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Case Study

PARTIAL FISTULOTOMY WITH *APAMARGA KSHARASUTRA* IN THE MANAGEMENT OF RECURRENT COMPLEX FISTULA-IN-ANO *(BHAGANDARA)*

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ABSTRACT

Bhagandara, correlated with fistula-in-ano, is a chronic anorectal disorder that recurs after conventional surgery, particularly in complex disease. A 36-year-old man presented with perianal pain and pus discharge, pain during defecation, and constipation for six months, after fistulectomy for fistula-in-ano in December 2025. Magnetic resonance fistulography (13 May 2026) showed a recurrent complex fistula-in-ano with tracts extending along the left ischiorectal fossa up to the left pelvic sidewall, reported as Grade V of the St James's University Hospital classification. At operation, three external openings (1, 6 and 11 o'clock) were probed to internal openings at 5, 6 and 10 o'clock respectively. On 20 May 2026, partial fistulotomy was performed under local anaesthesia and *Apamarga Ksharasutra* was placed in all three tracts. It was changed at approximately weekly intervals, with oral Ayurvedic formulations and sitz fomentation with *Tankan bhasma*. The thread in the 6 to 6 o'clock tract was removed on 17 June 2026 and the remaining two on 20 August 2026. Complete healing, without active external opening or purulent discharge, was documented on 2 September 2026. This observation suggests that partial fistulotomy with *Apamarga Ksharasutra* may be considered in recurrent complex fistula-in-ano; longer follow-up is needed to assess recurrence and continence.

INTRODUCTION

Bhagandara, counted among the *Ashta Mahagada* (eight grave disorders) in the Sushruta Samhita, is the Ayurvedic counterpart of fistula-in-ano.[1] Fistula-in-ano is conventionally classified according to the course of the tract in relation to the anal sphincter muscles.[2] Magnetic resonance imaging demonstrates the relationship of tracts to the sphincter complex, ischiorectal fossa and levator plate, and the St James's University Hospital classification grades perianal fistulas from 1 to 5 on this basis.[3] Current surgical guidelines state that imaging may be considered in recurrent or complex fistulas.[4]

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Ksharasutra, a medicated alkaline seton, is a para-surgical method described by Sushruta for *Bhagandara*.[1] In a multicentric randomised controlled trial of the Indian Council of Medical Research, *Ksharasutra* was compared with conventional surgery for fistula-in-ano.[5] A recent meta-analysis of seven studies has also reported favourable cure rates with low recurrence and anal incontinence.[6] A case series has described partial fistulectomy combined with *Ksharasutra* under transrectal ultrasound monitoring,[7] and a complex supralevator fistula with prostatic communication has been reported to resolve with *Ksharasutra*.[8] We report a patient with recurrent complex fistula-in-ano after previous fistulectomy, managed with partial fistulotomy and *Apamarga Ksharasutra*, with imaging, operative findings, treatment details and healing documented.

Case report

Patient Information and Presenting Complaints

A 36-year-old man presented with pain in the perianal region with pus discharge for six months, pain

during defecation for six months, and constipation. He had undergone fistulectomy for fistula-in-ano in December 2025. There was no history of hypertension, type 2 diabetes mellitus or thyroid disorder.

Investigations

Routine laboratory investigations are given in Table 1.

Magnetic resonance fistulography of the perineum (T2 TSE, T1 TSE, STIR and T2 SPACE sequences) on 13 May 2026 was reported as follows. A thin, irregular, T2-hyperintense fluid-line sinus tract in the left perianal region had an internal opening in the anal canal at the 5 o'clock position, about 12mm above the anal verge. A second, thick sinus tract in the posterior perianal region had an internal opening at the 6 o'clock position, about 28mm above the anal verge. The two tracts communicated and formed a large, thick tract in the left perianal region that extended along the ischiorectal fossa and superiorly up to the left pelvic sidewall, measuring about 6mm in thickness, 19mm in anteroposterior length and 96mm in superoinferior length, with no significant pelvic collection. A further branching thick tract extended anteriorly to an external opening at the 12 o'clock position of the anterior perineum, and crossed the midline to the right side with a suspicious internal opening at the 10 o'clock position. No fat stranding or abscess was seen in the ischiorectal or ischioanal fossa, and no lymphadenopathy was noted. The findings were reported as recurrent complex fistula-in-ano, Grade V of the St James's University Hospital classification.

