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SUCCESSFUL MANAGEMENT OF FISTULA-IN-ANO BY IFTAK (INTERCEPTION OF FISTULOUS TRACT WITH APPLICATION OF *KSHARASUTRA*): A MINIMAL INVASIVE METHOD: A CASE REPORT

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Abstract

Background: Fistula-in-ano is a chronic and often recurrent anorectal disorder characterised by persistent purulent discharge, intermittent pain, local irritation, and occasional swelling around the perianal region. The condition commonly develops following a cryptoglandular infection and significantly affects patients' quality of life due to its prolonged course and tendency for recurrence. Conventional surgical procedures such as fistulotomy, fistulectomy, advancement flap surgery, and ligation of the intersphincteric fistula tract (LIFT) are widely practised; however, these approaches may be associated with postoperative pain, delayed wound healing, recurrence, and, in some cases, varying degrees of anal sphincter injury leading to faecal incontinence**.** Anal sphincter damage is a danger associated with conventional surgical procedures, which frequently result in protracted wound healing. A cutting-edge, minimally invasive method called Interception of the Fistulous Tract with Application of *Ksharasutra*

(IFTAK) is intended to maximise healing results while rigorously maintaining sphincter integrity. The **Interception of the Fistulous Tract with Application of Ksharasutra (IFTAK)** has emerged as an innovative sphincter-preserving technique derived from the principles of Ayurvedic parasurgical management. IFTAK involves the identification and interception of the fistulous tract at a strategic point, usually in the vicinity of the infected anal crypt or intersphincteric region, followed by the application of a medicated **Ksharasutra** (alkaline medicated thread). The intercepted tract allows effective drainage of septic contents and eradication of the primary source of infection while minimising tissue trauma.

Presentation of case-Presenting a Case: A 36-year-old man with recurring purulent discharge and severe perianal discomfort had no notable medical or surgical history. Chronic tobacco use and sporadic alcohol use were noteworthy aspects of the individual's past. The diagnosis of fistula-in-ano was validated by clinical examination. Following the patient's successful admission and management using the IFTAK approach, a planned three-month postoperative follow-up protocol.

Results: Pain, drainage, induration, and wound diameters all gradually decreased, according to serial follow-up evaluations. Early in the postoperative period, healthy granulation tissue formed, leading to full wound epithelialization. Over the course of the follow-up period, no recurrence, sphincter dysfunction, or other surgical problems were noted.In conclusion, the IFTAK technique offers good wound healing kinetics and a smooth postoperative recovery. It is an efficient, minimally invasive, and sphincter-preserving method for treating fistula-in-ano.

Keywords: *Bhagandara,* Fistula-in-Ano, IFTAK, *Ksharasutra*, *Shalya Tantra*, Wound Healing

1. Introduction:- *Bhagandara* is chronic and difficult to treat; it is one of the *Ashta Mahagada* described by Acharya Sushruta. It may be associated with fistula-in-ano, a prevalent anorectal condition marked by aberrant communication between the perianal skin and the anal canal.[1] The illness typically results from a cryptoglandular infection, which causes an abscess to form and a fistulous tract to develop.[2]Clinically, patients present with recurrent purulent discharge, pain, perianal swelling, irritation, and discomfort during defecation, significantly affecting their quality of life. Despite the availability of various surgical modalities, recurrence and preservation of anal

