

Ksharasutra Ligation In Intersphincteric Fistula: A Detailed Case Study

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Abstract

Ksharasutra therapy is a well-established Ayurvedic parasurgical technique for the management of Intersphincteric fistula, offering controlled chemical cauterization, debridement, and simultaneous healing. This case study presents the successful management of a 36-year-old male diagnosed with a low anal fistula (intersphincteric type) who underwent Ksharasutra ligation. The patient presented with pain, seropurulent discharge, and recurrent swelling near the anal verge. After probing and confirming the tract, a standard Apamarga Ksharasutra was ligated under local anesthesia. Weekly changes were performed for four weeks. Significant reduction in discharge was noted by the second week, progressive tract cutting and healing by the third week, and complete healing by the fifth week without complications. No recurrence was observed during three months of follow-up. This case demonstrates that Ksharasutra ligation is safe, minimally invasive, cost-effective, and offers high healing rates with low recurrence compared to conventional surgery.

Keywords: Ksharasutra, Bhagandara, anal fistula, Ayurveda, parasurgical procedure, fistula-in-ano, wound healing, case study, minimal recurrence.

Introduction

Intersphincteric fistula (*Bhagandara*) is a chronic inflammatory condition characterized by an abnormal tract between the anal canal and perianal skin¹. It is notorious for recurrence, persistent discharge, pain, and risk of infection. In Ayurveda, Bhagandara is described among the **Ashtamahagada**, indicating its difficult-to-cure nature². Ksharasutra therapy, described by Sushruta, is a unique parasurgical intervention that provides controlled chemical cauterization, drainage, debridement, and healing of the fistulous tract³.

Ksharasutra prepared from **Snuhi latex, Apamarga Kshara, and Haridra** acts as a cutting and healing thread, gradually excising the tract while simultaneously promoting healthy granulation tissue⁴. Modern studies show that Ksharasutra therapy offers lower recurrence rates, minimal tissue damage, and better sphincter preservation compared with conventional fistulotomy and fistulectomy⁵. The treatment ensures continuous chemical action along the tract, preventing premature closure and reducing microbial load⁶. Due to these advantages, Ksharasutra is considered one of the most effective minimally invasive options for managing Intersphincteric fistulas⁷.

Objective

To evaluate the effectiveness of Ksharasutra ligation in the management of a single case of Intersphincteric fistula and assess healing response, symptom relief, and recurrence.

Materials & Methods

This single case study includes a clinically diagnosed patient of low anal fistula treated with Apamarga Ksharasutra ligation. Diagnosis was confirmed by probing and local examination. Ksharasutra was prepared using classical methods and standard Ayurvedic pharmacopeia guidelines. The ligation was performed under local anesthesia, followed by weekly thread changes. Progress was evaluated based on pain, discharge, tract healing, granulation, and recurrence over a 3-month follow-up period. Clinical observations and outcomes were recorded systematically.

CASE PRESENTATION

Patient Profile

- **Age:** 36-year-old
- **Gender:** Male
- **Occupation:** Office employee
- **History:** Sedentary lifestyle, irregular diet, chronic constipation

• Chief Complaints:

- Seropurulent discharge near anal verge since 4 months
- Mild to moderate pain, especially on sitting
- Occasional swelling and discomfort after passing stools

History of Present Illness

The patient reported a recurrent painful swelling near the perianal region, which occasionally burst on its own, discharging pus and blood. Previous antibiotic treatment offered only temporary relief. The symptoms recurred every 15–20 days.

General Examination

- Temperature: Normal
- Pulse: 78/min

- BP: 120/80 mmHg
- No systemic illness

Local Per Rectal Examination

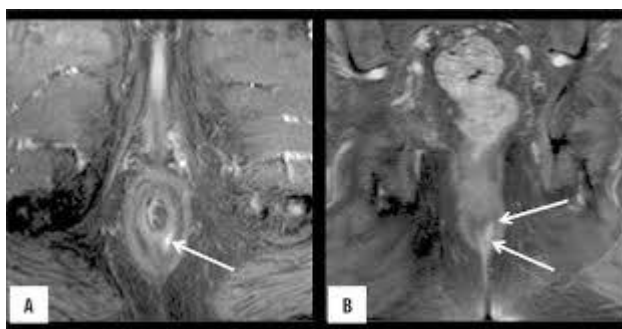
- External opening at 4 o'clock position, 1.5 cm from anal verge
- Mild tenderness
- Minimal discharge present
- Tract palpable on digital rectal examination
- Sphincter tone: Normal

Diagnosis

• **Intersphincteric fistula – Low Type (Intersphincteric)**

Confirmed by gentle probing.

