EVALUATION OF THE EFFECTIVENESS OF SURGICAL TREATMENT IN CLINICAL FORMS OF TRANSIENT ACUTE PARAPROCTITIS

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Annotation. Research objective: *To study the methods used in Uzbekistan to quickly and without complications treat patients with acute acute paraproctitis by correctly diagnosing them and applying the right treatment measures.* ***Materials and methods:*** *In the purulent surgery department of the Rustamov's clinic of Mirzo Ulugbek district of Tashkent city, 45 patients with paraproctitis were admitted in October-November 2024 and divided into 20 control groups and 25 patients into main groups. The medical history of the patients was studied and a retrospective analysis was conducted. Paraproctitis with aerobic flora was observed in all patients. Also, additional examinations, including: a sharp increase in the leukocyte and erythrocyte sedimentation rate in the blood test, were observed.* ***Analysis and discussion of results:*** *Additional tests, including: a sharp increase in the leukocyte and erythrocyte sedimentation rate in blood tests, were also observed. After the operation, the patients were administered detoxification, antibiotic, analgesic, antihypoxic, and tissue metabolism-improving drugs.* ***Conclusion:*** *One of the main aspects is correct and early diagnosis of the disease and successful surgery, which allows the process to be uncomplicated.*

Keywords: *acute paraproctitis, leukocytes, ESR, purulent cavity, antibiotics, analgesics.*

Relevance. Anorectal abscesses and fistulas are potentially debilitating but rarely life-threatening conditions. They usually originate from an infection in the cryptoglandular epithelium and, based on their location, are classified into perianal, ischiorectal, intersphincteric and supralevator. According to the literature, perianal and ischiorectal abscesses are the most common (1). Supralevator abscesses are the least common, occurring in 1% to 9% of patients, and they present with nonspecific anal pain and fever while redness or swelling of the buttocks may be absent. Spread across specific anatomic spaces is a very rare complication but may potentially lead to sepsis and death (9). Acute paraproctitis is one of the most common purulent surgical diseases, accounting for 0.5-4% of all surgical diseases and 24-50% of urgent proctological diseases. Acute paraproctitis is observed in severe form (ischiorectal, pelviorectal, retrorectal, horseshoe-shaped) in 5-58% of cases, in 4.0% of cases, pus ruptures into the abdominal cavity, and in 1.2% of cases, it spreads to the groin and genital areas (7,10). Postoperatively, recurrent paraproctitis or rectal fistula occurs in 24-88% of cases, anal sphincter insufficiency occurs in 6-27.9% of cases, and posterior anal discomfort occurs in 17-36% of cases (4,6). Complex anal fistulas are difficult to manage. The success rate of most procedures is not satisfactory as the recurrence rates are very high in these fistulas. Depending on the location and severity of paraproctitis, radical and 2-stage operations are performed. In radical operations, the purulent cavity is opened, cleaned, and the purulent duct and internal opening are closed. This method is used in mild forms of paraproctitis. 2-stage operations: 1) the purulent cavity is opened, cleaned, and the internal opening is drained with a ligature. In the 2nd stage, the fistula is cut. These methods are used in severe forms of paraproctitis(5,7,10). After surgery, treating patients with antibiotic therapy, analgesics, detoxification, and drugs that improve regeneration and hemodynamics helps the disease to progress more quickly and without complications.

Research objective: To study the methods used in Uzbekistan to quickly and without complications treat patients with acute acute paraproctitis by correctly diagnosing them and applying the right treatment measures.

Inspection material and methods: A retrospective analysis was conducted of the medical history of 25 patients who were included in the main group and who were diagnosed with paraproctitis in October-November 2024 at the Department of Purulent Surgery of the Rustamov Clinic of the Mirzo Ulugbek District of Tashkent. Paraproctitis with aerobic flora was observed in all patients.

Analysis and discussion of results. We studied the condition of 25 patients with acute paraproctitis, who were included in the main group and visited our clinic in October-November 2024, before and after treatment. 20 of the patients were men and 5 were women (**Fig 1**.).

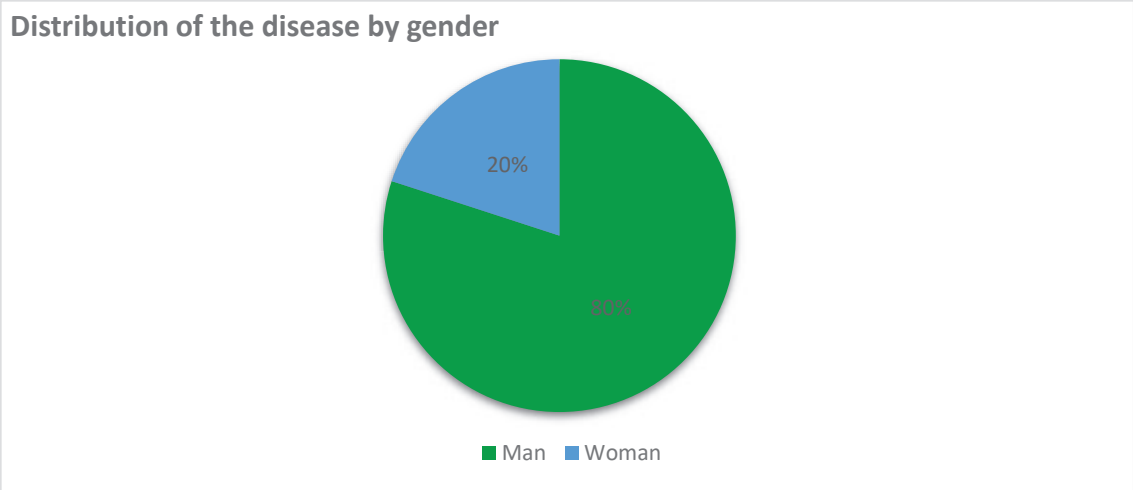

Fig 1. Distribution of patients by gender.

