

# Surgical rehabilitation of patients with Crohn's disease

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**OBJECTIVE** — to enhance the outcomes of surgical rehabilitation for patients with Crohn's disease through the improvement and implementation of organisational measures as well as general and specialised surgical strategies.

**MATERIALS AND METHODS.** The study focused on the development of organisational measures as well as general and specialised surgical rehabilitation procedures for Crohn's disease. The research was conducted to determine the scope of radical surgical interventions for complications resulting from segmental lesions with extensive damage to the intestinal tract. The study also aimed to develop methods of restorative, reconstructive and restorative operations that would reduce the frequency of postoperative complications, disease recurrence, digestive disorders in the intestinal tract, malabsorption, and anal incontinence. Additionally, the study aimed to improve the functional outcomes and quality of life for operated patients.

**RESULTS.** A total of 53 patients with Crohn's disease — 28 (52.8%) men and 25 (47.2%) women — were operated on using specially designed surgical rehabilitation techniques. The patients undergoing surgery ranged in age from 19 to 45. 32 (60.4%) patients had segmental resections, while 21 (39.6%) had extensive resections. 8 (15.1%) patients underwent restorative operations, while 40 (75.4%) had reconstructive operations. A lifelong ileostomy was formed in 5 (9.4%) patients. Postoperative complications were observed in 12 (22.6%) patients, and disease relapses in 5 (9.4%) patients. One (1.8%) patient died after surgery. Positive functional outcomes, including improved digestion in the intestinal tract, normal absorption, and preservation of anal retention, were noted following restorative and reconstructive-restorative operations.

**CONCLUSIONS.** Organisational measures as well as general and specialised surgical rehabilitation strategies for Crohn's disease allowed for more effective diagnosis and treatment of postoperative complications, better prevention of disease recurrence, improved digestion in the intestinal tract, normalised absorption processes, and preservation of anal retention. Following the implementation of specially designed surgical rehabilitation techniques, 20.7% and 1.8% of patients experienced early and late postoperative complications, respectively. Additionally, there were occurrences of postoperative mortality in 1.8% of patients and relapses in 9.4%. Severe forms of reflux ileitis, postcolectomy syndrome, and secondary anal incontinence syndrome were not observed.

## KEYWORDS

Crohn's disease, surgical treatment, rehabilitation.

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The concept of surgical rehabilitation includes a set of surgical measures aimed at surgical treatment of the disease, its complications, achievement of an uncomplicated course of the postoperative period, favourable short-term and long-term functional outcomes, quality of life, and sufficient social and labour adaptation of operated patients [20]. The implementation of these rehabilitation factors in patients with Crohn's disease is extremely important when performing radical, restorative, and, especially, reconstructive and restorative surgical interventions [12, 15, 16, 20, 21].

Surgical rehabilitation of patients with Crohn's disease is an extremely important and complex problem. The challenges in dealing with this problem are evident in the substantial number and severity of complications associated with the underlying disease, postoperative complications, relapses, and even the reluctance of some authors to perform reconstructive and restorative operations, despite the significance of these rehabilitation measures [10, 16–18].

In order to effectively implement these provisions, it is imperative to improve, and in some cases,

modify, the methodological approach to choosing the scope of radical, restorative and, especially, reconstructive and restorative surgical interventions. This includes the use of monitoring techniques to assess the overall health of operated patients throughout their lifetimes, and the timely addressing of any identified disorders [12, 18, 20–22].

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## Materials and methods

The components of surgical rehabilitation for Crohn's disease include a set of organisational measures, general and specialised surgical strategies aimed at determining appropriate indications for surgical treatment, developing and implementing new diagnostic and treatment methods for postoperative complications, preventing relapses, improving digestion and absorption in the intestinal tract, and preserving anal retention.

The organisational measures encompassed the identification of indications, patient preparation for surgery, appropriate support based on the clinical course of the disease, assessment of the anatomical lesions in the intestinal tract, determination of the scope of the radical surgical stage and the method of its completion, and evaluation of the risk of postoperative complications.

