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Results Of Reconstructive Surgery In Patients With Colostomies

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ABSTRACT

This report presents an analysis of the results of reconstructive and reconstructive surgery in 106 patients previously operated on for colorectal diseases from 2015 to 2020 at the Department of FUV Surgery of the Andijan State Medical Institute. During the study it was found that 12 (27.9%) patients in the control group developed various postoperative complications. The problem of isolation and preparation of the rectal stump also remains an important problem.

KEYWORDS

Large intestine, diseases of the large intestine, reconstructive and reconstructive surgery.

INTRODUCTION

Currently, the number of patients with colostomies tends to increase. This is due to an increase in colonic diseases, in the treatment of which colostomy placement is an important necessary step in the recovery of patients.

Surgical rehabilitation of patients with colostomies is not only important from medical point of view, but also has a great social importance, because most of these patients artificially isolate themselves from society

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because of irregular stool, frequent diarrhea, they lose their ability to work, tragedy in their families occurs. The socio-economic importance of rehabilitation of patients with colostomies is determined not only by the cost of long-term treatment and disability, but also by the cost of pensions for radically cured patients with severe primary pathology, but who remain disabled due to colostomies . In addition, most of these patients who are young, of working age, categorically require restoration of intestinal continuity. Surgical rehabilitation to restore gastrointestinal continuity has important psychological and social significance for patients. However, reconstructive surgery, formation of intestinal anastomosis in the abdominal cavity involve difficulties due to localization and size of the distal stump, adhesions in it, length of the descending colon loop, possibility of activation of dormant infection from foci of chronic inflammation, exhaustion of patients after the first operation

To determine the optimal timing of reconstructive-reconstructive interventions and the choice of surgical treatment methods that reduce the incidence of complications in this pathology.

RESEARCH MATERIALS AND METHODS

From 2015 to 2020, the Department of Surgical Diseases of the Faculty of Advanced Medical Training of the Andijan State Medical Institute had 106 patients operated on for various colorectal diseases. Colostomies were formed in these patients. Patients were divided into 2 groups: control and basic. All patients were 18 - 76 years old. Mean age of the patients was 43,54,0 years. The vast majority of patients were of working age 81 (76.4%). There were 67 (63,2%) male and 39 (36,8%) female patients.

Reasons for surgical interventions were various diseases and traumas of the colon. Intestinal obstruction, inflammatory complications of the underlying disease, technical difficulties of simultaneous operations with imposition of anastomoses as well as failure of intestinal anastomoses after various operations on colon and rectum served as indications for colostomy application.

intestine (Table 1).

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Table 1.

Nature of underlying disease and indications for surgery with colostomy (control and control group)

Underlying disease	Indication for a colostomy						Total
	Intestinal gangrene	Intestinal obstruction	Peritonitis	Inflammatory complications of the underlying disease	Technical difficulties during the operation	Failure of anastomoses	
Colorectal cancer	-	12 (11.3%)	4(3,8%)	-	4(3,8%)	-	20(18,9%)
Sigmoid ulcer	47(44,3%)	-	3(2,8%)		3(2,8%)	8(7,5%)	61 (57,5%)
Ulcerative colitis	-	-	1 (0,94%)	4(3,8%)	1(0,94%)	1(0,94%)	7(6,6%)
Rectal trauma	-	-	4(3,8%)	-	4(3,8%)	-	8(7,6%)
Diffuse polyposis of the colon	-	-	-	2(1,9%)	-	1(0,94%)	3(2,8%)

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Spastic intestinal obstruction	3(2,8%)	3(2,8%)	1(0,94%)	-	-	-	7(6,6%)
Total	50 (47,2%)	15 (14,1%)	13 (12,3%)	6(5,7%)	12(11,3%)	10(9,4%)	106 (100%)

As can be seen from the table, the largest group consists of 61 patients with sigmoid intestinal prolapse (57.5%). They underwent Hartmann's operation. Reasons for refusal of primary colorectal anastomosis among 61 (57,5%) patients were intestinal gangrene in 42 (39,6%) patients, in 4 (3,8%) patients - peritonitis, in 4 (3,8%) patients - technical difficulties, in 11 (10,4%) patients - failure of colorectal anastomosis after primary anastomosis. Regarding other diseases the analysis showed the following: 7 (6,6%) patients were operated for adhesive intestinal obstruction, 3 (3,2%) patients had diffuse polyposis of the colon, 8 (7,6%) patients were admitted with trauma of the colon, ulcerative colitis was noted in 7 (6,6%) patients, colorectal cancer in 20 (18,9%) patients.

