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SURGICAL OPERATION PERFORMED IN THE HYPOGASTRIC REGION

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Abstract

Acute intersphincteric paraproctitis is one of the most severe forms of inflammatory diseases of the pararectal tissue. It is characterized by rapid development of the infectious-inflammatory process within the intersphincteric space and a high risk of complications. The surgical approach is based on timely diagnosis, appropriate choice of surgical access and extent of intervention, as well as adequate postoperative management. This article reviews modern approaches to the surgical treatment of intersphincteric paraproctitis, including literature analysis and clinical observations.

Keywords

high risk of sequela, intersphincteric space, surgical access, widespread abscess formation,anorectal, purulent

Introduction. Acute paraproctitis is one of the most common proctological diseases, accounting for up to 35% of all consultations in coloproctology. The intersphincteric variant occurs in approximately 4–12% of patients with acute paraproctitis[1] The condition is marked by the migration of infectious agents from the anal glands into the intersphincteric compartment, causing the development of either a confined or widespread abscess formation.Late recognition and suboptimal surgical management elevate the likelihood of a prolonged disease trajectory and the development of anorectal fistulous tracts. Despite decades of experience, the optimal surgical approach for intersphincteric paraproctitis remains a matter of debate [2]

Relevance.Acute paraproctitis is one of the most common diseases in the field of coloproctology and ranks among the leading conditions for which patients seek specialized medical care from colorectal specialists. According to numerous clinical studies and practical observations, the incidence of this condition is relatively high, accounting for up to 35% of all patient visits to a colorectal surgeon, which underscores its clinical significance and relevance.

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Among the various clinical forms of acute paraproctitis, the intersphincteric type deserves particular attention as one of the most specific yet challenging variants of the pathological process. According to different sources, this subtype occurs in approximately 4–12% of patients with acute paraproctitis and is characterized by distinctive clinical features, diagnostic complexities, and treatment approaches. The intersphincteric form is considered more difficult to diagnose in a timely manner and to treat effectively, due to both the anatomical peculiarities of the inflammatory process location and the high risk of complications if specialized care is delayed [3].

The characteristic feature of this clinical form of acute paraproctitis is that the infectious agent, usually originating in the anal crypts (small depressions known as anal sinuses), gradually spreads into the intersphincteric space. This anatomical area provides favorable conditions for the rapid proliferation of pathogenic microflora and the formation of a localized infectious focus. As microorganisms multiply, a cascade of inflammatory reactions is triggered, accompanied by significant tissue infiltration, increased vascular permeability, and progressive cellular damage. The formation of a purulent focus becomes the inevitable outcome of this pathological process. Such a focus may remain relatively localized within a small area of the intersphincteric space or become more diffuse, progressively involving the surrounding cellular structures and adjacent tissues. This disease progression leads to pronounced clinical manifestations, including severe pain, rapid onset of edema, and discomfort in the perianal region

Delayed diagnosis or incorrect surgical management significantly increases the likelihood of unfavorable outcomes. In such cases, the acute inflammatory process often loses its potential for complete resolution and gradually transitions to a chronic form. Chronic paraproctitis is characterized by a prolonged, often months-long, debilitating course, negatively affecting not only the patient's physical health but also their psycho-emotional state and overall quality of life.

As the pathological process advances, persistent anal fistulas form—one of the most severe and treatment-resistant complications of paraproctitis. Such fistulas demonstrate resistance to conservative therapy, a tendency toward frequent exacerbations, and a high risk of secondary infection in the surrounding tissues. Chronic paraproctitis with fistula formation often necessitates repeated surgical interventions, which are frequently traumatic, involve prolonged recovery, and require comprehensive rehabilitation.

Even after adequate surgical treatment, the risk of disease recurrence remains high due to the complex anatomical location of fistulous tracts, their multiplicity, and the significant tissue changes in the perianal region. All these factors highlight

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the importance of early diagnosis, appropriate surgical strategy, and timely radical treatment aimed at preventing the transition of the acute process to a chronic form and minimizing the risk of severe complications[4].

Materials and Methods. The clinical presentation of acute intersphincterparaproctitis (AIP) is characterized by a pronounced pain syndrome with minimal local signs of the purulent-inflammatory process. Pain is especially severe during defecation, resembling that observed in anal fissures. In eight patients, pain was the only complaint. In half of the patients, body temperature did not exceed 38°C. On examination of the perianal region, either no external changes were detected or only slight edema along the anocutaneous line was noted (in 22 patients). On specialized examination, a marked sphincter spasm was typically identified (resting tone of the internal anal sphincter exceeding 9.4 kPa, and of the external sphincter exceeding 6.8 kPa). Digital rectal examination was extremely painful.

The anal crypt adjacent to the infiltrated area was also infiltrated, sometimes protruding into the rectal lumen or, conversely, being retracted. The size of the infiltrate ranged from 3–5 × 2–3 cm. In seven patients, the purulent process extended along the anocutaneous line, and the clinical picture of AIP resembled that of subcutaneous-submucosal paraproctitis.

The clinical features of acute intersphincterparaproctitis (AIP) were the cause of diagnostic errors.

