

1. INTRODUCTION

Anal fistulas can be difficult to treat, with complex fistulas posing additional challenges with 8.6 incidences per 100,000 people [1]. The key concerns in treating this disorder are the risk of anal sphincter injury, which has a high recurrence rate, and the possibility of fecal continence. The goal of surgical treatment is to promote complete healing by closing, obliterating, or removal of the fistula tract while preventing fecal incontinence.

According to *Ayurvedic* literature, the condition *Bhagandara* is linked to fistula-in-ano because to comparable clinical symptoms [2]. *Shataponaka Bhagandara* is one among 8 types of *Bhagandara* with clinical features like pus discharge, multiple openings and associated with severe pain [3,4]. *Ksharasutra* is considered as standard treatment in the complementary and alternative medicine in the treatment of long standing fistula in the ano.[5] IFTAK is a unique advanced *ksharasutra* approach that eliminates the disadvantages of the standard method while also improving patient convenience [6]. Patients with diabetes experience delayed healing and recurring infections, which makes treating a fistula considerably more challenging [7]. Integration eliminates the ambiguities of each health care field and enables them to work together to provide the most comprehensive patient care. Here we report a case of multiple fistula-in-ano associated with diabetes mellitus, which was treated with integrated approach which has resulted in a good surgical outcome.

Case Report

A 58-year-old male, diagnosed with type 2 Diabetes Mellitus and receiving medication for the past nine years was treated at KAHER's Shri B M K Ayurveda Hospital with MR no. KLE220023677 from 8th October 2022 to 5th December 2023. The patient presented with the complaints of pus discharge from multiple openings at perineum region from the past 15 days. Associated complaints were fever with chills and rigors, constipation. There was no significant family history; he was under stress, disturbed social and personal life as he was feeling difficulty in performing his routine activities. Past medical history of the patient suggested that there was no major systemic illness. Personal history suggested that patient is on anti-diabetic medications for the past 9 years, addiction of tobacco chewing since 12 years, alcohol intake twice per week since 12 years. Previous surgical history of the patient suggested that he was operated twice at private hospitals in 2003 and 2013 under spinal anesthesia for right side perianal abscess.

Clinical Findings-

The general examination indicated that the patient was moderately built and nourished. Systemic examination showed that the patient was conscious and well-oriented to time and place. Vital signs revealed a blood pressure of 130/90 mmHg, a pulse rate of 78 beats per minute, a respiratory rate of 20 breaths per minute, and a body temperature of 101.6°F (febrile).

The local examination revealed that on inspection swelling was present on right side of perianal region, multiple opening seen at 7, 9, 10 and 11 o'clock position with purulent discharge. On palpation redness,

temperature, tenderness was present at the right side of the perianal region; Proctoscopy examination was not done as was experiencing moderate pain in the anal region on digital examination. On digital rectal examination, internal opening was present at 6 o'clock position; on digital rectal examination patient sphincter tone was hypertonic with mild tenderness present and no active bleeding.

Diagnostic Assessment - On the basis of complaints and clinical findings Crohn's disease, ulcerative colitis, irritable bowel disease, were taken as differential diagnosis. Based on the history of the patient we did not find any symptoms of Crohn's, tuberculosis etc., so the case was diagnosed as multiple fistula-in-ano due to crypto gland infection (Figure 1) associated with immune-compromised state (Type 2 Diabetes mellitus). After over viewing the symptoms like pain, pus discharge from perianal region, the present case was diagnosed as *Sataponaka bhagandara* as per Ayurveda and treatment was planned accordingly. Overall prognosis of the disease when associated with diabetes mellitus is difficult to treat with expected complications and high recurrence rate.



Figure 1. Multiple pus pockets seen at external opening present at 7,9,10 and 11 o clock position

2. INTERVENTION

The treatment plan was developed using an integrated approach, combining modern medicine and Ayurveda. The prognosis, potential complications, and risks to the patient were thoroughly explained to the patient's relatives, and treatment was initiated after obtaining their consent and investigations. The patient received modern medications, including intravenous fluids, antibiotics, and anti-inflammatory drugs, along with Ayurvedic treatments such as IFTAK (Interception of fistulous track with application of *ksharasutra*) (Table 1) (Figure 2), Sitz baths with *Pentabark Kashaya*. He was advised with oral medications like *kaisore guggulu*, *Asanadi kashaya*, *Cap Grab*, *Tab Nishamlaki* (Table 1) for further management of fistula. The patient was discharged after 7 days, *ksharasutra* was changed after every 7 days and regular dressing was advised.



