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REVIEW OF THE SURGICAL TREATMENT OF COMBINED NON-TUMOR PATHOLOGY OF THE RECTUM AND ANAL CANAL


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АНАЛ КАНАЛ ВА ТЎҒРИ ИЧАК БИРГАЛИКДАГИ ЎСМА БЎЛМАГАН ПАТОЛОГИЯЛАРИНИ ХИРУРГИК ДАВОСИ БЎЙИЧА ШАРҲ

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ОБЗОР ПО ХИРУРГИЧЕСКОМУ ЛЕЧЕНИЮ СОЧЕТАННОЙ НЕОПУХОЛЕВОЙ ПАТОЛОГИИ ПРЯМОЙ КИШКИ И АНАЛЬНОГО КАНАЛА

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Резюме. *Сўнгги йилларда саноат ривожланган мамлакатларда анал канали ва тўғри ичакнинг жарроҳлик даволашни талаб қиладиган қўшма касалликларининг кўпайиши тенденцияси кузатилмоқда. Колопроктологик касалланиш таркибида геморрой, ўткир парапроктит, анус каналининг сурункали ёриғи, тўғри ичак оқмалари, анал канал ва тўғри ичак полиплари билан оғриган беморлар 19-42% ни ташкил қилади. Адабиётларни таҳлил қилиш комбинацияланган операцияларни бажаришнинг мақсадга мувофиқлигини кўрсатади. Бугунги кунга қадар анал канал ва тўғри ичакнинг ўсимта бўлмаган патологияси учун бир босқичли операцияларни бажариш учун кўрсатмалар ва қарши кўрсатмалар етарли даражада ишлаб чиқилмаган. Комбинацияланган проктологик патологияни даволаш учун оптимал алгоритм йўқ. Даволаш самарадорлигини ошириш учун баъзи операцияларни ўзгартириш керак. Буларнинг барчаси ушбу тадқиқотнинг асосини ташкил этди.*

Калит сўзлар: *ўсма бўлмаган комбинацияланган патология, анал канал, тўғри ичак, тўғри ичак оқмалари.*

Abstract. *In recent years, there has been a tendency in industrialized countries to an increase in combined diseases of the anal canal and rectum, requiring surgical treatment. Patients with hemorrhoids, acute paraproctitis, chronic fissure of the anal canal, rectal fistulas, polyps of the anal canal and rectum account for 19-42% in the structure of coloproctological morbidity. An analysis of the literature indicates the expediency of performing combined operations. To date, indications and contraindications for performing one-stage operations for non-tumor pathology of the anal canal and rectum have not been sufficiently developed. There is no optimal treatment algorithm for combined proctologic pathology. Some operations need to be modified to improve the effectiveness of treatment. All this formed the basis for this study.*

Key words: *combined non-tumor pathology, anal canal, rectum, rectal fistulas.*

In recent years, there has been a tendency in industrialized countries to an increase in combined diseases of the anal canal and rectum, requiring surgical treatment. 18-32% of patients admitted to coloproctology hospitals have 2-3 comorbidities, which require simultaneous surgical correction [1, 6].

Patients with hemorrhoids, acute paraproctitis, chronic fissure of the anal canal, rectal fistulas, polyps of the anal canal and rectum account for 19-42% in the structure of coloproctological morbidity. In particular, hemorrhoids in combination with a chronic fissure of the anal canal is observed in 12.3-59.1% of cases, rectal fistula in 29.3-40.1%, anal canal polyps in 13.2-18.4%. The predictor of acute paraproctitis in 20.3-31.5% of cases is hemorrhoids [2, 8].

Until now, the diagnosis, differential diagnosis and surgical treatment of combined non-tumor pa-

thology of the anal canal and rectum is a complex, not fully resolved problem. Some surgeons [3] have a positive attitude towards combined surgical interventions due to the reduction of the bed-day, a pronounced medical and economic effect and the absence of the need for a second operation. Others believe that after combined operations, the percentage of complications is higher, and these interventions should be performed only according to strict indications [3, 10].