continence remain major concerns in the management of fistula-in-ano.[3] Conventional procedures such as fistulotomy and fistulectomy are associated with prolonged wound healing and varying degrees of sphincter injury, which may adversely affect continence.[4]Among the Ayurvedic parasurgical approaches, *Ksharasutra* therapy has gained wide acceptance due to its ability to achieve simultaneous cutting, drainage, debridement, and healing of the fistulous tract.[5] However, the conventional *Ksharasutra* technique often requires a prolonged treatment duration and repeated thread changes, which may cause patient discomfort and affect compliance.[6]To overcome these limitations, the Interception of Fistulous Tract with Application of *Ksharasutra* (IFTAK) technique was developed. This minimally invasive, sphincter-preserving procedure involves intercepting the fistulous tract near the site of infection, thereby shortening the tract, improving drainage, and facilitating faster healing while maintaining anal sphincter integrity.[7] Emerging clinical evidence suggests that IFTAK is associated with favourable healing rates, reduced postoperative morbidity, shorter treatment duration, and lower recurrence rates compared with conventional approaches.[7,8]The present case report highlights the successful management of Bhagandara (fistula-in-ano) using the IFTAK technique and demonstrates its potential as an effective sphincter-preserving treatment modality. *Ksharasutra* therapy's simultaneous cutting, drainage, debridement, and healing characteristics have made it a popular Ayurvedic para-surgical treatment for *Bhagandara.*[5] Long treatment times and patient pain from frequent thread changes are still issues, though.[6] The method called the Interception of Fistulous Tract with Application of *Ksharasutra* (IFTAK) was created in order to get around these restrictions. The goal of the procedure is to preserve sphincter function while intercepting the fistulous tract close to the infection site, shortening the tract, facilitating drainage, and hastening healing.[7] Clinical reports have shown encouraging results, including good healing rates and decreased morbidity. [7,8]

2. Case Presentation: A 36-year-old male presented to the Shalya Tantra Outpatient Department with complaints of intermittent pain and recurrent purulent discharge from the perianal region for the past six months. The discharge was occasionally associated with localised discomfort, perianal irritation, and difficulty in sitting for prolonged periods. The symptoms showed a recurrent pattern with temporary relief following spontaneous drainage of pus. The patient denied any history of fever, bleeding

per rectum, constipation, diarrhoea, weight loss, or altered bowel habits. There was no previous history of anorectal surgery, perianal abscess drainage, tuberculosis, inflammatory bowel disease, diabetes mellitus, hypertension, or any other significant systemic illness. Personal history revealed chronic smoking and occasional alcohol consumption. Family history was non-contributory.

2.1 Clinical Findings

2.1.1 General Examination: The patient was conscious, cooperative, and well-oriented to time, place, and person. General physical examination revealed no pallor, icterus, cyanosis, clubbing, lymphadenopathy, or pedal oedema. Vital parameters were within normal limits.

Parameter	Findings
1. Pulse Rate	78 beats/min
2. Blood Pressure	124/80 mmHg
3. Respiratory Rate	18 breaths/min
4. Temperature	Afebrile
5. Oxygen Saturation	98% on room air

2.1.2 Local Examination: -Inspection of the perianal region revealed an external opening located in the posterior perianal area with minimal purulent discharge. Surrounding induration and mild tenderness were present. No active abscess or cellulitis was observed. Digital Rectal Examination (DRE) demonstrated normal anal sphincter tone with no palpable intraluminal growth or induration. Proctoscopic examination revealed no evidence of haemorrhoids, fissure, or other anorectal pathology.

Table 2.1.2 Local Examination Findings of the Perianal Region are-

Examination Parameter	Findings
Inspection	Two external openings are present in the perianal region
Number of External Openings	two
Location of External Opening	Approximately at the 9 and 4 o'clock position, 2 and 3 cm from the anal verge
Discharge	Purulent pus discharge present
Perianal Skin	Mild erythema with surrounding induration
Induration	Present around the external opening and along the tract
Tenderness	Mild tenderness on palpation
Swelling	Absent
Abscess Formation	Not evident
Secondary Openings	Not observed
Palpable Tract	Indurated tract palpable beneath the skin
Digital Rectal Examination	Normal anal sphincter tone
Internal Opening	At 6 0 clock postion at the level of the dentate line
Rectal Mucosa	Normal
Bleeding on Examination	Absent
Fecal Incontinence	Absent
Proctoscopic Findings	No associated haemorrhoids, fissure, or anorectal growth
Clinical Impression	Fistula-in-Ano (Bhagandara)

2.2 Diagnostic Assessment-

Based on the history, clinical examination, and local findings, a diagnosis of Bhagandara (Fistula-in-Ano) was made.

