

Interception of Fistulous Tract and Application of Ksharasutra (IFTAK) in a Grade IV Trans-sphincteric Fistula in Ano with Scrotal Extension: A Case Report

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Abstract: Background: Complex trans-sphincteric fistula in ano presents a treatment challenge when definitive management must be balanced against the risk of sphincter injury. IFTAK (Interception of Fistulous Tract and Application of Ksharasutra) is a modified Ksharasutra-based technique involving operative interception of the fistulous tract followed by Ksharasutra application. Case presentation: A 31-year-old man presented with a 6-month history of constipation, bleeding per rectum, pain on straining, burning, itching, pricking pain, and purulent discharge from a scrotal external opening. MRI fistulography demonstrated a Grade IV trans-sphincteric fistula with an approximately 8.8 cm primary tract extending from the root of the scrotal sac to the anal canal, a small blind-ending secondary ramification, and no abscess. The patient underwent IFTAK under spinal anesthesia. The tract was identified and curetted, inter-sphincteric access was obtained, and a 30-number Ksharasutra was placed without deliberate division of the external sphincter. Serial Ksharasutra changes and adjunctive wound and medical therapies were continued. Outcome: Ksharasutra clearance was documented on 27 February 2026. At follow-up on 16 March 2026 the wound was dry without pain or purulent discharge. At final assessment on 26 June 2026, approximately four months after Ksharasutra clearance, there was clinical healing without clinical evidence of recurrence. No flatus or fecal incontinence was reported. Conclusion: This case demonstrates the feasibility of IFTAK with Ksharasutra in an anatomically extensive trans-sphincteric fistula with scrotal extension. The outcome represents the complete multimodal treatment protocol, and the contribution of IFTAK alone cannot be determined from a single case.

Keywords: Fistula in ano; Bhagandara; Ksharasutra; IFTAK; Trans-sphincteric fistula; Scrotal extension; Ayurveda

1. Introduction

Fistula-in-ano is a chronic inflammatory tract connecting the anal canal or rectum with the perianal skin. Management requires eradication of the fistulous tract while preserving anal sphincter function. Complexity is determined by the relationship of the tract to the sphincter complex, its extent, secondary extensions, and associated pathology. In trans-sphincteric fistulas involving a substantial proportion of the external sphincter, treatment strategies that limit sphincter division may be appropriate to reduce the risk of continence impairment [2,3]. MRI is an established modality for preoperative assessment of complex fistula in ano and provides detailed information regarding the primary tract, secondary extensions, internal opening, and relationship to the sphincter complex [1, 2].

In Ayurveda, fistula in ano is described under the clinical entity of *Bhagandara*. *Ksharasutra*, a medicated seton prepared according to classical Ayurvedic principles, has been used in its management and subsequently evaluated in clinical studies. A multicentric randomized clinical trial conducted under the Indian Council of Medical Research demonstrated healing with *Ksharasutra*, while comparative clinical evidence has evaluated *Ksharasutra* against fistulotomy [5,6]. IFTAK (Interception of Fistulous Tract and Application of *Ksharasutra*) is a modified *Ksharasutra*-based technique in which the fistulous tract is surgically intercepted and *Ksharasutra* is applied without deliberate division of the external sphincter. Published reports have described its use in

trans-sphincteric and complex fistula-in-ano [7-9]. **Padmasri Dr. M. Sahu has been developed this technique.**

The present case describes a complex Grade IV trans-sphincteric fistula-in-ano with scrotal extension. MRI demonstrated an approximately 8.8 cm primary tract extending from the root of the scrotal sac to the anal canal, with a small blind-ending secondary ramification and no abscess. The patient was treated with IFTAK and serial *Ksharasutra* changes. Clinical healing was documented, with no clinical evidence of recurrence and no reported flatus or fecal incontinence at the final assessment on 26 June 2026.

2. Patient Information

A 31-year-old man presented to the Shalya Tantra outpatient service on 24 November 2025 with a 6-month history of constipation, pain on straining, burning sensation in the anal region, itching, pricking-type pain, and purulent discharge from an external opening in the scrotal region.

There was no known systemic illness, previous surgical intervention, previous treatment for fistula-in-ano, or drug allergy. His body weight was 74 kg at presentation.

3. Clinical Findings

Local examination revealed sinus openings extending from the anal region towards the scrotum, with purulent discharge from the external opening. Digital rectal examination identified an internal opening at the 12 o'clock position in the

anal canal. The clinical findings were suggestive of a complex fistula in ano with scrotal extension.