According to some authors [4, 8], combined operations have the following advantages: the patient is immediately cured of 2–3 combined diseases requiring surgical correction; there is no need for repeated anesthesia; further development of an uncorrected pathological process is prevented; the period of hospitalization of the patient is reduced; no need for re-examination; the economic efficiency of treatment increases.

According to various sources, the prevalence of hemorrhoids is quite high - from 120 to 186 per 1000 population, of which from 10 to 50% need treatment, and in 75% of cases - in surgery [5, 16]. As a separate nosological unit, hemorrhoids are observed in about 82.1% of cases, and in 17.9% it is combined with other proctological diseases [6, 13].

Causes of hemorrhoids: congenital insufficiency of the venous system, congestion in the veins of the rectum, sedentary lifestyle, hard physical labor, pregnancy, childbirth, etc. [7]. But these theories cannot explain the arterial nature of bleeding from hemorrhoids. According to Kapuller L.L. et al. (1974, 1994), the structural basis of hemorrhoids is not varicose veins of the rectum, but hyperplasia of the cavernous bodies and ectasia of their porto-caval and arteriovenular anastomoses.

The mechanical theory explains the occurrence of hemorrhoids by degenerative changes in the tissues of the anal canal. The muscular fibroelastic tissue that holds the internal hemorrhoids in place begins to degenerate from the third decade of life. The loss of elasticity leads to the mobility of the hemorrhoids, and they begin to move towards the anal canal. Constant prolapse leads to thinning and rupture of the mucous membrane, bleeding occurs from the cavernous anastomoses of the hemorrhoidal plexus. Thus, hemorrhoids develop due to a combination of various pathogenic factors [8].

By localization, hemorrhoids are divided into external, internal and combined; downstream is acute and chronic (as phases of the same process).

There are 4 stages of chronic hemorrhoids [4]:

I - the nodes do not fall out, during defecation, blood is released from the anus;

II - the nodes fall out during defecation and are set on their own;

III - the nodes fall out even with slight physical exertion, they do not reset on their own, only with manual assistance;

IV - nodes that have fallen out of the anal canal are not reduced.

There are three degrees of acute hemorrhoids:

I degree - thrombosis of external and internal hemorrhoids;

II degree - thrombosis of hemorrhoids with their necrosis;

III degree - the transition of inflammation to the subcutaneous fat, necrosis of the mucous membrane of the nodes.

Complicated forms of hemorrhoids are an indication for surgical intervention. Numerous operational benefits can be divided into 3 main groups:

1. Ligation of hemorrhoids [6];
2. Plastic surgery [7];
3. Excision of hemorrhoids [6].

According to the literature, the ligature method of treating hemorrhoids is accompanied by complications: severe pain syndrome (13.7-16.3%), swelling of the perianal region (16.2-19.4%), fever (9.1-15.3 %), and in the long-term period - weakness of the anal sphincter (8-11%), in 9.3-16.2 % of cases there was a recurrence of hemorrhoids [9]. The recurrence of the disease after the use of latex rings in the treatment of hemorrhoids is 8.2-34.1% [10].

Circular excision of the mucous membrane of the anal canal together with hemorrhoids and bringing down its overlying sections with fixation to the perianal skin (Whitehead operation), when using a circular stapler - Longo's operation, are often accompanied by formidable complications. These operations, according to some scientists, are considered "mutilating", and they are not recommended [11, 18]. The negative side of the method of hemorrhoidectomy using a mechanical suture with the KC-28 apparatus, a circular stapling apparatus manufactured by Covidien or Ethicon with a head diameter of 25-30 mm [13, 18] is that an anal canal wound is formed, which can lead to insufficiency of the anal sphincter and stricture of the anus. The method of hemorrhoidectomy with the imposition of a blind figure-eight sutures on a clamp and hemorrhoidectomy with a mechanical suture using vascular suturing devices have not found wide application [6, 8].

