



## THE USE OF ENDOMESENERIC LYMPHOTROPIC THERAPY IN ABDOMINAL SURGICAL PATHOLOGY IN THE POSTOPERATIVE PERIOD

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### ✓ Resume

**Objective:** to improve the results of treatment of operated patients with abdominal surgical pathology by using endomesenteric lymphotropic therapy in the postoperative period in the treatment complex.

**Material and methods:** the analysis of the results of surgical treatment of nonspecific ulcerative colitis and acute widespread peritonitis of various genesis of patients who were in the clinic of the Andijan State Medical Institute for the period from 2012 to 2021 was carried out. The patients were divided into two groups: the control group included patients (n=93) who received traditional methods of treatment in the postoperative period, and endomesenteric lymphotropic therapy was added to the treatment complex for patients of the main group (n=98).

**Results:** analysis of endomesenteric lymphotropic therapy for abdominal surgical pathology in the postoperative period shows that the use of this method contributes to the rapid restoration of gastrointestinal tract functions. At the same time, on the 2nd day, intestinal peristalsis and gas discharge are resumed on the 3rd day, unlike patients of the control group, in whom the functional ability of the gastrointestinal tract is restored for 4-5 days. Leukocytosis in the blood of patients of the main group significantly decreases on the 3rd day, and in control patients - on the 6th day after surgery.

**Key words:** acute peritonitis, ulcerative colitis, lymphotropic therapy.

## ЗНАЧЕНИЕ ЭНДОМЕЗЕНТЕРИАЛЬНОЙ ЛИМФОТРОПНОЙ ТЕРАПИИ ПРИ АБДОМИНАЛЬНОЙ ХИРУРГИЧЕСКОЙ ПАТОЛОГИИ В ПОСЛЕОПЕРАЦИОННОМ ПЕРИОДЕ

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### ✓ Резюме

**Цель работы:** улучшить результаты лечения оперированных больных при абдоминальной хирургической патологии применением в комплексе лечения эндомезентериальной лимфотропной терапии в послеоперационном периоде.

**Материал и методы:** проведен анализ результатов хирургического лечения неспецифического язвенного колита и острого распространенного перитонита различного генеза больных, находившихся в клинике Андijanского государственного медицинского института за период с 2011 по 2020 годы. Пациенты были разделены на две группы: в контрольную группу включены пациенты (n=93), получавшие традиционные методы лечения в послеоперационном периоде, а пациентам основной группы (n=98) в комплекс лечения добавлена эндомезентериальная лимфотропная терапия.

**Результаты:** анализ эндомезентериальной лимфотропной терапии при абдоминальной хирургической патологии в послеоперационном периоде показывает, что применение этого метода способствует быстрейшему восстановлению функций желудочно-кишечного тракта. При этом на 2-е сутки возобновляется перистальтика кишечника и отхождение газа на 3-сутки, в отличие от больных контрольной группы, у которых восстанавливается функциональная способность желудочно-кишечного тракта на 4-5 сутки. Лейкоцитоз в крови больных основной группы достоверно снижается на 3-сутки, а у больных контрольной - на 6-сутки после операции.

**Ключевые слова:** острый перитонит, неспецифический язвенный колит, лимфотропная терапия.

# QORIN BO'SHLIG'I XIRURGIK KASALLIKLARIDA OPERASIYADAN KEYINGI DAVRDA QO'LLANILADIGAN ENDOMEZENTERIAL LIMFOTROP TERAPIYANING AHAMIYATI

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## ✓ Rezyume

*Ishning maqsadi: qorin bo'shlig'i xirurgik kasalliklari bilan operatsiya qilingan bemorlarni operatsiyadan keyingi davrda kompleks davolashda endomezenterial limfotrop terapiya yordamida davolash natijalarini yaxshilash.*

*Material va uslublar: Andijon davlat tibbiyot instituti klinikasida 2011-2020 yillar davomida nospesifik yarali kolit va o'tkir tarqalgan peritonitni jarrohlik yo'li bilan davolash natijalarining tahlili o'tkazildi. Bemorlar ikki guruhga bo'lib o'rganildi: nazorat guruhiga operatsiyadan keyingi davrda an'anaviy usulda davolangan bemorlar (n=93) kiritilgan bo'lsa, asosiy guruhga davolash kompleksiga endomezenterial limfotrop terapiya usuli qo'llanilgan bemorlar (n=98) kiritildi.*

*Natijalar: qorin bo'shlig'i xirurgik kasalliklari bilan operatsiya qilingan bemorlarda operatsiyadan keyingi davrda endomezenterial limfotrop terapiyani qo'llash shuni ko'rsatadiki, ushbu usuldan foydalanganda oshqozon-ichak traktining funksiyasi tez tiklanadi. Asosiy guruh bemorlarida 2-kuni ichaklar peristaltikasi tiklanib, 3-kunida gazning ajralishi kuzatilsa, bu ko'rsatkichlar nazorat guruhidagi bemorlarda 4-5-kunida kuzatiladi. Asosiy guruhdagi bemorlarning qonida leykotsitoz 3-kuni, nazorat guruhidagi bemorlarda esa operatsiyadan keyingi 6-kuni sezilarli darajada kamayadi.*

*Kalit so'zlar: o'tkir peritonit, yarali kolit, limfotrop terapiya.*

## Introduction

Despite the improvement of diagnostic methods and improvement of the quality of medical measures, postoperative complications and mortality in acute widespread peritonitis (ORP) remain high. Especially high mortality is observed with the development of abdominal sepsis with the development of multiple organ failure, while reaching from 18 to 37% of cases [1; 6; 10; 15].