General surgical rehabilitation strategies were aimed at performing radical and restorative stages of surgery, prognostication, prevention, diagnosis, and treatment of complications in the early and late postoperative periods. To ensure timely diagnosis of early postoperative complications, continuous monitoring of the operated patients was provided, as well as staged monitoring in the late postoperative period to detect late complications and possible recurrence of the disease.

Specialised surgical rehabilitation strategies were aimed at reducing the risk or preventing the recurrence of the disease in the anatomical parts of the intestinal tract that remained after the radical stage of surgery. They largely depended on the characteristics of the clinical course of Crohn's disease, the sites and extent of the intestinal tract lesion, the scope of the radical surgical stage, and the method of performing the restorative or reconstructive-restorative stages of surgery.

The radical stage of surgical interventions for Crohn's disease with acute complications, such as bleeding into the intestinal lumen and extensive

peritonitis, involved performing an obstructive bowel resection, which depended on the extent of the lesion and was completed with the formation of an ileostomy. The rehabilitation measures for these patients included prescribing anti-relapse therapy and creating a retention ileostomy without a reservoir to improve digestion and absorption in the intestinal tract [2].

In the presence of chronic complications, in particular stricture, paracolic inflammatory infiltrate, internal or external intestinal fistulae, and colon cancer, which most often occurred at the site of segmental lesions, resection of the lesions was performed. The radical stage of surgical intervention was aimed at eliminating only the complications of the disease. In the presence of colon cancer, the radical stage of surgery was performed in accordance with generally accepted oncological standards.

Large-scale surgical interventions (colectomy, colectomy with low resection of the rectum, ultralow resection of the rectum, and mucosectomy of the surgical anal canal) were performed in cases of subtotal or total colon involvement with existing complications and irreversible morphological changes in its wall. These surgical interventions were complemented by resection of the terminal part of the small intestine in cases of its lesion and a high predicted risk of disease recurrence.

An important general surgical rehabilitation measure was the restorative stage of surgery, which included forming an intestinal anastomosis. Small intestinal and intermucosal anastomoses were created by the end-to-end type using a single-row inverted intestinal suture without capturing the mucous membrane in the suture [4].

Reconstructive-restorative operations, as a special measure of surgical rehabilitation, involved the creation of appropriate anatomical and functional structures that were used after the removal of functionally important parts of the intestinal tract: the ileocecal junction, colon, and rectum.

When removing the ileocecal junction, as well as after performing a right-sided hemicolectomy, an ileoascendicular anastomosis or ileotransverse anastomosis was formed, with the reproduction of the anatomical relationship between the segments of the small intestine and colon like the removed ileocecal junction [5].

After colectomy, the continuity of the intestinal tract was restored by forming an end-to-side ileorectal anastomosis with an excess of the small intestine's adductor and creating a bend in the small intestine in front of the anastomosis site with serous-muscle sutures. This contributed to a physiological delay in the advancement of the contents

and improved digestion and absorption [6]. After a colectomy with low resection of the rectum, which involved the preservation of only the lower ampullary section of the rectum, an ileorectal anastomosis was formed using a circular stapler. After colectomy with ultra-low resection of the rectum by mucosectomy of the surgical anal canal, as well as after the specified volume of the radical stage of surgery supplemented by forced resection of the terminal part of the small intestine, an ileo-endoanal anastomosis was formed [1]. After each of these radical operations, appropriate pelvic small bowel reservoir structures were created to prevent the occurrence of severe forms of postcolectomy syndrome [3, 7].