According to the literature, the disadvantages of the methods used for the surgical treatment of hemorrhoids are: the risk of bleeding, severe pain after surgery, the possibility of developing anal strictures, paraproctitis, painful dressings, a long period of disability, the risk of developing anal sphincter insufficiency in the long-term period and relapse of the disease in 2 -3.4% [10, 12]. For hemorrhoidectomy, a laser is also used, its advantages are the bloodlessness of the operation, a slight pain syndrome, and a more favorable postoperative period. However, in the liter-

ature there are works devoted to a high risk of recurrence of hemorrhoidal disease, the development of stricture of the anal canal [13]. There are also works on the use in the postoperative period of wound irradiation of the anal canal with a helium-neon laser, EUV irradiation, electroneedling, but there are no convincing data on the effect of this treatment on the rate of wound healing and reduction in rehabilitation time [8].

The Milligan-Morgan operation, proposed by W. Miles, has become widespread. In this case, three internal and three external hemorrhoids are excised (at 3, 7, and 11 o'clock of the conventional dial) together with cavernous bodies of the submucosal layer of the rectum, which is pathogenetically justified [9, 15]. The disadvantage of the operation is a pronounced pain syndrome caused by suturing the wounds of the perianal region. There is also a modified method of hemorrhoidectomy, when the wounds of the perianal region are not sutured, the so-called "open" hemorrhoidectomy, which reduces the duration of the operation, reduces pain and rehabilitation in the postoperative period [14].

Anal fissure occupies the 2nd place in frequency among proctological diseases, second only to hemorrhoids, and according to some reports, paraproctitis as well [8, 10, 15]. Chronic fissure of the anal canal is characterized by severe pain.

Among proctologists, there is no unity of views on the indications and tactics of treating chronic fissures of the anal canal, some opinions are diametrically opposed and are constantly being discussed [16].

The incidence of anal fissure is from 11 to 16% among all diseases of the colon, and is 20-24 cases per 1000 adults. Young and middle-aged women get sick more often [10, 17].

Many causes of AT are known: mechanical, parakeratosis, vascular disorders, neuromuscular changes and trauma to the anal sphincter, defects in the mucous membrane during the passage of solid feces, neurogenic disorders with prolonged spasm of the anal sphincters [6].

On the posterior wall of the anal canal, there are deeper distal parts of the rectal crypts of Morgagni, and the tendon endings of the anal sphincter muscles converge there, which can also contribute to the formation of an anal fissure [18]. A fissure in the anterior part of the anal canal is observed mainly in women.

Often anal fissure is combined with rectocele and megadolichocolon [3, 18]. A mucosal defect with clear edges and a bottom is preceded by scarification of a portion of the mucosa due to exposure to highly virulent intestinal microflora. At the bottom of such a crack-ulcer, the nerve endings lose their sheath, become exposed, which leads to a pronounced pain syndrome [1, 18].

In a chronic course, the edges of such an ulcer thicken and thicken, and a thickening is formed in the distal part - a “sentinel tubercle”, in the proximal part a hyperplastic anal papilla is sometimes determined. Normally, anal papillae have nothing to do with true polyps [1, 17].

The formation of antibodies can be promoted by itching of the anus, condylomas, proctitis, mucosal damage by foreign bodies, unnatural sexual relations, acute colitis, proctosigmoiditis, chronic colitis with constipation [10, 11].

Anal fissures are characterized by a triad of clinical manifestations: pain in the anus, spasm of the anal sphincter, minor bleeding from the anus. When AT is combined with hemorrhoids, prolapse of nodes and more abundant rectal bleeding are added to complaints [3, 7]. Pain causes spasm of the anal sphincter, and the spasm exacerbates the pain. In acute fissures, pain is strong, but short-term - during defecation and for 15-20 minutes after it. In chronic AT, the pain is long-lasting, and “stool fear” appears. Patients become irritable, insomnia worries, they often give enemas.

AT can be complicated by severe pain due to spasm of the anal sphincter, bleeding, and acute paraproctitis [7, 9]. Diagnosis of AT is quite simple (examination, palpation, digital examination of the rectum, sphincterometry). It is necessary to exclude the presence of an incomplete internal fistula, which is characterized by a constant pain syndrome, and when the anal canal is diluted, purulent discharge begins to flow from it [19].

