

About authors:

Lezhnina Oksana Yuryevna, MD, Associate Professor, Professor of the Department of Anatomy;
tel.: +78652353229; e-mail: okliz26@mail.ru; ORCID: 0000-0002-0348-0447

Mazharov Viktor Nikolaevich, CMSc, Associate Professor, Rector, Head of the Department of Public Health and Healthcare;
tel.: +78652753382; e-mail: ozdstgma@yandex.ru; ORCID: 0000-0003-3889-6271

Korobkeev Artemy Alexandrovich, student; tel.: +78652353229; e-mail: korobkeev@bk.ru

© Group of authors, 2023

UDC 616.711.8.748.14-08

DOI – <https://doi.org/10.14300/mnnc.2023.18041>

ISSN – 2073-8137

TREATMENT OF PATIENTS WITH UNCOMPLICATED CHRONIC FORM OF PILONIDAL SINUS INFLAMMATION

Korablina S. S.¹, Lavreshin P. M.¹, Muraviev A. V.¹, Gobedzhishvili V. K.¹,
Gobedzhishvili V. V.², Vladimirova O. V.¹, Korkmazov I. H.³, Galstian A. Sh.⁴

¹ Stavropol State Medical University, Russian Federation

² I. M. Sechenov First Moscow State Medical University (Sechenov University),
Russian Federation

³ North Caucasian State Academy, Cherkessk, Russian Federation

⁴ City Clinical Hospital № 2, Stavropol, Russian Federation

ЛЕЧЕНИЕ БОЛЬНЫХ С НЕОСЛОЖНЕННОЙ ФОРМОЙ ХРОНИЧЕСКОГО ВОСПАЛЕНИЯ КОПЧИКОВОГО ХОДА

С. С. Кораблина¹, П. М. Лаврешин¹, А. В. Муравьев¹, В. К. Гобеджишвили¹,
В. В. Гобеджишвили², О. В. Владимирова¹, И. Х. Коркмазов³, А. Ш. Галстян⁴

¹ Ставропольский государственный медицинский университет,
Российская Федерация

² Первый Московский государственный медицинский университет
им. И. М. Сеченова (Сеченовский Университет), Российская Федерация

³ Северо-Кавказская государственная академия, Черкесск, Российская Федерация

⁴ Городская клиническая больница № 2, Ставрополь, Российская Федерация

The article contains the results of the surgical treatment of 96 patients with simple chronic inflammation of the pilonidal sinuses. The control group consisted of 47 patients who underwent surgical treatment using «pilonidal sinus removal with fixation of the edges of the wound at the bottom, taking into account the height of the buttocks». The main group consisted of 49 patients who underwent surgery using the new method proposed by the author (patent RU2775802), which significantly improved the outcome of the disease. This reduced complications in the early stage, recurrence of the disease by three times and the patient's stay in the coloproctological department of the hospital to 3 days with achieving sustainable functional results.

Keywords: pilonidal sinus, inflammation, type of surgery, complications

Приведены результаты лечения 96 больных, оперированных по поводу неосложненной формы хронического воспаления копчикового хода, которые были разделены на две группы. Группу сравнения составили 47 больных, которым выполняли операцию иссечения эпителиального копчикового хода с фиксацией краев раны к ее дну с учетом высоты стояния ягодиц. Основную группу составили 49 больных, оперированных по предложенной автором методике (патент № 2775802), которая позволила значительно улучшить исходы заболевания: уменьшить осложнения в ранние сроки после операции в 2,4 раза, рецидивы заболевания – в 3 раза, сократить время пребывания больных в колопроктологическом отделении на 3 к/дня, получить хорошие функциональные результаты.

Ключевые слова: копчиковый ход, воспаление, способы операций, осложнения

For citation: Korablina S. S., Lavreshin P. M., Muraviev A. V., Gobedzhishvili V. K., Gobedzhishvili V. V., Vladimirova O. V., Korkmazov I. H., Galstian A. Sh. TREATMENT OF PATIENTS WITH UNCOMPLICATED CHRONIC FORM OF PILONIDAL SINUS INFLAMMATION. *Medical News of North Caucasus*. 2023; 18(2): 184-186.