2.2.1 Laboratory Investigations-

Investigation	Result	Reference Range
Hemoglobin	13.8 g/dL	13–17 g/dL
Total Leukocyte Count	8,200 cells/mm^3	4,000–11,000 cells/mm^3
Differential Leukocyte Count	Within normal limits	-
ESR	18 mm/hr	<20 mm/hr
Random Blood Sugar	96 mg/dL	70–140 mg/dL
Blood Urea	26 mg/dL	15–40 mg/dL
Serum Creatinine	0.9 mg/dL	0.6–1.3 mg/dL
HIV I & II	Non-reactive	Non-reactive
HBsAg	Negative	Negative
Urine Routine Examination	Within normal limits	-

2.2.2 Diagnostic Parameters-

Parameter	**Findings**
Chief Complaint	Recurrent perianal pain and pus discharge\
Duration	6 months
External Opening	Present
Purulent Discharge	Present
Perianal Induration	Present
Tenderness	Mild
Abscess Formation	Absent

Anal Sphincter Tone	Normal
Incontinence	Absent
Systemic Illness	Absent
Final Diagnosis	Bhagandara (Fistula-in-Ano)

3. Therapeutic intervention:-

After obtaining written informed consent, the patient was admitted for surgery.

Under spinal anaesthesia, the procedure was carried out in the lithotomy position. The fistulous tract was located with a flexible probe. The tract was stopped close to the infection site, and the internal opening was localised. Following that, *Ksharasutra* was inserted through the interposed tract in accordance with IFTAK principles. After establishing adequate drainage, a sterile dressing was applied.

Table 3.1: Follow-up and Wound Healing Timeline After IFTAK Procedure

Follow-up Period	Clinical Findings	Wound Status	Discharge	Pain (VAS)	Intervention
POD-1	Mild postoperative pain and discomfort at the operative site. No active bleeding.	Fresh postoperative wound with healthy margins.	Minimal serosanguinous discharge.	6/10	Daily dressing initiated. Ayurvedic medications as advised.
POD-7	Pain was significantly reduced. Patient comfortable during routine activities.	Healthy granulation tissue observed. No signs of infection.	Minimal purulent discharge.	3/10	First Ksharasutra change performed. Daily dressing and medications continued.
Week-2	Improvement in local symptoms. Reduced induration	Progressive wound contraction with healthy granulation	Scanty discharge.	2/10	Second Ksharasutra change. Daily dressing and Ayurvedic

	and tenderness.	tissue.			medications continued.
Week-3	Comfortable defecation. No difficulty in sitting.	Further reduction in tract size.	Minimal discharge.	2/10	Third Ksharasutra change. Regular dressing continued.
Week-4	Significant symptomatic relief.	Healthy granulation with ongoing tract healing.	Occasional serous discharge.	1/10	Fourth Ksharasutra change. Continued local wound care.
Week-5	No perianal discomfort. Induration markedly reduced.	Near-complete healing of intercepted tract.	Negligible discharge.	1/10	Fifth Ksharasutra change. Medications continued.
Week-6	Marked clinical improvement. No tenderness.	Approximately 80–90% wound healing achieved.	Absent.	0–1/10	Sixth Ksharasutra change. Dressing continued as required.
Week-8	Patient asymptomatic. Normal daily activities resumed.	Almost complete healing with healthy scar formation.	Absent.	0/10	Weekly follow-up and local care.
Week-10	No recurrence of symptoms.	Complete closure of the external opening.	Absent.	0/10	Observation and supportive therapy.
Month-3	No pain, discharge, or swelling. Anal continence preserved. No evidence of recurrence.	Complete wound healing with a healthy scar.	Absent.	0/10	Follow-up assessment completed.