Finger examination of patients with chronic anal fissures allows to determine its exact localization, the condition of the edges (dense, raised), the presence of sphincter spasm, the condition of the walls of the anal canal, the consistency of the anal papillae [3, 11]. Surgical treatment of AT is indicated in the chronic course of the disease, which is not amenable to conservative therapy.

Instead of an open posterior dosed sphincterotomy, foreign authors usually use the lateral subcutaneous sphincterotomy proposed by Parks A. [14]. In this case, only the internal sphincter is dissected under the control of a finger inserted into the rectum. After the operation, a thin catheter tube and gauze turunda with antiseptic ointment are inserted into the anal canal, while it is believed that the crack heals on its own. Given that the substrate of the underlying disease remains and it is impossible to control the depth of dissection of the lateral portion of the sphincter, in order to avoid anal incontinence, there is no complete confidence in the radical cure of this category of patients [1, 9].

A radical operation, according to domestic authors, consists in excision of a crack within a healthy mucosa with additional posterior dosed sphincterotomy [2]. Some authors recommend supplementing

sphincterotomy by bringing down and fixing the mucous membrane to the perianal skin, however, this increases the pain syndrome in the postoperative period, increases the risk of developing transsphincteric rectal fistulas and subcutaneous-submucosal paraproctitis [9].

Hemorrhoids in combination with AT occurs in 11.4-59.2% of cases. Most often there is a crack in the prolapse of internal hemorrhoids. With hemorrhoids, fissures usually have a chronic course due to impaired microcirculation, especially in the posterior and anterior parts of the anal canal [3].

The literature mentions cases of simultaneous surgical correction of AT in combination with hemorrhoids. So, Nazarov L.U. (1981) [7] excised a fissure with complete restoration of the mucosa, performed lateral subcutaneous sphincterotomy and hemorrhoidectomy with covering the wounds with a Diplen polymer film to protect against infection. However, the operation of excision of AT, sphincterotomy, suturing the edges of the wound to the bottom with hemorrhoidectomy has significant drawbacks. A mucosal defect is formed in the anal canal, which is the source of pain and the cause of reflex urinary retention. In addition, the presence of a wound surface in the anal canal lengthens the period of granulation with an increase in the period of temporary disability of patients. The mucosal defect also contributes to the formation of rough scars, which can lead to the formation of intrasphincter fistulas or insufficiency of the anal sphincter [16]. Madaminov A.M. et al. (2011) [14] analyzed the results of various methods of surgical treatment of 172 patients with chronic hemorrhoids in combination with chronic anal fissure. The patients were divided into 2 groups. The first (main) group included 82 (47.7%) patients operated on according to the method proposed by the authors. The second (control) group included 90 (52.3%) patients who underwent Milligan-Morgan hemorrhoidectomy in the second modification of the Research Institute of Proctology of the Ministry of Health of the Russian Federation with excision of the anal fissure by Gabriel. All patients complained of prolapse of internal hemorrhoids, the appearance of blood and slight pain during defecation. The operations in the two groups were the same, except that in the main group the anal fissure was excised according to Gabriel with wound suturing in the transverse direction, and in the control group this wound remained open, with dosed sphincterectomy to a depth of 0.8 cm in men, and up to 0.6 cm - in women. In the first group in the postoperative period, 3.7% of patients had pain in the area of wounds and bleeding during defecation, in the second group such complaints were in 8.9% of cases. Patients in group I spent 7 ± 1.2 bed days in the hospital, the period of outpatient aftercare was 15 days; in group II, these periods were 9±1.4 days and 17 days, respectively. There was no postoperative incontinence in both groups. In some periods after surgical treatment in the first group, the recurrence of anal fissure was in 2.4% of cases, in the second group - in 5.5%. Thus, the authors showed the advantages of a simultaneous operation of hemorrhoidectomy with excision of the anal fissure according to Gabriel with suturing of the wound left after excision of the fissure in the transverse direction.

