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The War in Donbass Did Not Lead to a Worsening of the Clinical Manifestations of the Onset of Ulcerative Colitis and Crohn's Disease in Children

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Abstract

The aim of the study was to study the dynamics of clinical and paraclinical manifestations at the onset of inflammatory bowel disease in Donbas children for the period 2015 - 2022 compared to the period 2010 - 2014.

The comparison allows us to conclude that the presence of hostilities did not affect the main trends in the development of symptoms and manifestations of IBD, which largely remain unchanged over time. Moreover, on the basis of signs such as massive bleeding, severe pain, fever, and some extraintestinal manifestations, a more favorable course of the debute of IBD has been established.

Keywords: *Inflammatory Bowel Disease (IBD); Ulcerative Colitis (UC); Crohn's Disease (CD)*

Introduction

Inflammatory bowel disease (IBD) is one of the most pressing problems in modern gastroenterology. IBD is a set of nosological forms of unknown etiology characterized by ulcerative lesions of the large and/or small intestine as a result of their chronic non-specific inflammation [1]. This group includes Crohn's disease (CD) and ulcerative colitis (UC).

Key factors responsible for IBD include genetic components, environmental elements, microbial flora, and immune responses. It is difficult to dispute the popular belief that IBD arises as a result of extremely complex interactions between genetic and environmental elements, dysregulation of immune responses, and changes in the microbiome, and that none of these factors alone can cause disease.

In childhood, IBD has a number of features:

1) More common forms of CD and UC are more often registered;
2) There is a less specific, erased clinical picture;
3) The disease affects the physical and sexual development of the child.

UC and CD have certain differences, in particular, in CD, any part of the gastrointestinal tract can be affected - from the oral cavity to the anus, whereas in UC, the large intestine is affected; in CD, the lesion is fragmentary, and in UC, it is continuous. In CD, the lesion involves the

deep layers of the intestinal wall with the formation of a granuloma, while in UC, only the superficial layer, etc. These and other differences are characterized by the definition of "more often". For example, hemocolitis, fissures are more common in UC, and fistulas, arthritis, erythema nodosum are more common in CD. Thus, there are no unambiguous diagnostic criteria for UC and CD, and the diagnosis is made on the basis of a combination of anamnesis, clinical presentation, and characteristic endoscopic and histological changes [2].

Aim of the Study

The aim of the study was to study the dynamics of clinical and paraclinical manifestations at the onset of inflammatory bowel disease (IBD) in Donbas children for the period 2015 - 2022 compared to the period 2010 - 2014.

Materials and Methods

The histories of patients admitted to the clinic before the outbreak of hostilities in the period from 2010 to 2014 (group 1, 32 patients) and from 2015 to 2022 (group 2, 24 patients) admitted with the onset of IBD were studied. The comparison was carried out both in general and for individual nosologies.

In the course of the analysis, the share indicator and the error of the sample fraction were determined for the quantitative parameters. The significance of the difference was determined using Student's t-test for relative magnitudes and series of variations, as well as by the Fisher angular transform method.

Results and Discussion

The gender composition of patients has changed (See table 1). If before the war there were approximately the same number of boys and girls, now there are twice as many boys, but the difference is not reliable.

Floor	2010-2014						2015-2020					
	UC (23)		CD (9)		Total (32)		UC (18)		CD (6)		Total (24)	
	P	%%	P	%%	P	%%	P	%%	P	%%	P	%%
Boys	10	43,5	5	51,4	15	46,9	11	61,1	4	66,6	15	63,2
Girls	13	56,5	4	48,6	17	53,1	7	38,9	2	33,45	9	36,8

Table 1: *Gender composition of patients.*

The period from the onset of the first complaints to the diagnosis in the first group was, on average, 13.5 months, in the second group it decreased to 10.2 months. (the distinction is not certain). This indicates that the diagnosis of IBD is still quite late.

The frequency of stool was 4.5 ± 0.92 times in the first group with UC, 5.4 ± 1.05 times in CD, and 5.98 ± 1.80 and 6.0 ± 2.21 in the second group, respectively (the difference is not significant).

Weight loss was observed in all groups and was approximately equal: in the first group with UC it was 3.8 ± 0.84 kg, in CD - 4.4 ± 0.95 kg, in the second, 3.59 ± 0.91 kg and 3.92 ± 1.00 kg, respectively.

The total indicators IBD (UC+CD) is shown in table 2.

As can be seen from table 2, there are some differences between the two groups, in particular, heredity plays a smaller role in the development of IBD. The intensity of the pain syndrome has decreased, its absence is more often observed. Massive hemocolitis is less common, but mucus in the stool and low-grade fever are more common, and the number of non-febrile patients has also significantly decreased.

