



## **COMPLEX TREATMENT OF PATIENTS WITH RECTAL MALIGNANT TUMOR WITH LONG-TERM USE OF ENDOLYMPHATIC AND REGIONAL POLYCHEMOTERAPY**

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### **Article history:**

**Received:** January 20<sup>th</sup> 2023  
**Accepted:** February 11<sup>th</sup> 2023  
**Published:** March 26<sup>th</sup> 2023

### **Abstract:**

In recent decades, in many countries of the world there has been an increase in the incidence of malignant tumors of the rectum (MTR). Incidence statistics per 100,000 population in different countries of the world are not the same: 33.2 in the USA, 17.8 in Sweden; -25.8 in UK; -15.7 in Japan; In Senegal, 2.5. In Russia, the incidence of a malignant tumor of the rectum (MTR) also has a pronounced upward trend: the overall increase in incidence over the past decade is 37.4%. The incidence reaches -12.6 in women and -12.5 in men per 100,000 population. Incidence rates of malignant tumors of the rectum among men vary significantly across the CIS countries. Thus, in Turkmenistan, Uzbekistan and Armenia it ranges from 3.0 to 3.5; And in Russia and Belarus it reaches 11.3-14.8. For women in Turkmenistan, Uzbekistan and Armenia, this figure is higher than 2.5, while in Russia and Belarus this figure is -7.6-8.2. In 2005, 1.9 cases of a malignant tumor of the rectum per 100,000 population were detected in Uzbekistan, and this pathology ranks eighth in the structure of the overall incidence. The global standard for mortality from MTR was 7.4, in Europe -11.1, where the mortality rate for men was 9.6 and 14.4, and for women - 5.5 and 8.1, respectively.

**Keywords:** Endolymphatic, regional polychemotherapy, RC.

### **INTRODUCTION:**

To date, the occurrence of 50 new cases of malignant colorectal tumors per 100,000 population annually and the development of the disease in 5% during a lifetime determine the population risk. It is alarming that for every 100 newly diagnosed cases of rectal cancer, there are more than 70 cases, with about 40% occurring within a year of diagnosis. This situation is explained by the fact that late forms of MTR (III-IV stages) are diagnosed in 62.4% of patients at the first visit to the doctor. Distant metastases were detected in 25-30% of patients during surgery. The five-year survival rate of patients with MTR after surgical treatment at stage T1N0M0 was 90%; T1N0M0 - after combined treatment -70-80%; T1N0M0 formed in -60-65% after combined treatment and in -50-55% after a single surgical intervention. T1-3N1-3M0 - after combination - 50-55%, after only surgical treatment - 25-30%. -10-15% at stage T4N0-1M0 It is accepted that the situation in which the product not only goes beyond the border of the intestinal wall, but also reaches the pre-intestinal cell and spreads to nearby organs or into the pelvic

cavity, bladder, etc., is called local distribution MTR. As a broader concept of local distribution of MTR, the following definition can be taken: an immobile or limited malignant tumor 5 cm long, circularly covering the entire intestinal wall, narrowing the intestinal opening with the involvement of neighboring organs and tissues in the process of a malignant tumor that forms ulcers or purulent cavities, and is a condition without distant metastases. According to many authors, 70-80% of patients with MTR go to the clinic in stages III-IV of the disease. Among the reasons for the late diagnosis of MTR, it should be noted the absence of a mandatory standard scheme for examining patients with suspected this disease, the incomplete use of previously developed diagnostic methods, and the limited use of new diagnostic methods. In this regard, increasing the effectiveness of the treatment of MTR remains an urgent problem of modern oncology.

**PURPOSE OF THE STUDY:** Improving the quality of life of patients with a malignant tumor of the rectum



with the help of treatment with long-term use of endolymphatic and regional polychemotherapy.

**MATERIALS AND METHODS:**

Preoperative endolymphatic (ELPCT) regional lymphatic polychemotherapy (RLPCT) was performed in 87 (72.5%) patients with POPC, of which 44 (36.7%) patients of the main group, 43 (35.8%) of the control group.

