DOI: 10.38095/2181-466X-20241153-117-121 UDC 616.22-007.253+611.35(616.89-02-089)

OPTIMIZATION OF SURGICAL TREATMENT OF PATIENTS WITH TRANSSPHINCTERIC RECTAL FISTULAS

K. U. Sherkulov[1], S. S. Davlatov[2], K. E. Rakhmanov[1]
[1]Samarkand state medical university, Samarkand,
[2]Bukhara state medical institute, Bukhara, Uzbekistan

Key words: anal canal, rectum, transsphincter fistulas, surgical treatment.
Таянч сўзлар: анал канал, тўғри ичак, транссфинктер оқмалари, жарроҳлик даволаш.
Ключевые слова: анальный канал, прямая кишка, транссфинктерные свищи, хирургическое лечение.

Purpose of the study: to improve the treatment results of patients with transsphincteric fistulas of the rectum by improving the technical aspects of fistulous passage excision. Materials and methods of research. 105 cases were selected for a prospective dynamic active study, among them patients with transsphincteric fistulas of the rectum. All patients were operated on routinely and, depending on the chosen treatment tactics, were divided into two groups. The first group- Control one, included 56 (53.3%) patients who had their fistulas excised using traditional methods. The second group, the main group, included 49 (46.7%) patients in whom fistula dissection was performed using modified instruments. Results of the study. Patients who underwent LIFT surgery with the use of modified guides and without disruption of the muscle fibers of the anal groin have a significant reduction in the level of pain syndrome in the postoperative period and after acts of defecation. This reduction in pain reduces the need for narcotic analgesics and significantly improves the quality of life of patients. Conclusions. The use of sphincter-saving surgical methods in the main group differs from traditional operations on fistula excision with subsequent suture of the sphincter, causing a shorter period of temporary disability - 18.9±3.6 days compared to 32.7±4.6 days; more favorable postoperative course with lower intensity of pain syndrome - 1,6±0,3 on VAS scale in Control with 6,0±0,2 points; shorter hospitalization - 10,1±2,2 days in Control with 17,4±3,1 days, and more effective postoperative rehabilitation of patients. These factors significantly improve the quality of life after surgery and contribute to lower financial costs to achieve successful treatment outcomes.

ОПТИМИЗАЦИЯ ХИРУРГИЧЕСКОГО ЛЕЧЕНИЯ БОЛЬНЫХ С ТРАНССФИНКТЕРНЫМИ СВИЩАМИ ПРЯМОЙ КИШКИ

К. У. Шеркулов[1], С. С. Давлатов[2], К. Э. Рахманов[1]
[1]Самаркандский государственный медицинский университет, Самарканд,
[2]Бухарский государственный медицинский институт, Бухара, Узбекистан

Цель исследования заключается в улучшении результатов лечения больных транссфинктерными свищами прямой кишки путём совершенствования технических аспектов иссечения свищевого хода. Материалы и методы исследования. Для проспективного динамического активного исследования были отобраны 105 случая. Среди них были пациенты с транссфинктерными свищами прямой кишки. Все пациенты были прооперированы планово и, в зависимости от выбранной тактики лечения, разделены на две группы. В первую группу, группу сравнения, вошли 56 (53,3%) пациентов, которым свищи иссекались традиционными методами. Во вторую, основную группу, включены 49 (46,7%) пациентов, у которых иссечение свищей проводилось с использованием модифицированных инструментов. Результаты исследования. У пациентов, прошедших операцию методом LIFT с применением модифицированных проводников и без нарушения мышечных волокон анального жома, отмечается значительное снижение уровня болевого синдрома в послеоперационном периоде и после актов дефекации. Это снижение боли позволяет уменьшить потребность в наркотических анальгетиках и существенно улучшить качество жизни пациентов. Выводы. Применение сфинктеросберегающих оперативных методов в основной группе отличается от традиционных операций по иссечению свища с последующим швом сфинктера, обуславливая более короткий период временной нетрудоспособности - 18,9±3,6 дней по сравнению с 32,7±4,6 днями; более благоприятное послеоперационное течение с меньшей интенсивностью болевого синдрома - 1,6±0,3 по шкале VAS в сравнении с 6,0±0,2 балла; сокращение сроков госпитализации - 10,1±2,2 дня по сравнению с 17,4±3,1 днями, и более эффективную послеоперационную реабилитацию пациентов. Эти факторы существенно улучшают качество жизни после операции и способствуют снижению финансовых затрат для достижения успешных результатов лечения.

