

# Optimization Of Tactics In The Treatment Of Peritonitis Of Obstetric And Gynecological Origin

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**ABSTRACT:** *The authors analyzed the treatment results of 87 patients with obstetric and gynecological peritonitis and the nature of complications in the postoperative period. All patients underwent general clinical, biochemical studies and bacteriological examinations of exudate from the abdominal cavity and various methods of treatment of peritonitis were applied. 1 - a group of 32 patients with a traditional method of treatment, 2 - a group of 55 patients with ointment sanitation of the abdominal cavity in combination with Decasan solution.*

*The use of water-soluble ointments and Decasan solution allowed to reduce the level of microbial contamination of the abdominal cavity below the critical level on the 3rd day of treatment, the number of intra-abdominal complications from 34.3% to 23.6%, mortality from 25% to 11.8% and 74, 7% maintain the reproductive functions of women, which allows us to recognize this method as highly effective and recommend it for widespread use in the treatment of peritonitis of obstetric and gynecological origin.*

**KEYWORDS:** *peritonitis, rehabilitation, obstetric, gynecological, treatment.*

## 1. INTRODUCTION

The treatment of severe forms of peritonitis still continues to be one of the most difficult problems of modern clinical medicine. Mortality with widespread purulent peritonitis

depending on the severity of the disease remains at the level of 19–70% [1–4], which prompts the search for new ways to solve this complex problem.

Peritonitis is one of the most severe, often fatal, postoperative complications. Among its varieties, peritonitis of obstetric and gynecological origin are distinguished, since their course is indistinct, which is the reason for the late diagnosis and delayed surgical treatment [5]. To day, these peritonitis are very common and still not well understood.

Among the reasons, an increase in the frequency of cesarean section (CS) operations is 4–12% of the number of all genera [6]. In some clinics, cesarean section is a frequent obstetric operation: delivery is performed operatively in 10–16% of pregnant women [6, 7]. However, literature data [5–8] indicate that maternal mortality due to cesarean section is 3-4 times higher than the rates of natural delivery. According to the WHO recommendation, the optimal cesarean section rate for optimal outcomes for both the mother and the fetus should not exceed 5–10%. According to F. Althabe and J. Belizan [8], increasing the frequency of abdominal delivery to 15% is a risk factor for the development of perinatal and maternal morbidity. At the same time, today the frequency of cesarean section in most developed countries of Europe and the USA varies from 23–33%, and in some years it reached 44% [9–11].

Caesarean section is associated with various kinds of complications, among which inflammatory processes prevail. Indeed, the opening of the uterus is accompanied by contamination, which already poses a risk of infection. If the operation is performed against the background of an infectious process, the risk of its septic complications increases. By far, the most formidable of these is obstetric peritonitis, the outcome of which may be maternal mortality [12, 13].

Among all forms of purulent - septic diseases in women of childbearing age, peritonitis after cesarean section develops in 0.5–2% of cases, but in the structure of maternal mortality it is 32.9% [6].

Analysis of existing methods of treatment of peritonitis of obstetric and gynecological origin shows that traditional methods of peritoneal debridement are often used, including postoperative lavage, drainage of the abdominal cavity with 1-2 drainages with the introduction of solutions of medicinal substances.

The high incidence of intra-abdominal complications with a fatal outcome of 23.2% indicates the lack of effectiveness of traditional methods of rehabilitation of the abdominal cavity with peritonitis of obstetric and gynecological etiology [14].

The problem of sanitation of the abdominal cavity with peritonitis remains relevant, which forces us to conduct new searches in this direction. In modern surgery, many methods are used to eliminate pathogenic microflora in the abdominal cavity, remove purulent - necrotic masses, fibrin films and various dialysis techniques using antiseptic solutions [9].

Very rarely, with diffuse forms of peritonitis of obstetric and gynecological origin, the use of peritoneal dialysis is recommended. Absolutely not studied is the possibility of using antibacterial water-soluble ointments and an antiseptic solution Dekasan for abdominal sanitation for peritonitis of obstetric and gynecological origin. Wide antimicrobial effect, which is due to decamethoxin. Dekasan exerts a pronounced effect on gram-positive and gram-negative aerobes and anaerobes, has a fungicidal effect, a virucidal, detoxifying and antispasmodic effect [7].

The purpose of the study is to reduce mortality and the incidence of postoperative complications in patients with peritonitis of obstetric and gynecological origin by applying ointment sanitation of the abdominal cavity in combination with modern antiseptic solutions.