As you can see from the diagram, men are 4 times more likely to get sick than women.

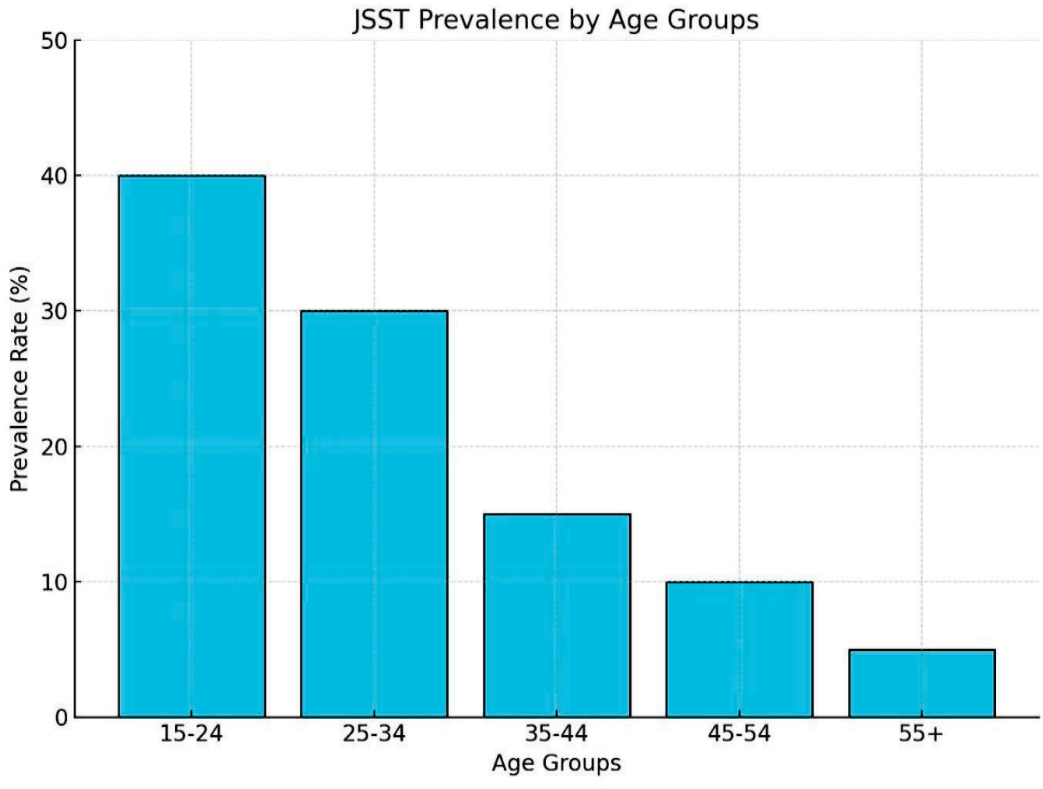

Fig 2. Average age of those affected by the disease

Also, the average age of our patients was 43 years for men and 44 years for women (**Fig 2**.). Blood tests, ECG, and ultrasound examinations were performed, the patient's life and medical history were studied, and a local examination was performed. The results showed that the patients' blood tests showed a significant increase in the number of leukocytes (**Table 1.**), an increase in the level of ESR, and during local examination, when palpating the affected area with a hand, we can see redness and swelling, as well as pain in that area, and increased sphincter tone.

Table 1.

Analysis of blood samples taken from patients

General blood test results		
Analysis indicator	**Standard**	**In patients**
Hemoglobin	Men: 130-170 gr/l	Norm
	Women: 120-150 gr/l	Norm
Red blood cell (erythrocyte) count	Men: 4,0-5,0·10^{12}/l	Norm
	Women: 3,5-4,7·10^{12}/l	Norm
Leykocyte count	Price range 4,0-9,0 x10^{9}/l	Increased (±15,0 x10^{9}/l)
Platelet count	Price range 180-320·10^{9}/l	Norm
Erythrocyte sedimentation rate (ESR)	Men: 3 — 10 mm/ hour	Increased ±12 mm/ hour
	Women: 5 — 15 mm/ hour	Increased ±18 mm/ hour

In addition, in some patients, during ultrasound examination, we observed infiltrates of various sizes in the affected area. We also observed that the patients had used various ointments, antibiotic tablets, and painkillers for 3-4 days without any effect. Based on the data obtained, these patients were diagnosed with acute paraproctitis and were referred for the operation "Opening the purulent cavity and liquidation of the internal opening" as a treatment procedure.