Diagnostic Assessment

MRI fistulography performed on 2 October 2025 demonstrated scrotal wall edema with surrounding fat stranding and traces of fluid. A linear T2-hyperintense sinus tract arose from the posterior aspect of the root of the scrotal sac and extended posteriorly along the right lateral aspect of the corpus spongiosum, with surrounding fat stranding. The tract continued into the anterior perianal space and traversed the external sphincter at the 12 o'clock position, with a suspected internal opening within the anal canal approximately 2.5 cm proximal to the anal verge. The primary tract measured approximately 8.8 cm in length and 2-3 mm in maximum thickness. A small blind-ending secondary ramification arose from the anterior aspect of the primary tract near the root of the scrotal sac. No abscess was identified. The internal sphincter and remaining external sphincter were intact, and the levator ani and pelvic musculature appeared normal. The MRI impression was **Grade IV trans-sphincteric fistula**.

Preoperative investigations showed hemoglobin 12.2 g/dL, total leukocyte count 4940/mm³, platelet count 258,000/mm³, blood glucose 106.71 mg/dL, serum creatinine 0.90 mg/dL, and PT-INR 1.00. SGPT was 60.6 U/L, with the remaining documented liver function parameters within the reported limits. Thyroid function tests and routine urine examination were within normal limits. Screening for HIV, HBsAg, and HCV was negative.

Ultrasonography of the scrotum performed on 1 February 2026 revealed no major abnormality.

Based on the clinical examination and MRI findings, the final diagnosis was complex Grade IV trans-sphincteric fistula in ano with scrotal extension and a secondary blind-ending ramification.

4. Therapeutic Intervention

Operative Procedure

- The patient underwent IFTAK (Interception of Fistulous Tract and Application of Ksharasutra) on 26 November 2025 under spinal anesthesia in the lithotomy position. Aseptic preparation was performed with betadine and spirit. Methylene blue dye was injected through the external scrotal opening; dye was observed from the **internal opening and the anal canal at the 12 o'clock position**. A probe introduced through the external scrotal opening emerged at the 12 o'clock internal opening.
- Curettage of the tract was performed and the external opening was widened. The inter-sphincteric space was identified and incised, with a wide opening created at the 12 o'clock position. Hydrogen peroxide and saline wash was given, followed by normal saline cleaning. A 30-number *Ksharasutra* was introduced and secured with a loose knot in the inter-sphincteric space. Hemostasis was achieved and *Jatyadi* oil dressing was applied. No deliberate division of the external sphincter was performed. The procedure was uneventful and the patient was shifted to recovery.



Figure 1: Pre operative probing of the fistula



Figure 2: Window opening and Intra operative probing for Kshara sutra

Immediate Postoperative Management

- The patient was kept nil by mouth for 4 hours, placed in the head-low position, and monitored for temperature, pulse, and respiration. **Inj. Pacimol** was prescribed as required and catheterization was advised if required. During hospitalization, intravenous Amoxicillin-clavulanate 1.2 g twice daily, **Pan** 40 mg twice daily, Emset 4 mg twice daily, and **Inj. Pacimol** 1 g twice daily were administered, with Syp. Picozide 15 mL at bedtime.
- The dressing was opened after 12 hours. Wound care consisted of a 15-minute warm-water sitz bath with Proctobath, normal saline wash, betadine and hydrogen peroxide wash, drying of the wound, *Jatyadi* oil Pichu, and packing dressing.
- Ksharasutra Treatment and Adjunctive Therapy
- Ksharasutra changes were performed under local anesthesia with 1% Lignocaine at weekly intervals. On 3 December 2025, *Sukshma Triphala* twice daily, **Tab Parskin** twice daily, **Tab Krimikuthar** rasa once daily, *Panchatikta Ghritha Guggulu* once daily, **Syrup Anulax** 10 mL at bedtime, and *Panchatikta Kashaya Kwath* for sitz bath were prescribed, together with Cifran 500 mg twice daily, Metro 600 mg once daily, Rab 20 mg once daily, and Dolo 650 mg twice daily if pain occurred for first 5 days.
- Ksharasutra changes were performed on 11 and 19 December 2025. Good healing was documented on 19 December, when *Sukshma Triphala Guggulu* once daily, *Parskin* twice daily, *Krimikuthar* once daily, *Panchatikta Ghritha Guggulu* once daily, *Anulax* 10 mL at bedtime, and *Panchatikta Kashaya* for sitz bath were prescribed.



