

Original article



CLINICAL AND PATHOLOGICAL FEATURES OF COLONIC ILEUS FROM OBSTRUCTIVE COLORECTAL CANCER. ACTUAL CHARACTERISTICS.

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SUMMARY

Purpose: The purpose of this study is to analyze the possible change in the characteristics of patients with colonic ileus from obstructive colorectal cancer in UMHATEM “N. Pirogov”.

Material and Methods: For two separate periods of 2 years in the Department of General, Visceral and Emergency Surgery in University Hospital “N. I. Pirogov” from ileus caused by colorectal carcinoma were operated respectively:

Group A (1.1.2010-31.12.2011) - 187 patients (average 71.2 years, women were 88, men 99)

Group B (1.1.2014-31.12.2015) - 141 patients (average 73.5 years, women were 69, men 72).

Results: In group B, there was an increase in infected patients at an earlier stage. There was no significant difference in the localization of the tumor process in the two groups. In contrast to the increased number of patients hospitalized at an earlier ileus stage, there was no difference in the two groups according to the tumor stage.

Conclusions: Emergency surgery is indicated for cases with full bowel obstruction and significant prediction of rupture. Surgery procedure like proximal colostomy is recommended for elderly patients and complicated comorbidity. A primary procedure like segmental and subtotal colectomy is appropriate for patients in good condition. Segmental resection is favorable in elderly patients and those with shock who may not tolerate lengthy surgery.

Keywords: ileus, colorectal carcinoma, surgery, clinical signs, obstruction,

INTRODUCTION

Obstructive colorectal carcinoma is the most common cause of colonic obstruction and, on the other hand, is the most common malignant neoplasm of the gastrointestinal tract causing urgent disease- ileus. Although it spreads globally, the incidence is higher in industrialized and western countries, suggesting a possible impact on the environment and genetics. Dietary factors are statistically related to the risk of colorectal cancer.

Clinical presentation of colorectal cancer is influenced by the size and location of the tumor. Lesions on the

right side are bulky, ulcerating and usually manifest as anemia and moderate pain in a right lower quadrant. Transverse colon lesions are presented as obstruction or local pain. A left-side lesion is usually scirrhus, annular and presents as obstruction. Between 15 and 20 percent of patients with colorectal cancer present with signs of intestinal obstruction. Urgent surgical treatment is associated with an increased risk of higher morbidity and mortality [1].

Management of colorectal carcinoma depends on the location of the lesion, grade of disease and general status of the patients. Right-side tumors are managed by resection and primary anastomosis without any diversion procedure. Left-side colonic tumors were performed a staged procedure which is proximal decompression by stoma formation, resection and anastomosis followed by the closure of stoma; or resection with primary anastomosis. Lesions of the sigmoid colon could be treated by Hartmann’s procedure, resection with end colostomy or sigmoid resection with primary anastomosis with or without a stoma. For obstructing carcinoma of the rectum is indicated decompression colostomy (only for cases with ileus) and afterwards performed radiotherapy followed by resection of the lesion, or resection of neoplasm with protective ileostomy (without clinical signs of ileus)[2].

Critical for the proper behavior and improve the results of treatment for colonic ileus-carcinoma is timely diagnosis and knowledge of the clinical and pathologic features of the various tumors causing pathological processes.

The purpose of the study is to analyze the possible change in the characteristics of patients with colonic ileus from obstructive colorectal cancer in UMHATEM “N. Pirogov”.

MATERIAL AND METHODS

For two separate periods of 2 years in the Department of General, Visceral and Emergency Surgery in University Hospital “N. I. Pirogov” from ileus caused by colorectal carcinoma were operated respectively: Group A (1.1.2010-31.12.2011) - 187 patients (average 71.2 years, women were 88, men 99) and group B (1.1.2014-31.12.2015) - 141 patients (average 73.5, women were 69, men 72).

The clinical diagnosis was based on history, physical

examination, laboratory results, X-ray, ultrasound, FCS, irigography and CT. In this study, the parameters - age, gender distribution, clinical symptoms, mode of treatment, morbidity and mortality were analyzed. Some basic clinical and pathological indicators for the character of the tumor process and ileus have been studied and analyzed.

Routine tests and additional research were performed before surgery of the patients. They were treated with a nasogastric tube, intravenous fluid therapy, electrolyte replacement, rectal enema and antibiotic therapy. Classification of physiological status by American Society of Anesthesiologists (ASA) into ASA Class I-V was done. Several different surgical interventions were completed related with the physiological status of the patients, complicated comorbidity, bowel obstruction and location of the lesion. The patients with resectable tumor were subjected to a single resection with anastomosis or two-stage operation of resection with covering colostomy or Hartmann's procedure.

