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SUBSTANTIATION OF THE CLINICAL EFFECTIVENESS OF GRAVITATIONAL SURGERY IN THE TREATMENT OF NON-SPECIFIC ULCERATIVE COLITIS

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Abstract: Purpose of the study. Improving the results of treatment of steroid-dependent and steroid-resistant forms of ulcerative colitis. The positive dynamics of general clinical, laboratory parameters and endoscopic picture in patients with steroid - dependent and steroid - resistant forms of ulcerative colitis when using for their treatment a course of plasmapheresis with indirect electrochemical detoxification of blood plasma with additional ozonation indicates its effectiveness in stopping the exacerbation of the disease.

Keywords: non-specific ulcerative colitis, indirect electrochemical oxygenation, leukocytes, C-reactive protein was

The urgency of the problem. According to epidemiological studies, there is currently an increase in the incidence of non-specific ulcerative colitis (NUC) worldwide. According to the severity of the course, the frequency of complications and mortality, NUC occupies one of the leading places in the structure of diseases of the gastrointestinal tract [1,3,6].

Chronic relapsing course of NUC, the development of life-threatening complications, the predominant lesion of people of working age, insufficiently effective, and often expensive treatment, determine the relevance of this problem [2,4,5,7].

Purpose of the study. Improving the results of treatment of steroid-dependent and steroid-resistant forms of ulcerative colitis.

Materials and research methods.

The main group consisted of 47 patients, the control group - 58 patients. The main and control groups of patients did not differ significantly in gender, age, the ratio of hormone-resistant and/or hormone-dependent forms of NUC, the timing of the formation of hormone dependence and/or hormone resistance (Table 1).

In addition to the course of plasmapheresis with indirect electrochemical oxygenation with additional ozonation (PF with IECHO + O3), patients of the main group received 5-ASA preparations at a dose of 2-4 g, depending on the severity of UC and the prevalence of the inflammatory process. Taking into account hormonal dependence and / or resistance, in severe cases of the disease, patients were additionally prescribed azathioprine at a dose of 1.5 mg per kg of body weight per day.

Table 1

Characteristics of patients according to the localization and severity of the inflammatory process in the main and control groups

Researched options	Number of patients main group, n=47	Number of patients control group, n=58
Localization		
Pancolitis	11 (23%)	13 (22,5%)
Left sided lesion	15 (32%)	18 (31%)
Proctosigmoiditis	17 (36%)	21 (36%)
Proctitis	4 (9%)	6 (10,5%)
severity course of NUC		
Severe	13 (27,5%)	16 (27,5%)
Moderate	29 (62%)	33 (57%)
Lung	5 (10,5%)	9 (15,5%)

Patients in the control group were prescribed 1-2 mg of prednisolone per kg of body weight, depending on the severity and prevalence of the inflammatory process in the colon, but not more than 100 mg. Like patients of the main group, they received 5-ASA preparations 2-4 g per day. In contrast to the main group, azathioprine was administered to all patients in the control group. The dose of the drug, 1.5-2.5 mg per kg of body weight, depended on the severity of the NUC.

The criteria for the effectiveness of treatment were: reduction or overcoming of resistance to basic therapy, dose reduction or withdrawal of steroids, achievement of stable clinical and endoscopic remission, reduction in the frequency and severity of relapses, regression of systemic manifestations, reduction in the percentage of surgical interventions.

Research results and discussion.

To substantiate the expediency of including PF with IECHO + O3 in the treatment of patients with steroid-dependent and steroid-resistant forms of UC, the features of the clinical course of the disease, laboratory parameters and endoscopic picture were studied when using efferent cell technologies in comparison with the control group of patients where the latter were not used.

Clinical evaluation criteria. Upon admission, all patients of the main and control groups complained of frequent loose stools, blood in the feces, tenesmus, abdominal pain, the intensity of which depended on the activity and prevalence of the inflammatory process, the severity of the disease. Fever from subfebrile to febrile was observed in 29 (62%) patients of the main group and in 37 (64%) patients of the control group with severe and moderate NUC.

Already after 2 courses of PF with IECHO + O3, on the 8th day, in the main group, clinical remission was achieved in 38 (81%) of 47 patients, of which: in 4 (9%) of 5 patients with mild the course of the disease, in 27 (57%) of 29 patients with moderate course and in 7 (15%) of 13 patients with severe UC; by the end of the course of PF

with IECHO + O3, on the 20th day, in 45 (96%) of 47 patients, of which 11 (23%) of 13 patients with severe colitis. In the control group, clinical remission on the 8th day of treatment was achieved in 31 (53%) of 58 patients, of which: in 7 (12%) of 9 patients with a mild course of the process, in 23 (40%) of 33 patients with moderate course and in 1 (2%) of 16 patients with severe NUC; on the 20th day - in 45 (78%) of 58 patients, of which: in 29 (50%) of 33 patients with a moderate course of the inflammatory process and in 7 (12%) of 16 patients with a severe course of NUC.