The difficulty of solving the problem of peritonitis, along with other reasons, is that in the treatment of acute respiratory infections, factors such as the fight against sources of intoxication of the body in the postoperative period are insufficiently corrected [2; 5; 13; 11].

One of the most unfavorable ORP syndromes in prognostic value is progressive endogenous intoxication of the body, which is associated with the lesion in the abdominal cavity. This process contributes to the development of functional intestinal insufficiency with the translocation of bacterial flora from the intestine to the abdominal cavity. These factors, progressing and involving organs and systems in the process, are the cause of deep metabolic disorders of the body, which lead to multiple organ failure and death of the patient [4; 5; 14].

At the beginning of the disease, the primary focus of intoxication plays the main role, which often occurs due to destructive changes in the abdominal organs. These are also non-specific ulcerative colitis (ulcerative colitis), of which etiological factors are still unknown [3; 12; 13; 14; 15].

A secondary focus in abdominal surgical pathology is infection of the lymph nodes of the abdominal cavity and retroperitoneal space. Against the background of which microabscesses are formed in the lymph nodes, causing further intoxication of the body. At the same time, there is a stagnant phenomenon in the lymphatic system of the abdominal organs of patients, which also contributes to increased intoxication of the body. All this has a very negative impact on the infectious defense mechanisms of the intestine, providing its barrier function [1; 2; 4; 7; 12; 13].

The tertiary focus of intoxication in acute respiratory infections of various genesis and NAC is a violation of the function of the gastrointestinal tract in the postoperative period, in which, due to the development of intoxication of the body, dynamic intestinal obstruction may occur, which further aggravates the endotoxemia of the body [5; 6; 14].

Despite the complete elimination of the primary focus of infection, most patients continue to deteriorate and increase the degree of intoxication of the body. The question of the expediency of antibacterial therapy, even with such a severe course of ORP and NYAC, remains unresolved [7; 10; 12; 15].

At the same time, it has been proven that one of the ways to increase the effectiveness of antibiotic therapy and correction of immunity in ORP and NAC is the introduction of drugs into the lymphatic system [10; 12; 13].

The search and development of new methods of targeted delivery of drugs to target organs are urgent problems of modern medicine. One of these methods is lymphotropic therapy, which ensures the creation of sufficient and stable therapeutic concentrations of drugs in the lymphatic region of the lesion by the pathological process, and therefore in the target organ.

**Objective:** to improve the results of treatment of operated patients with abdominal surgical pathology by using endomesenteric lymphotropic therapy in the postoperative period in the treatment complex.

### Material and methods

We analyzed the results of surgical treatment of nonspecific ulcerative colitis and acute widespread peritonitis of various genesis of patients who were on inpatient treatment at the clinic of the Andijan State Medical Institute for the period from 2011 to 2020. All patients were divided into two groups: the first - control group included patients (n=93) who received traditional methods of treatment in the postoperative period, and patients in the second - main group (n=98) endomesenteric lymphotropic therapy was added to the treatment complex.

In order to evaluate the effectiveness of endomesenteric lymphotropic therapy in the postoperative period, we tried to study the state of limotok in the intestinal mesentery normally and with the model of ulcerative colitis created by us. The proof of this was the results of absorption of Evans' blue from the intestinal mesentery on the model of ulcerative colitis created by us after lymphostimulation (Table 1).

#### The time of absorption of Evans' blue from the mesentery and the serous layer of the colon wall against the background of the created model of ulcerative colitis

Results of absorption of Evans' blue against the background of the created model of ulcerative colitis				
The points of introduction of the Evans blue and the time of its absorption	Closer to the mesentery root	Suction time without lymphostimulation	Suction time after lymphostimulation	Acceleration of suction in %
		6 min 39 sec±10 sec.	4 min 02 sec ±10 sec.	36,2±1,4
	The middle part of the mesentery	7 min. 21 sec± 21sec.	4 min. 32 sec. ± 7 sec.	40,1±2,8
The marginal part of the mesentery (closer to the intestinal wall)	8 min.35 sec ±13 sec.	5 min 02 sec.±14 sec	39,9±1,3	
	6 min35 sec.± 10 sec.	6 min 02 sec±10 sec.		

The table shows that after lymphostimulation, the lymph flow in the intestinal mesentery improves, while eliminating lymphostasis in the "lymphatic collector", which develops against the background of the inflammatory process.

The causes of peritonitis in the main group of patients (out of 98 patients with peritonitis, only 68) who received endomesenteric lymphotropic therapy were: acute destructive appendicitis in 29 patients (29,6%), perforated gastric ulcer and duodenal ulcer - in 18 patients (18,4%), destructive cholecystitis – in 7 patients (7,1%), gynecological destructive diseases – in 9 patients (9,2%), acute intestinal obstruction – in 5 patients (5,1%). Here, in the main group, there were also 30 patients with NAC (30,6%).