Figure 2 – Surgical exploration and IFTAK procedure

Table 1: Showing Therapeutic Intervention And Oral Medicine

Sl.NO	Plan Of Care	Procedure	08 to 13/10/22	20/10/22	28/10/22	06/11/22	20/11/22	05/12/22	20/12/22
1.	Modern Medicine	IV Injection ceftriaxone with sulbactam 1.5 gms IV BID.	✓						
		IV metronidazole 100ml daily IV TID.	✓						
		Injection Pantoprazole 40mg IV BID for 1 week	✓						
		Tab zerodol SP 1BID orally BID for 1 week Tab chymoral forte 1 BID orally BID for 1 week	✓						
2.	Insulin therapy	Injection Human atrapid SC as per sliding scale	✓	✓	✓	✓	✓	✓	✓
3.	Intravenous (IV) Fluids	IV fluids like Dextrose Normal Saline (DNS), Ringer Lactate (RL) Normal saline (NS) – 500ml	✓						
4.	IFTAK Procedure		✓						
5.	Kshara Sutra changing			✓	✓	✓			
6.	Tab Nishamlaki	250 mg 2 BID AF	✓	✓	✓	✓	✓	✓	✓
7.	Tab Kaishore guggulu	250 mg 2 BID AF	✓	✓	✓	✓	✓	✓	✓
8.	Cap Grab	500 mg 1 BID AF	✓	✓	✓	✓	✓	✓	✓
9.	Asanadi kashaya	10 ml BID AF	✓	✓	✓	✓	✓	✓	✓
10.	Wound management	Wound cleaned with Panchavalkala kashaya followed by Jatyadi taila dressing	✓	✓	✓	✓	✓	✓	✓

BID - two times daily after food with water, AF – After food with water, IV – Intravenous, SC-Subcutaneous

Timeline

The detail of progress of the disease along with treatment is provided in table 2.

Table 2: Disease progression and treatment

S.No	Year	Symptoms	Intervention
1	2003	Pain and swelling present at right perianal region	Took conservative management at modern hospital and was treated with antibiotics and analgesics.
2	2003	Complaints persists	Incision and drainage of abscess done at modern hospital
3	2013	Recurrence	Incision and drainage of abscess at modern hospital
4	2022	Multiple opening present over right side of perianal region	Incision and drainage along with ksharasutra application (IFTAK)
5	2023	No recurrence of the symptoms	Improved quality of life
6	2024	No recurrence of the symptoms	Improved quality of life

Follow Up and Outcomes

The Patient was called regularly for the follow ups to assess wound healing and frequent change of *ksharasutra* (Figure 3). During the follow up period of 15 days the swelling along with redness was noticed at right perineal region. Surgical exploration of the swelling was done by taking an incision and draining of pus was done by breaking all loculi. The *ksharasutras* from various openings were removed after 1 month allowing them to heal (Table 3) by secondary intention (Figure 3). All the wounds healed with secondary intention and minimal scar formation. The patient was called after 6th month, 12th month, 24th month to check for reoccurrence and there was no reoccurrence seen

during follow up period. No adverse events were reported throughout the course of the treatment.