Ayurvedic diagnosis: **Bhagandara (Kshataja type)**

**TREATMENT GIVEN****1. Preparation of Ksharasutra**

The standard **Apamarga Ksharasutra** was prepared using:

- Base thread: Surgical linen No. 20
- **Snuhi latex (Euphorbia nerifolia)**
- **Apamarga Kshara (Achyranthes aspera ash)**
- **Haridra (Curcuma longa powder)**

Total **21 coatings** as per classical guidelines:

- 11 coatings of Snuhi latex + Apamarga Kshara
 - 7 coatings of Snuhi latex + Haridra
 - Final 3 coatings of Snuhi latex alone
- Thread dried in shade and sterilized in UV chamber.

2. Surgical Procedure (Ksharasutra Ligation)

- The patient was placed in lithotomy position.
- Local anesthesia with 2% lignocaine infiltration.

- Fistulous tract identified using malleable probe.
 - Probe gently negotiated from external opening to internal opening.
 - Prepared Ksharasutra tied to the eye of probe.
 - Probe withdrawn from inside out, leaving the medicated thread inside the tract.
 - Ksharasutra ligated tightly, ensuring proper tension within the tract.
 - Sterile dressing applied.
- Total operative time: **20 minutes**

3. Postoperative Care

- Sitz bath with Panchavalka kwatha twice daily
- Local hygiene instructions
- Triphala churna (5 g at bedtime) for soft stools
- Jatyadi taila for dressing around external opening
- High-fiber diet and adequate hydration

4. Weekly Ksharasutra Changes

The Ksharasutra was changed **once every week** for 4 weeks.

Each change ensured:

- Cutting of tract
- Simultaneous healing
- Debridement
- Reduced infection

OBSERVATIONS

Week-wise Progress

Week 1

- Discharge reduced by 50%
- Pain significantly reduced
- Inflammation controlled
- Tract cutting initiated

Week 2

- Discharge minimal
- No tenderness
- Tract showed healthy granulation tissue
- 40% tract cutting achieved

Week 3

- Almost no discharge
- Patient comfortable while sitting
- Good wound contraction
- 70% of tract cut and healed

Week 4

- Tract completely cut
- Wound healthy and healing well
- No signs of infection
- Ligation removed

RESULTS

- **Complete healing achieved in 5 weeks**, including final epithelialization.
- No bleeding, no incontinence, no complications.
- Patient resumed normal activities after Week 2.
- **No recurrence observed during 3-month follow-up.**

Clinical Outcome Summary

- Pain: Completely relieved
- Discharge: Stopped by week 3
- Granulation: Healthy and uniform
- Healing: Rapid and without scarring
- Sphincter: Fully preserved
- Recurrence: **None**

DISCUSSION

Intersphincteric fistula (*Bhagandara*) is clinically challenging due to its chronic nature, tendency for repeated infection, and high recurrence rates after conventional surgical procedures. Modern surgical methods such as fistulotomy, fistulectomy, seton

insertion, or advancement flap therapy often carry risks like sphincter injury, incontinence, postoperative pain, and incomplete healing. In contrast, **Ksharasutra therapy**, an Ayurvedic parasurgical technique described by Sushruta, offers a minimally invasive, sphincter-preserving, and highly effective alternative.

In this case, the patient presented with persistent discharge, perianal swelling, and a low anal fistula confirmed by probing. Ksharasutra ligation showed rapid symptomatic relief, progressive tract cutting, and simultaneous healing with no complications. By the second week, discharge reduced markedly, swelling subsided, and pain almost disappeared. The tract showed healthy granulation by the third week, and complete healing was observed by the fifth week. No recurrence was noted within the three-month follow-up period.