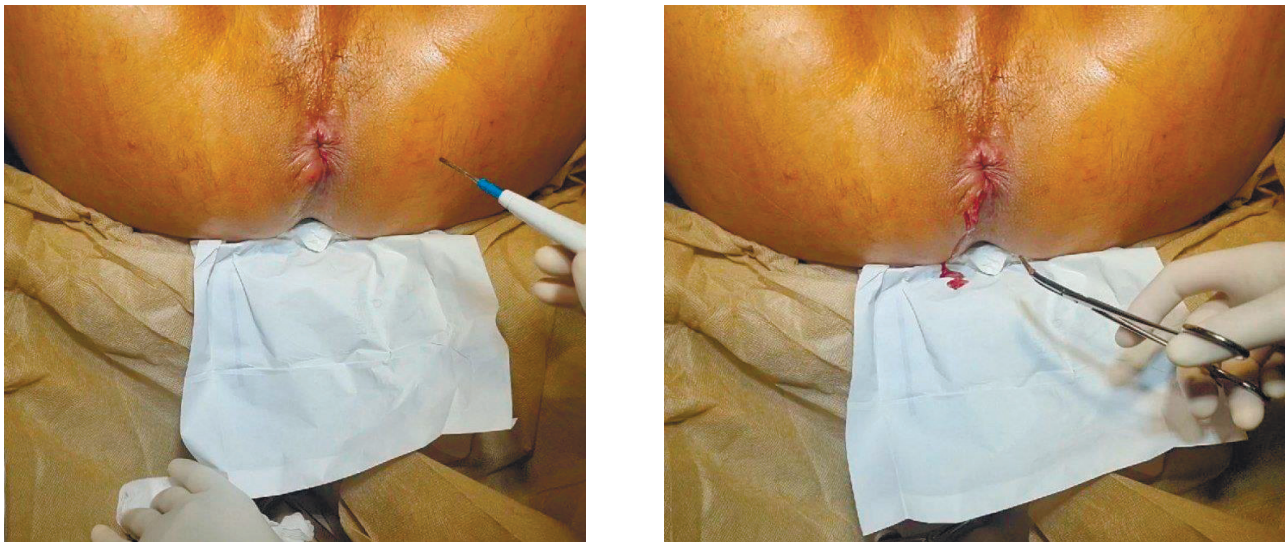

Fig 3,4. "Opening of the purulent cavity and liquidation of the internal hole" operation

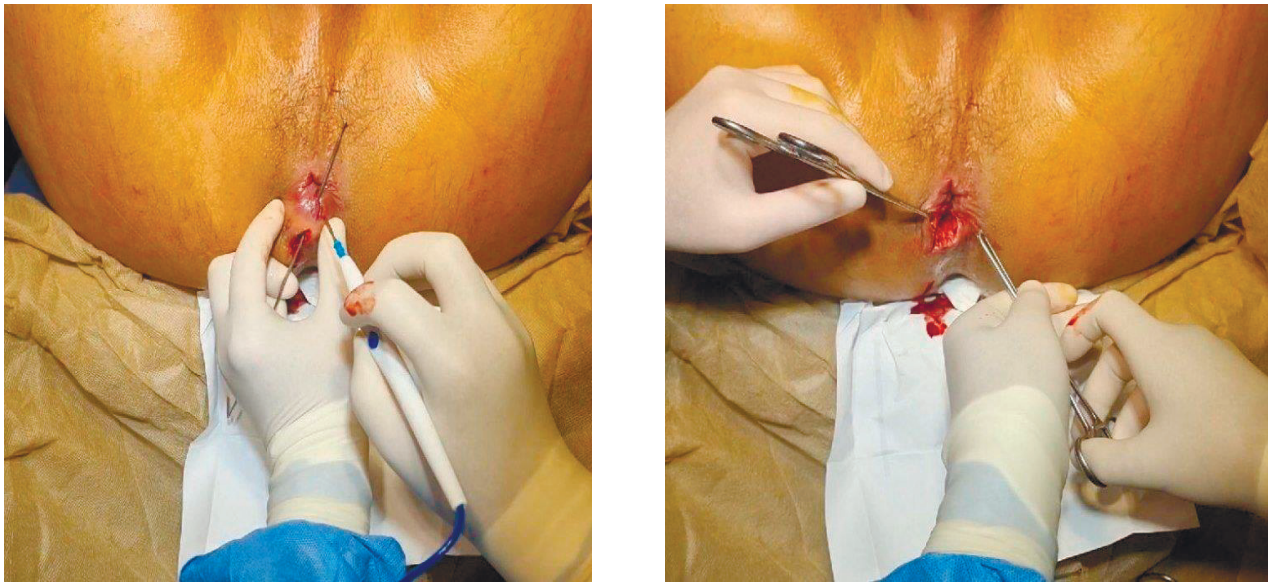

Fig 5,6. "Opening of the purulent cavity and liquidation of the internal hole" operation

The patients were prepared for the operation in accordance with the established standards. After that, the patients underwent the operation "Opening the purulent cavity and liquidating the internal hole" under spinal anesthesia. The patients were treated in the hospital for 2-9 days. In the postoperative period, local antiseptic treatment (hydrogen peroxide, betadine) was carried out 1-2 times a day.

Patients received antibiotic (ceftriaxone, levofloxacin, metrogil) and analgesic (blokium, ketonal) treatments based on daily standards, and some patients additionally received infusions of detoxification (Nacl-0.9%, reosorbilact) and antihypoxic drugs.

In these patients, the process of clearing postoperative pus and necrotic tissue took an average of 3-5 days. In some patients, the process was even faster.