DOI – <https://doi.org/10.14300/mnnc.2023.18041>

Для цитирования: Кораблина С. С., Лаврешин П. М., Муравьев А. В., Гобеджишвили В. К., Гобеджишвили В. В., Владимировна О. В., Коркмазов И. Х., Галстян А. Ш. ЛЕЧЕНИЕ БОЛЬНЫХ С НЕОСЛОЖНЕННОЙ ФОРМОЙ ХРОНИЧЕСКОГО ВОСПАЛЕНИЯ КОПЧИКОВОГО ХОДА. *Медицинский вестник Северного Кавказа*. 2023;18(2):184-186. DOI – <https://doi.org/10.14300/mnnc.2023.18041>

The frequency of the disease determines the relevance of this pathology, the young age of the patient, and the results of treatment, which do not satisfy today's doctors-coloproctologists. Three percent of those examined showed signs of pilonidal sinus through a mass medical examination. This specific pathology accounts for 1–2 % of all operations currently performed and also accounts for 12 % of all coloproctological operations. Most patients with this condition are in the 20–30 age group. Most often, these patients receive surgery performed on them by general surgeons in ordinary hospitals, which use simple surgical procedures which do not take into account the clinical form of the disease and anatomical features of surgery, which leads to undesirable results of treatment [1–3]. About 20–25 % of patients in the early postoperative period experience purulent inflammatory complications, and 5–12 % have relapse disease [4, 5]. Therefore, further optimization of surgical procedures is essential for the overall improvement of fistula treatment.

The aim was to create a new method of surgery for the treatment of patients with uncomplicated chronic pilonidal sinuses.

Material and Methods. The data are based on treating 96 patients with uncomplicated chronic pilonidal sinuses. The treatment group was divided into two almost identical groups depending on their age, gender, and type of pathology. The reference group included 47 patients who underwent conventional surgical treatment. Surgical interventions were performed using spinal anesthesia. The first step was to remove the pilonidal sinuses in the healthy tissue. The second stage of the surgical procedure included a surgical suture process, considering the height of the buttocks. Sixteen patients with low buttocks have lowered the edges of their wounds and stitched down below. At the same time, 23 medium-sized patients and eight high-gluteal patients had their subcutaneous tissues cut at 90 and 60 degrees, respectively. This surgical technique could keep the edges of the wound attached to the bottom without any tension, leaving the wound 0.5 cm wide open. It also caused the discharge of the wound.

The proposed method, which also provided for treating the uncomplicated chronic form of pilonidal sinuses (patent number 2775802), was applied to 49 patients (main group). Our method included the following techniques. Using cerebrospinal anesthesia and the «Surgitron» radiosurgical device (Ellman International, Inc.), we cut the fistula thoroughly once with the skin and seamy tissue. After that, the wound was sutured by separate nodular sutures. Nodes were placed $\frac{1}{3}$ deep for low configuration, $\frac{1}{2}$ for medium, and $\frac{2}{3}$ for high configurations, respectively. Then the ends of the threads were cut by a single knot. With the help of an uncut thread, the edges of the wound were picked up intracellularly on both sides, which were fixed to its bottom without tension. In addition, the wound sites between the nodes remained open in a diamond-shaped form, which allowed the wound to be released.

Magno-immunosorbent test system with adsorbed antigen complex of scars was used to monitor the effectiveness of scar therapy. The statistical processing of the results of the study was carried out using the program

«Biostat» (AnalystSoft Inc., Walnut, CA) and SPSS Statistics 17.0 (IBM, USA). Differences between groups were considered significant at $p < 0.05$.

Results and Discussion. In the postoperative period, active control tactics were applied: 6 hours out of bed; refusing drainage, which is the conductor of infection; ultraviolet radiation of wounds; ultrasound cavitation of the middle frequency of ultrasound of the edges of the wound.