In the main and control groups, upon admission, leukocytosis (more than 9 x 10^9/l) was registered in all patients with moderate and severe NUC, with a mild form of the process, the level of leukocytes corresponded to the norm. On average, this indicator was 6.64±0.61 x 10^9/l in mild form of NUC in patients of the main group, in patients of the control group - 5.56±0.76 x10^9/l; with a moderate form in patients of the main group - 12.22±1.84 x 10^9/l, in patients of the control group - 11.87±0.87 x 10^9/l; in severe form in patients of the main group - 20.08±1.85 x 10^9/l, in patients of the control group - 19.47±0.94 x 10^9/l.

After a course of PF with IECHO + O_3, on the 20th day of treatment, in patients of the main group, this indicator was 5.34±0.31 x 10^9/l for mild NUC, and 5.89±0.61 x for moderate NUC 10^9/l, in severe course - 6.09±0.81 x10^9/l, but on the 2nd and 8 th days of treatment, which corresponded to the condition after the 1st and 2nd course of PF with IECHO + O3, an increase in the number of leukocytes was determined as a natural response to the ongoing therapy, followed by a decrease in indicators to normal values. This was especially noticeable in the mild and moderate course of the inflammatory process against the background of a low level of leukocytes.

In the control group, a less pronounced decrease in leukocytes was observed at the corresponding terms of treatment with the achievement of the norm by the end of treatment in mild and moderate forms of NUC: in mild form - 5.56 ± 0.32 x 10^9/l, in moderate form - 6.2 ± 0 .75 x 10^9/l. In severe NUC, the level of leukocytes remained elevated to 11.59±0.51 x 10^9/l ($p<0.05$)

Upon admission to the hospital, the erythrocyte sedimentation rate (ESR) in patients of the main and control groups was increased according to the severity of NUC. In the main group, the ESR at admission was 7.64±2.13 mm/hour in mild exacerbation of UC, 19.43±7.42 mm/hour in moderate course of the process, and 42.36±10.13 mm/hour in with severe flow. In the control group, ESR with mild course was 6.98±2.38 mm/hour, with moderate course - 20.12±8.03 mm/hour, with severe course of the disease - 41.96±9.36 mm/hour.

In the main group, after a course of PF with IECHO + O3, on the 20th day of treatment, this figure was 5.38±0.32 mm/hour in mild NUC, 6.89±1.17 mm/hour in moderate course and 7.64±2.69 mm/h in severe cases. In the control group, at the same time, the ESR level was 5.56±0.41 mm/hour in mild course, 12.56±3.37 mm/hour in moderate course, and 19.06±3.37 in severe course. mm/hour. Moreover, in moderate and severe NUC, there was a significant difference in the levels of this indicator in the main and control groups of patients.

Elevated levels of C-reactive protein, according to the severity of the course of NUC, were also observed upon admission in patients in both groups. On average, this indicator in the main group was 4.17±1.32 mg/l in mild form, 10.34±3.16 mg/l in moderate course and 46.48±13.67 ml/l in severe form. course of NUC. In the control group, with a mild course, the level of C-reactive protein was 4.09±1.28 mg/l, with a moderate course - 10.71±2.98 mg/l, with a severe course - 44.98±11.12 mg / l.

A statistically significant decrease in the level of C-reactive protein, and with the achievement of normal numbers, in the main group of patients was noted by the end of the course of PF with IECHO + O3, by the 20th day of treatment; with mild NUC - 2.03±0.62 mg/l, with moderate - 2.43±1.04 mg/l, with severe - 3.41±1.3 mg/l. In the control group, a statistically significant decrease in this indicator was also observed, but did not reach the values corresponding to the norm in moderate and severe UC. So, on the 20th day of treatment, the level of C-reactive protein was 2.07±0.58 mg/l in mild UC, 6.73±2.61 mg/l in moderate NUC, and 19.85 mg/l in severe NUC. ±3.72 mg/l.

Results of endoscopic research methods. At admission, 5 (10.5%) of 47 patients of the main group and 9 (15.5%) of 58 patients of the control group were diagnosed with minimal activity of the inflammatory process.

In 29 (62%) out of 47 patients of the main group and 33 (57%) out of 58 patients in the control group, moderate activity of the inflammatory process was diagnosed.

In 13 (27.5%) out of 47 patients of the main group and 16 (27.5%) out of 58 patients in the control group, the maximum activity of the inflammatory process was diagnosed.

After treatment with PF with IECHO + O3, on the 20th day of observation, in the main group, during endoscopic examination, positive dynamics was significantly noted: hyperemia and edema of the colon mucosa decreased in all patients, a vascular pattern appeared, mucosal granularity decreased, spontaneous bleeding, there were signs of active epithelialization (Fig. 1-3).