During our research, we used and studied many foreign literatures, below we present the results of some of these articles for comparison:

An otherwise healthy 52-year-old male patient was admitted to our surgical department from a public hospital with sepsis following multiple drainage procedures of a perianal abscess. He presented with fever, cramping lower abdominal pain and severe pain around the area of the buttocks. The physical examination revealed tenderness upon deep palpation of the right lower abdominal quadrant with no evidence of peritoneal irritation. An extensive perianal surgical wound was revealed, indicating the previous drainage procedures were performed through bilateral ischioanal incisions. No pathology of the scrotum and groin was observed. The digital rectal examination provoked severe pain and was not diagnostic. The laboratory studies showed leukocytosis (white blood cells number, 18.000/μL; neutrophils, 97%) and an increased level of C-reactive protein (CRP, 30 mg/L). The computed tomography (CT) scan, which was performed 5 days prior to presentation, demonstrated a posterior horseshoe abscess and inflammation of the right pararectal space. Due to the patient's indolent clinical presentation, the complex perianal surgical wound and the persistent fever despite the multiple drainage procedures, a magnetic resonance imaging (MRI) of the lower abdomen and pelvis was performed. As a new finding, an abscess cavity was revealed in the right supralevator space. Fluid collections and air were detected in the retropubic area and anterolateral extraperitoneal compartments which extended to the anterior abdominal wall.

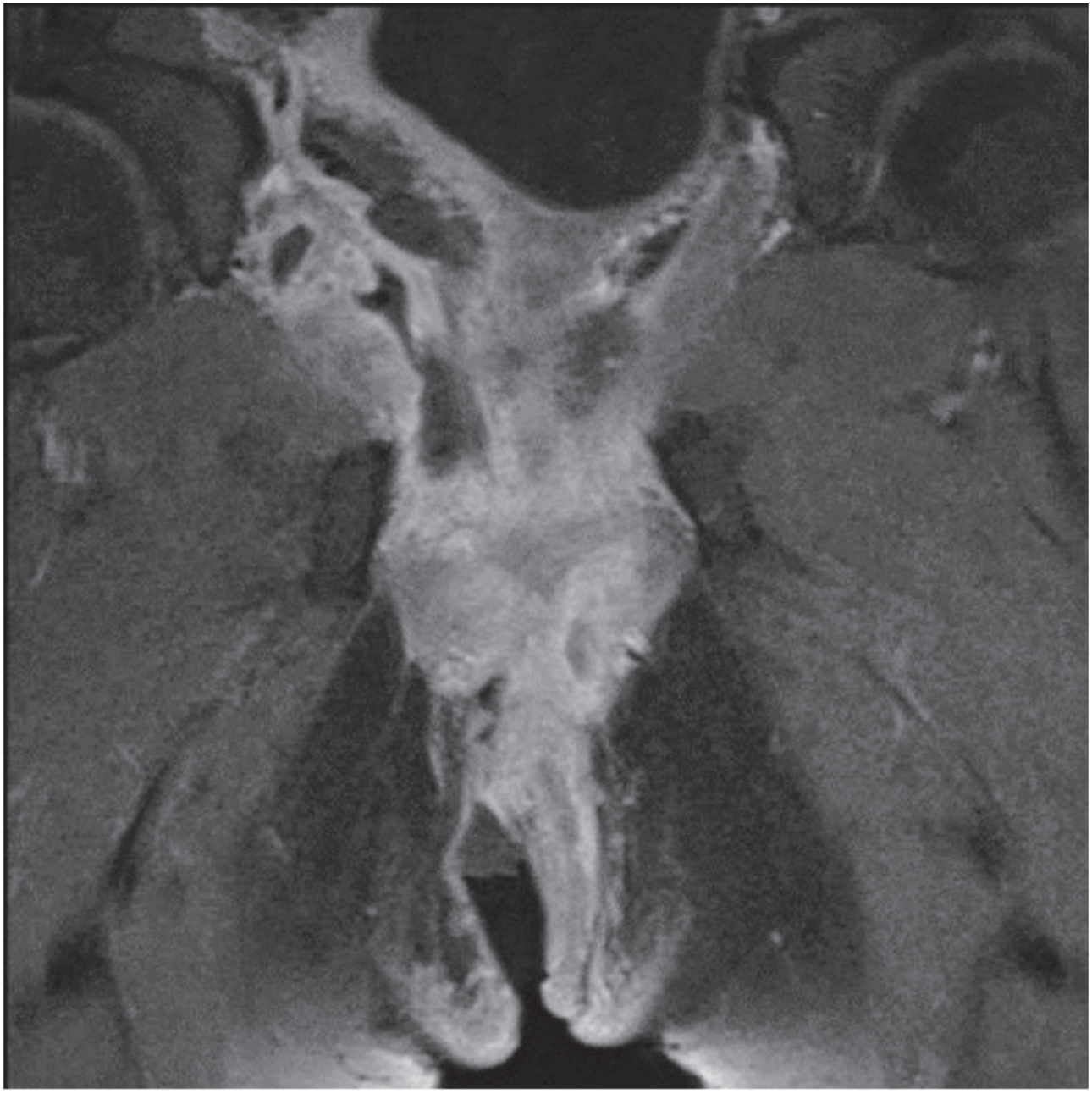

Fig. 7. Horseshoe abscess cavity involving the bilateral ischioanal spaces.