ТЎҒРИ ИЧАКНИНГ ТРАНССФИНКТЕР ОҚМАЛАРИ БЎЛГАН БЕМОРЛАРНИ ЖАРРОҲЛИК ДАВОЛАШНИ ОПТИМИЗАЦИЯЛАШ

К. У. Шеркулов[1], С. С. Давлатов[2], К. Э. Рахманов[1]
[1]Самарқанд давлат тиббиёт университети, Самарқанд,
[2]Бухоро давлат тиббиёт институти, Бухоро, Ўзбекистон

Тадқиқотнинг мақсади: оқмани кесишнинг техник жиҳатларини такомиллаштириш орқали тўғри ичакнинг транссфинктер оқмалари бўлган беморларни даволаш натижаларини яхшилаш. Тадқиқот материаллари ва усуллари. Проспектив динамик фаол ўрганиш учун 105 та клиник маълумотлар танланди. Улар орасида тўғри ичакнинг транссфинктер оқмалари бўлган беморлар бор эди. Барча беморлар режалаштирилганидек операция қилинди ва танланган даволаш тактикасига қараб икки гуруҳга бўлинди.

Биринчи гуруҳ, таққослаш гуруҳига анъанавий усуллар билан оқмалар олиб ташланган 56 (53,3%) бемор кирди. Иккинчи, асосий гуруҳга 49 (46,7%) бемор киритилган бўлиб, уларда оқмани бартараф этишда модификацияланган асбоблар ёрдамида жарроҳлик амалиёти амалга оширилган. Тадқиқот натижалари. LIFT усули билан модификацияланган ўтказгичлар ёрдамида ва анал сфинктерининг мушак толаларига зарар етказмасдан бажарилган жарроҳлик амалиётида беморларда операциядан кейинги даврда ва дефекация ҳаракатларидан кейин оғриқ даражаси сезиларли даражада пасайди. Оғриқнинг бу камайиши наркотик аналгетикларга бўлган эҳтиёжни камайтиради ва беморларнинг ҳаёт сифатини сезиларли даражада яхшилайди. Хулоса. Асосий гуруҳда сфинктер сақловчи жарроҳлик усулларидан фойдаланиш оқмани очиш учун анъанавий усуллар ва кейинги сфинктерни тикиш операцияларидан кескин фарқ қилади, бу эса вақтинчалик ногиронликнинг 18,9±3,6 кун билан 32,7±4,6 кун солиштирганда қисқароқ даврини келтириб чиқаради; VAS шкаласи бўйича 1,6±0,3 билан 6,0±0,2 солиштирганда оғриқ синдромининг паст интенсивлиги билан операциядан кейинги давр янада ижобий кечишини таъминлайди; касалхонага ётқизиш вақтини 10,1±2,2 кун билан 17,4±3,1 солиштирганда қисқартиради ва беморларни операциядан кейинги реабилитация қилиш эффективлигини оширади. Ушбу омиллар операциядан кейинги ҳаёт сифатини сезиларли даражада яхшилайди ва муваффақиятли даволаниш натижаларига эришиш учун молиявий харажатларни камайтиришга ёрдам беради.