Staged monitoring in the late postoperative period involved the performance of clinical, laboratory, and instrumental methods of examination of the patient, which were carried out 1, 3, 6, and 12 months after the end of surgical treatment, and then once a year, taking into account the peculiarities of performing radical and reconstructive and restorative stages of surgical intervention aimed at determining the functional results of surgical treatment, timely diagnosis of late postoperative complications, disease recurrence, and correction of diagnosed pathological conditions. At the same time, standard clinical and biochemical laboratory tests and special methods, including proctological examination, irrigography, colonoileoscopy, CT, or MRI of abdominal organs, were used. Anoproctoscopy, anoreservoirscopy, reservoirography, CT, or MRI enteroreservoirography were prescribed according to indications. The assessment of functional results, the presence of late postoperative complications, and disease recurrence is given in the period up to 3 years from the time of completion of all stages of surgical treatment.

## Results

From 2011 to 2020, using specially designed surgical rehabilitation techniques at the Coloproctological Centre of Ukraine, the main clinical base of the Department of Surgery No. 1 of Bogomolets National Medical University, the authors operated on 53 patients with Crohn's disease, including 28 (52.8%) men and 25 (47.2%) women. The age of the operated patients ranged from 19 to 45 years. The features of damage to the anatomical parts of the intestinal tract in patients with Crohn's disease are presented in Table 1.

These findings indicate that the vast majority of patients had segmental lesions of the terminal area of the small intestine and anatomical sections of the right half of the large intestine, accompanied by

ileocolitis, cecoileitis, and ileitis. In a much smaller number of patients, the disease affected only the colon (segmental and total colitis), as well as the colon and the terminal part of the small intestine (total colitis and terminal ileitis). The complications of Crohn's disease are presented in Table 2.

Extensive peritonitis in all patients occurred as a result of perforation of the colon wall and intestinal bleeding into the lumen of the terminal area of the small intestine and the right sections of the colon. Internal intestinal fistulas most often arose between the terminal area of the small intestine, proximal to the stricture, and the left anatomical sections of the

Table 1. **Features of intestinal damage in Crohn's disease**

Extent of the lesion	Number of patients (n = 53)
Segmental ileocolitis	17 (32.1%)
Cecoileitis	8 (15.1%)
Segmental ileitis	4 (7.5%)
Segmental colitis	3 (5.7%)
Total colitis	6 (11.3%)
Total colitis and terminal ileitis	9 (16.9%)

Table 2. **Complications of Crohn's disease**

Diagnosis of complications	Number of complications (n = 76)
<b>Acute complications</b>	
Common peritonitis	5 (9.4%)
Intestinal bleeding	4 (7.5%)
<b>Chronic complications</b>	
Internal intestinal fistulas	11 (20.7%)
External intestinal fistulas	9 (16.9%)
Paracolic infiltrates	7 (13.2%)
Stricture of the small intestine	7 (13.2%)
Colon stricture	6 (11.3%)
Colon cancer	3 (5.7%)
Hormone dependence and hormone resistance	16 (30.2%)
Extraintestinal manifestations of the disease	14 (26.4%)

Note. 7 (13.2%) patients were diagnosed with 2 complications, 2 (5.7%) — with 3 ones.

colon, in particular the sigmoid and descending colon, as well as between the loops of the jejunum and duodenum, the bladder. External intestinal fistulas mainly opened on the front abdominal wall in the right iliac region and on the perineum, which led to the destruction of the rectal sphincters. Strictures of the small and, especially, the large intestine were often tubular and sufficiently long, which made it impossible to perform a colonoscopy, to visualise the mucous areas of the intestinal canal proximal to the stricture, and to perform stricturoplasty.

Associated diseases such as obesity, diabetes, duodenal ulcers, chronic urinary tract infections, and essential thrombocytopenia were diagnosed in 11 (20.7%) patients.

According to the prevalence of the pathological process and existing complications, the following radical surgical interventions were performed, as presented in Table 3.

In general, segmental resections of the intestinal canal, namely, resection of the terminal part of the small intestine, right-sided hemicolectomy, resection of the ileocecal junction, and resection of the colon, were performed in 33 (62.3%) patients, and extensive resections in 20 (37.7%).