Figure 3: Changing the Ksharasutra under Local anaesthesia

- On 1 January 2026, *Ksharasutra* change was performed and on 12 January, *Ksharasutra* change was performed and Acidova twice daily and Helmintrox twice daily were prescribed. On 26 January, *Ksharasutra* change was performed; Acidova twice daily, *Triphala Guggulu* twice daily, and *Gandhak Rasayan* twice daily were prescribed, and ultrasonography of the scrotum was advised.
- Ultrasonography of the scrotum performed on 1 February 2026 showed no major abnormality.
- On 10 February 2026, *Ksharasutra* change was performed. A to Z once daily, Germocid twice daily, *Amrutta Guggulu* twice daily, Proctobath 15 mL for sitz bath, Aragvaddadhi Kashaya 10 mL twice daily with lukewarm water, Helmintrox once daily, Flexon twice daily if pain occurred, and *Mahatikta Ghritam* once daily were prescribed for 15 days.
- The *Ksharasutra* was cleared on 27 February 2026. Germocid twice daily, Parskin twice daily, *Amrutta Guggulu* twice daily, and Zerodol-P if pain were prescribed thereafter.



Figure 4: Ligation and clearing of Kshara Sutra done on.

- These oral and local herbal formulations, antimicrobial agents, analgesics, laxative therapy, and wound-care measures were administered as adjunctive treatment to the principal IFTAK with *Ksharasutra* intervention.

Follow-up and Outcomes

On 16 March 2026, the patient had no fresh complaints. There was no pain or purulent discharge from the secondary opening, and the wound was dry. Increased appetite and weight gain were also documented.

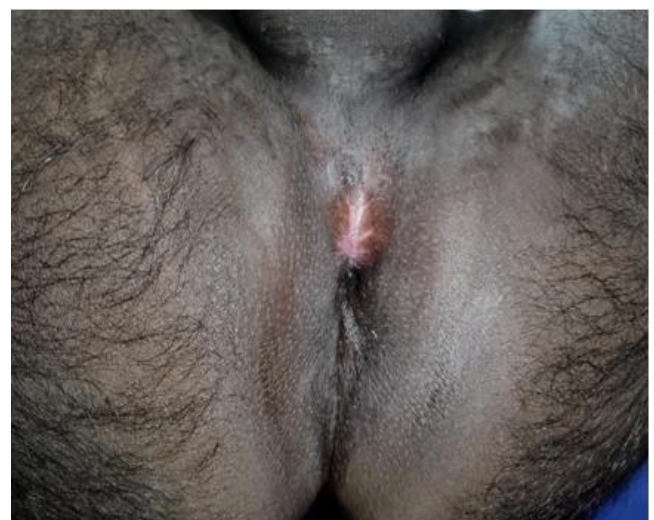


Figure 5: Post-procedure follow-up on day 18 after ligation of kshara sutra

A further clinical assessment was performed on 26 June 2026, approximately 3 months after the March assessment. The patient had no complaints and no clinical evidence of

recurrence. Local examination was consistent with healing, with no discharge. He reported no pain, swelling, flatus incontinence, or fecal incontinence, and peristalsis was normal.

No procedure-related complication was documented during the treatment course. At the final assessment, clinical healing was maintained without clinical evidence of recurrence.

Timeline

Date	Clinical event
2 October 2025	MRI fistulography demonstrated a Grade IV trans-sphincteric fistula with an approximately 8.8 cm primary tract extending from the root of the scrotal sac to the anal canal, a small blind-ending secondary ramification, and no abscess.
24 November 2025	Initial clinical evaluation for symptoms of approximately 6 months' duration. External sinus openings with purulent discharge extended towards the scrotum, with an internal opening at 12 o'clock.
26 November 2025	IFTAK performed under spinal anesthesia. The tract was identified with methylene blue and probing; curettage and widening of the external opening were performed, followed by intersphincteric access, irrigation, and placement of a 30-number <i>Ksharasutra</i> . No deliberate external sphincter division was performed.
26-27 November 2025	Immediate postoperative management and first dressing. Local care included warm-water sitz bath with Proctobath, saline wash, betadine and hydrogen peroxide wash, <i>Jatyadi oil Pichu</i> , and packing.
3 December 2025	<i>Ksharasutra</i> change under local anesthesia with documented adjunctive Ayurvedic, antimicrobial, laxative, sitz-bath, and analgesic therapy.
11 December 2025	<i>Ksharasutra</i> change performed.
19 December 2025	<i>Ksharasutra</i> change performed; good healing documented. Adjunctive Ayurvedic therapy continued.
1 January 2026	<i>Ksharasutra</i> change performed.
12 January 2026	<i>Ksharasutra</i> change performed; Acidova and Helminthox prescribed.
26 January 2026	<i>Ksharasutra</i> change performed; Acidova, <i>Triphala Guggulu</i> , and <i>Gandhak Rasayan</i> prescribed. Ultrasonography of the scrotum advised.
1 February 2026	Ultrasonography of the scrotum performed; no major abnormality reported.
10 February 2026	<i>Ksharasutra</i> change performed; further adjunctive therapy prescribed for 15 days.
27 February 2026	<i>Ksharasutra</i> documented as cleared.
16 March 2026	Follow-up: no fresh complaints, no pain or purulent discharge from the secondary opening, and wound dry. Increased appetite and weight gain documented.
26 June 2026	Final clinical assessment, approximately 3 months after the March assessment: no complaints and no clinical evidence of recurrence. Local examination was consistent with healing, with no discharge. No pain, swelling, flatus incontinence, or fecal incontinence was reported; peristalsis was normal.