Relevance of the study. A variety of studies and meta-analyses indicate that there is no single standard that fully guarantees the successful treatment of complex rectal fistulas, especially in transsphincteric forms [2, 5]. Traditional surgeries, although usually leading to recovery in most patients, are often accompanied by traumatic effects on the anal sphincter, which stimulates the search for new methods of intervention [1, 4]. Among the traditional methods, the technique of fistula excision with closure of the internal fistulous opening with a rectal wall flap or a skin-anal flap is considered to be the gentlest for the patient [3, 5, 7]. This method helps to reduce the risk of anal incontinence and deformity of the anus after surgery [2, 3, 6]. However, even this technique, according to various authors, is associated with a high incidence of mild anal sphincter insufficiency, reaching 30-38%.

Purpose of the study is to improve the results of treatment of patients with transsphincteric fistulas of the rectum by improving the technical aspects of excision of the fistulous passage.

Materials and methods of research. The study is based on the data of examination and treatment of patients with rectal fistula operated in the proctology department of the multidisciplinary clinic of Samarkand State Medical University in the period from 2018 to 2023. 105 cases were selected for the prospective dynamic active study. Among them were patients with transsphincteric fistulas of the rectum. All patients were operated on routinely and, depending on the chosen treatment tactics, divided into two groups. The first group, the Control group, included 56 (53.3%) patients who had their fistulas excised using traditional methods. The second group, the main group, included 49 (46.7%) patients in whom fistula dissection was performed using modified instruments. Patients in the main group with transsphincteric fistulae underwent LIFT (Ligation of Intersphincteric Fistula Tract, i.e., ligation of the fistula tract in the intersphincteric space) with the elimination of the internal opening of the fistula at its base after turning it inside out into the rectal lumen. For this purpose, a modified button probe with an olive or a flexible cylindrical guide with an olive was used in case of a tortuous fistulous passage. In the presence of purulent accumulations in the pararectal tissue, in addition to excision of the fistula, we performed dissection, scraping of the walls of the purulent cavity, washing with antiseptics and drainage of the residual cavity. The average age of the patients in this group was 45.3 ± 7.1 years.

Technical aspects. The operation was performed under spinal, epidural or combined anesthesia. The patient was placed on the operating table on his back with his legs bent at the knee and hip joints on special supports. The lumen of the rectum and the surgical field were treated with an alcoholic iodine solution. After standard diagnostic procedures, such as staining the fistula passage with a methylene blue solution and examining the fistula passage with a button probe, the exact location of the internal fistula opening was determined. An important stage of the operation was to carry a button probe through the entire fistula passage, since the probe served as a guide for the correct location of the fistula and to prevent damage to the wall of the fistula passage during its mobilization in the intersphincter space. A flexible cylindrical conductor developed by us was used for patients with branched and sinuous fistula passages. The intersphincter sulcus was palpated in the projection of the internal fistula. A semilunar incision 1.5-2.0 cm long was made along the furrow. (Fig. 1).

Then the edges of the wound from the inner and outer sphincters were captured with Alice clamps or separated with blunt hooks like Farabeuf hooks. Using electrocoagulation and acute dis-

section, the tissues were carefully delaminated between the outer surface of the inner sphincter and the inner surface of the outer sphincter. At the same time, the surgeon was constantly guided by the location of a button-shaped probe or a flexible conductor inserted into the fistula. When the area of the fistula passage was reached, tissues above and behind the fistula were separated using an electrocoagulator and a blunt dissection using a dissector. Bypassing the fistula canal, the dissector was carried out behind it and removed into the wound from the opposite side (Fig. 2a).

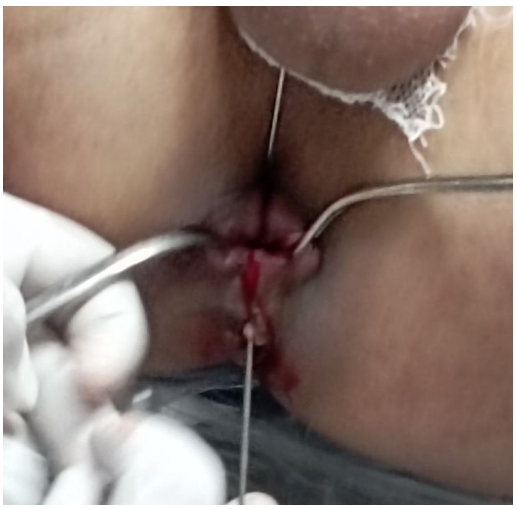

Fig. 1. A button probe is passed through the fistula passage. A semilunar incision was made along the intersphincter sulcus 2 cm long in the projection of the location of the internal fistula opening.