## 2. MATERIALS AND METHODS

87 patients with peritonitis developed against the background of obstetric and gynecological pathology were examined. Of these, the control group consisted of 32 patients (36.8%) with traditional methods of rehabilitation of the abdominal cavity. The main group included 55 (63.2%) patients who used Levomekol ointment and modern Decasan antiseptic solution for abdominal sanitation. All patients underwent general clinical and biochemical blood tests, microbiological studies of peritoneal exudate with the identification of aerobic and anaerobic pathogens.

The main causes of peritonitis in patients of the control group were: a suppurative ovarian cyst - 10 (31.2%), uterine suture failure after cesarean section -2 (6.2%), and after uterine extirpation -2 (6.2%), a breakthrough of tubo-ovarian formations in the abdominal cavity - 2 (6.2%). In 4 - (12.5%) patients, intestinal damage was noted after surgical interventions, followed by the development of fecal peritonitis. In 10 (31.2%) cases, the cause of peritonitis was the progression of inflammation of the uterus, in 2 (6.2%) - abortion with perforation of the uterus.

32 patients of the control group underwent 39 surgical interventions. In 20% of patients, after eliminating the source of peritonitis, a second operation was performed for postoperative complications.

The most frequent surgical interventions in patients of the control group were cystectomy - 10 (31.2%), hysterectomy with appendages -9 (28.2%), intestinal surgery - 8 (25%), of which suturing of the bowel defect -6 ( 18.7%), bowel resection with the placement of an unloading stoma -2 (6.2%), opening of abscesses of the abdominal cavity -8 (25%), removal of tubo-ovarian masses -4 (12.5%).

The following reasons were revealed in the structure of peritonitis in patients of the main group: failure of the sutures of the vaginal stump after extirpation of the uterus -13 (23.6%), damage to the intestines during surgery on the uterus and its appendages -5 (9.0%), failure of uterine sutures after cesarean section -9 (16.3%), progression of inflammation of the uterine appendages -4 (7.2%), breakthrough of tubo-ovarian formations into the abdominal cavity -8 (14.5%), postpartum endometritis -6 (7.2%), suppurative ovarian cyst - 9 (16.2%), abortion - 3 (5.4%).

The main principle of the complex of therapeutic measures in patients with peritonitis of obstetric and gynecological origin was an early surgical intervention with the removal of the source of peritonitis, evacuation of exudate and thorough intraoperative lavage of the abdominal cavity with decompression of the small intestine by the nasointestinal probe and the initial section of the jejunum 50-80 cm from the Trety.

Patients of the control group were eliminated from the source of peritonitis with intraoperative lavage of the abdominal cavity with furatsilin solutions and in the postoperative period antibiotic solutions were introduced into the drainage tubes (Kanamycin).

After elimination of the source of peritonitis and intraoperative rehabilitation of the abdominal cavity by water-soluble Levomekol ointments and Dekasan solution heated to a temperature of 37-38 ° C, the abdominal cavity was drained.

After 24 hours with spilled peritonitis, a planned abdominal sanitation was performed with the introduction of a water-soluble Levomekol ointment at the rate of 1.5 ml / kg of the patient's body weight and 100.0 ml of Decasan solution. In the case of local and diffuse peritonitis, the abdominal cavity was sanitized through one or two drainage tubes by introducing the water-soluble ointments Levomekol and Decasan solution. In total, in the

postoperative period 3–20 ml, depending on the volume of the abscess cavity, 10–20 ml of water-soluble ointment and Decasan solution were brought to 50.0 ml in the drainage tube.

### 3. RESULTS

A comparative analysis of the prevalence of peritonitis in groups showed that out of 87 analyzed patients, diffuse peritonitis was diagnosed in 26 (29.8%).

Of 26 patients with diffuse peritonitis, 17 belonged to the main group and 9 were in the control group. Diffuse peritonitis was detected in 37 (42.5%) patients out of 87 analyzed. Of these, 22 were in the main group and 15 in the control. When analyzing the prevalence of peritonitis according to the etiology of 58 patients with gynecological peritonitis of the main group in 16 (27.6%) cases, peritonitis was diffuse. Of the control group, diffuse peritonitis was detected only in 7 gynecological patients. According to the stages of peritonitis development, the terminal stage was diagnosed in 23 (26.5%) patients. Of these, 16 were in the main group and 7 in the control group. Of 34 (39%) patients with the toxic stage of peritonitis, 20 patients belonged to the main group and 14 to the control group. Of the 20 patients of the main group with toxic peritonitis, 16 were gynecological and 4 obstetric. The reactive stage of peritonitis was noted in 27 (31.0%) cases, of which 20 belonged to the main and 7 to the control groups.

A comparative analysis of the clinical and biochemical blood parameters of patients in the main and control groups showed that patients in the control group had lower leukocytosis, leukocyte intoxication index (LII) and secondary molecules on the 1st day after the operation (Table 1). They increased on the 3rd – 4th day and gradually decreased on the 5–7th day of the postoperative period. These indicators in patients of the 2nd group had the same tendency, however, they were initially higher in comparison with the control and their decrease in the main group was noted to the level of normal values.