The presence of large changes in the retroperitoneal space in patients with various forms of peritonitis in the form of infiltration, edema, swelling, hyperemia, purulent-inflammatory changes, as well as in all patients of the main group with nonspecific ulcerative colitis were indications for inclusion in the complex treatment of endomesenteric lymphotropic therapy.

All patients of the main group after the completion of the main stage of the operation, intraoperatively, in the mesentery of the intestine - endomesenterically, we invented a PVC - special catheter into the mesentery of the intestine for lymphotropic therapy in the postoperative period and fixed it with a thin catgut into the mesentery of the intestine (Fig.1).



*Fig. 1. Intraoperative establishment of an endo-mesenteric catheter.*

The outer end of the catheter was removed from the abdominal cavity through a contraperture and fixed to the skin of the anterior abdominal wall of the abdomen with a silk thread (Fig. 2).



*Fig. 2. Endomesenterically installed catheter.*

Our method of installing a catheter into the mesentery of the intestine differs in that we place the catheter at a distance of 2 cm from the mesenteric edge of the intestine, and not in the area of the mesentery root. By doing this, we avoid damage to blood vessels, the formation of a large hematoma in the mesentery, ligation or indentation of large lymphatic and blood vessels into it with injected drugs.

In patients with peritonitis, first of all, attention was paid to the fight against the microbial factor. In this regard, in the postoperative period, through a catheter installed in the mesentery of the intestine, immediately after lymphostimulation, lymphotropic administration of broad-spectrum antibiotics was started, by drip. The sensitivity of the microflora of the abdominal cavity to antibacterial drugs was immediately determined. When studying the microflora of the abdominal cavity, *E. coli*, *Staphylococcus*, *Pseudomonas aeruginosa* were found in 84.5% of patients. In the remaining patients with acute peritonitis, combined types of microorganisms were detected during sowing.

The greatest sensitivity of the microflora of the abdominal cavity was found to drugs of the cephalosporin series: ceftriaxone and cefazolin (84.7%) in patients with acute peritonitis. As soon as the sensitivity to the antibiotic was established, they immediately switched to the use of this drug for endomesentral lymphotropic therapy, to which the microbes were sensitive.

For lymphotropic therapy, a glucose-novocaine mixture was used as lymphostimulators in a ratio of 1:1 at a dose of 4 ml per kg of body weight of a patient with lidase (0.5 u / kg) or by adding heparin (80 u / kg) taking into account the patient's blood clotting, thymogen at a dose of 150 mcg, broad-spectrum antibiotics (cephalosporons of the III-IV generation: cefazolin or ceftriaxone) in a single therapeutic dose, further taking into account the sensitivity of the microflora abdominal cavity to them.

Lymphotropic therapy for peritonitis was carried out depending on the severity of the disease and the patient's condition once or twice a day for 4-5 days. With hemicolectomies for nonspecific ulcerative colitis once a day, and with subtotal or total colectomies twice a day, also for 4-5 days.

**Results** of treatment with the use of lymphotropic therapy in the postoperative period were compared with the indicators of the control group of patients.

Against the background of complex therapy in the postoperative period with the use of lymphotropic therapy, intestinal peristalsis resumed on the 2nd day in patients of the main group, and gas discharge was noted on the 3rd day. In patients of the control group, weak intestinal peristaltic noises appeared on the 3rd day after surgery. Only on the 4th-5th day the functional ability of the gastrointestinal tract was restored in this group of patients.

Compared with traditional methods of treatment of acute peritonitis, leukocytosis in the blood of patients of the main group significantly decreased on the 3rd day, and in patients of the control group, a

decrease in this indicator was noted on the 6th day after surgery. LII normalized in patients of the main group on the 4th day after surgery, and in the control group on the 7th day. Also, a decrease in ESR was observed starting from day 4 in patients of the main group, and in patients of the control group from day 6-7.

As a result of lymphotropic therapy in the complex of treatment in the postoperative period, the amount of fluid released from the abdominal cavity in patients of the main group began to decrease compared to the control group starting from the 2nd day after surgery (Table 2).

Table 2

**Dynamics of exudate release from the abdominal cavity (ml) in the postoperative period with endomesenteric lymphotropic therapy and the traditional method of treatment**

Method of treatment	1 day	2 days	3 days	4 days
Traditional treatment	117,2±10,1	100,4±7,9	77,1±5,8	38,4±6,9*
Endo mesenteric lymphotropic therapy	108,4±9,2	60,3±9,6*	20,2±4,1*	5,7±1,3*

\* - the reliability of the difference compared to the initial data ( $P < 0.05$ ).

Thus, in abdominal surgical pathology, the applied lymphotropic therapy in the complex of treatment of patients in the postoperative period has a positive effect on the restorative function of the body, preventing complications from the underlying disease, reduces the cost of medicines and the patient's hospital stay by  $3.5 \pm 1.5$  days.

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