A part of the fistula was carefully isolated in the intersphincter space, avoiding damage to the muscle fibers of the anal pulp. Then, with the help of a dissector, the ligature was brought under the fistula. The inserted conductor was pulled through the external fistula opening to the intersphincter space, and after ligation of the distal part at the level of the recess of the rod, the fistula passage was tied with a ligature. When the probe was pulled back, the olive fixed the mucous membrane of the fistula and pulled it into the lumen of the rectum, thus the proximal part of the fistula turned into the lumen of the rectum. The fistula was cut off at the very base after stitching and bandaging (Fig. 2 b, c). It should be noted that the operation was performed without traumatization of the anal sphincter.

After ligation and crossing of the fistula, a sample was performed with the introduction of a methylene blue solution through the external fistula opening. When the stroke was sealed, the dye did not penetrate into the wound, but completely flowed back through the external fistula opening. If the tightness was insufficient, the dye began to flow into the wound. However, this was not a criterion for the unreliability of the operation, since it is more important to ensure the tightness of the fistula stump in the area of the internal sphincter. In case the dye got into the wound, the stumps of the fistula were additionally immersed in separate sutures with vicryl 2-0 with the capture of the external sphincter. The walls of the peripheral part of the fistula, in the absence of con-

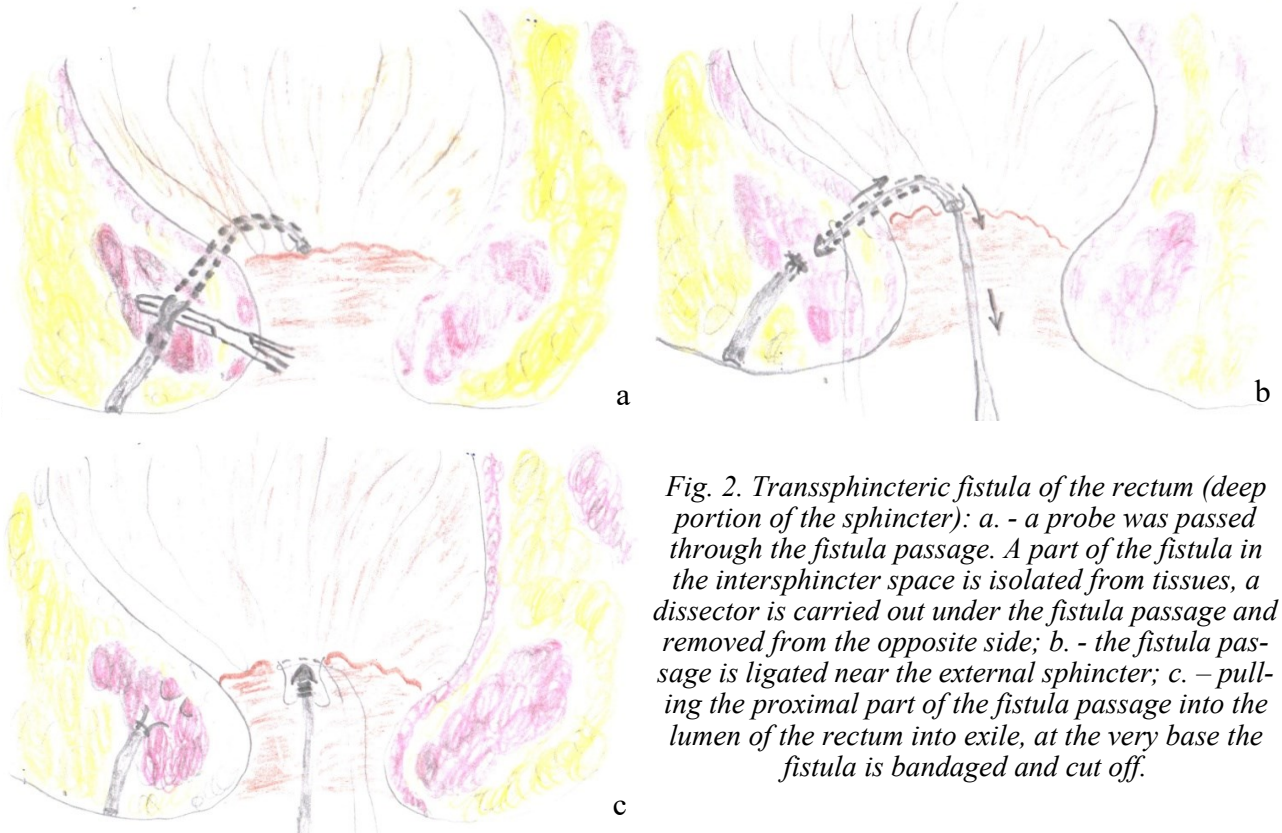

Fig. 2. Transsphincteric fistula of the rectum (deep portion of the sphincter): a. - a probe was passed through the fistula passage. A part of the fistula in the intersphincter space is isolated from tissues, a dissector is carried out under the fistula passage and removed from the opposite side; b. - the fistula passage is ligated near the external sphincter; c. – pulling the proximal part of the fistula passage into the lumen of the rectum into exile, at the very base the fistula is bandaged and cut off.

Fig. 3. Patient L. 47 years old. I/b No.7534-22g. Diagnosis: posterior transsphincter fistula of the rectum (superficial portion of the sphincter). The position on the table is like for a lithotomy. Ligation of the fistula passage in the intersphincter space (LIFT) was performed. The peripheral part of the fistula is scraped through the external fistula opening with a Volkmann spoon. A latex graduate is installed between the sutures in the wound, providing drainage of the wound.