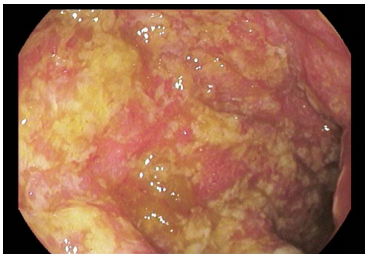

Figure 1. Active course of NUC

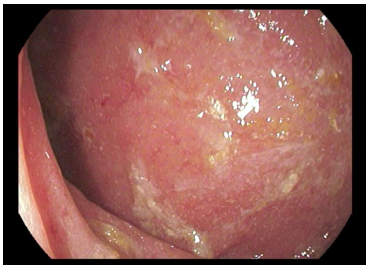

Figure 2. On the 12th day after PF with IECHO+O_3

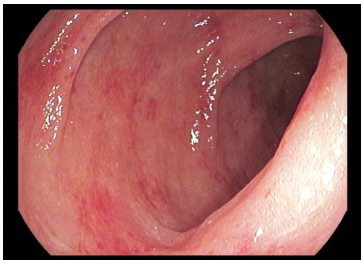

Figure 3. On the 20th day after PF with IECHO+O_3

Among 47 patients of the main group, by the end of treatment, endoscopic remission was achieved in all 5 (11%) patients with minimal disease activity and in 25 (53%) of 29 patients with moderate NUC activity, in total 30 (64%) patients. An improvement in the endoscopic picture was noted in 4 (8%) of 29 patients with moderate disease activity and in all 13 (28%) patients with a pronounced activity of the inflammatory process. In these patients, endoscopic mucosal changes corresponded to minimal disease activity.

After a course of PF with IECHO + O_3, 17 (36%) patients who did not achieve complete clinical and endoscopic remission required the appointment of prednisolone at a dose of 20-30 mg / day, which was 2-3 times less than the average dose of the drug prescribed to patients control group with a similar course of NUC in these terms. Such a course of treatment made it possible to achieve complete remission with the gradual withdrawal of steroids within 1-2 months. By the end of the course of PF with IECHO + O3, the patients were transferred to a maintenance dose of 5-ASA preparations 1-2 g/day. Patients with severe NUC continued to be on a maintenance dose of azathioprine 1.5 mg/kg/day for six months.

During the entire period of treatment, most patients felt satisfactory, PF with IEHO+O_3 was easily tolerated. Side effects were evaluated in patients not taking azathioprine and were observed in 9 (26%) of 34 patients: nausea and dizziness in 5 (14.5%) patients and a slight decrease in blood pressure in 4 (11.5%) patients.

In the control group receiving conservative treatment, less pronounced positive dynamics was observed at the time corresponding to the 4th session of PF with IECHO + O_3. Endoscopic remission in the control group of patients, unlike the main one, was achieved in 22 (38%) of 58 patients: in all 9 (15.5%) patients with minimal NUC activity and only in 13 (22.5%) of 33 patients with moderate activity of the process. The remaining 20 (34.5%) of 33 patients with moderate disease activity were diagnosed with minimal severity of the inflammatory process. In 16 (27.5%) patients with severe NUC activity, more negative results of conservative treatment were noted: in 3 (5%) patients, the endoscopic picture corresponded to the minimum degree of inflammation activity, in 9 (15.5%) patients - moderate NUC activity, 4 (7%) of patients did not respond to the treatment at all. They underwent a total colectomy.

Unlike patients of the main group, patients in the control group during these periods continued to take high doses of prednisolone, an average of 0.75-1 mg/kg of body weight per day, mesalazine 3-4 g per day, azathioprine 1.5-2.5 mg /kg per day.

In patients of the control group, adverse events were observed more frequently than in patients treated with PF with IEHO+O_3. Thus, leukopenia was noted in 3 (5%) patients, dyspepsia - in 43 (74%) patients, headache - in 32 (55%) patients, arterial hypertension - in 13 (22%) patients, skin rash - in 6 (10%) of patients, in 2 (3%) patients there was an exacerbation of chronic pancreatitis.

Conducting a general assessment of the results of treatment, we considered clinical and endoscopic remission as a complete response, only clinical remission with endoscopic signs of disease activity as an incomplete response, an improvement in the clinical and endoscopic picture of NUC as a partial response, and no improvement in the clinical and endoscopic course of UC as a lack of response.

Thus, in patients of the main group on the background of PF with IECHO + O3, we received a complete response in 30 (64%) of 47 patients, an incomplete response in 15 (32%) patients, a partial response in 2 (4%) patients.

In patients of the control group, the results of treatment during these periods were significantly worse than in patients of the main group. We received a complete response to corticosteroids and cytostatic therapy in 22 (38%) of 58 patients, incomplete - in 23 (39.5%) patients, partial - in 9 (15.5%) patients, no response - in 4 (7 %) of patients.

Conclusions. The positive dynamics of general clinical, laboratory parameters and endoscopic picture in patients with steroid - dependent and steroid - resistant forms of ulcerative colitis when using for their treatment a course of plasmapheresis with indirect electrochemical detoxification of blood plasma with additional ozonation indicates its effectiveness in stopping the exacerbation of the disease.

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