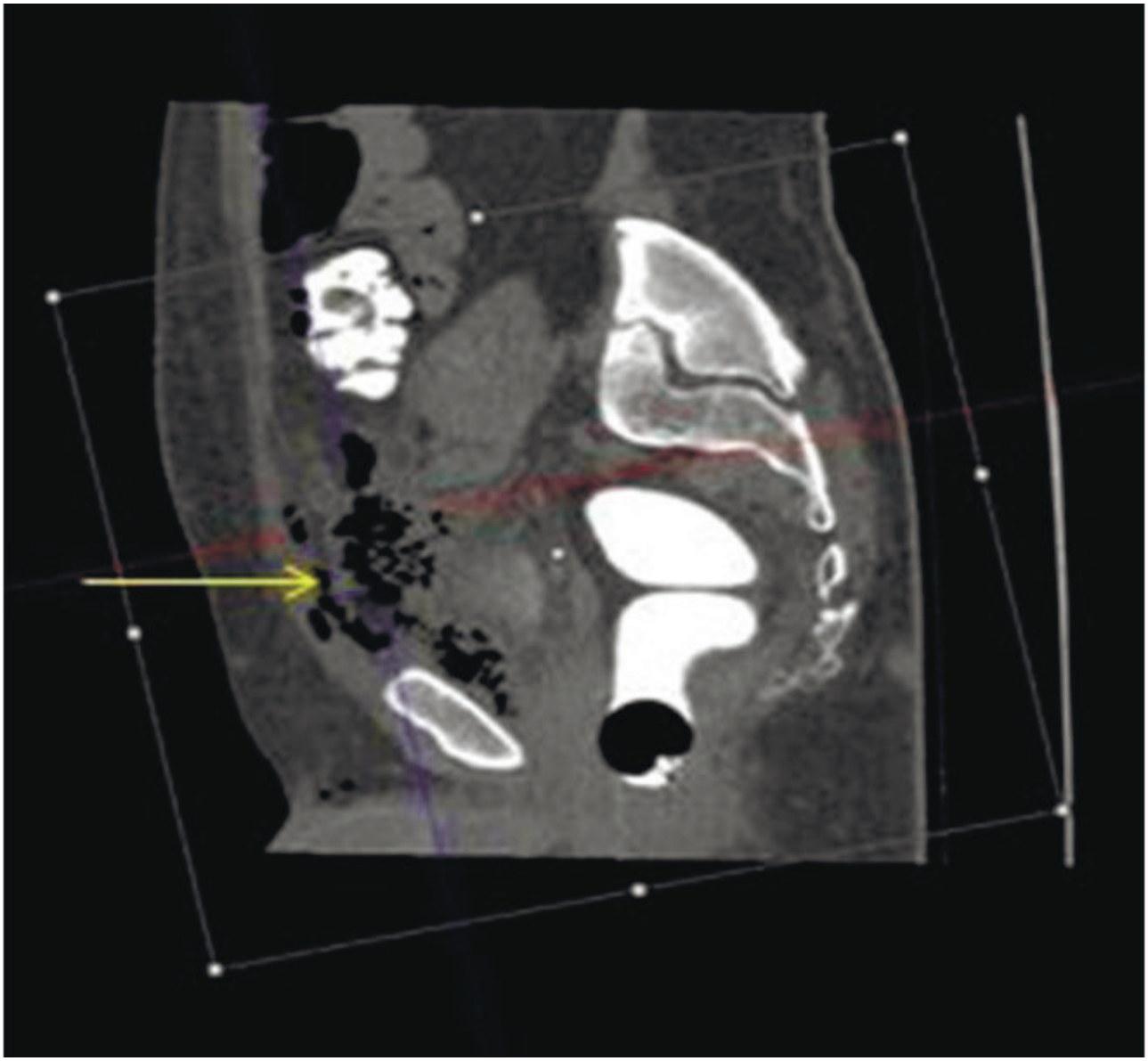

Fig. 8. Air and fluid (arrow) in the anterolateral extraperitoneal compartments.

Initial resuscitation with crystalloids and intravenous broad-spectrum antibiotics was followed by an examination under general anaesthesia. Prior to induction of general anesthesia, the patient received counsel regarding the emergency procedure, and written informed consent was obtained. Our institution's policy is that a case report does not meet the criteria of research that must be approved by the Health Sciences Institutional Review Board (IRB) therefore it is exempt from IRB review. In the operating room, thorough inspection and wash-out of the bilateral ischioanal spaces were possible through the previous incisions. Neither an additional surgical wound to the perineum nor a posterior midline sphincterotomy were performed. The anoscopic examination revealed the internal opening of a fistulous tract in the posterior midline (6 o'clock in lithotomy position). A malleable probe was placed through the internal opening to the right deep postanal cavity, excluding any other potential limbs of the fistula. A vessel loop was placed as a loose seton drainage in the fistula tract.

Fig 9. Drainage of the ischioanal abscesses using drainages.

The patient remained hospitalized for eight days. The fever receded on the second postoperative day. Serial irrigations through the Foley catheter and digital examinations separating the wound edges were performed. Considering the patient's progressive clinical and laboratory improvement, no further surgical exploration was performed. The patient was discharged on the eighth postoperative day in good condition. He was encouraged to clean his wounds with tap water twice a day. The drains were removed five days later. One week after the drainage procedure, a CT scan confirmed the radiologic amelioration. The inflammatory process was limited, and no abscess cavities were detected. The surgical wounds were kept open to heal by secondary intention and were found to be completely healed 8 weeks later. The seton drainage remained, tracking a transphincteric fistula-in-ano. A ligation of intersphincteric fistula tract (LIFT procedure) was performed. The patient was placed in the prone position. The vessel loop as a seton drainage was removed, and a metallic probe was inserted inside the tract. An incision was made at the intersphincteric groove. Identification and suture ligation of the tract were achieved. The wound was closed with nonabsorbable sutures. The postoperative course was uneventful. Four weeks later, closure of the loop sigmoidostomy was

performed with no postoperative complications. No recurrence was observed during a follow-up of twenty months. Neither sphincteric dysfunction nor degree of incontinence was encountered(1).