gestion in the pararectal tissues, were scraped through the external fistula opening using a Volkmann spoon. With a deep location of the fistula passage and an extended wound, a latex drainage was installed in the intersphincter space between the sutures. If there was no inflammatory process and abundant discharge, the drainage was removed after 3-5 days (Fig. 3).

In transsphincter fistulas with purulent cavities in the pararectal cellular spaces, the fistula passage was also crossed in the intersphincter space (LIFT). In addition, the walls of the purulent cavity were opened and scraped, it was washed with antiseptics and the remaining cavity was drained. The operation is radical and simple in technique, since the fistula passage is completely excised and the internal opening of the fistula is eliminated. The wound heals quickly, which shortens the postoperative period and reduces the length of hospital stay.

The results of the study. In patients who underwent LIFT surgery using modified conductors and without disruption of the muscle fibers of the anal pulp, there was a significant decrease in the level of pain in the postoperative period and after acts of defecation. This reduction in pain reduces the need for narcotic analgesics and significantly improves the quality of life of patients. During the first two days after surgery, patients in the main group had daily aseptic bandages changed in the perianal area, after which daily dressings were no longer required. This made it possible to reduce the burden on medical personnel and reduce the consumption of dressing material. In the Control group, daily bandages were performed with periodic tightening of the ligature every 4-5 days before its removal.

In the postoperative period, patients of the main group were given the opportunity to receive pain relief on demand using the non-narcotic drug Ketorol. In most cases (76.9%), it was 2 ml twice a day for the first two days after surgery. In the Control group, patients were prescribed the narcotic drug Promedol for the first day after surgery, 1 ml three times a day.

The low invasiveness of surgery using modified conductors without damaging the muscle fibers of the anal sphincter had a significant impact on the length of stay of patients in the hospital.