It should be noted that in 11 patients with internal fistulas, the scope of the radical stage of surgical intervention had to be expanded to include sectoral resections of the walls of other hollow organs, specifically the sigmoid colon, duodenum, and bladder, depending on the location of the internal fistula openings. In 9 (16.9%) patients with acute complications (peritonitis, bleeding), regardless

of the severity of the general condition, obstructive surgical interventions were performed, which ended with the formation of an ileostomy and rectal stump. In 3 (5.7%) patients, colectomy with rectal extirpation was performed. The remaining 8 (15.1%) patients underwent primary reconstructive surgery involving the formation of an intestinal anastomosis, including 4 patients with a small intestinal anastomosis and 4 patients with an inter-anal anastomosis.

Primary reconstructive and restorative operations involving the formation of appropriate anatomical and functional structures and anastomoses were performed in 32 (60.3%) patients: small-bowel – in 25 (47.1%), pelvic small-bowel – in 7 (13.2%). In 6 patients, after obstructive type operations, in 14–18 months after stabilisation of the general condition, topical anti-inflammatory therapy in the area of the rectal stump and secondary reconstructive and restorative operations were performed. In three of them, the rectal stump was preserved, and an ileorectal anastomosis was formed with a corresponding small intestinal reservoir structure. This operation was possible only if there were no inflammatory changes in the rectal stump. The other 4 patients underwent resection of the rectal stump and mucosectomy of the surgical anal canal due to inflammatory changes in the mucous membrane of the rectum. In this way, the radical stage of surgical treatment was completed for this category of patients. After that, an appropriate pelvic small bowel reservoir and ileo-anal anastomosis were formed. In two patients, the second stage of surgical treatment involved extirpation of the rectal stump due to the aggressive course of the disease in the rectal stump, the consequent external fistulae, and purulent lesions in the pararectal tissue. Thus, restorative surgical interventions were performed in 8 (15.1%) patients, reconstructive-restorative – in 40 (75.4%), including primary – in 36 (67.9%), and secondary – in 4 (7.5%). In addition, in 5 (9.4%) patients, surgical treatment was completed with the formation of a lifelong ileostomy.

Postoperative complications occurred in 12 (22.6%) patients, early complications in 11 (20.7%), and late complications in 1 (1.8%). Early postoperative complications occurred in patients operated on urgently due to acute complications of the disease: progressive peritonitis – in 3 (5.7%), failure of rectal stump sutures – in 2 (3.8%), postoperative wound suppuration – in 3 (5.7%), and *pneumonia* – in 3 (5.7%). These complications were treated in accordance with modern standards. Postoperative mortality occurred in 1 (1.8%) patient due to multiorgan failure against the background

Table 3. **Radical surgeries for Crohn's disease**

Scope of the radical operation	Number of operations (n = 53)
Resection of the terminal part of the small intestine	4 (7.5%)
Right-sided hemicolectomy	17 (32.1%)
Resection of the ileocecal junction	8 (15.1%)
Resection of the colon	4 (7.5%)
Colectomy with resection of the rectum	5 (9.4%)
Colectomy with resection of the terminal part of the small intestine and resection of the rectum	5 (9.4%)
Colectomy ultralow rectal resection, mucosectomy of the surgical anal canal	7 (13.2%)
Colectomy, extirpation of the rectum	3 (5.7%)
Colectomy, rectal extirpation	2 (3.8%)

