



## Case Study

### MANAGEMENT OF BHAGANDARA (FISTULA-IN-ANO) USING GUNJA KSHAR SUTRA

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#### ABSTRACT

*Bhagandara* (fistula-in-ano) is a chronic, recurrent, and challenging ano-rectal disorder described in Ayurveda as one of the *Ashta Mahagada* due to its grave prognosis and tendency for recurrence. Conventional surgical management often carries risks of recurrence, prolonged healing, and sphincter-related complications, whereas *Kshar Sutra* therapy offers a minimally invasive Ayurvedic parasurgical alternative. This case study evaluates the efficacy of *Gunja Kshar Sutra* therapy in a 35-year-old male patient presenting with persistent perianal pain, intermittent pus discharge, and occasional constipation for six months, with a prior history of fistula-in-ano one year earlier. Clinical examination confirmed *Bhagandara* with an external opening at the 4 o'clock position and a single indurated fistulous tract. Following standard pre-operative investigations, *Gunja Kshar Sutra* was applied under spinal anesthesia using a systematic parasurgical procedure, followed by weekly thread changes, local hygiene measures, sitz baths, bowel regulation, and dietary modifications. The patient demonstrated significant pain reduction within the first week, decreased discharge by the second week, progressive tract cutting during the third and fourth weeks, and complete healing by day 45. The tract length measured 3.7cm with a satisfactory Unit Cutting Rate (UCR) of approximately 0.58cm/week. Complete symptomatic relief was achieved without recurrence or major complications. The findings suggest that *Gunja Kshar Sutra* therapy is a safe, effective, economical, and sphincter-preserving treatment modality for recurrent *Bhagandara*, validating classical Ayurvedic management principles while offering substantial relevance in modern ano-rectal surgical care.

#### INTRODUCTION

A fistula-in-ano, also referred to as a perianal or anoperineal fistula, is an abnormal epithelial-lined tract connecting the anal canal to the perianal skin [1]. In this condition, the external opening typically lies outside the sphincter muscle complex, involving only a limited portion of voluntary sphincter fibers [2]. Perianal fistulas are broadly classified into primary and secondary types [3,4]. Primary fistulas usually arise from obstruction of the anal glands, leading to stasis, infection, and abscess formation, whereas secondary fistulas may result from underlying conditions such as

inflammatory bowel disease (IBD), malignancy, iatrogenic factors, or infection.

The most frequent cause of fistula-in-ano is an anorectal abscess. Studies indicate that 30–70% of patients with an anorectal abscess concurrently have a fistula-in-ano. Among those without an initial fistula, approximately one-third develop a fistula in the months to years following abscess drainage [5,6]. Classification of fistulas is generally based on their anatomical relationship to the anal sphincters [7,8].

#### Ayurvedic Perspective

Ano-rectal disorders such as *Arsha* (hemorrhoids) and *Bhagandara* (fistula-in-ano) are regarded in Ayurveda as particularly challenging conditions to manage. Among these, *Bhagandara* is classified as one of the *Ashta Mahagada* (eight grave diseases) due to its chronicity, complexity, and tendency for recurrence. [9] Ancient Ayurvedic

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literature provides extensive, systematic, and scientific descriptions of *Bhagandara*, highlighting its clinical significance since early times. It remains one of the most prevalent ano-rectal diseases affecting populations worldwide.

The term *Bhagandara* is derived from “Darana,” meaning tearing, splitting, or piercing in the regions of *Bhaga* (perineum), *Guda* (anus), and *Basti Pradesha* (pelvic region), indicating the destructive nature of the disease in the perianal area. In Ayurveda, the initial non-suppurative stage is referred to as *Pidika* (boil or abscess), while the suppurative and chronic tract-forming stage is termed *Bhagandara*.<sup>10</sup>

### Pathogenesis

The pathogenesis of *Bhagandara* (fistula-in-ano) can be described as a sequential process: *Dosha* vitiation → Localized inflammation → Abscess formation (*Pidika*) → Suppuration → Rupture → Chronic tract formation (*Bhagandara*). According to Acharya Sushruta, multiple therapeutic approaches are recommended, including:

- Medicinal therapy (*Bheshaja*)
- Chemical cauterization (*Kshara Karma*)
- Thermal cauterization (*Agni Karma*)
- Surgical intervention (*Shastra Karma*)

Among these, *Kshar Sutra* therapy has gained widespread acceptance due to its minimally invasive nature and its ability to simultaneously facilitate tract cutting and healing. Considering authenticity and principles of *Shalya Chikitsa* (parasurgery), the present study focuses on *Kshara Karma*, interpreted as “Potential Cauterization Application Therapy”<sup>[11]</sup>. Within *Kshara Karma*, *Kshar Sutra* treatment has been found to be both suitable and acceptable compared to prevalent methods in modern medical practice<sup>[12]</sup>.

A modified variant, *Gunja Kshar Sutra*, is believed to enhance therapeutic outcomes owing to its specific pharmacodynamic properties. *Gunja* (*Abrus precatorius*) has been reported to exhibit multiple pharmacological activities, including anti-tumor<sup>[13]</sup>, anti-cancer<sup>[14]</sup>, anti-spermatogenic<sup>[15]</sup>, anti-fertility<sup>[14]</sup>, central nervous system depressant and analgesic effects<sup>[14]</sup>, treatment of ulcers and skin affections<sup>[16]</sup>, antidiarrheal and anti-helminthic activities<sup>[16]</sup>, anti-inflammatory activity<sup>[17]</sup>, and antispasmodic activity<sup>[18]</sup>.