A 57-year-old male presented to the ED with diffuse pain vaguely located at the lower abdomen over the previous 24 hours. He was awake and alert and did not complain of pain in any other site. His past medical history included type 2 diabetes mellitus (DM), gout, myocardial infarction and chronic obstructive pulmonary disease. There was no history of constipation or perianal inflammation. He was a heavy smoker, his body mass index was 45 kg/m^2, and he admitted poor compliance with all of his medications. On admission he was febrile (body temperature, 39.5°C), hypertensive (blood pressure, 160/90 mmHg), slightly tachycardic (heart rate, 88 beats/minute), and hyperglycemic (blood glucose, 250 mg/dL). Physical examination revealed pain with deep palpation, no rebound tenderness, negative Giordano sign, and no signs of deep vein thrombosis in the extremities. The scrotum and groin were normal. The digital rectal examination was negative for blood but revealed mild nonspecific pain. A plain abdominal radiograph was normal, and laboratory findings consisted of elevated white blood cell count and C-reactive protein (white blood cells, 26,000/μL; neutrophils, 85%; C-reactive protein, 21.58 mg/L).

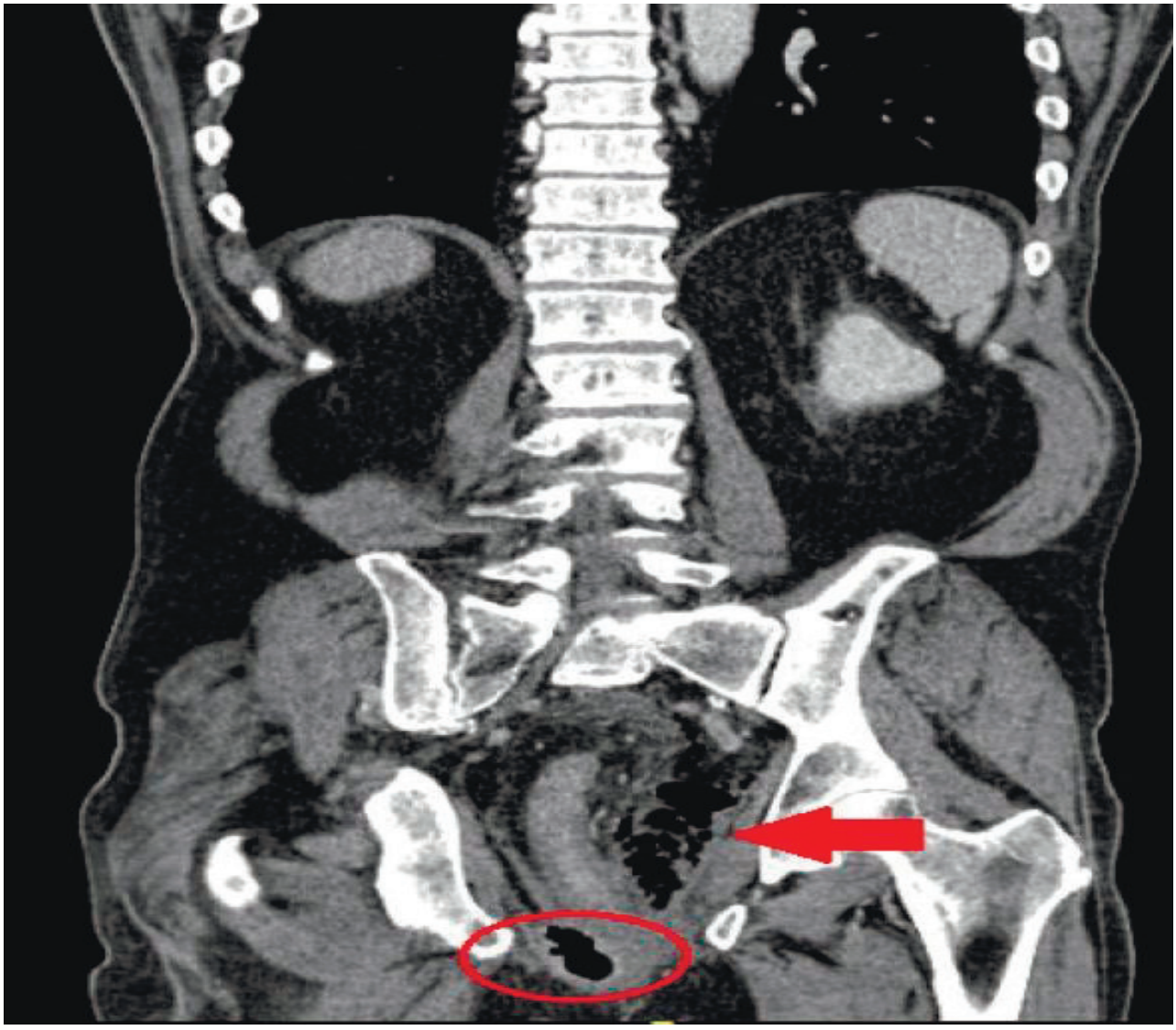

Fig. 10. Frontal view of the abscess cavity on the right side (circle) with contralateral extension to the left suprasphincteric space (arrow).