For example, 5 patients were treated on an outpatient basis for 2–3 days for “acute hemorrhoids” or anal fissure. In one patient, acute anal fissure was mistakenly diagnosed. This patient had a pronounced sphincter spasm; a specialized examination was performed only after presacral anesthesia, and on the second day, paraproctitis was revealed and surgically treated.

Therefore, in diagnostically challenging cases, a digital rectal examination under anesthesia is recommended.The analysis was based on recent literature data from PubMed, e-Library, Coloproctology Journal, as well as the authors’ own clinical observations of patients operated on for acute intersphincterparaproctitis.

Main Surgical Approaches

1. Radical Procedures

a)Incision and drainage of the abscess.

b)Simultaneous excision of the internal fistula opening

c)Sphincter-preserving techniques for localized processes.

2. Palliative Interventions

a) Drainage of the purulent focus without excision of the internal opening.

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Used in critically ill patients or in cases with unclear localization of the internal opening.

3. Modern Minimally Invasive Techniques

a) Ligation of the intersphincteric fistula tract (LIFT procedure).

b) Video-assisted techniques (VAAFT).

c) Use of biomaterials for fistula tract closure and reconstruction.

Hospital Admission Record

1. Patient Information

Name: GavkharOtajonova

Date of Birth: 1992

Hospital Number: 1293D

Admission Details

Date of Admission: June 6, 2025

Primary Diagnosis: Chronic intersphincteric fistula of the rectum (paraproctitis)

Date of Surgery: June 7, 2025

General Blood analysis

WBC (10,5 x10 9/L), RBC (3,5 x10 12/L), Neutrophils (78%), ESR (25 mm/h)

Postoperative Course

The surgical pattern was sent for histopathological examination.The result was received within 24 hours:

Findings: Wall thickening, fibrosis around the fistulous tract.

2. Patient Information

*Name:*Tokhir Ergashev

Date of Birth: 1951

*Hospital Number:*126D

Admission Details

Date of Admission: January 15, 2025

Primary Diagnosis: Chronic intersphincteric fistula of the rectum (paraproctitis)

Date of Surgery: January 16, 2025

General Blood analysis

WBC (9,5 x10 9/L), RBC(3 x10 12/L), Neutrophils(86%), ESR(18 mm/h)

Postoperative Course

Postoperatively, the material was sent for histological examination. The result was obtained within 12 hours: the epithelium of the fistulous tract is often absent and replaced by granulation tissue.

3. Patient Information

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*Name:*AtamatovOlimzhon

Date of Birth: 1981

*Hospital Number:*1860D

Admission Details

Date of Admission: August 20,2025

Primary Diagnosis: Chronic recurrent intrasphincteric fistula of the rectum (paraproctitis)

Date of Surgery :August 20, 2025

General Blood analysis

WBC (9,9 x10 9/L), RBC (4.3 x10 12/L), Neutrophils (78%), ESR (15 mm/h)

Express test

HBsAGpositive

The postoperative material was sent for histopathological examination. The report was received within 2 days: hyperplasia of the squamous epithelium and chronic inflammation of the fistulous tract wall.

In cases of acute intersphincterparaproctitis (AIPP), a one-stage radical surgical intervention is usually performed under general or sacral anesthesia.After preparation of the anal verge and rectal mucosa according to standard methods, the communication between the abscess cavity and the rectal lumen is clarified. For this purpose, the infiltrate is punctured along the intersphincteric groove, pus is aspirated, and a dye solution (methylene blue or brilliant green) is injected into the abscess cavity.The further course of the operation depends on the level of communication between the abscess cavity and the rectal lumen:In intrasphincteric communication, a transverse incision parallel to the fibers of the external anal sphincter is made, the abscess is opened, the muscle fibers are bluntly separated, and the incision is extended toward the rectal lumen. Resection is performed proximodistally in a conical manner along the anal verge. This ensures better wound drainage and prevents the formation of residual cavities, which may later develop into a rectal fistula.

In transsphincteric communication through the superficial fibers of the external anal sphincter, the operation is performed as a graded sphincterotomy via the internal opening of the abscess, communication involving a significant portion of the external sphincter, after opening the abscess, excising the affected anal crypt, and extending the incision distally along the anal ridge through the internal opening of the abscess, a seton is placed and ligated.During a follow-up period of up to 3 years, only one patient developed an incomplete internal fistula.

Patients operated for acute paraproctitis under general or spinal anesthesia underwent excision of the fistulous tract, irrigation of the cavity with antiseptic

solutions (3% H_2O_2 and decasan), and drainage with a tube wrapped in gauze soaked with Levomekol ointment. On the first postoperative day, the drainage tube was removed, the wound was treated with Betadine, a rubber drain was left in place, and an aseptic dressing was applied.

Conclusion: Thus, AIPP should be regarded as a distinct form of the disease with an aggressive clinical course and a substantial risk of complications. Early and accurate diagnosis, combined with the selection of an optimal surgical strategy, is critical in reducing the likelihood of chronic disease progression. An individualized approach to determining the extent of surgical intervention, tailored to the patient's clinical presentation and overall health status, has proven to be the most effective. To establish standardized treatment protocols, further large-scale clinical studies are required.

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