According to the dynamics of changes in the content of total blood protein, patients of groups 1-2 did not differ. In all patients, the total protein content during the treatment gradually decreased by 1-3–5 days with an increase by 7 days of the postoperative period.

The indicators of nitrogenous slag in the blood in patients of the control group on day 1 were less than in patients of the main group and increased by 3 days. In the next day, they gradually decreased, but remained elevated compared with the main group.

Blood enzymes in patients in the control group were also initially lower compared with the main group of patients. On day 3 these indicators in both groups increased and did not differ much, and by day 5–7 they gradually decreased to normal. As can be seen, according to the dynamics of clinical and biochemical parameters in patients of group I-II, there was a general tendency to increase on the 3rd day and a gradual decrease on the 5-7th day of observation. However, despite the fact that in the patients of the control group, all indicators were initially better than in the main group by 5–7 days they turned out to be more severe.

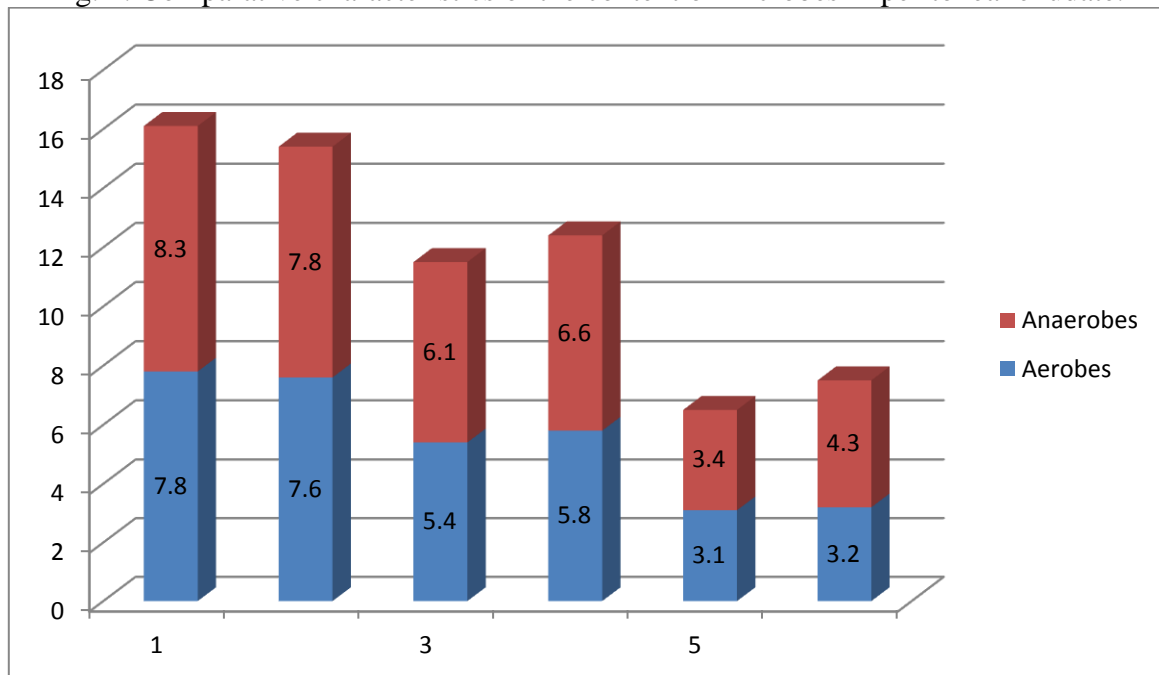
Table 1. Comparative characteristics of changes in clinical and biochemical blood parameters in patients of the control and main groups with peritonitis of obstetric and gynecological origin

Indicators	Groups	Postoperative period			
		1 day	3 days	5 days	7 days
White blood cells (10 <sup>9</sup> / l)	I	12.1+0.04	14.2+0.3*	14.9+0.2	12.5+0.4*
	II	14.1+0.02	16.9+0.4*	13.2+0.03*	9.2+0.05*
leukocyte intoxication index	I	1.4+0.01	4.2+0.01*	5.1+0.01*	3.2+0.02*
	II	1.8+0.01	4.6+0.02*	4.1+0.03*	1.6+0.01*