Liu Y. et al. (2017) [10] operated on 118 patients with hemorrhoids in combination with anal fissure. In 60 patients, improved tactics of surgical treatment were performed. 35 (58.3%) patients underwent hemorrhoidectomy of external and internal hemorrhoids in combination with excision of the fissure and laxative incisions in the skin of the perianal region. In 25 (41.7%) cases, they limited themselves to excision of the anal canal fissure in combination with disarterialization of internal nodes or excision of only external hemorrhoidal nodes. Pain after improved surgery was noted in 8.3% and 24.1% of cases.

Song P. et al. (2022) [11] analyzed the surgical treatment of 96 patients with stage III and IV chronic hemorrhoids; 25 (26%) of them had a combined pathology of the anal canal: chronic anal fissure - 7, hypertrophied anal papilla - 7, hemorrhoidal fringe - 7, chronic intrasphincteric fistula of the rectum - 3, cryptitis - 1. The average age of patients was 48.5 ±11.7 years. On average, 6 to 8 branches of the superior rectal artery were ligated for the purpose of transanal desarterization of hemorrhoids. Lifting was carried out in places of the greatest prolapse, as a rule, at 3, 7 and 11 o'clock. After desarterization of hemorrhoids with mucopexy and lifting of the rectal mucosa (25 cases), the following complications were observed: bleeding - 8 (8.3%) cases, acute hemorrhoidal thrombosis - 3 (3.1%), severe pain syndrome - 2 (2, 1%). In 7 cases, on the 10-12th day after the operation, the erupted lifting suture turned out to be the source of bleeding. In 2 cases, repeated hemorrhoidectomy was performed. In 2 patients, conservative treatment made it possible to arrest hemorrhoidal thrombosis.

According to the author, changing the technique of performing the operation (tying each stitch of the lifting suture to the supporting suture, placing the last stitch no closer than 8 mm to the dentate line) minimizes the risk of early complications after surgery for stage III and IV hemorrhoidal disease with combined pathology of the anal canal [16].

The combination of hemorrhoids with rectocele is observed in 8-31% of cases, especially in middle-aged and older women [3, 12]. A large percentage of unsatisfactory results of treatment indicates that the issues of choosing rational operational tactics for such a combined pathology have not yet been finally resolved.

Wang X. and co-authors [12] observed 88 patients with hemorrhoidal disease in combination with rectocele for three years. 24 of them were operated only for rectocele-levatoroplasty (group I), 44 patients - only for hemorrhoids: DHAL-RAR or hybrid operation - DHAL-RAR of internal components and excision of external components of hemorrhoids (group II) and 20 patients a simultaneous operation was performed - levatoroplasty with DHAL-RAR for stage II hemorrhoids or a hybrid DHAL-RAR operation of internal components and excision of the external components of hemorrhoids for stage III-IV hemorrhoids (group III).

In the first group of patients in the first weeks after the operation, exacerbation of hemorrhoidal disease was noted in the form of edema and prolapse of enlarged dense nodes. In the coming months after the operation, the function of emptying the rectum improved only in half of the patients, in the other half, constipation was disturbed at the same level. In group I, the duration of inpatient treatment was 9±2.6 bed-days, the period of outpatient rehabilitation was 24±5.5 days.

All 20 patients of group III showed a favorable course of the postoperative period with primary wound healing and rapid recovery of the passage of intestinal contents on days 4-7. All markedly improved the function of emptying the rectum in the immediate and long-term follow-up. In this group, the duration of inpatient treatment was 12±2.9 bed-days, the duration of outpatient rehabilitation was 28±5.7 days (p=0.32).

According to Vuitton L. et al. [13], isolated operations with a combination of hemorrhoids and rectocele lead to a worsening of the course of the "left" pathology. Simultaneous operations for combined anorectal diseases should be considered pathogenetically more substantiated. They allow to increase the efficiency of postoperative rehabilitation and significantly improve the quality of life of such patients. Chronic paraproctitis was a fairly common disease in the most able-bodied group of patients. It occupies the 4th place among diseases of the rectum, with a specific gravity of 11% in terms of negotiability [10]. Some authors [11, 14] note that chronic paraproctitis is more often observed in women, others [9, 15] - in men or men and women get sick with the same frequency [9, 17]. Chronic paraproctitis is characterized by the presence of an internal opening in the intestine, a fistulous tract and an external fistulous opening in the perianal skin. It was a consequence of OP due to late treatment by patients for medical help and incorrectly chosen treatment tactics [14, 15].