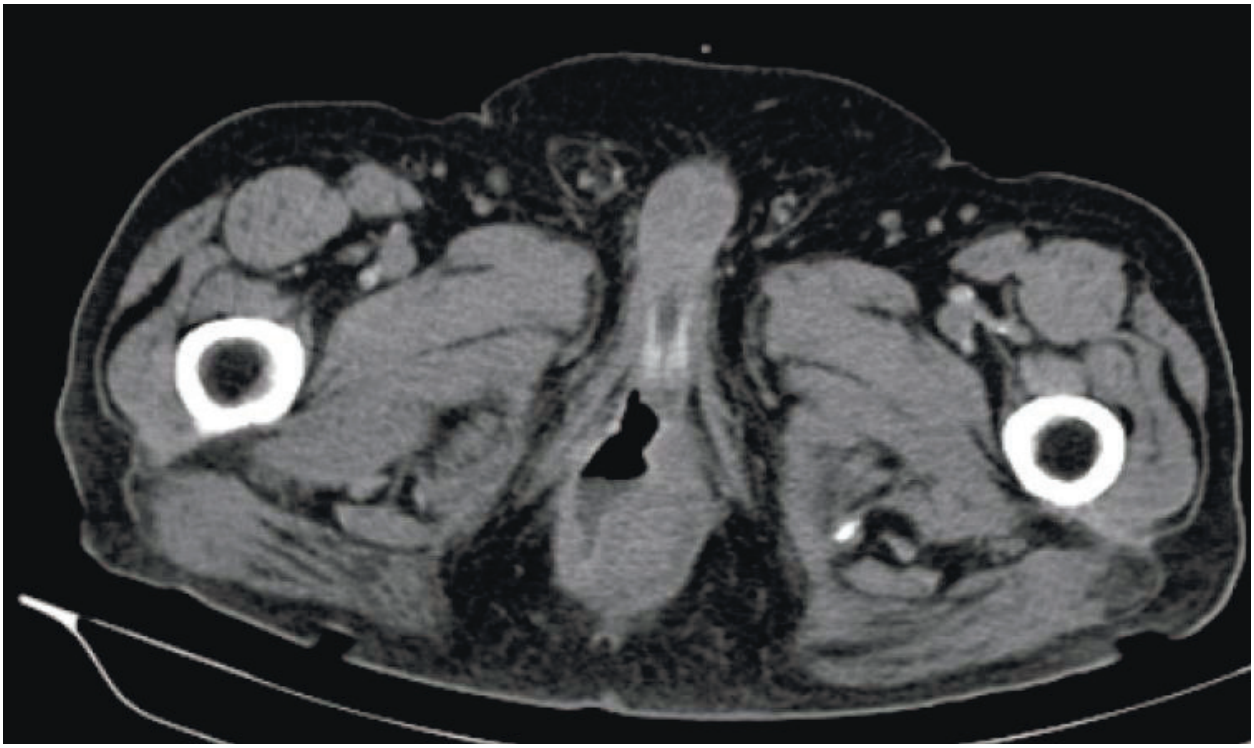

Fig. 11. Fluid-filled cavity with air in axial view.

Deep spreading perianal abscesses represent one of the most morbid entities in anorectal disease. Their rarity and insidious clinical manifestations can lead to delayed diagnosis, severe sepsis, and death. Comorbidities, such as IBD, heart disease, obesity, or DM, raise the risk of complications, and the absence of typical signs along with abdominal pain can confuse the physician in search of abdominal pathology.

Retroperitoneal abscesses usually originate from the genitourinary tract, may be idiopathic or postoperative, and infrequently involve other organs like the colon, duodenum, and pancreas. Traditionally, lumbar incision was proposed for treatment, with the transperitoneal approach being the least successful, in an overall mortality background of 26% highly associated with critically ill patients and delayed diagnoses (9).

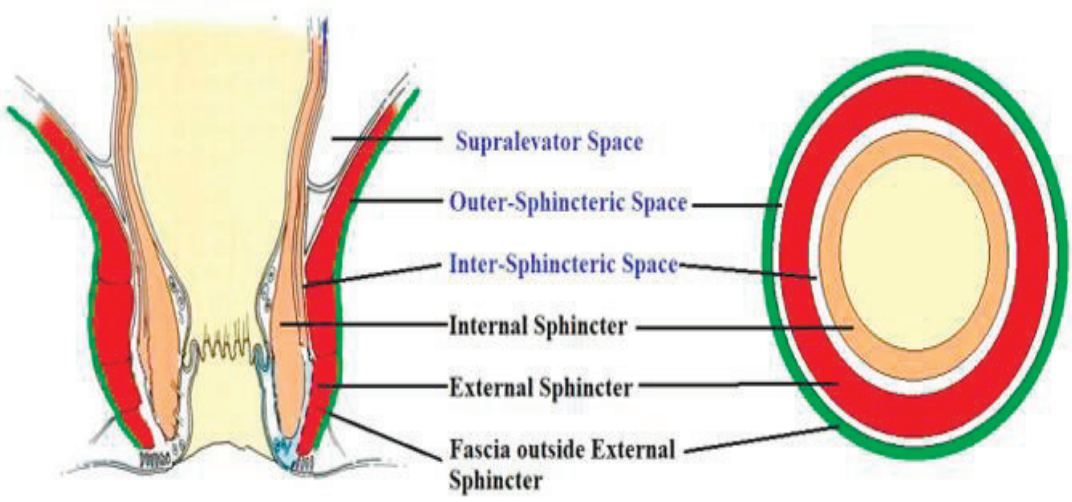

Fig. 11. Schematic diagram showing intersphincteric and outer-sphincteric spaces (8).