Medium molecules ( $\mu\text{g} / \text{L}$ )	I	0.209+0.2	0.272+0.18*	0.316+0.12	0.187+0.02*
	II	0.246+0.03	0.356+0.06*	0.290+0.04*	0.167+0.02*
Urea (mmol / L)	I	7.88+0.04	7.12+0.34	9.87+0.81*	8.62+0.71
	II	10.23+0.03	13.4+0.02*	10.8+0.04*	7.2+0.05*
Креатинин (мкмоль/л)	I	0.09+0.004	0.10+0.006	0.11+0.02*	0.01+0.02
	II	0.11+0.003	0.13+0.004*	0.11+0.003*	0.06+0.002*
Bilirubin ( $\mu\text{mol} / \text{L}$ )	I	21.4+1.8	22.3+1.3	21.04+2.3	17.4+0.5*
	II	29.1+1.6	32.4+2.1	24.6+1.2*	15.3+1.3*
ALT ( $\mu\text{mol} / \text{L}$ )	I	2.0+0.01	2.2+0.13	2.0+0.12	1.1+0.1*
	II	2.6+0.02	3.1+0.0*4	1.8+0.08*	0.8+0.005*
AST ( $\mu\text{mol} / \text{L}$ )	I	2.1+0.12	2.2+0.2	2.4+0.17	1.2+0.2*
	II	2.4+0.08	2.8+0.1	2.2+0.2*	1.0+0.1*
Общий белок (г/л)	I	58.8+1.6	54.5+1.2	50.3+0.6*	51.4+0.4
	II	50.3+2.1	48.6+1.5	51.2+1.8	55.4+1.5*

A comparative analysis of the dynamics of changes in the microbial contamination of peritoneal exudate in the control and main groups allowed us to establish that in the control group the initial content of both aerobic and anaerobic microbes was lower than in the main group (Fig. 1).

Fig. 1. Comparative characteristics of the content of microbes in peritoneal exudate.



According to the content of aerobic microbes by 3 days after the operation, the elimination rates in the second group were quite high due to the use of abdominal salve ointment and Decasan solution in the postoperative period, which allowed this indicator to be reduced to the level observed in the control group (3.46-3 , 63Lg / ml). The rates of elimination of anaerobic microbes from the abdominal cavity in the main group were maximum and exceeded those in the control group despite the use of peritoneal dialysis there. As a result of a higher elimination by 3 days after the operation, the content of anaerobic microbes in the main group was significantly lower (3.11 + 0.13L / ml g) than in the control group (4.24 + 0.173Lg / ml, P <0.05) .

A comparative analysis of the incidence of postoperative complications in the control and main groups with peritonitis of obstetric and gynecological origin showed that in the control group of 32 patients in 11 (34.3%) various intra-abdominal complications were noted in the immediate postoperative period. In the main group of 55 patients, these complications were noted in 13 (23.6%) cases. Among them, the most formidable were abscesses of the abdominal cavity, which were observed in 9 patients in the control group, and -1 in the main group.

Intestinal suture failure in the control group was observed in 3 patients, while in the main group - in 1.

An analysis of extra-peritoneal complications revealed that despite the initially heavier contingent of patients of the main group, postoperative extra-abdominal complications occurred in 14 of 55 cases, which amounted to 25.4%. In patients of the control group, extraperitoneal complications were detected in 10 (31.3%) cases out of 32.

A comparative analysis of the causes of deaths revealed that 8 patients (25%) died in the control group and 6 patients in the main group (11.8%)

In general, the use of ointment sanitation of the abdominal cavity and Decasan solution during surgery and in the immediate postoperative period contributed to a decrease in mortality by almost 13% compared with traditional methods of treatment.

The use of ointment sanitation of the abdominal cavity with water-soluble, antibacterial ointments in combination with Decasan solution, rational antimicrobial therapy with drugs of wide and ultra-wide spectrum of activity, detoxification, symptomatic, immunostimulating therapy, correction of metabolic disorders and hemostasis in patients with obstetric and gynecological origin to accelerate microbial origin from peritoneal exudate with a decrease in microbial contamination of the abdominal cavity below the critical level (104 Lg / ml) on the 3rd day after the operation. As a result, the incidence of intraperitoneal complications was reduced from 34.3% to 23.7%, extraperitoneal complications from 31.3% to 25.4% with a decrease in mortality from 25% to 11.8%.

#### 4. CONCLUSION

1. The use of combined sanitation of the abdominal cavity with peritonitis of obstetric and gynecological origin using water-soluble antibacterial ointments Levomekol and Decasan solution is a highly effective treatment method that contributes to a sharp reduction in postoperative complications and mortality, which makes it widely recommended in clinical practice.

2. Ointment sanitation of the abdominal cavity should be carried out intraoperatively after eliminating the source of peritonitis and in the postoperative period 3 times a day, while in limited forms of peritonitis, depending on the volume of the abscess cavity, from 10 to 50 ml of water-soluble ointment is introduced into the drainage tube, and with open methods of sanitation at the rate of 1 ml / kg of patient body weight.

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