Table 3.2 Outcome Assessment after wound healing (complete 1.5-year follow-up)

Parameter	**Baseline**	After **3** months
Pain	Present	Absent
Purulent Discharge	Present	Absent
Tenderness	Present	Absent
Induration	Present	Absent
Difficulty in Sitting	Present	Absent
External Opening	Present	Completely Healed
Wound Healing	Active Fistulous Tract	Complete Healing
Anal Continence	Preserved	Preserved
Recurrence	Presenting Complaint	No Recurrence Observed

3.3 Among the postoperative care were: Dressing-In order to improve local circulation, ease discomfort, and speed up wound healing, the patient was advised to take warm sitz baths twice a day as part of postoperative therapy. To preserve hygiene and avoid infection, appropriate local wound care was carried out on a regular basis. To guarantee regular bowel movements and reduce straining during defecation, the patient was advised to eat a high-fibre diet. In order to avoid constipation and promote general recuperation, enough oral hydration was advised. To manage pain, analgesic drugs were prescribed as needed. Weekly follow-up evaluations were carried out to track the alleviation of symptoms, examine the degree of wound healing, and detect any problems following surgery.

4. Assessment criteria -

A set of predetermined characteristics that represented both the subjective symptoms and the objective healing results was used in the clinical evaluation of the wound

healing process. The patient's level of pain relief, the presence and intensity of tenderness (painfulness) at the wound site, and the amount of time needed for tissue healing and symptom resolution were all assessed. Additionally, granulation tissue growth and quality were closely monitored as markers of successful wound healing. Regular clinical examinations were used to assess the overall development of wound healing, taking into account elements including wound contraction, tissue regeneration, reduction of inflammation, and full epithelialization. Together, these factors offered a thorough evaluation of the treatment's efficacy and the rate of wound healing.

5. Observation: -

Table 5.1: Clinical Assessment During Follow-up

Parameter	POD-1	POD-7	Week-6	Month-3
Pain (VAS Score 0-10)	8	3	1	0
Discharge Score	3	1	0	0
Tenderness Score	3	1	0	0
Induration Score	2	1	0	0
Granulation Tissue (%)	30%	80%	100%	100%
Wound Healing (%)	10%	50%	95%	100%

6. Result:- Pain, discharge, soreness, and induration gradually decreased during postoperative follow-up. By the end of the third month, the Visual Analogue Scale (VAS) pain score had dropped from 8 on the first postoperative day to 0. During the first week following surgery, purulent discharge significantly decreased, and by the sixth week, it had totally disappeared. By the seventh postoperative day, around 80% of the wound bed had developed healthy granulation tissue. By the sixth week following surgery, 95% of the wound had contracted, and the third-month follow-up revealed full healing. There were no surgical problems, such as recurrence, secondary infection, or faecal incontinence.

Serial clinical photographs documenting progressive wound healing are-

Figure 6.1: Clinical appearance prior to surgery demonstrating an external opening and purulent discharge in the perianal area.

Figure 6.2: Day 1 after the IFTAK treatment, showing good wound margins and sufficient drainage.

Figure 6.3: Day 7 following surgery demonstrates the development of healthy granulation tissue and a decrease in local inflammation

Figure 6.4 : At the six-week mark, there was noticeable wound shrinkage and almost full epithelialization.

Figure 6.5 : A three-month follow-up reveals full wound healing, healthy scar development, and no recurrence.

Healthy granulation tissue with a notable decrease in discharge and pain was seen by the seventh postoperative day. Subsequent follow-up revealed progressive wound constriction and epithelialization. During the three-month follow-up period, complete wound healing was attained, and no recurrence was noted.

