

Results of Treatment of Patients with Metastatic Colorectal Cancer

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Abstract This study was conducted on the basis of the Department of Coloproctology of the Republican Specialized Scientific and Practical Medical Center of Oncology and Radiology in Tashkent. The study included 78 patients with colorectal cancer (CRC) of stage II-IV of the disease who underwent surgical treatment in the department of Coloproctology of the Republican Specialized Scientific and Practical Medical Center of Oncology and Radiology. Performing cytoreductive surgery on patients with colorectal cancer with liver metastases may help improve the quality of life of these patients in the long term.

Keywords Colorectal cancer, Metastases, Cytoreductive surgery, Polychemotherapy

1. Introduction

Colorectal cancer (CRC), due to the increase in morbidity, remains a serious healthcare problem worldwide. According to Cancer Today, 1,926,425 cases of the disease and 904,019 deaths from CRC have been recorded worldwide. In Asian countries, over 960,000 new cases and over 460,000 deaths were recorded in 2022 [4, 6]. In 2022, CRC ranks third (10.3%) in the environmental structure of morbidity: among the male population, after lung and prostate cancer, and among the female population, after breast and lung cancer [1,5].

In the Republic of Uzbekistan, according to official statistics, 1,818 patients with colorectal cancer were identified in 2022, of which 290 patients (16.0%) were diagnosed with stage IV of the disease. 936 patients died from colorectal cancer in the country. The ratio of deaths to patients remains high, reflecting the effectiveness of ongoing anti-cancer measures, including diagnostic and treatment measures, at 51.5% in 2022 [2,7].

Surgical treatment, as an independent method, is effective for colon cancer in stages I-II. In colon cancer of the I stage of the disease, the effectiveness of surgical intervention as an independent treatment method has been proven, in other cases - it is necessary to conduct a preoperative course of radiation therapy. Approximately 25-40% of patients who received CRC treatment according to the radical program (stages I-II) develop disease recurrence or develop distant metastases. Distant metastases, among patients with stage III of the disease, appear in almost 35% of cases after potentially radical treatment. In this case, the progression of the disease is due to the activation of tumor cells that migrated from

the primary tumor site before surgery. To solve this problem, adjuvant chemotherapy is prescribed worldwide [3].

Thus, the increase in CRC morbidity worldwide, including in the Republic of Uzbekistan, and the high frequency of disease progression after treatment determine the relevance of this issue for the oncological service. Studying and identifying prognostic factors that influence long-term treatment outcomes will allow for individualized treatment of patients.

Purpose of the research. Improvement of a multidisciplinary approach to the timely diagnosis of metastatic colorectal cancer.

2. Material and Methods

This study was conducted at the Coloproctology Department of the Republican Specialized Scientific and Practical Medical Center of Oncology and Radiology (RSPMCOR) in Tashkent.

The retrospective group included data on 360 patients with stage II-IV colorectal cancer who received surgical treatment in the coloproctology department of the Republican Specialized Medical Scientific and Practical Center of Oncology and Radiology. The study did not include patients with primary-multiple synchronous/metachronous malignant neoplasms, patients receiving surgical treatment for colorectal malformation in other medical institutions of the Republic of Uzbekistan.

The diagnosis was made based on complaints, medical history, physical examination, morphological examination of tumor material, and data from instrumental and laboratory examination methods. Patients received adjuvant/non-adjuvant treatment in accordance with the current algorithms for the diagnosis and treatment of colorectal cancer patients,

approved by the Ministry of Health of the Republic of Uzbekistan. The study material was: patients' peripheral blood, paraffin blocks of tumor tissue, fresh frozen tumor and normal colon tissue, isolated circulating tumor cells.

The prospective group included data from 78 patients with metastatic colorectal cancer II-IV.

When processing the initial research materials, IBM SPSS Statistics 23 (Stat Soft, USA) and MedCalc 19.3.0 (MedCalc Software bv, USA) programs were used.