Table 1: Laboratory investigations

Parameter	Result	Unit / remark
Haemoglobin	12.3	g/dL
White blood cell count	4.80	$\times 10^3/\mu L$
Prothrombin time	12.9	seconds
Random blood sugar	107.4	mg/dL
HIV 1 and 2	Non-reactive	–
HBsAg	Non-reactive	–

HIV: Human Immunodeficiency Virus; HBsAg: Hepatitis B surface antigen

Diagnosis

Recurrent complex fistula-in-ano *(Bhagandara),* Grade V of the St James's University Hospital, classification on magnetic resonance imaging, following previous fistulectomy.

Therapeutic Intervention

Pre-procedure preparation: Written informed consent for the procedure was obtained. Injection tetanus toxoid 0.5ml was given intramuscularly, and a sensitivity test with 2% lignocaine was performed. The operative site was painted with antiseptic solution and draped under aseptic precautions.

Operative findings: Three external openings were identified in the perianal region at about the 1, 6 and 11 o'clock positions (Fig. 1). On gentle probing, the 1 o'clock opening communicated with an internal opening at 5 o'clock, the 6 o'clock opening with an internal opening at 6 o'clock, and the 11 o'clock opening with an internal opening at 10 o'clock (Table 2). The tracts were thick and indurated with purulent discharge, consistent with recurrent complex fistula-in-ano. The MRI report had placed the anterior external opening at 12 o'clock, whereas at operation it was found at 11 o'clock.

Table 2: Tract mapping at operation and duration of *Ksharasutra* in each tract

External opening	Internal opening	*Ksharasutra* removed	Duration in situ*
1 o'clock	5 o'clock	20/08/2026	92 days
6 o'clock	6 o'clock	17/06/2026	28 days
11 o'clock	10 o'clock	20/08/2026	92 days

*Calculated from the date of placement (20/05/2026) to the date of removal. The thread in the 6 to 6 o'clock tract was removed first; the remaining two (1 to 5 and 11 to 10 o'clock tracts) were removed together.

Procedure: On 20 May 2026 the patient was placed in the lithotomy position under local anaesthesia with 2% lignocaine. After probing each tract from the external to the internal opening, partial fistulotomy was performed in the accessible portions of the tracts. The tracts were cleaned, and purulent material and unhealthy tissue were removed as required. *Apamarga Ksharasutra* was then placed in each of the three tracts and secured (Fig. 2), haemostasis was ensured, and the patient was shifted to the recovery area in stable condition. The *Ksharasutra* used was the standard *Apamarga Ksharasutra*, a surgical linen thread coated with *Snuhi* latex, *Apamarga kshara* and *Haridra* powder.

Post-procedure medication: The following were prescribed *Avagaha sweda* (sitz fomentation) with *Tankan bhasma*; *Saptavinshati guggulu*, 2 tablets twice daily; *Arogyavardhini vati,* 1 tablet twice daily; *Abhayarishta*, 4 teaspoonfuls; and *Avipattikar churna*, 2 teaspoonfuls at bedtime with lukewarm water.

The thread was changed under aseptic precautions at approximately weekly intervals (Table 3; Fig. 3).

Table 3: Chronology of procedure, *Ksharasutra* changes and outcome

Date	Event
20/05/2026	Partial fistulotomy; *Ksharasutra* placed in three tracts
27/05/2026	*Ksharasutra* changed
03/06/2026	*Ksharasutra* changed
17/06/2026	*Ksharasutra* of the 6 to 6 o'clock tract removed after adequate cutting and healing; remaining two *Ksharasutras* changed
24/06/2026	*Ksharasutra* changed in the two remaining tracts
24/06/2026 to 20/08/2026	Remaining two *Ksharasutras* changed at approximately weekly intervals with progressive cutting and healing of the tracts
20/08/2026	Both remaining *Ksharasutras* removed after satisfactory healing
02/09/2026	Complete healing documented; no active external opening or purulent discharge

Follow-up and Outcome

After removal of the *Ksharasutras* the patient was followed regularly, with progressive reduction in pain and purulent discharge followed by healing of the tracts (Fig. 4). On 2 September 2026, complete healing was documented with no active external opening or purulent discharge (Fig. 5). This was 105 days (15 weeks) after the procedure; the *Ksharasutra* remained in the slowest-healing tracts for 92 days (13 weeks).

