40.5	43	42,2
Lymphatic-hypoplastic diathesis	23	38.3	14	33.3	37	36.3
Neuroarthritic diathesis	9	15.0	13	31.0%	22	21.6
Total	60	100%	42	100%	102	100%

Exudative-catarrhal diathesis was detected in 42.2% of children, which corresponds to the data of the world literature, lymphatico-hypoplastic diathesis was found in 36.3% of children. Neuro-arthritic diathesis diathesis was detected in 21.6% of children and was manifested by a tendency to inflammatory and infectious diseases of the skin and mucous membranes. When analyzing the age distribution, we did not find reliable differences in the types of occurrence of constitutional anomalies, with the exception of exudative-catarrhal diathesis, which was observed almost twice as often in the 3-6 year age group, amounting to 31% versus 15%. Exudative-catarrhal diathesis in 22 children was manifested by a pronounced tendency to inflammatory processes and allergic reactions. The onset of the disease was usually accompanied by pronounced symptoms, such as weeping eczema, frequent relapses of rhinitis and conjunctivitis. The main factors worsening the course of infection were a tendency to pronounced inflammatory reactions and metabolic disorders. The infectious process in these children was more severe, with frequent complications and a long recovery period.

Thus, the clinical course of acute intestinal infection in children with various forms of diathesis was characterized by specific features, which led to a more detailed analysis of the physical development and course of acute diarrhea in this category of patients.

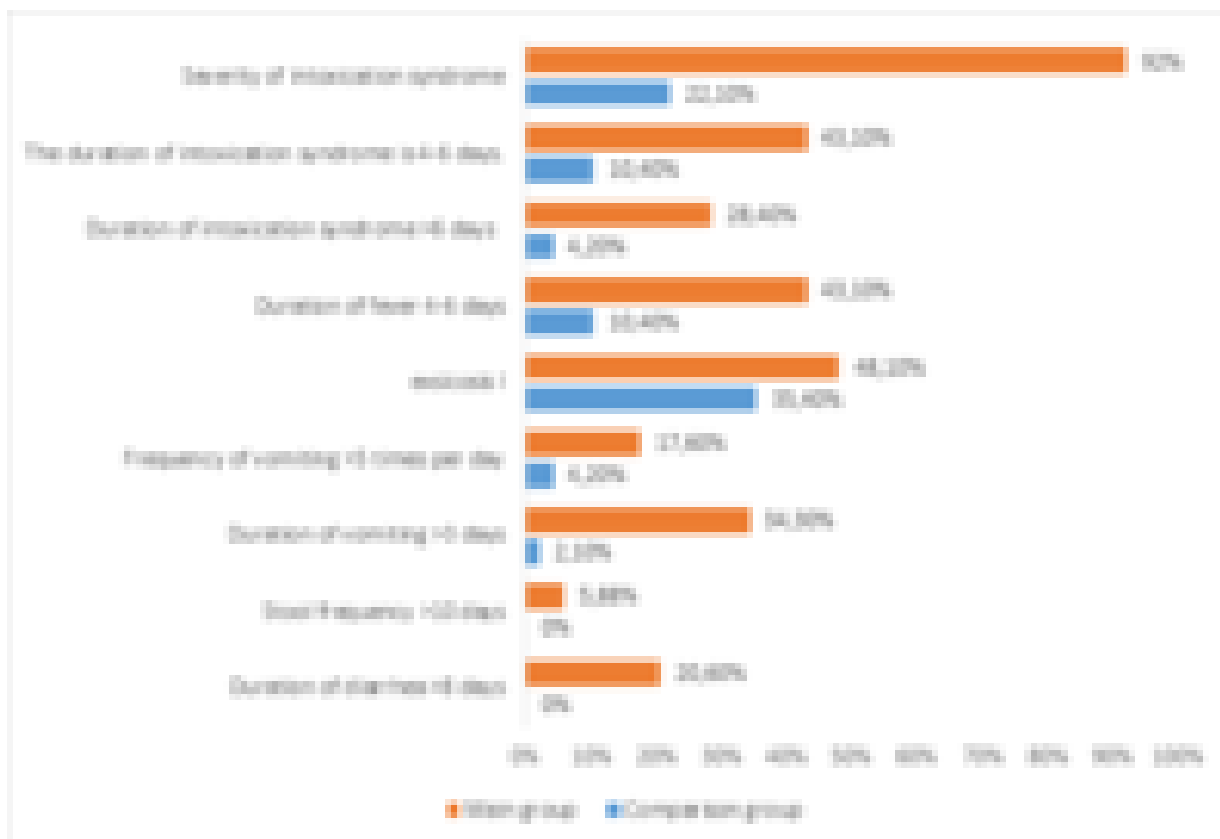
When assessing the severity and course of acute diarrhea in the study groups with and without constitutional abnormalities, the results shown in the table were obtained.