Patients with unresectable neoplasm were treated with palliative procedures- exploration, colostomy or a bypass decompression.

Pathological characteristics of the resected specimens were studied and staged. Additional therapy was specified.

Patients under 18 years of age as well as those without signs of ileus in diagnosed colorectal neoplasia were excluded from the study.

The data from all patients admitted with colonic ileus from obstructive colorectal cancer were carefully systematized, analyzed and summarized. The results are summarized by tracking the morbidity up to one month after discharge.

RESULTS

Depending on the degree of intestinal obstruction (Table 1), patients were distributed as follows:

Table 1. Distribution by stage of intestinal obstruction

	Stage I	Stage II	Stage III	Stage IV
Group A	11,9%	30,3%	35,1%	22,7%
Group B	14,3%	37,8%	32,4%	15,5%

In group B, there was an increase in infected patients at an earlier stage. The number of patients in stage IV significantly decreased - with marked dilatation and/or with perforation and peritonitis. However, the rate of hospitalized

patients with relatively advanced bowel obstruction was still high. This also leads to discontinuous or two-stage surgery.

According to the localization of the tumor (Table 2), the distribution in the two groups was:

Table.2 Localization of the tumor process

	Group A	Group B
caecum	11,2%	10,9%
colon ascendens	4,3%	5,1%
flexura hepatica	9,6%	11,3%
colon transversum	9,6%	6,5%
flexura lienalis	9,6%	15,3%
colon descendens	7,0%	7,6%
colon sigmoideum	32,6%	34,5%
rectum	13,4%	8,8%

There was no significant difference in the localization of the tumor process in the two groups. Localization in the left side colon prevailed. There was some reduction in patients with rectal carcinoma in group B. Synchronous mul-

tiple tumors with different localization were found in 5 cases in group A and in 3 cases in group B.

The relative share of the various tumor stages (Table 3 and 4), according to Dukes, was:

Table 3. Dukes' staging system

Stage A	Limited to muscularis propria; nodes not involved.
Stage B	Extending beyond muscularis propria; nodes not involved
Stage C	Nodes involved but highest (apical) node spared
Stage D	Distant metastatic spread.

Table 4. Tumor stage in both groups according to Dukes

	Stage A	Stage B	Stage C	Stage D
Group A	1,7%	33,5%	38,9%	25,9%
Group B	3,1%	37,3%	39,1%	20,5%

In contrast to the increased number of patients hospitalized at an earlier ileus stage, there was no difference in the two groups according to the tumor stage. There was still a significant percentage of patients with advanced carcinoma, which reduces the chances of radical treatment.

The pathomorphic study found the approximately equivalent performance of high- and low-differentiated adenocarcinomas and a high incidence of moderate-defining tumors in both groups.

DISCUSSION

There were no statistically reliable chronological changes in the main features of intestinal obstruction in colorectal carcinoma, but some indicators showed a significant tendency for change.

The location of the left side colon remains the most common, with a significantly decreasing relative share of rectal lesions and an increased share of splenic flexure localization. Despite significant progress, adequate behavior in this localization remains challenging. Possible options are: stenting, one-stage surgery (resection with primary anastomosis), intraoperative irrigation with resection and anastomosis, subtotal colectomy, discontinuity surgery (Hartman type), proximal colostomy only [2]. Still, the mode of treatment depends on the surgeon's experience.

Predominant frequency average advanced ileus condi-

tion, but with a distinctly higher incidence of early stages at the expense of advanced. This makes it possible to increase the single-stage surgery and oncologic their soundness and radicality [4,5].

Similar changes were observed in terms of the growth stages of tumor.

Verified is a slight increase in the average age of patients in the second group. Identified differences were due more to the relatively early diagnosis in other hospitals and faster referral for surgery than a chronological change in the features and the development of the neoplastic process..

CONCLUSION

Emergency surgery is indicated for cases with full bowel obstruction and significant prediction of rupture. Surgery procedure like proximal colostomy is recommended for elderly patients and complicated comorbidity [6]. A primary procedure like segmental and subtotal colectomy is appropriate for patients in good condition [7]. Segmental resection is favorable in elderly patients and those with shock who may not tolerate lengthy surgery[8]. Diversion procedure is performed when the primary anastomosis is made in the bowel dilatation with the inflammatory response.

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