These findings align with published outcomes indicating that Ksharasutra offers **very low recurrence** and **high healing success** because of its unique ability to maintain continuous drainage, prevent closure of the internal opening, and eliminate infection along the tract. Conventional surgery often fails because premature closure entrapped infection leads to abscess recurrence, whereas the medicated thread ensures controlled fistula cutting while healing simultaneously.

The ingredients used in Ksharasutra—*Snuhi latex*, *Apamarga Kshara*, and *Haridra*—provide a combination of **ksharana (corrosive)**, **shodhana (cleansing)**, **ropana (healing)**, and **krimighna (antimicrobial)** properties. This ensures the tract is destroyed in a regulated manner while promoting healthy tissue formation. The weekly thread changes maintain uniform medicated exposure, preventing residual infection and fibrosis.

Additionally, the patient experienced minimal discomfort during treatment and was able to resume normal activities early, demonstrating that Ksharasutra is both convenient and cost-effective. No sphincter damage was observed, which is a major advantage over surgical excision. The preservation of sphincter integrity prevents complications such as fecal incontinence—one of the most feared complications in modern anorectal surgery.

Overall, this case supports the clinical utility of Ksharasutra therapy as an effective option for uncomplicated low anal fistulas. The healing pattern, absence of recurrence, minimal postoperative care requirements, and absence of major complications validate the classical Ayurvedic description of Ksharasutra as an ideal treatment for Bhagandara.

MODE OF ACTION OF KSHARASUTRA

Ksharasutra works via a **multidimensional mechanism**, combining chemical cauterization, mechanical pressure, antimicrobial action, debridement, and healing stimulation.

1. Chemical Cauterization (Ksharana Karma)

Apamarga Kshara contains strong alkaline compounds such as sodium carbonate and potassium carbonate.

Actions:

- Brakes down unhealthy tissue and tract lining
- Destroys epithelial track and crypt glands
- Reduces fibrosis and chronic infection pockets
- Promotes controlled cutting of tract

This ensures that the tract is excised **gradually and uniformly** without harming surrounding sphincter muscles.

2. Mechanical Cutting (Chedana Karma)

When tied across the fistulous tract, the thread provides:

- Constant tension
- Narrow band pressure
- Slow slicing effect
- Controlled, predictable cutting

Each weekly tightening advances the thread by a few millimeters, ensuring safe and sphincter-sparing fistulotomy.

3. Shodhana (Debridement / Cleansing Action)

The alkaline and latex combination removes:

- Necrotic tissue
- Fibrous debris
- Pus pockets
- Infected epithelial lining

This keeps the tract sterile and promotes early wound contraction.

4. Antimicrobial Action (Krimighna Karma)

Haridra (Curcuma longa) contains curcumin which has:

- Strong antibacterial effect
 - Anti-inflammatory action
 - Anti-fungal properties
- This reduces anaerobic bacterial load and prevents abscess formation, one of the major causes of recurrence.

5. Anti-inflammatory Action

Snuhi latex and turmeric reduce:

- Pain
- Swelling
- Local congestion
- Inflammatory mediators

Thus, patients experience rapid symptomatic relief.

6. Ropana (Healing Action)

The thread stimulates:

- Fibroblast proliferation
- Granulation tissue formation
- Collagen deposition
- Early epithelialization

This ensures that the tract heals from inside out without leaving dead spaces.

7. Continuous Drainage

Ksharasutra maintains tract patency, allowing:

- Drainage of pus
- No entrapment of infection
- Prevention of abscess recurrence
- No premature closure

This is one of the strongest advantages of Ksharasutra over modern surgery.

8. Sphincter Preservation

Because the cutting is gradual, the sphincter muscle adapts and remains intact.

Benefits:

- No incontinence
- Better functional outcome
- Faster recovery

CONCLUSION

Ksharasutra ligation proved highly effective for this low anal fistula case, offering safe, controlled cutting and healing with minimal recurrence. It is a reliable, sphincter-preserving, cost-effective Ayurvedic parasurgical technique for managing uncomplicated anal fistulas.

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