CP is often accompanied by the phenomena of proctitis and proctosigmoiditis, changes in the body of a general and local nature due to intoxication from a purulent focus. The widest and deepest crypts on the posterior wall of the anal canal most often undergo inflammatory changes. OP and rectal fistula can be considered as two stages of the same disease due to the presence of communication between the purulent focus and the lumen of the rectum. More often, rectal fistulas are localized at 6 o'clock of the conditional dial due to inadequate blood supply from the inferior rectal artery in this area [10, 13].

In some cases, the cause of the formation of paraproctitis is hemorrhoids, when ulcerated thrombosed hemorrhoids are the entrance gate for infection, more often along the crypt line. Trauma, persistent constipation, and cooling also contribute to the appearance of cryptitis and inflammation of the anal glands [1, 12].

Surgical treatment of chronic paraproctitis and rectal fistulas is a topical topic of research and discussion for coloproctologists around the world; these topics are enough on the agendas of recent congresses of the European Association of Coloproctologists. 17 abstracts of the All-Russian Congress of Coloproctologists with International Participation (Hidalgo L. H., 2014) describe new methods of fistula treatment currently used in Russia [14].

According to the literature [13, 15], many methods of treating rectal fistulas are used, but none can be considered universal. In the National Clinical Guidelines for Coloproctology, edited by Balytskyy V. V. which are based on the principles of evidence-based medicine, it is noted that all methods used have a low degree of effectiveness. In the treatment of rectal fistulas, the optimal operation should not only provide good healing results, but also be sphincter-preserving. The traditional methods of surgical treatment of chronic paraproctitis with a fistula include dissection or excision of the fistula into the intestinal lumen, excision of the fistula tract with sphincter closure (in the treatment of intrasphincteric and superficially located transsphincteric fistulas, as well as the ligature method [13, 16].

According to most surgeons, the only effective treatment for chronic paraproctitis is surgery [10]. Operation Gabriel is of 2 types: Gabriel-1 and Gabriel-2. Operation Gabriel-1 is performed in the intra- and transsphincteric course of the rectal fistula and consists in excision of the rectal fistula in the form of a triangular flap with the apex facing the intestine, the base in the perianal skin, with stretching of the sphincter according to Recamier. After such an operation, a positive effect is noted in 83-94.7% of cases. 19-25.1% of patients complain of discomfort in the anus [5]. Other authors obtained good and satisfactory results after rectal fistula excision in 53.6-68.1% of cases [12]. The Gabriel-2 operation is performed with an extrasphincteric location of the fistulous tract and consists in excising the fistulous tract within healthy tissues, crossing all the fibers of the sphincter, followed by its restoration with interrupted sutures, which often leads to the development of anal

incontinence, especially in the anterior and lateral rectal fistulas. The disadvantages of this method of operation are: a large wound, slowly healing by secondary intention, the formation of a rough scar of the anal canal; soreness after surgery; long hospital stay [15].

Plasty with a free skin flap [11] leads to a decrease in the time of wound healing, but additional trauma is caused during the formation of the skin flap.

Some authors [12, 18] proposed to excise the fistula up to the anal canal with bringing down the overlying part of the mucous membrane and suturing to the distal edge of the wound according to Maslyak. But such plastic surgery with local tissues is rather complicated, with the risk of bacterial contamination of the wound. In the case of suture eruption, the development of acute paraproctitis and recurrence of the fistula is likely. More perfect in this regard is the technique of full-walled reduction of the rectal wall according to Blinnichev with excision of the fistulous tract within healthy tissues, while preserving the sphincter fibers. However, some authors [9] noted recurrences in this case, too, with suture eruption and retraction of the rectal wall.