7. Discussion: Fistula-in-ano is a common anorectal disorder characterised by an abnormal communication between the anal canal and perianal skin. Despite advances in surgical management, it continues to present a therapeutic challenge because of its chronicity, recurrent nature, and close relationship with the anal sphincter complex.[2–4] The primary objective of treatment is the eradication of the septic focus and fistulous tract while preserving sphincter function and minimising recurrence.[3,4]Acharya Sushruta described *Bhagandara* as one of the *Ashta* Mahagada because of its difficult management and recurrent course.[1] In Ayurveda, *Ksharasutr*a therapy has long been recognised as an effective para-surgical intervention owing to its simultaneous cutting,

curettage, drainage, debridement, and healing properties.[5,6,19–21] Several clinical studies have reported satisfactory healing rates, low recurrence, and preservation of continence following *Ksharasutra* therapy, making it a widely accepted treatment modality for *Bhagandara.[*5,6,19–21]However, conventional *Ksharasutra* therapy may require a prolonged treatment period and repeated thread changes until complete transection and healing of the tract occur.[6] To address these limitations, the Interception of Fistulous Tract with Application of *Ksharasutra* (IFTAK) technique was developed. The principle of IFTAK is based on the interception of the fistulous tract near the primary source of infection, usually the anal crypt, thereby shortening the effective tract length and facilitating adequate drainage. [7,22] This modification reduces tissue trauma, decreases treatment duration, and promotes faster wound healing while preserving anal sphincter integrity. [7,8,22]In the present case, the patient presented with recurrent pain and purulent discharge from the perianal region, which are characteristic clinical manifestations of fistula-in-ano.[2,13] Following IFTAK, progressive reduction in pain, discharge, induration, and tenderness was observed. Weekly *Ksharasutra* changes, daily wound dressing, and supportive Ayurvedic medications contributed to healthy granulation tissue formation and gradual closure of the fistulous tract. Complete wound healing was achieved within the follow-up period, and no recurrence or impairment of continence was observed. The outcomes observed in this case are comparable with those who demonstrated successful healing and reduced morbidity following IFTAK in patients with fistula-in-ano.[7,8] The concept of intercepting the tract close to the internal opening is also consistent with modern sphincter-preserving strategies that focus on eliminating the source of sepsis while minimising sphincter injury.[10–18] Techniques such as LIFT, advancement flap, FiLaC, and VAAFT have been developed with similar objectives; however, recurrence rates and procedure-related limitations continue to be reported in the literature.[10–18,23,24]The favourable outcome achieved in the present case may be attributed to the combined effects of tract interception, continuous drainage, controlled chemical debridement by *Ksharasutra*, and meticulous postoperative wound care. Furthermore, preservation of anal continence throughout the treatment period highlights one of the major advantages of the IFTAK technique. These findings support previous reports suggesting that IFTAK is a safe, minimally invasive, and sphincter-preserving alternative for the management of fistula-in-ano.[7,8,22] Nevertheless, the limitations of this report

include its single-case design and relatively short follow-up period. Larger prospective studies with longer follow-up are necessary to validate the long-term efficacy, recurrence rates, and comparative advantages of IFTAK over other contemporary treatment modalities. [12–18,23–25]

8. Conclusion: *Fistula-in-ano* remains a challenging anorectal condition because of its chronic course, tendency for recurrence, and the need to preserve anal sphincter function during treatment.[2–4] The present case demonstrates that Interception of Fistulous Tract with Application of *Ksharasutra* (IFTAK) is an effective sphincter-preserving technique that promotes adequate drainage, progressive wound healing, and eradication of the fistulous tract while maintaining continence.[7,8,22]The combination of IFTAK, weekly *Ksharasutra* changes, daily wound dressing, and supportive Ayurvedic management resulted in significant clinical improvement, complete wound healing, and absence of recurrence during the three-month follow-up period. These findings are consistent with the established therapeutic benefits of *Ksharasutra* therapy and the growing clinical evidence supporting IFTAK as an advanced modification for *Bhagandara* management.[5–8,19–22]Although further multicentric studies and randomised controlled trials are required to establish definitive evidence, the present case suggests that IFTAK is a safe, minimally invasive, and clinically effective treatment option for fistula-in-ano, offering the dual advantages of sphincter preservation and favourable healing outcomes.[10–18,23–25]

9. Patient Agreement-The patient gave written informed consent for treatment, photography, and clinical data dissemination.

10. No declared conflicts of interest.

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