**Table 1**  
 Preoperative lymphatic polychemotherapy in patients with malignant neoplasms of the rectum

Treatment regimen	Group of patients				Total, n=120	
	Main n=60,		Control, n=60			
	Aбс.	%	Aбс.	%	Aбс.	%
ELPCT + RLPCT +GRT	21	17,5	19	15,8	40	33,3
ELPCT + RLPCT	23	19,2	24	20,0	47	39,2
Total:	44	36,7	43	35,8	87	72,5

At the same time, 21 (17.5%) patients of the main group underwent ELPCT and RLPCT in combination with hypoxic radiation therapy (HRT), in the control group this type of treatment was used in 19 (15.8%) patients. The remaining 23 (19.2%) patients of the main group and 24 (20.0%) patients of the control group underwent only ELPCT (endolymphatic polychemotherapy) and RLPCT (regional lymphatic polychemotherapy). Surgical treatment was carried out 14 days after the removal of the last preparations from the lymphatic system, after a decrease in the biological activity of the malignant tumor as a result of PCT (polychemotherapy). The immediate result of preoperative treatment (duration of ELPCT + RLPCT) was assessed according

to subjective and objective criteria. After the treatment, the general condition improved in 96.8% of patients, the pain syndrome decreased in 92.6% of patients, pathological stool appendages (pus, mucous substances) disappeared in 85.0%, improvement in defecation and the disappearance of tenism were noted in 80.0 . % of patients. We did not observe complete regression of the malignant tumor, but partial regression was noted in 43.5% of patients, and the process stabilized in 56.5% of patients. The development of a malignant tumor process was not detected. In 14.5% of patients, a transition of a malignant tumor from unresectable to resectable was noted.

**Table 2**  
 Dynamics of malignant neoplasms against the background of preoperative chemotherapy in the main group of patients with malignant neoplasms of the rectum, n=44.

Treatment regimen	Degree of tumor regression			
	Partial		Stabilization	
	Aбс.	%	Aбс.	%
ELPCT + RLPCT + GRT, n=21	11	52,3	10	47,7
ELPCT + RLPCT, n=23	9	39,1	14	60,9
Total	20	45,5	24	54,5

**Table-3**  
 Dynamics of the malignant tumor process in relation to chemotherapy before surgery in the control group of patients with malignant tumors of the rectum, n=43.

Treatment regimen	Degree of tumor regression			
	Partial		Stabilization	
	Aбс.	%	Aбс.	%
ELPCT + RLPCT + GRT, n=19	11	57,9	8	42,1
ELPCT + RLPCT, n=24	9	37,5	15	62,5
Total	20	46,5	23	53,5



When analyzing the effectiveness of the proposed treatment, depending on the histological structure of the malignant tumor, it was found that in 25 out of 40 patients with adenocarcinoma (62.5%), a partial

regression of the malignant tumor was observed, and stabilization of the malignant tumor process was noted in 15 (37.5%) patients.

**Table-4**

Dynamics of a malignant tumor process after lymphochemotherapy depending on the histological structure of a malignant tumor in the main group of patients with a malignant tumor of the rectum, n=44.

Histological form		Degree of tumor regression			
		Partial		Stabilization	
		A6c.	%	A6c.	%
Adeno-carcinoma	Highly differentiated, n=12	8	66,7	4	33,3
	Average differentiated, n=18	11	61,1	7	38,9
	Poorly differentiated, n=10	6	60,0	4	40,0
	Signet cell carcinoma, n=1	0	0	1	100
Other types	Mucinous cancer, n=1	0	0	1	100
	Squamous cell carcinoma, n=1	1	100,0	0	0
	Undifferentiated cancer, n=1	0	0	1	100
Total		20	45,5	24	54,5

With a highly differentiated form of a malignant tumor, partial regression was noted in 66.7% of cases, and stabilization of the malignant tumor was noted in 33.3% of cases. partial regression was observed in a moderately differentiated form in 61.1% of cases, stabilization of a dangerous tumor process in 38.9% of cases, and in a poorly differentiated form in 60.0% and

40.0% of cases. In patients with the cellular form of adenocarcinoma, only stabilization of the dangerous tumor process was revealed. Partial regression was not observed in mucinous, annular and undifferentiated malignant tumors. Partial regression of the malignant process was noted in 1 patient with a squamous cell malignant tumor.