The methods of dissection of the fistulous tract and excision of the fistula into the lumen of the rectum are the simplest in execution and ensure its reliable elimination only with intra- and extrasphincteric location of the fistulous tract. The recurrence of the disease was observed in 2-9% of cases, and the incidence of anal incontinence was 0-17% [9, 12].

Dissection of the fistula into the intestinal lumen is more preferable, since the size of the wound and damage to the muscle fibers of the sphincter are smaller than in the case of excision of the entire fistulous tract [13, 18]. At the same time, the terms of wound healing after dissection were 7-85 days, and after excision - 26-116 days.

Anal incontinence is one of the most common postoperative complications that significantly reduces the patient's quality of life. According to Sherkulov K. U. et al. [16], various degrees of sphincter incontinence after traditional methods of surgical treatment of rectal fistulas were noted in 39 (34%) of 141 patients. At the same time, the indicators in patients with complex fistulas (4.7 points on the Wexner scale) were much worse than in patients with simple fistulas (1.2 points on the Wexner scale) ($p = 0.001$). In other studies, including manometry, the negative impact of various surgical interventions on the holding function was also noted [1 2].

Balytskyy V. V. et al. [18] in 2022 studied the long-term results after dissection of the fistulous tract in 415 patients. Only in 26.3% of cases there was no decrease in the tone of the anal sphincter. Therefore, the use of these techniques is now limited due to the risk of developing postoperative anal sphincter insufficiency.

Fistula excision with tight closure of the wound sharply reduces the radicalism of the operation and can lead to recurrence in 9.6-11.7% of cases [7, 16]. Rough scars on the back wall of the anal canal deform it and lead to incontinence of gases and intestinal contents.

In 2011 Manne U. et al. [19] studied the cost of treating rectal fistulas in 214 patients. It was found that the total cost of treating a patient averaged 5,561 euros, of which 80% were directly related to medical expenses. The remaining 20% of economic losses were associated with the duration of the period of incapacity for work (10.4 days on average). The authors noted that such a high cost of treatment is due to the high frequency of relapses of the disease and the development of complications.

In recent years, in experimental and clinical medicine, much attention has been paid to the development of therapeutic techniques using cell transplantation and regenerative medicine technologies to restore both functional and structural disorders in the body, and a new direction in reconstructive surgery has been formed. A promising technique is cell autotransplantation in the treatment of rectal fistulas [19].

Despite the achievements of modern surgery and anesthesiology, the percentage of unsatisfactory results of surgical treatment of proctological diseases is quite high. In the available literature, there are very few works that would reflect the clinic, diagnosis, differential diagnosis and surgical treatment of concomitant diseases of the anal canal and rectum.

An analysis of the literature indicates the expediency of performing combined operations. To date, indications and contraindications for performing one-stage operations for non-tumor pathology of the anal canal and rectum have not been sufficiently developed. There is no optimal treatment algorithm for combined proctologic pathology. Some operations need to be modified to improve the effectiveness of treatment. All this formed the basis for this study.

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ОБЗОР ПО ХИРУРГИЧЕСКОМУ ЛЕЧЕНИЮ СОЧЕТАННОЙ НЕОПУХОЛЕВОЙ ПАТОЛОГИИ ПРЯМОЙ КИШКИ И АНАЛЬНОГО КАНАЛА

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Резюме. *В последние годы в промышленно развитых странах отмечается тенденция к увеличению сочетанных заболеваний анального канала и прямой кишки, требующих оперативного лечения. Больные геморроем, острым парапроктитом, хронической трещиной анального канала, свищами прямой кишки, полипами анального канала и прямой кишки составляют 19-42% в структуре колопроктологической заболеваемости. Анализ литературы свидетельствует о целесообразности выполнения комбинированных операций. На сегодняшний день недостаточно разработаны показания и противопоказания к выполнению одномоментных операций при неопухолевой патологии анального канала и прямой кишки. Оптимального алгоритма лечения сочетанной проктологической патологии не существует. Некоторые операции необходимо модифицировать для повышения эффективности лечения. Все это легло в основу настоящего исследования.*

Ключевые слова: *сочетанная неопухолевая патология, анальный канал, прямая кишка, ректальные свищи.*