of aggressive progressive peritonitis. In the late postoperative period, most of the operated patients received anti-relapse therapy in accordance with modern requirements. However, 5 (9.4%) patients experienced disease recurrence: two in the terminal area of the small intestine proximal to the anastomosis, two in the area of the rectum stump after the formation of ileorectal anastomoses, and one in the area of the small intestinal reservoir. It should be noted that patients with relapses did not sufficiently adhere to clear recommendations regarding the prescribed anti-relapse treatment. In one (1.8%) patient, against the background of recurrence in the pelvic small bowel reservoir, an external fistula was formed in the area of the pelvic small bowel 4 months after completion of all stages of surgical treatment, which opened into the perineum. Conservative treatment aimed at fistula healing within 3 months was ineffective. In this regard, the anal canal stump with the ileo-anal anastomosis and part of the pelvic small bowel reservoir with the existing internal fistula opening were extirpated. The operation was completed with the formation of a lifelong ileostomy. In most patients, after removal of functionally important parts of the colon, in particular the ileocecal junction, colon, ileum, and rectum, and mucosectomy of the surgical anal canal, formation of appropriate anatomical and functional structures and anastomoses, except for patients with recurrent disease and a lifelong ileostomy, the frequency of bowel movements was 3–5 times a day, which corresponded to the permissible limit of the physiological frequency of bowel movements in a healthy person. There was also a satisfactory course of intestinal digestion and absorption, as indicated by the presence of a mushy, sometimes thick, consistency of the stool, a small amount of it within 300–450 grams per day, and no body weight deficit. Almost all patients did not have cases of anal incontinence, which indicated a satisfactory function of anal retention. The satisfactory functional results of surgical treatment for patients with Crohn's disease contributed to a significant improvement in their quality of life.

## Discussion

The main goal of surgical rehabilitation of patients with Crohn's disease was to preserve or restore their body image by preventing the formation or elimination of an enterostomy on the anterior abdominal wall, reducing the number of postoperative complications and relapses, providing favourable conditions for the implementation of the main functions of the intestinal tract: digestion, absorption, and

anal retention, and thus preventing or reducing the degree of disability, and improving the quality of life. The complexity of the problem required a systematic approach to its solution through the implementation of organisational measures, and general and specialised surgical strategies.

Taking into account the presence of a constantly existing high risk of disease recurrence, the risk of complications in the area of this recurrence, and the need for repeated surgical interventions in this regard, the organ-preserving principle of choosing the scope of radical surgery was followed. This principle provided for the removal of only the part of the intestinal canal with an existing complication or complications. Thus, operations in the presence of local complications were radical only in relation to the complication but not to Crohn's disease. However, in the case of total colon involvement, a reconstructive and restorative procedure is required. To prevent severe post-colectomy syndrome, a small bowel reservoir is created in the pelvic area using ileorectal or ileo-endoanal anastomosis. In this situation, the authors state that the organ-preserving principle loses its fundamental importance. This approach to the choice of a radical stage of surgical intervention in Crohn's disease is due to the attempt to minimise the risk of relapse after performing sufficiently complex reconstructive and restorative operations. In such cases, it becomes necessary to expand the radical surgical intervention by removing those areas of the intestinal canal where the probability of recurrence of Crohn's disease is highest. These areas include the mucous membrane of the surgical anal canal and the ampulla of the terminal section of the small intestine, which is usually less than 15 cm long. That is why colectomy with ultra-low anterior resection of the rectum was supplemented with mucosectomy of the surgical anal canal and removal of the small bowel ampulla. Removal of typical sites of Crohn's disease recurrence significantly reduced the risk of its occurrence.

Our research shows that the technical aspects of connecting the segments of the intestinal tract during the formation of interintestinal anastomoses and small intestinal reservoir structures are crucial for surgical rehabilitation. The use of a single-row inverted intestinal suture without capturing the mucous membrane in the formation of small-intestinal, small-intestinal-analogue, and inter-analogue anastomoses prevented its injury, penetration of infection into the thickness of the submucosa and other layers of the intestinal wall, and the resulting chronic productive inflammation inherent in Crohn's disease.

The reconstructive and restorative stages of surgical intervention were considered possible only if

there was a low risk of disease recurrence. The criteria for a low risk of recurrence included Crohn's disease affecting only the colon, chronic recurrent, intermittent variants of its course, and the absence of acute complications in the history. To prevent the recurrence of Crohn's disease during the formation of pelvic small intestinal reservoir structures, methods of atraumatic formation were used. The peculiarity of this measure was the refusal to create anatomical containers like classical reservoir structures. Instead, functional structures were created using serous-muscular sutures, which included anatomical bends of the terminal part of the small intestine. This eliminated the need to cross and suture the walls of the small intestine and the presence of a wound surface in the formed reservoir. The functionality of the reservoir was to physiologically delay the movement of the contents, and increase the duration of contact of the chyme with the surface of the small intestinal mucosa, thus improving the course of intestinal digestion and absorption. The rehabilitation effect of these functional small intestinal reservoir structures was due to a reduction in the risk of complications of healing of the small intestinal reservoir and ileo-endoanal anastomosis, and the severity of post-colectomy syndrome due to the use of a new methodological approach to the formation of pelvic small intestinal reservoirs and techniques for their formation.