5. Discussion

The principal clinical issue in this case was management of an anatomically extensive trans-sphincteric fistula while limiting sphincter injury. MRI demonstrated a Grade IV trans-sphincteric tract approximately 8.8 cm in length, extending from the root of the scrotal sac to the anal canal, with a small secondary blind-ending ramification and no abscess. MRI is particularly useful in complex fistula in ano because it defines the relationship of the fistulous tract and secondary extensions to the sphincter complex [1,2]. In this patient, the defined tract anatomy, absence of abscess or supralelevator extension, and preservation of the remaining sphincter complex provided a basis for tract interception rather than deliberate external sphincter division.

The established evidence for *Ksharasutra* provides context for this approach. In the multicentric ICMR randomized clinical trial, 265 patients treated with *Ksharasutra* and 237 treated by conventional surgery achieved complete healing; median healing time was 8 weeks with *Ksharasutra* compared with 4 weeks with conventional surgery [5]. Among patients assessed at 1 year, recurrence was reported in 4% and 11%, respectively [5]. A prospective comparative study similarly found a longer mean healing period with *Ksharasutra* than fistulotomy (53 versus 35.7 days), but fewer days away from routine work with *Ksharasutra* [6]. Thus, *Ksharasutra* represents a treatment strategy in which tract healing may require a longer treatment period while allowing management without prolonged hospitalization.

Madam check this is required or not, IFTAK this techniuie is develope and publised by dr manoranjan sahu , so ple take that reference also he has done big study and series also.

The present intervention was IFTAK rather than conventional prolonged cutting *Ksharasutra* treatment. IFTAK involves interception of the fistulous tract followed by application of *Ksharasutra* and has been reported in a trans-sphincteric fistula [7] and subsequently in complex fistula in ano [8]. More recently, a retrospective series of 10 patients with recurrent fistula in ano reported clinical outcomes following IFTAK [9]. However, the IFTAK evidence remains limited to case reports and small observational series; no randomized comparative evidence establishes its efficacy relative to other sphincter-preserving procedures [7-9].

In this patient, the fistulous tract was identified intraoperatively and accessed through the intersphincteric plane. The external sphincter was not deliberately divided. Serial *Ksharasutra* treatment continued until clearance on 27 February 2026. At assessment on 16 March, the wound was dry without pain or purulent discharge. On 26 June, approximately four months after *Ksharasutra* clearance, local examination remained consistent with healing and there was no clinical evidence of recurrence. The patient reported no pain, swelling, flatus incontinence, or fecal incontinence. These findings demonstrate a favorable clinical outcome following the complete treatment protocol, but they do not objectively establish preservation of sphincter function

because a validated continence score or anorectal manometry was not performed.

The patient also received concomitant institute-prepared herbal formulations, antimicrobial and analgesic medicines, laxative therapy, sitz-bath therapy, and local *Jatyadi* oil wound care. These therapies have different supportive roles, including bowel regulation, symptom control, local cleansing, and management of the perioperative wound environment. Their concurrent use constitutes an important confounding factor when interpreting the outcome. The observed healing therefore represents the outcome of the complete multimodal treatment protocol, and cannot be attributed exclusively to IFTAK or *Ksharasutra*.

The principal limitations of this report are its single-case design, absence of a comparator, lack of validated objective continence assessment, and absence of post-treatment MRI confirmation of tract resolution. Recurrence assessment was clinical rather than radiological. Nevertheless, the case provides documented clinical experience with IFTAK and serial *Ksharasutra* treatment in an anatomically extensive Grade IV trans-sphincteric fistula with scrotal extension, with clinical healing and no clinical evidence of recurrence during the available follow-up. Prospective comparative studies incorporating standardized healing, continence, recurrence, and patient-reported outcomes are required to define the role of IFTAK in complex fistula in ano.

Patient Perspective

The patient reported satisfaction with the treatment and overall hospital care. He was particularly pleased that major surgery was not required, which he considered advantageous from a cost perspective. At the final assessment, he expressed satisfaction with the absence of recurrent symptoms and the sustained healing of the fistula.

Informed Consent

Written informed consent was obtained from the patient for publication of the case details and accompanying clinical photographs.

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