Figure 3: Healing of fistula track during follow up period

Table 3: Assessment of symptoms during intervention and follow up period

Sl. No.	Date	Complaints	Assessment
1.	8-10-2022 and 13-10-2022	Mild to moderate pain at operated site	Pus discharge and slough, Tenderness present.
2.	20-10-2022	Mild pain present at operated site	Mild pus discharge present, slough was present, granulation tissue presents at wound site, mild tenderness and Serous discharge. <i>Kshara sutra</i> in situ
3.	28-10-2022	Mild pain and discomfort at present at wound site	No pus discharge, mild slough was present, granulation tissue present at wound, Sloping edges, Serous discharge, Mild tenderness, <i>Kshara sutra</i> in situ

4.	6-11-2022	Mild pain and discomfort at present at wound site	No pus discharge, No slough, red granulation tissue, No tenderness, sloping edges. <i>Kshara sutra</i> in situ
5.	20/11/2022	Mild pain and discomfort at present at wound site	<i>Kshara sutra</i> removed
6.	05/12/2022	Mild pain at present at wound site	Signs of healing present
7.	20/12/2022	No complaints	Signs of healing present

3. DISCUSSION

Fistula-in-ano has been a longstanding challenge in medicine, persisting through the ages despite on-going efforts to find effective solutions [9]. IFTAK presents a promising innovation aimed at addressing these limitations and improving outcomes, particularly in comparison to established methods such as *Ksharasutra* therapy.

Antibiotics promote cellular and vascular proliferation and lower infection in fistula-in-ano treatment (Table 1), which speeds up wound healing [10]. Numerous studies have demonstrated that insulin, one of the body's key anabolic hormones, has a good influence in addition to blood glucose control. Cap grab prevents foul smell, cleansing, and possess anti-inflammatory action, thus helps in wound healing [8]. *Jatyadi Taila* contains salicylic acid, which contributes antibacterial, anti-inflammatory, and antifungal effects [11]. Kaishore Guggulu is indicated in non-healing wounds with suppuration [12]. *Pentabark kshaya* has antimicrobial, anti-inflammatory wound healing properties [13].

Nishamlaki exhibits properties like anti-diabetic, and anti-inflammatory [14]. *Asanadi Kwatha* is indicated in blood-related disorders which help in ulcer healing [15].

Strengths – The case was successfully managed with integrated approach, it helped in faster recovery,

shorter hospital stays, and reduced postoperative pain compared to conventional.

Takeaway lessons: Multiple fistula-in-ano is difficult and challenging condition for Ayurveda practitioners. All the cases of multiple fistula-in-ano should be treated with IFTAK since it has a much lower incidence of post-operative complications.

4. CONCLUSION

Multiple fistula-in-ano was managed with integrated approach i.e. intravenous antibiotics, analgesics for seven days, surgical exploration and Ayurveda treatment like IFTAK, and oral medications for 3 months. The patient was followed up to 24 months to check recurrence but there was no recurrence found. There was no adverse effect during the treatment period. Multiple openings with low lying fistula were the key finding which made the condition complex and difficult to treat. Integrated approach has given good surgical outcome with no complications, minimum tissues damage and no fecal incontinence. Further research in this area is necessary to establish evidence-based results, making policy and developing guidelines for the treatment of the multiple fistula-in-ano.

Declaration Of Patient Consent – The authors confirm that they have acquired a patient consent form, in which the patient or caregiver has granted permission for the publication of the case, including accompanying images and other clinical details, in the

journal. The patient or caregiver acknowledges that their name and initials will not be disclosed, and sincere attempts will be undertaken to safeguard their identity. However, complete anonymity cannot be assured.

Authors Details:

¹Associate Professor, Dept of Shalya Tantra, KAHER'S Shri B M Kankanawadi Ayurveda Mahavidhyalaya Shahapur, Belagavi, Karnataka.

^{2*} Associate Professor, Department of Kriya Sharir, KAHER'S Shri B M Kankanawadi Ayurveda Mahavidyalaya Shahapur, Belagavi, Karnataka.

³Professor & HOD, Dept of Shalya Tantra KAHER'S Shri B M Kankanawadi Ayurveda Mahavidhyalaya, Shahapur, Belagavi, Karnataka

⁴Final year PG Scholar, Dept of Shalya Tantra, KAHER's Shri B M Kankanawadi Ayurveda Mahavidhyalaya, Shahapur, Belagavi, Karnataka

Authors Contribution:

Conceptualization and clinical management: All authors

Data collection and literature search: All authors

Writing – original draft: All authors

Reviewing & editing: Dr. RSK, Dr. DP

Approval of final manuscript: All authors

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