3. Results

Table 1. General characteristics of patients with metastatic colorectal cancer

Characteristic	Distribution of patients	
	Absolute number (%)	95% CI
Gender:		
men	67 (51,9)	43,3-60,5
women	62 (48,1)	39,5-56,7
Resident:		
city	104 (80,6)	73,8-87,4
village	25 (19,4)	12,6-26,2
Age:		
up to 40 years	9 (7,0)	2,6-11,4
40-49 years old	17 (13,2)	7,4-19,0
50-59 years old	44 (34,1)	25,9-42,3
60-69 years old	47 (36,4)	28,1-44,7
70-79 years old	10 (7,8)	3,2-12,4
80 years and older	2 (1,6)	0,5-2,7
Location:		
colon	74 (57,4)	48,9-65,9
rectosigmoid junction	19 (14,7)	8,6-20,8
rectum	36 (27,9)	20,2-35,6
Histology:		
BDU adenocarcinoma	103 (79,8)	72,9-86,7
Intestinal type adenocarcinoma	6 (4,7)	1,2-8,3
Tubular adenocarcinoma	9 (7,0)	2,6-11,4
Mucinous adenocarcinoma	9 (7,0)	2,6-11,4
Ring cell carcinoma	2 (1,6)	0,5-2,7
Grade		
1	9 (7,0)	2,6-11,4
2	42 (32,6)	24,5-40,7
3	78 (60,5)	52,1-68,9
According to category T		
2	5 (3,9)	0,6-7,2
3	77 (59,7)	81,2-68,2
4	47 (36,4)	28,1-44,7
Category N		
0	28 (21,7)	14,6-28,8
1	51 (39,5)	31,1-47,9
2	50 (38,8)	30,4-47,2
Distant metastases		
Liver	75 (58,1)	49,6-66,6
Liver and other organs	19 (14,7)	8,6-20,8
Other organs, dissemination	35 (27,1)	19,3-34,9

The retrospective group included information about 129 patients with metastatic CRP. The main characteristics of the patient group are presented in Table 1.

As can be seen from the presented data, 51.9% of patients included in the study were men, 48.1% were women; more than 80% were urban residents. More than 90% of patients are 40 years old and older, the smallest number of patients (2 patients) are 80 years old and older. In more than half of the patients (60.5%), the malignant neoplasm had a degree of differentiation 3, the size of the primary focus (according to TNM classification) T3 was detected in 59.7% of patients, T4 - in 36.4%, and in 78.3% of patients, primary lesions of regional lymph nodes were identified. Primary distant metastases in the liver were detected in 58.1%, in the liver and other organs - in 14.7%, in other organs and dissemination - in 27.1%.

The largest number of CRP patients included in the study (Figure 1), patients with primary colon lesions - 74 patients (57.4%), in second place in terms of frequency of occurrence - rectal tumors - 36 patients (27.9%), in third place - tumors of the rectosigmoid junction - 19 patients (14.7%).

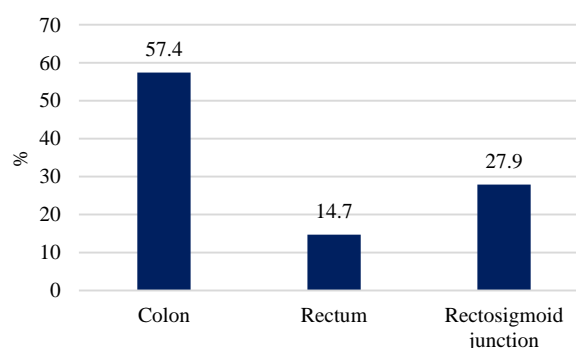


Figure 1. Distribution of metastatic CRR depending on the primary lesion

Analysis of the data presented in Table 1 allows us to draw the following conclusions. Damage to the right flank of the colon increases the risk of death in patients (OR=2.15, 95% CI 1.19-3.86, p=0.011). The risk of death is higher among rural residents than among urban residents by 25% (OR=1.25, 95% CI 0.81-1.92, p=0.311); metastatic damage to regional lymph nodes N2 compared to damage to N0-N1 (OR=1.49, 95% CI 0.85-2.61, p=0.160), as well as the presence of lymphovascular and perineural invasion (OR=1.58, 95% CI 0.67-3.73, p=0.298 and OR=1.44, 95% CI 0.67-3.09, p=0.344).

4. Conclusions

The long-term treatment results of patients suffering from metastatic colon cancer and rectosigmoid junction were statistically significantly better among patients with left flank involvement (42.7±7.4%), compared to patients with right flank involvement (15.4±9.2%), p=0.008. Among patients with metastatic rectal cancer, the median AV of urban residents was 40.0 months, among rural residents - 70.0 months, p=0.013.

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