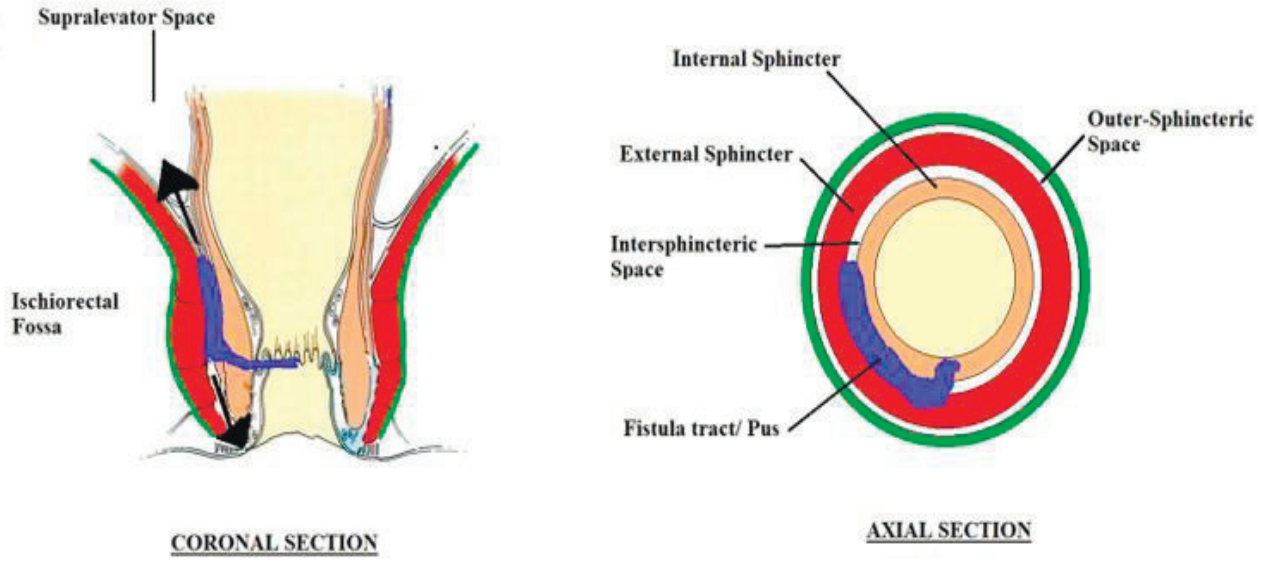

Fig 12. Schematic diagram highlighting abscess/fistula tract in the intersphincteric space and its propensity to spread to supralevator space (8).

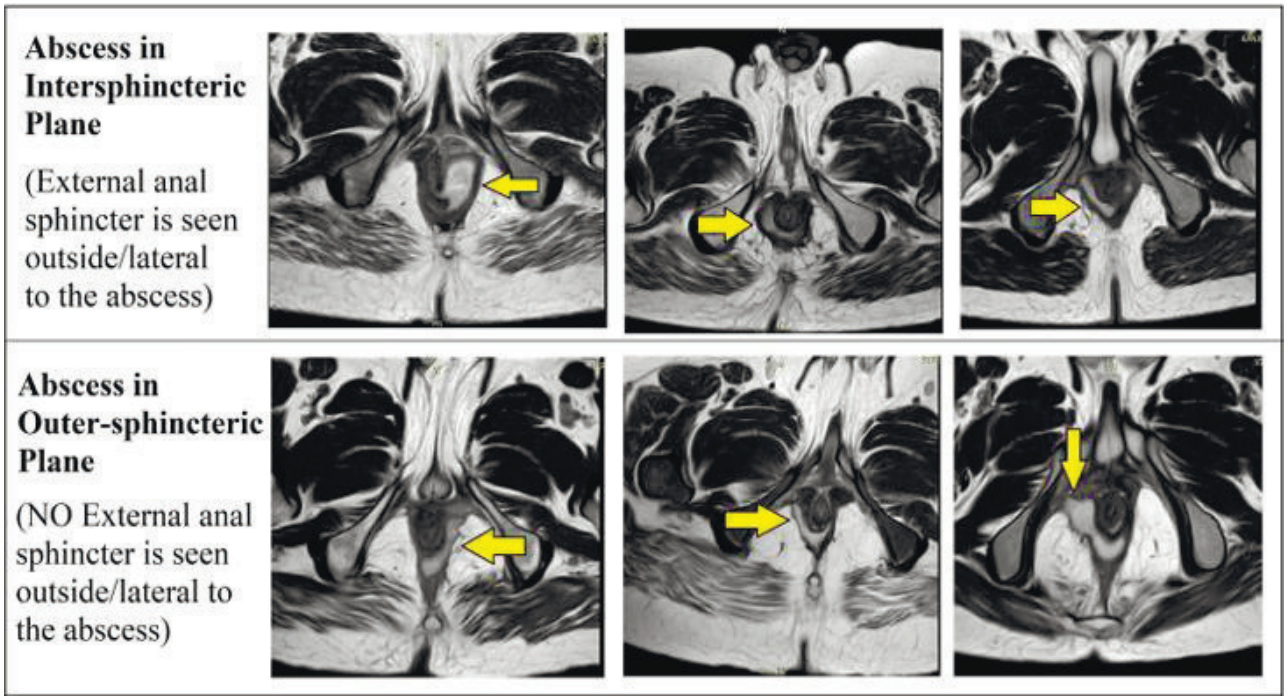

Fig 2. Upper panel: Abscess in the intersphincteric space (external sphincter muscle can be seen lateral to the abscess). Lower panel: Abscess in the outer-sphincteric space (external sphincter muscle cannot be seen lateral to the abscess and the abscess is juxtaposed to the fat in ischiorectal fossa) (8).

Conclusion. In patients with acute paraproctitis, in addition to local antiseptic and general antibacterial therapy, the use of detoxification, antihypoxic, and tissue metabolism-improving drugs further increases the effectiveness of treatment. One of the main aspects is the correct and early diagnosis of the disease and successful surgery, which allows the process to be uncomplicated.

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