**Table-5**

Dynamics of a malignant tumor after lymphochemotherapy depending on the histological structure of a malignant tumor in the control group of patients with a malignant tumor of the rectum n=43

Histological form		Degree of tumor regression			
		Partial		Stabilization	
		A6c.	%	A6c.	%
Adeno-carcinoma	Highly differentiated, n=11	6	54,5	5	45,5
	Average differentiated, n=14	7	50,0	7	50,0
	Poorly differentiated, n=10	4	40,0	6	60,0
	Signet cell carcinoma, n=2	1	50,0	1	50,0
Other types	Mucinous cancer, n=1	0	0	1	100
	Squamous cell carcinoma, n=3	1	33,3	2	66,7
	Undifferentiated cancer, n=2	0	0	2	100
Total		19	44,2	24	55,8

Analysis of the degree of regression depending on the macroscopic appearance of the malignant tumor showed that in 40.0% the malignant tumor underwent partial regression into an exophytic form, and in 60.0% the process was divided as the process stabilized. With

mixed forms of growth, these figures were 47.8% and 52.1%, respectively (table). In the form of endophytic growth of a dangerous tumor, they showed low results: 45.5% and 54.5%.

**Table-6**

Dynamics of malignant tumor process after lymphatic polychemotherapy depending on macroscopic forms of malignant tumor growth in the main group of patients with malignant tumor of the rectum, n=44

Macroscopic type of growth	Degree of tumor regression			
	Partial		Stabilization	
	A6c.	%	A6c.	%
Exophyte, n=10	4	40,0	6	60,0
Endophyte, n=11	5	45,5	6	54,5
Mixed, n=23	11	47,8	12	52,1
Total	20	45,5	24	54,5

**Table-7**

Dynamics of a malignant tumor process after lymphatic polychemotherapy depending on the macroscopic forms of a malignant tumor in patients of the control group with a malignant tumor of the rectum, n=44.

Macroscopic type of growth	Degree of tumor regression			
	Partial		Stabilization	
	A6c.	%	A6c.	%
Exophyte, n=9	4	44,4	5	55,6
Endophyte, n=12	5	41,7	7	58,3
Mixed, n=22	10	45,5	12	54,5
Total	20	46,5	23	53,5

Analysis of the histomorphological picture showed that dystrophic and necrotic changes occur in the cells of malignant tumors after non-adjuvant DELPCT and RLPCT. In some cases, dystrophic changes are observed

along with necrosis, focal sclerosis and severe cell destruction, as well as lymphocytic infiltration. Areas of subcapsular necrosis appear in the lymph nodes.

**Table-8**

The level of therapeutic pathomorphosis of tumors depending on the type of lymphatic polychemotherapy before surgery in the main group of patients with malignant tumors of the rectum, n=44

Treatment regimen	Pathomorphosis treatment level							
	I		II		III		IV	
	A6c.	%	A6c.	%	A6c.	%	A6c.	%
ELPHT+RLPHT+GRT, n=21	3	14,2	9	42,9	7	33,3	2	9,6
ELPHT + RLPHT, n=23	7	30,4	9	39,2	5	21,7	2	8,7
Total:	10	22,7	18	40,9	12	27,3	4	9,1



The level of therapeutic pathomorphosis of tumors depending on the type of lymphatic polychemotherapy before surgery in the main group of patients with malignant tumors of the rectum, n=43

Treatment regimen	Pathomorphosis treatment level							
	I		II		III		IV	
	A6c.	%	A6c.	%	A6c.	%	A6c.	%
ELPHT+RLPHT	3	15,8	8	42,1	6	31,6	2	10,5
+GRT, n=19	8	33,3	9	37,5	6	25,0	1	4,2
Total:	11	25,6	17	39,5	12	27,9	3	7,0

In most cases, 40.9% of the lesions of dangerous tumor cells after ELPCT and MLPCT corresponded to the II level of pathomorphosis of treatment (No. 4.3) in 4 (9.1%) patients of the IV level of this pathomorphosis,

12 (27.3%) - in the patient III and in 10 (22.7%) patients - at level I of pathomorphosis treatment. Complications of methods of combined use of DELPCT and MLPCT are presented in the table.