Indicators	Group 1		Group 2	
	32 patients		19 patients	
	P	%%	P	%%
Allergic reactions to foods and medications	11	34,4	4	21,1
Heredity in the gastrointestinal tract	19	58.4 ± 8.68	7	Acts 36.8 ± 11.37[1)]
Severe abdominal pain	22	68.8 ± 8.19	1	5.3 ± 5.26[4)]
Moderate pain	6	18.7 ± 6.90	11	57.9 ± 11.14[1)]
No pain	4	12.5 ± 5.85	7	Acts 36.8 ± 11.37[1)]
Massive hemocolitis	21	65.6 ± 6	7	36.8 ± 11.37[4)]
Moderate hemocolitis	3	9.38 ± 5.15	6	31.5 ± 10.96[1)]
Minimal hemocolitis	3	9,3	2	10,5
No blood in the stool	5	15,6	4	21,0
Lots of slimes in kale	2	6,3	3	23,0
Moderate amount of mucus	15	6.9 ± 8.9	5	Acts 26.3 ± 10.38[1)]
Minimal mucus	9	28,1	8	42,1
No mucus in the stool	6	18,7	3	23,0
Febrile fever	11	34,3	7	36,8
Low-grade fever	3	9.38 ± 5.15	10	52.6 ± 11.77[2)]
No fever	14	43.7 ± 8.77	2	10.5 ± 7.23[4)]
Arthritis	7	21,9	2	33,3
Erythema nodosum	1	3,1	1	5,26
Uveitis	4	12,5	1	5,26
Stomatitis	5	15,6	5	26,3
Hemorrhoids	5	15,6	2	10,5
F issures	4	12,5	1	5,26
Fistulas	4	12,5	2	10,5
Distal colitis	9	28,1	5	26,3
Left-sided colitis	8	25,0	2	10,5
Terminal ileitis	4	12,5	4	21,0
Relapses	19	59,3	10	52,6

Table 2: *Comparison of the indicators in the two groups.*

Note: here and further there is a significant difference between the compared indicators: 1) - p < 0.05, 2) -p < 0.02, 3) - p < 0.01, 4) - p <

Statistical differences between nosologies in groups 1 and 2 are shown in table 3.

The data in table 3 show approximately the same dynamics as the total figures. In particular, heredity for gastrointestinal diseases is lower in both UC and CD; severe abdominal pain was significantly less common in CD and UC, but in CD there was also significantly more absence of pain.

Massive intestinal bleeding in CD was not noted at all in the second group, but low-grade fever was observed more often and its absence was less common. In the same group, massive amounts of mucus in the stool were more likely to be observed in CD. All of these differences are valid.

Indicators	Group 1				Group 2			
	UC (23)		CD (9)		UC (13)		CD (6)	
	P	%%	P	%%	P	%%	P	%%
Allergic reactions to foods and medications	8	34,8	3	33,3	3	23,1	1	16,6
Heredity in the gastrointestinal tract	14	60.9 ± 10.41	5	55,6	4	30:8 ± 13:3[1)]	2	33,3
Severe abdominal pain	15	65.2 ± 10.15	7	77.8 ± 14.7	0	0[4)]	1	16.7 ± 16.67[2)]
Moderate pain	4	17.3 ± 8.08	2	22,2	8	61.5 ± 14.04[2)]	3	50,0
No Pain	4	17,3	0	0	5	38,4	2	33.3 ± 21.08[1)]
Constipation previously	7	30,4	2	22,2	2	15,3	0	0
Massive hemocolitis	16	69,6	5	55.5 ± 17.57	7	53,8	0	0[3)]
Moderate hemocolitis	3	13,0	0	0	4	30,7	2	33,3
Minimal hemocolitis	3	13,0	0	0	1	7,6	0	0
No blood in the stool	1	4,35	4	44,4	1	7,6	3	50,0
There is a lot of mucus in the stool	2	8,7	0	0	0	0	3	50.0 ± 22.36[1)]
Moderate mucus	10	43,4	5	55,5	4	30,7	1	16,6
Minimal mucus	7	30,4	2	22,2	6	46,1	2	33,3
No mucus	4	17,3	2	22,2	3	23,08	0	0
Febrile fever	6	26,09	5	55,5	4	30,77	3	50,0
Low-grade fever	3	13.0 ± 7.18	4	44,4	7	53.8 ± 14.39[2)]	3	50,0
No fever	14	60.8 ± 10.41	0	0	2	15.3 ± 10.42[3)]	0	0
Arthritis	3	13.0 ± 7.18	4	44,4	0	0[1)]	2	33,3
Erythema nodosum	0	0	1	11,1	0	0	1	16,6
Uveitis	1	4,4	3	33.3 ± 16.67	1	7,6	0	0[1)]
Stomatitis	2	8,7	3	33,3	1	7,6	4	66,6
Hemorrhoids	4	17,3	1	11,1	1	7,6	1	16,6
Fissures	4	17.3 ± 8.08	0	0	0	0[1)]	1	16,6
Fistulas	0	0	4	44,4	0	0	2	33,3
Distal colitis	9	39,1	0	0	5	38,4	0	0
Left-sided colitis	8	34,7	0	0	4	30,7	0	0
Terminal ileitis	0	0	4	44,4	0	0	4	66,6
Relapses	12	52,1	7	77,7	6	46,1	4	66,6

Table 3: *Statistical differences between nosologies in groups.*

Of the extraintestinal manifestations, the absence of uveitis and fissures in the second group in CD should be noted. Three patients with UC from the first group had arthritis, while the second group did not have it.

Conclusion

The comparison allows us to conclude that the presence of hostilities did not affect the main trends in the development of symptoms and manifestations of IBD, which largely remain unchanged over time. Moreover, on the basis of signs such as massive bleeding, severe pain, fever, and some extraintestinal manifestations, a more favorable course of the debute of IBD has been established.

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