A mandatory rehabilitation measure aimed at reducing the risk of complications of the healing of the formed pelvic small intestinal reservoir structure was its temporary disconnection from the flow of chyme with a protective (diverting) loop ileostomy, which was «closed» no earlier than 2–3 months after the healing of the pelvic reservoir and ileo-endoanal anastomosis.

Among the measures of surgical rehabilitation for Crohn's disease, which are the subject of discussion in modern available literary sources, the peculiarities of performing radical and reconstructive and restorative surgical interventions should be highlighted. The majority of authors adhere to a single, well-founded point of view regarding the performance of segmental resections for local lesions of the intestinal canal based on the fact that it is impossible to cure Crohn's disease surgically [8, 17]. In this regard, the selection of the scope of radical surgery for local lesions was minimal [8, 17]. Most authors use a similar principle in case of subtotal or total damage to the colon, trying to reduce the amount of resection. At the same time, preference is given to colectomy or proximal subtotal resection of the colon and the formation of ileorectal or ileosigmoid anastomoses [8, 13, 14, 18, 21]. Less trauma,

slightly better functional results, and preservation of sexual function [17] serve as the motivation for performing these radical operations. However, the authors do not take into account the fact that over the next 5–10 years, 80–89% of patients will experience relapses and severe irreversible changes in the remaining parts of the colon (sigmoid and rectum) [8, 17, 21]. The most frequent complications in such cases are external fistulas that open into the perineum, inflammatory infiltrates, and rectal cancer [17]. The presence of these complications requires the removal of the sigmoid colon and rectum and the removal of a lifelong ileostomy [17, 18]. The main reason for refusing to perform a larger volume of radical surgery for the available indications, in particular, colectomy with ultra-low anterior resection, mucosectomy of the surgical anal canal, and formation of the «J pouch» of the small intestinal pelvic reservoir, is considered to be a significant risk of complications in the range of 24–35% due to the formation of the specified reservoir and reservoir-anal anastomosis, and relapse in the formed reservoir in 54% despite more favourable functional results [9, 11, 17, 19].

Taking into account the stated circumstances, the authors of the article worked out and used a fundamentally different methodical approach to the choice of radical, restorative and reconstructive-restorative stages of surgical intervention, including in the case of total involvement of the colon with Crohn's disease. The essence of this approach is to perform not limited but rather radical surgical intervention in the case of a total lesion of the large intestine using the author's atraumatic method of applying a single-row everted intestinal suture, which does not injure the mucous membrane and does not lead to a decrease in the lumen of the intestinal canal, using the principle of atraumatic formation of the pelvic small intestinal reservoir. The introduction of a new methodical approach to the surgical treatment of Crohn's disease led to the absence of recurrences in the areas of anastomoses formed with the help of a manual intestinal suture, which contributed to the occurrence of a significantly lower number of complications in the early – 20.7% and late – 1.8% postoperative periods, postoperative mortality – 1.8%, relapses of the disease – 9.4%, prevention of severe forms of reflux ileitis, post-colectomy syndromes, and secondary anal incontinence syndrome.