Figures



Fig. 1: Pre-procedure clinical photograph of the perianal region. Scarring from the previous fistulectomy and multiple external openings of the recurrent fistula are seen.



Fig. 2: Immediate post-procedure photograph after partial fistulotomy. *Apamarga Ksharasutra* threads are in situ in the three tracts, with open wounds of the partially laid-open tracts.

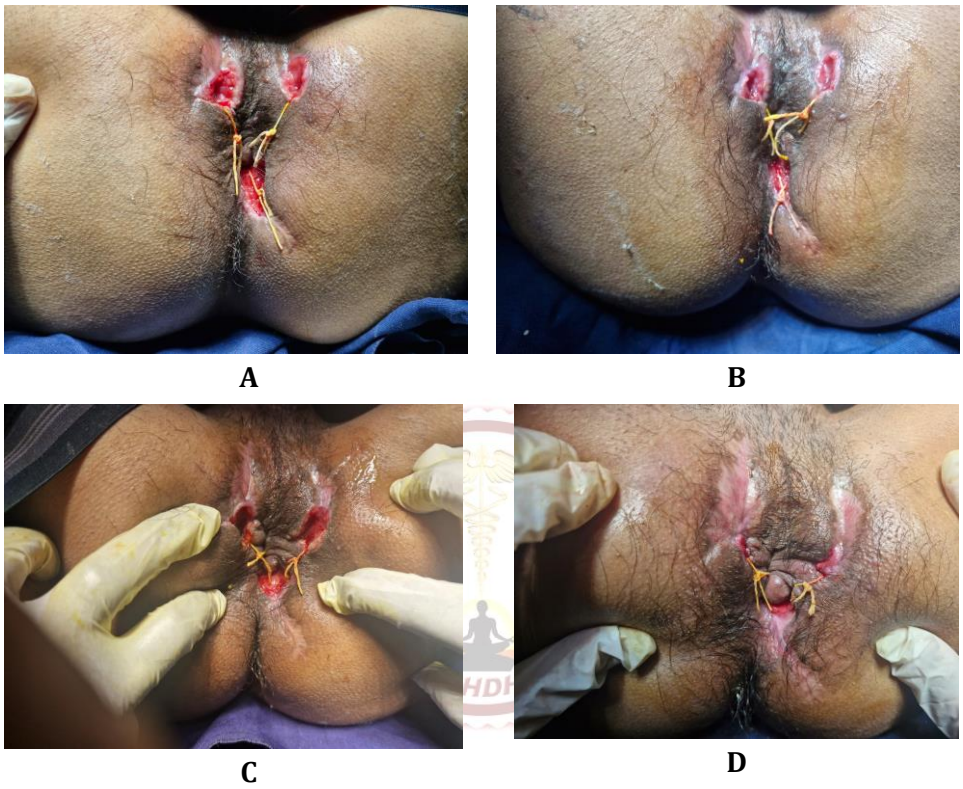


Fig. 3: Serial photographs during *Apamarga Ksharasutra* therapy (A to D). Threads remain in situ in the tracts with granulating wounds that become progressively smaller on successive weekly changes.



Fig. 4: Perianal region after removal of the *Ksharasutra* threads. Scarred, contracted tract lines are seen with small areas of residual raw surface at the anal margin.



Fig. 5: Perianal region at follow-up showing healed tracts. No active external opening or discharge is seen; complete healing was documented on 02/09/2026.

DISCUSSION

The present case is of interest because the disease was recurrent after a previous fistulectomy, had three external and three internal openings, and was graded as Grade V on magnetic resonance imaging, with a thick tract reaching the left pelvic sidewall without an associated collection. In such anatomy, the central surgical concern is to eradicate the tracts without sacrificing sphincter function. The treatment adopted here was a combination of partial fistulotomy of the accessible tract segments with *Ksharasutra* in the remainder.