All patients who underwent reconstructive surgery were examined according to a comprehensive programme. To determine the possibility of reconstructive surgery the following examinations were carried out;

1. Examination of the patient's general condition in view of comorbidities.
2. Examination of colostomy condition.
3. Radiological study of the colon to select the best access, predict the volume of surgery.
4. Thorough examination of rectal stump (assessing its length, condition of mucosa).
5. Study of functional state of the sphincter of the rectum.

Preoperative preparation and choice of surgical method of reconstructive surgery depends on individual characteristics of the patient, length of adductive and diverting stumps of the large intestine, presence of inflammatory and adhesive processes in the intestine and surrounding tissues. Before the operation the patients undergo adequate correction of the revealed metabolic disturbances in the course of examination. Emaciated patients necessarily prescribe a complex of vitamins, amino acid mixtures, correction of violations of the water-salt, carbohydrate and protein balance. To clean the proximal intestine we use laxatives Picolax, as well as Espumisan and Duphalac, and periodically we wash out with Decosan solution. For this purpose we prescribe daily warm compression enemas to give the rectal muscles a certain training. Given that colon surgery is an operation with a high infection rate, patients were prescribed a broad spectrum antibiotic therapy prior to surgery, taking into account the sensitivity of the microflora to it.

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RESEARCH RESULTS

The type of anastomosis formed in patients in the control group depended largely on the topographic and anatomical relationships formed in the abdominal cavity at the time of surgery.

We formed intraperitoneal anastomoses. Intraperitoneal anastomoses were often formed end-to-end, sometimes end-to-side (Table 2).

Table 2.

Nature of restorative and reconstructive surgery

(control group)

The nature of reconstructive surgery	Total	
	Avs	%
End-to-end colorectal anastomosis	28	65,1
End-to-side colorectal anastomosis	15	34,9
Total	43	100

Most often, the type of anastomosis depended on the length of the distal stump. In 2 (4.6%) patients it was short - 0 to 10 cm, in 18 (41.9%) patients from 11 to 16 cm and in the remaining patients more than 17 cm in 23 (53.5%) patients.

Reconstructive and reconstructive operations in patients of the control group were performed in 43 (40.6%) patients operated on in other medical institutions. Colon continuity was restored in 24 (55,8%) patients during the first year after colostomy formation in the second year - 12 (27,9%) patients. In 7 (16,3%) patients reconstructive surgery took place in later period.

Of no small importance are technical difficulties encountered during surgery in patients in the control group due to separation of rectal stump (26 (60.5) patients).

Patients of the main group (63 (59,4%) patients), as at the first stage, were operated according to the method developed by us: (Patent application form IAP 20170357) The method was carried out as follows. A midline laparotomy and revision of abdominal cavity organs are carried out under endotracheal anesthesia after the operating field is treated with alcohol and iodine solutions. After that, mobilization of the section of the colon to be removed is performed. The altered intestine is then resected. After that, a separate incision in

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the left region is made in the anterior abdominal wall, sutured along the perimeter to the peritoneum with separate nodal sutures and a single-bore colostomy is formed. Next, at 4-5 cm from the edge of the parietal peritoneum of the anterior abdominal wall, on the lateral wall of the intestinal drive, the serosomuscular layer is dissected transversely to the mucosa. After that, we cut off the mucosa from the seromuscular layer at a distance of 0.5-1.0 cm, preserving its integrity. Then we form the walls of the anastomosis without forming the anastomosis opening. When forming the walls of the anastomosis, 4 through sutures (through all layers of the intestinal wall) should be applied, so we leave landmarks for the subsequent formation of the anastomosis opening. The operation is completed by sanation, drainage and closure of the abdominal cavity.