Characteristics of the studied patient groups by clinical forms, severity of acute intestinal infections, and hospitalization periods

Parameters	Main group, n=102		Comparison group, n=48		Significance of differences, p
	Abs.	%	Abs.	%	
Clinical forms:					
Gastroenteritis	59	57.8	13	27.1	<0.05
Gastroenterocolitis	16	15.7	14	29.2	<0.05
Enterocolitis	15	14.7	11	22.9	>0.05
Enteritis	12	11.8	10	20.8	>0.05
Severity form:					
Easy	0	0	0	0	0
Medium-heavy	76	74.5	44	91.7	<0.05
Heavy	26	25.5*	4	8.3	<0.05
Duration of hospitalization from the onset of the disease					
1 day	33	32.3	14	29.2	>0.05
2 days	42	41.2	18	37.5	>0.05
3 days	27	26.4	16	33.3	>0.05

When analyzing topical intestinal lesions in children, the clinical picture of gastroenteritis prevailed in the main group (57.8% of patients), while gastroenterocolitis was the leading one in the comparative group (29.2% of cases, although with a slight difference from gastroenteritis, which was detected in 27.1% of patients). Enterocolitis was detected in 14.7% of cases in the main group and in 22.9% in the comparative group. Enteritis was found in 11.8% of patients in the main group, versus 20.8% in the comparison group.

In terms of severity, the moderate form was predominant in both age groups (MG - 74.5%, CG - 91.7%), however, the severe form of diarrhea was statistically 3 times more often ($p < 0.05$) detected in patients in the main group in 25.5% of cases, versus 8.3% in the comparison group, which indicates a negative impact of the presence of constitutional anomalies in the MG. There were no statistical differences in the duration of hospitalization of patients ($p > 0.05$).



Stool frequency up to 9 times in the group with constitutional anomalies (GA) 8.8% of children (χ^2 , $p < 0.05$), in the comparison group - 8.3%, more than 10 times in 5.8% (χ^2 , $p < 0.01$), in the comparison group these indicators were not recorded, the frequency of stool was noted up to 5 times a day in all patients and the duration of up to 5 days in 91.7% of patients with CG and 5 - 8 days in 64.6% of patients. By the nature of the stool, in the group of patients with CG, liquid stool without impurities was recorded in all patients, watery in 54.2% of cases against 100% in GA. Pathological impurities in the form of mucus (28.4%) and greenery (24.5%) were detected only in children with CG. Normalization of stool upon discharge from the SG was recorded in 72.9% of patients, while in the MG it was noted only in 60.7% of cases, which indicates a more severe course of the pathological process in children of the main group with constitutional anomalies.

Conclusions: it can be stated that children with constitutional anomalies of the main group had more pronounced clinical manifestations of diarrhea, manifested in a longer and more pronounced intoxication syndrome by 1.4 days (4.0 ± 0.3 days versus 2.9 ± 0.2 days in the main group), fever duration by 1.6 days (4.0 ± 0.2 days versus 2.4 ± 0.1 days), duration of gastrointestinal disorders by 1.8 days ($p < 0.01$), differences in the nature of the stool (severity of watery diarrhea, mucus, greenery in the stool), the presence of more pronounced changes in the coprological study, while the severity of dysbiotic disorders in the gastrointestinal tract and the course of the disease in acute intestinal infections are significantly affected by the severity of the course of constitutional anomalies.

Used literature:

1. Ivanov A.P., Petrova E.V. Clinical features of acute diarrhea in children with congenital anomalies. **Journal of Pediatric Gastroenterology**, 2020, v. 15, no. 3, pp. 45-52.
2. Sidorenko M.N., Kuznetsova L.S. Pathogenesis and diagnostics of acute diarrhea in children with constitutional abnormalities. **Medical Bulletin**, 2019, v. 22, no. 4, pp. 78-85.
3. Fedorov V.V. Treatment of acute diarrhea in children with constitutional features. **Pediatrics and children's medicine**, 2021, v. 18, no. 2, pp. 34-40.
4. Lebedeva T.A., Smirnov D.I. Influence of immune status on the course of acute diarrhea in children. **Immunology and immunopathology**, 2022, v. 30, no. 1, pp. 50-58.
5. Kovalevsky Yu.G. Features of hydration therapy for acute diarrhea in children with constitutional abnormalities. **Journal of Clinical Medicine**, 2020, v. 25, no. 6, pp. 112-118.
6. Morozova N.V., Zakharova I.A. The role of intestinal microflora in the development of acute diarrhea in children with constitutional anomalies. **Gastroenterology for children**, 2018, v. 12, no. 3, pp. 67-73.
7. Pavlovskaya E.Yu., Nikitina A.S. Prognostic factors for the course of acute diarrhea in children with congenital defects. **Modern pediatric practice**, 2021, v. 19, no. 5, pp. 90-96.
8. Grigoriev P.V., Andreeva M.K. An integrated approach to the treatment of acute diarrhea in children with various constitutional abnormalities. **Pediatric Therapy**, 2019, v. 14, no. 4, pp. 123-130.
9. Vasilyeva L.S., Tikhonov R.I. The role of genetic factors in the development of acute diarrhea in children. **Molecular Biology in Medicine**, 2022, v. 28, no. 2, pp. 55-62.
10. Chernysheva O.V., Borisova I.P. Comparative analysis of the course of acute diarrhea in children with normal and abnormal constitution. **Pediatric Clinical Medicine**, 2020, v. 17, no. 1, pp. 40-48.