An obligatory rehabilitation measure aimed at reducing the risk of complications of healing of the formed pelvic small intestinal reservoir structure was its temporary disconnection from the chyme flow by a protecting (diverting) loop ileostomy,

which was «closed» no earlier than 2 months after the healing of the pelvic reservoir and ileoendoanal anastomosis. Thus, the use of a system of organisational, general and specialised surgical strategies for the rehabilitation of patients operated on for Crohn's disease aimed at selecting clear, timely indications for surgical treatment, ensuring the implementation of radical, restorative, reconstructive and restorative stages of surgical interventions, prevention, diagnosis, treatment of postoperative complications, and recurrence of the disease allowed to reduce the number of these postoperative complications, cases of postoperative mortality, and recurrence of the disease.

The future prospects for research are enhancing the techniques used in surgical treatment for Crohn's disease.

## Conclusions

Organisational measures as well as general and specialised surgical rehabilitation strategies for Crohn's disease allowed for more effective diagnosis and treatment of postoperative complications, better prevention of disease recurrence, improved digestion in the intestinal tract, normalised absorption processes, and preservation of anal retention.

Following the implementation of specially designed surgical rehabilitation techniques, 20.7% and 1.8% of patients experienced early and late postoperative complications, respectively. Additionally, there were occurrences of postoperative mortality in 1.8% of patients and relapses in 9.4%. Severe forms of reflux ileitis, postcolectomy syndrome, and secondary anal incontinence syndrome were not observed.

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## DECLARATION OF INTERESTS

The authors declare that they have no conflicts of interest.

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## AUTHORS CONTRIBUTIONS

O. I. Poyda: research concept and design, manuscript editing, final approval of the manuscript. V. M. Melnyk: data collection, data analysis and interpretation, writing the manuscript.

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## Хірургічна реабілітація пацієнтів при хворобі Крона

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**Мета** — поліпшити результати хірургічної реабілітації пацієнтів при хворобі Крона шляхом розробки та вдосконалення організаційних, загальнохірургічних і спеціальних хірургічних заходів.

**Матеріали та методи.** Опрацьовані організаційні, загальнохірургічні та спеціальні хірургічні заходи реабілітації при хворобі Крона кишкового каналу. Визначено обсяги виконання радикальних хірургічних втручань при ускладненнях у ділянках сегментарних уражень і на тлі обширних уражень кишкового каналу, розроблено способи виконання відновних та реконструктивно-відновних операцій, спрямовані на зниження частоти виникнення післяопераційних ускладнень, рецидивів захворювання, порушення функцій кишкового травлення, всмоктування, анального тримання, поліпшення функціональних результатів та якості життя прооперованих пацієнтів.

**Результати.** Із використанням опрацьованих заходів хірургічної реабілітації прооперовано 53 пацієнти із хворобою Крона кишкового каналу, з них 28 (52,8%) чоловіків і 25 (47,2%) жінок. Вік пацієнтів становив 19—45 років. Сегментарні резекції виконано 32 (60,4%) пацієнтам, великі — 21 (39,6%), відновні операції — 8 (15,1%), реконструктивно-відновні — 40 (75,4%). Довічну ілеостому сформовано 5 (9,4%) пацієнтам. Післяопераційні ускладнення виникли у 12 (22,6%) пацієнтів, рецидиви захворювання — у 5 (9,4%). Зареєстровано 1 (1,8%) випадок післяопераційної летальності. Після відновних і реконструктивно-відновних операцій відзначено сприятливі функціональні результати — поліпшення функцій кишкового травлення та всмоктування, збереження анального тримання.

**Висновки.** Опрацьовані організаційні, загальнохірургічні та спеціальні заходи хірургічної реабілітації при хворобі Крона дали змогу поліпшити діагностику, лікування післяопераційних ускладнень і рецидивів захворювання, поліпшити функції кишкового травлення та всмоктування, зберегти функцію анального тримання. Ранні післяопераційні ускладнення виникли у 20,7% пацієнтів, пізні — у 1,8%, рецидиви захворювання — у 9,4%. Не зафіксовано жодного випадку тяжких форм рефлюкс-ілеїту, постколектомічного синдрому, синдрому вторинної анальної інконтиненції. Післяопераційна летальність — 1,8%.

**Ключові слова:** хвороба Крона, хірургічне лікування, реабілітація.

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