Examples of a particular implementation of the method.

Example 1.

Patient K. 1964 y.o. Story N 5630/1728 Admitted to the 1st surgery department in a state of moderate severity with the diagnosis: Acute intestinal obstruction. Sigmoid intestinal entrapment. Complication: Disseminated serous hemorrhagic peritonitis.

After a short preoperative preparation a laparotomy, resection of the sigmoid colon with colostomy was performed. Sanation and drainage of the abdominal cavity.

Operation protocol: the midline laparotomy was performed under endotracheal anesthesia, after the operating field had been treated with alcohol and iodine solutions. The revision revealed the bloated, hyperemic, balloon-shaped dilated large intestine, the sigmoid colon was rotated 360° around its axis, there were areas of necrosis. The abdominal cavity contains approximately 700-800 ml of serous haemorrhagic fluid. The sigmoid colon has been retorrected. Intestinal viability impaired. The intestine was mobilized, followed by resection of the altered segment of the intestine. After that, a separate incision in the left region was made in the anterior abdominal wall of the adjoining intestine, it was sutured to the peritoneum with separate nodal sutures and a single-bore colostomy was formed. Then, 4-5 cm from the edge of the parietal peritoneum of the anterior abdominal wall, on the lateral wall of the intestinal drive, the serosomuscular layer was dissected transversely to the mucosa. After that, we cut off the mucosa from the seromuscular layer at a distance of 0.5-1.0 cm, preserving its integrity. Next, we form the anastomosis walls, without forming the anastomosis opening. When forming the walls of the anastomosis, it is necessary to make 4 through sutures (through all layers of the intestinal wall), so we leave landmarks for the subsequent formation of the anastomosis opening. The operation was completed by sanation, drainage and closure of the abdominal cavity.

Macro preparation: removed sigmoid colon measuring 65 x 15 cm, intestinal walls hyperemic, blood vessels dilated, areas of necrosis present.

The postoperative period was smooth, without any complications. The patient was discharged on the 7th day after the operation in satisfactory condition. Examination after 15 days showed no signs of suture inconsistency, anastomosis and stenosis of anastomosis. After 2 months on control colonofibroscopy the anastomosis was functioning, there were

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no signs of stenosis. It was decided to perform reconstructive-reconstructive surgery.

Further on, when performing reconstructive-reconstructive surgery, we didn't have question about length of rectal stump, its preparation and isolation. Patients of the main group had the second stage of the operation carried out at the terms of 2 to 6 months from the moment of colostomy formation. In terms of 2-3 months, 34 (54,0%) patients underwent reconstructive surgery, 26 (41,3%) patients underwent reconstructive surgery in terms of 4-5 months and 3 (4,7%) patients were operated upon after 6 months.

Table 3.

Timing of reconstructive surgery after colostomy placement in the main group of patients.

№	Timing of colostomy placement	Number of patients
1	Up to 2-3 months.	34 (54,0%)
2	Up to 4-5 months.	26 (41,3%)
3	Up to 6 months.	3 (4,7%)

The number of postoperative complications and postoperative mortality are important in assessing the treatment outcome. In the control group, 12 (27.9%) patients developed various postoperative complications. Among them: anastomosis suture inconsistency in 7 (16,3%) patients, suppuration of the postoperative wound in 4 (9,3%) patients, postoperative pneumonia in 1 (2,3%) patient. Complications in the main group were noted in 2 (3.17%) patients with suppuration of the postoperative wound. We did not observe any lethal outcomes.

Table 4.

Postoperative complications in patients and main group.

№	Types of complications	Control group of patients	Core group of patients
1	Failure of anastomosis sutures	12 (27,9%)	-

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2	Festering of the postoperative wound	4 (9,3%)	2 (3,17%)
3	Postoperative pneumonia	1 (2,3%)	-
4	Lethal outcomes	-	-

CONCLUSIONS

Thus, summarizing the results of the carried out research, it was found out that our developed method reduced the incidence of complications during reconstructive-reconstructive operations. Detachment of rectal stump remains an important problem as well which was not found while using our method. It is necessary to note reduction of terms of reconstructive-reconstructive operations.

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