The effectiveness of the predicted anti-scar therapy has been tracked by the results of the formation of an autoantibody in the blood by ELISA in patients with magno-immunosorbent with immobilized ligand, which is an antigenic protein complex isolated from scar tissue. Positive results of blood serum of 5 (10.6 %) patients with a simple form of chronic inflammation of the coccygeal passage of the main group in diagnostic dilution 1:80 with magno-immunosorbent decreased by 30 days. The number of patients with an uncomplicated form of the pilonidal sinus in the control group, whose blood sera reacted with antigen-antibody protein-ligand magno-immunosorbent immunoassay in large dilutions (1:160–1:640) on the 15th day did not tend to decrease. In the main group, the number of such reactions dropped to 4 (8.2 %), which required continuation of anti-scar therapy. In these patients used Bovgialuronidaseazoximer intramuscularly #10 with a break in 3 days; a gel of Green Tea Extract locally a week after surgery with desensitizing therapy. In addition, after the completion of wound epithelization, ultraphonophoresis of liquid extract of onion bulbs in the form of a gel – #10 and two weeks after surgery-laser therapy #5 was used. By 30 days in dilution, 1:640 reactions were recorded in 5 (10.6 %) patients in the control group and only 2 (5.6 %) patients in the main group. This was a sign of a continuing trend toward pathological scarring.

In patients from the control group 7 complications (14.9 %) were observed in the early postoperative period: in 4 (8.5 %) patients – wound margins detachment from its bottom, and in 3 (6.4 %) – wound suppuration was registered. In the remote postoperative period, we observed 10 (21.3 %) complications: 7 (14.9 %) patients had a rough postoperative scar, deforming intergluteal fold and surrounding tissues, and 3 (6.4 %) patients had a recurrence of the disease. After operations according to our suggested technique (the main group), 5 (10,2 %) complications occurred: in 2 (4.1 %) patients – partial suppuration of the wound; in 1 (2.0 %) – separation of the wound edges from the bottom (in the region of one suture); in 2 (4.1 %) patients we observed the formation of the excessive scar tissue, not deforming the area of the surgical intervention. Relapse of the disease was observed in 1 (2.0 %).

The length of hospital stay for pilonidal sinus patients at the chronic inflammation stage in the control group was 11.2 ± 0.32 bed-days, and in the main group – 9.0 ± 0.26 .

Conclusion. The developed and patented method of treatment of patients with a simple form of chronic inflammation of the pilonidal sinuses, compared to the known techniques, significantly improved the outcome of the disease. At the same time, the number of postoperative complications decreased by 2.5 times, the number of relapses – by 3.2 times, and the duration of the patient's stay in the hospital – by three bed days. Functional results of treatment have also improved.

Disclosure: The authors declare no conflict of interest.

References

1. Doll D. New Attempt to Reach a Common Sense in Pilonidal Sinus Therapy. *Dis. Colon Rectum*. 2019;62:6:36-38. <https://doi.org/10.1097/DCR.0000000000001394>
2. Khubezov D. A., Lukanin R. V., Ogoreltzev A. Y., Puchkov D. K., Serebryanskiy P. V. [et al.] Choice of method of surgical treatment of pilonidal inflammation without abscess formation. *Surgery*. 2019;8(2):24-31. <https://doi.org/10.17116/hirurgia.201908224>
3. Lichman L. A. The choice of postoperative wound closure method in patients after pilonidal sinus excision. *Koloproktologiya. – Coloproctology*. 2020;19(3):19. <https://doi.org/10.33878/2073-7556>
4. Nechai I. A., Bozhchenko A. A., Maltseva N. P., Vetoshkin V. A., Yakunina M. Y. Surgical treatment of pilonidal sinus inflammation using «closed» techniques. *Bulletin of Surgery named after I. I. Grekova*. 2022;181(2):33-38. <https://doi.org/10.24884/0042-4625-2022-181-2-33-38>
5. Groshilin V. S., Magomedova Z. K., Chernyshova E. V. Analysis of the effectiveness of using the original method of surgical treatment of recurrent pilonidal sinus inflammation. *Coloproctology*. 2016;1:22-22. <https://doi.org/10.33878/2073-7556>