**Table-10**

Late complications after lymphatic polychemotherapy in the main group of patients with malignant tumor of the rectum, n=44

Complications of chemotherapy		Treatment regimen				Total, n=44			
		ELPCT+ RLPCT +GRT, n=21		ELPCT+ RLPCT, n=23					
		A6c.	%	A6c.	%	A6c.	%	A6c.	%
General	Leukopenia	2	9,4	2	8,8	4	9,1	38	86,4
	Lymphopenia	5	23,8	4	17,5	9	20,6		
	ALT	1	4,8	1	4,3	2	4,5		
	AST	1	4,8	1	4,3	2	4,5		
	Creatinine	1	4,8	2	8,8	3	6,9		
	Decreased appetite	2	9,4	5	21,9	7	16,0		
	Diarrhea	1	4,8	1	4,3	2	4,5		
	nausea	2	9,4	1	4,3	3	6,9		
	vomit	1	4,8	1	4,3	2	4,5		
	Stomatitis	1	4,8	1	4,3	2	4,5		
	allergic rashes	1	4,8	1	4,3	2	4,5		
Local	Skin necrosis	1	4,8	1	4,3	2	4,5	6	13,6
	Lymphangitis	1	4,8	1	4,3	2	4,5		
	Swelling of the legs (heels)	1	4,8	1	4,3	2	4,5		



Thus, 9.1% of our patients had lymphopenia, 20.6% had leukopenia, 4.5% and 6.9% had elevated levels of ALT, AST, and creatinine. Appetite worsened in 16.0% of patients, nausea in 6.9%, vomiting in 4.5%, diarrhea in 4.5%, stomatitis in 4.5%. Allergic rashes occurred in 4.5% of patients. Among the local complications:

lymphatitis, aseptic necrosis of the skin, mainly associated with the extravasation of the chemical preparation into soft tissues, as a result of the exit of the catheter from the vein and rupture of the walls of the lymphatic vessels, heel edema occurred in 4.5% of patients at the site of methylene blue injection.

**Table-11**

Late complications after lymphatic polychemotherapy in the main group of patients with malignant tumor of the rectum, n=43

Complications of chemotherapy		Treatment regimen				Total, n=43			
		ELPCT+ RLPCT +GRT, n=19		ELPCT+ RLPCT, n=24					
		A6c.	%	A6c.	%	A6c.	%	A6c.	%
General	Leukopenia	2	10,3	2	8,3	4	9,4	37	86,0
	Lymphopenia	3	15,7	4	16,6	7	16,4		
	ALT	1	5,3	1	4,2	2	4,6		
	AST	1	5,3	1	4,2	2	4,6		
	Creatinine	1	5,3	1	4,2	2	4,6		
	Decreased appetite	3	15,7	5	20,7	8	18,5		
	Diarrhea	1	5,3	2	8,3	3	7,0		
	nausea	1	5,3	2	8,3	3	7,0		
	vomit	1	5,3	1	4,2	2	4,6		
	Stomatitis	1	5,3	1	4,2	2	4,6		
	allergic rashes	1	5,3	1	4,2	2	4,6		
Local	Skin necrosis	1	5,3	1	4,2	2	4,6	6	14,0
	Lymphangitis	1	5,3	1	4,2	2	4,6		
	Swelling of the legs (heels)	1	5,3	1	4,2	2	4,6		

**CONCLUSION:**

A new method of complex treatment of patients with a malignant tumor of the rectum has been developed, including high-intensity hypoxic radiotherapy with a single radiation regimen at a dose of 13 Gy (in 37 patients) before surgery, and then organ-preserving surgery (in 36 patients). From 5 Gy to 25 Gy, the transfer of irradiation by moderate fractions of SOD takes place. After endolymphatic polychemotherapy and regional polychemotherapy, the five-year survival rate in patients with rectal cancer was 69.6% compared with

76.1% before hypoxic radiotherapy. Five-year survival after a single dose of 13 Gy with hypoxic radiotherapy followed by organ-preserving surgery was 76.1% compared with -62.5% after the radiation regimen from 5 Gy ROD to 25 Gy SOD.2.

A new approach to the complex treatment of patients with a malignant tumor of the rectum was developed, which included endolymphatic polychemotherapy and regional lymphatic polychemotherapy before surgery (47 patients), as well as hypoxic radiotherapy followed by organ-preserving intervention (40 patients) carry



together. 3. Analysis of the five-year survival rate in patients with MTR, depending on the type of surgical treatment performed, showed that the highest rate was observed after direct resection of the rectum (PR RC) with anastomosis, which amounted to 83.3%, and the lower section of the transverse colon after PR RC of a five-year patient survival was 71.4%, -68.0% after abdomino-intermediate resection of the rectum with the introduction of the sigmoid colon, -50.0% after abdomino-anal resection of the rectum with colostomy and -66.7% after the Hartmann operation. The five-year survival rate after abdomino-intermediate resection of the rectum with the installation of a sigmoidostoma in patients in the control group was 68.3%.

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