1 table.

Results of surgical treatment of patients with rectal fistulas in the early postoperative period.

Indicators		**Main group (n=78)**	**Control group (n=56)**
Average duration of inpatient treatment		10,1±2,2	17,4±3,1
		p<0,05	
Complications	acute urinary retention	2 (2,6%)	1 (1,8%)
	abscessed fistula	-	4 (7,1%)
Anesthesia	using narcotic drugs	-	+
	using non-narcotic drugs	+	-
	dressing anesthesia	-	+

On average, patients of the main group spent 10.1±2.2 days in the hospital (the preoperative period was 3.2± 3.2 days, the postoperative period was 7± 1.9 days). The duration of inpatient treatment was determined by the need for a comprehensive examination, including fistulography, ultrasound examination of the rectum and pararectal tissue, as well as magnetic resonance imaging. After the introduction of a new algorithm for examination and treatment, 15 patients operated on in 2021 managed to reduce the length of hospital stay to 7.9±1.1 bed days. In the Control group, the average length of hospital stay was 17.4±3.1 days (preoperative period - 5.3±3.1 days, postoperative - 11.4±2.2 days) ($p<0.05$) (Table 1).

Conclusions: The developed innovations in the technical aspects of surgical treatment of patients with transsphincter rectal fistulas led to an improvement in the standards of medical care, reducing the frequency of immediate postoperative complications from 8.9% to 2.0%. The use of a modified button probe and a flexible cylindrical conductor in the surgical treatment of transsphincter rectal fistulas not only simplifies the process of technical implementation, but also prevents damage to the muscle fibers of the anal pulp. In addition, this method requires less time for surgery - 44.2± 5.1 minutes compared to 80.5± 7.3 minutes. The use of sphincter-sparing surgical methods in the main group differs from traditional operations for excision of the fistula followed by suture of the sphincter, causing a shorter period of temporary disability - 18.9±3.6 days compared with 32.7±4.6 days; a more favorable postoperative course with a lower intensity of pain syndrome - 1.6± 0.3 on the VAS scale compared with 6.0 ± 0.2 reduction of hospitalization time - 10.1 ± 2.2 days compared to 17.4± 3.1 days, and more effective postoperative rehabilitation of patients. These factors significantly improve the quality of life after surgery and contribute to reducing financial costs to achieve successful treatment results.

References:

1. Akiba R. T., Rodrigues F. G., da Silva G. Management of complex perineal fistula disease //Clinics in colon and rectal surgery. – 2016. – T. 29. – №. 02. – P. 092-100.
2. Balciscueta Z. et al. Rectal advancement flap for the treatment of complex cryptoglandular anal fistulas: a systematic review and meta-analysis //International journal of colorectal disease. – 2017. – T. 32. – P. 599-609.
3. Cadeddu F. et al. Complex anal fistula remains a challenge for colorectal surgeon //International journal of colorectal disease. – 2015. – T. 30. –P. 595-603.
4. Davlatov S. S. et al. The choice of surgical treatment tactics in patients with acute paraproctitis //Journal of Hepato -Gastroenterology. – T. 1. – №. 2. – C. 26-29.
5. Gaertner W. B. et al. The American Society of Colon and Rectal Surgeons clinical practice guidelines for the management of anorectal abscess, fistula-in-ano, and rectovaginal fistula //Diseases of the Colon & Rectum. – 2022. – T. 65. – №. 8. – C. 964-985.
6. Sherkulov K. U., Radjabov J. P., Usmonkulov M. K. Diagnostics and surgical treatment of rectal fistulas //World Bulletin of Public Health. – 2023. – T. 19. – C. 28-30.
7. Shekhovtsov S.A., Davlatov S.S. Analysis of Factors Influencing the Results of the Laser Obliteration Technique of Short and Complex Rectal Fistulas// American Journal of Medicine and Medical Sciences 2023, 13(7): 913-916. DOI: 10.5923/j.ajmms.20231307.15