About authors:

Korablina Sofia Sergeevna, PhD, Associate Professor of the General Surgery Department; tel.: +79624478458; e-mail: Korablinas27@gmail.com; ORCID: 0000-0002-5113-2543

Lavreshin Peter Mikhailovich, MD, PhD, Professor, Head of the General Surgery Department; tel.: +79280075502; e-mail: v_lin@mail.ru; ORCID: 0000-0001-7839-5995

Muraviev Alexandr Vassilievich, MD, PhD, Professor of the General Surgery Department; tel.: +79624423406; e-mail: Mur_50@mail.ru; ORCID: 0000-0001-5636-2252

Gobedzhishvili Vakhtang Vladimirovich, PhD, Associate Professor of the Department of Surgery; tel.: +79283060575; e-mail: walker87@list.ru; ORCID: 0000-0002-8883-4952

Gobedzhishvili Vladimir Kishvardievich, PhD, Associate Professor of the General Surgery Department; tel.: +79188647652; e-mail: gobshah@mail.ru; ORCID: 0000-0002-0377-6205

Vladimirova Oksana Vladimirovna, MD, PhD, Associate Professor of the General Surgery Department, surgeon of the Department of Purulent Surgery and Burns; tel.: +79054133340; e-mail: oxy_8181@mail.ru; ORCID: 0000-0002-3011-7408

Korkmazov Ilyas Hhamzatovich, Assistant Professor of the Department Surgical Diseases with a course of Topographic Anatomy; tel.: +79283939322; e-mail: korkmaz@gmail.com; ORCID: 000-0001-7134-0289

Galstian Ashkhen Shagenovna, PhD, coloproctologist at the Colorectal Surgery; tel.: +79624598654; e-mail: Ashhengal@mail.ru; ORCID: 0009-0004-8570-3895

© Group of authors, 2023

UDC 617.7-007.681:616-07

DOI – <https://doi.org/10.14300/mnnc.2023.18042>

ISSN 2073-8137

EXPRESSION PROFILE AND TNF- α GENE POLYMORPHISM IN PRIMARY OPEN-ANGLE GLAUCOMA

Kakulia D. M., Barycheva L. Yu., Khodzhayan A. B., Minasyan M. M.

Stavropol State Medical University, Russian Federation

ПРОФИЛЬ ЭКСПРЕССИИ И ГЕННЫЙ ПОЛИМОРФИЗМ ФНО- α ПРИ ПЕРВИЧНОЙ ОТКРЫТОУГОЛЬНОЙ ГЛАУКОМЕ

Д. М. Какулия, Л. Ю. Барычева, А. Б. Ходжаян, М. М. Минасян

Ставропольский государственный медицинский университет,
Российская Федерация

The TNF- α 308 G/A (rs1800629) gene polymorphism was studied in 56 patients with primary open-angle glaucoma (POAG), and TNF- α levels were determined in 103 lacrimal fluid samples. An increase in TNF- α – 94 [45; 165] pg/ml in patients with glaucoma compared with the control group ($p=0.001$) was revealed. The probability of developing POAG increased in residents of the homozygous for the rare allele genotype 308 A/A – 6.30 (95 % CI: 0.77–51.9, $p=0.049$), as well as in the owners of the heterozygous genotype 308 G/A – 3.60 (95 % CI: 0.96–13.6, $p=0.049$). High levels of TNF- α in the lacrimal fluid in patients with POAG are associated with the A308A genotype – 190 [153.0–220.0] pg/ml.

Keywords: primary open-angle glaucoma, lacrimal fluid, TNF- α , gene polymorphism