The classical rationale for *Ksharasutra* rests on its combined actions: the alkaline *(Kshara)* coating debrides unhealthy tissue and keeps the tract clean, while the thread maintains drainage and cuts through the tract gradually as healing proceeds behind it.[1] Partial fistulotomy reduces the length of tract that the thread must traverse and permits cleaning and removal of unhealthy tissue under vision, which may be relevant in a tract that has already failed excision once. The shorter retention of the thread in the 6 to 6 o'clock tract (28 days) than in the other two (92 days) is an observation only; tract lengths were not recorded, and no inference about unit cutting time can be drawn.

In the Indian Council of Medical Research trial, complete healing was recorded in all 265 patients in the *Ksharasutra* series and all 237 in the surgery series, with a longer median healing time for *Ksharasutra* (8 weeks versus 4 weeks); recurrence was lower with *Ksharasutra* (4% versus 11%, based on 150 patients per series followed up for one year), and mild anal incontinence was observed in 8 and 13 patients respectively.[5] A more recent meta-analysis of seven studies reported a favourable cure rate with low recurrence and incontinence.[6] These data come from heterogeneous fistula populations and do not specifically address Grade V recurrent disease; the healing time of 15 weeks in this patient should be read in that light.

Our approach resembles that of a case series of six patients in whom partial fistulectomy was followed by *Ksharasutra* with weekly changes; the average unit cutting time and healing was 7.86 days/cm, all patients were free of fistula, and no recurrence was seen over 12 months of follow-up, with transrectal ultrasonography used before and after treatment.[7] In a patient with a complex left anterolateral supralevator fistula communicating with the prostate, pus discharge stopped after four months of *Ksharasutra* and sonofistulography showed no fistula.[8] The 92 days of thread retention in our patient is of a similar order, although the tract anatomy and the methods of assessment differ. Unlike those reports, our patient has no recorded unit cutting time or follow-up imaging.

Evidence specific to partial fistulectomy combined with *Ksharasutra* is limited. In a randomised study of 42 patients, partial fistulectomy with *Guggulu*-based *Ksharasutra* was reported to be better than *Ksharasutra* alone,[9] and a recent series of three patients with multiple tracts treated with partial fistulectomy and *Apamarga Ksharasutra* reported healing in 8 to 9 weeks, with unit cutting times of 7.45 to 8.40 days/cm.[10] The 105 days to documented healing in our patient is not directly comparable, because the disease was recurrent and Grade V and tract length was not measured. In a prospective observational study of complex fistula-in-ano, recurrence after *Ksharsutra* was lower than after fistulectomy or ligation of the intersphincteric fistula tract, but the difference was not statistically significant,[11] which supports the need for controlled studies.

The strengths of this report are the pre-treatment MR fistulography with tract mapping, the operative documentation of each external and internal opening, the dated record of thread placement, changes and removal in every tract, and serial photographs from the pre-procedure state to healing.

This report has important limitations. It describes a single patient, the oral formulations and sitz fomentation were given together with *Ksharasutra* so their individual contribution cannot be separated, and no pain scores, continence assessment or follow-

up imaging were documented. Healing of the deep tract towards the pelvic sidewall therefore rests on clinical assessment alone. Follow-up beyond the documented date of healing is not recorded, so recurrence cannot be excluded. The European Society of Coloproctology guideline for cryptoglandular fistula names healing, recurrence and incontinence as critical outcomes;[12] of these, only healing is documented here. The observation supports further systematic study, not a conclusion about efficacy.

CONCLUSION

In this patient with recurrent complex fistula-in-ano (Grade V, St James's University Hospital classification), partial fistulotomy with *Ksharasutra* changed at weekly intervals was followed by documented healing of all three tracts 105 days after the procedure, without a reported need for further surgery. Controlled studies with objective assessment of continence, tract measurements and imaging follow-up are needed before the approach can be recommended for such disease.

Learning Points

1. In a recurrent Grade V fistula-in-ano, partial fistulotomy with *Apamarga Ksharasutra* was followed by documented clinical healing of all three tracts.
2. Pre-treatment MR fistulography defined the tract anatomy and the grade of disease in this recurrent case.
3. Objective follow-up, including continence scoring, imaging and a longer period of observation, is needed before efficacy can be inferred.

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