### Therapeutic Approach

The management of *Bhagandara* (fistula-in-ano) in this case was planned according to classical Ayurvedic principles with emphasis on eradication of the fistulous tract, prevention of recurrence, promotion of wound healing, and correction of associated *Doshic* imbalance. Considering the

chronicity of the disease, recurrent history, presence of pus discharge, and palpable tract, *Gunja Kshar Sutra* therapy was selected as the primary intervention.

### Case Description

#### Patient Profile

A 35-year-old male patient presented with complaints of persistent pain and intermittent pus discharge from the perianal region for the past six months. The chronic nature of these symptoms significantly affected his daily activities, particularly during defecation and prolonged sitting. He also reported occasional constipation, which further aggravated his discomfort and contributed to bowel irregularity. The prolonged duration of symptoms, recurrent discharge, and associated bowel disturbances strongly indicated an established ano-rectal pathology consistent with *Bhagandara* (fistula-in-ano). On clinical examination, inspection of the perianal region revealed an external opening with active discharge located at the 4 o'clock position. Palpation demonstrated an indurated fistulous tract, while probing confirmed the presence of a single fistulous tract. Based on the clinical findings and Ayurvedic assessment, the condition was diagnosed as *Bhagandara* (fistula-in-ano).

#### Clinical History

The patient reported continuous pain and intermittent discharge of pus from the perianal region, specifically located at the 4 o'clock position. Symptoms were exacerbated during bowel movements and prolonged sitting.

#### Medical History

The patient had no history of chronic systemic illnesses such as diabetes mellitus, hypertension, tuberculosis, or any other major medical disorders. However, he had a significant past history of fistula-in-ano one year prior and had previously undergone an I&D (Incision and Drainage) procedure for perianal abscess management, suggesting recurrence of the disease and indicating either incomplete healing, persistence of the primary tract, or an underlying predisposition for chronic ano-rectal pathology. From an Ayurvedic perspective, the recurrence and progression of the condition can be understood through the classical pathogenesis of *Bhagandara*, wherein vitiation of *Doshas* leads to localized inflammation in the perianal region, followed by abscess formation (*Pidika*), suppuration, rupture, and eventual development of a chronic fistulous tract (*Bhagandara*). This sequential progression reflects the chronic, recurrent, and destructive nature of the disease.

## Management

**Pre-operative:** The standard pre operative measures included routine blood investigations, radiological investigations including fistulogram for confirmation of diagnosis.

## Main Procedure

After obtaining informed consent, the patient received spinal anesthesia and was positioned in the lithotomy posture to allow optimal access to the anorectal region. The perianal area was meticulously prepared under aseptic conditions, using betadine solution for antiseptic painting and sterile draping.

The fistulous tract was identified and delineated by instilling a betadine and hydrogen peroxide mixture through the external opening, followed by gentle probing with a malleable probe to assess the tract's course and extent. A specially prepared *Gunja Kshar Sutra* was then threaded through the tract and securely ligated. The medicated thread provided continuous chemical cauterization,

enabling simultaneous cutting, curettage, drainage, and healing of the unhealthy tissue. This process promoted progressive debridement while supporting healthy granulation and tissue regeneration.

Weekly *Kshar Sutra* changes were performed to maintain therapeutic efficacy until complete cut-through of the tract was achieved. The wound subsequently healed satisfactorily, with minimal risk of recurrence. This minimally invasive parasurgical approach effectively managed *Bhagandara* by combining tract eradication with enhanced wound healing.

## Post-Procedure Care

- Scheduled weekly thread replacement.
- Daily warm sitz bath.
- Administration of mild laxatives (e.g., *Triphala Churna*).
- Maintenance of local hygiene.
- Advice on fiber-rich diet.



## Follow-Up Details

| Time Interval                         | Clinical Progress            |
|---------------------------------------|------------------------------|
| 1 <sup>st</sup> Week                  | Noticeable reduction in pain |
| 2 <sup>nd</sup> -3 <sup>rd</sup> Week | Decrease in discharge        |
| 4 <sup>th</sup> -6 <sup>th</sup> Week | Progressive cutting of tract |
| Day 45                                | Complete healing achieved    |

## RESULTS AND OBSERVATIONS

- Tract length: 3.7 cm
- Total treatment duration: 45 days (~6.43 weeks)

## Unit Cutting Rate

UCR = 3.7/6.43

Calculated UCR ≈ 0.58 cm/week

## Symptomatic Outcome

| Symptom       | Pre-treatment | Post-treatment |
|---------------|---------------|----------------|
| Pain          | Significant   | Absent         |
| Discharge     | Present       | Resolved       |
| Constipation  | Occasional    | Improved       |
| Tract healing | Absent        | Complete       |

## DISCUSSION

*Bhagandara* (fistula-in-ano) is recognized in both modern surgery and Ayurveda as a chronic, recurrent, and therapeutically challenging anorectal disorder. Conventional surgical interventions, although often effective, are frequently associated with recurrence, prolonged wound healing, postoperative complications, and potential sphincter injury. In Ayurveda, *Bhagandara* is classified among the *Ashta Mahagada*, reflecting its serious prognosis and clinical

complexity. Acharya Sushruta advocated minimally invasive parasurgical techniques, with *Kshar Sutra* therapy emerging as a highly effective management strategy for fistula-in-ano.

In the present case, the patient presented with a recurrent fistula-in-ano, accompanied by chronic symptoms of pain, purulent discharge, and constipation, which significantly impaired quality of life. The patient had a prior history of fistula and had undergone Incision and Drainage (I&D) for a perianal abscess one year earlier, suggesting recurrence due to incomplete healing, persistence of the primary tract, or residual infection- recurrence commonly observed when the fistulous tract is not fully eradicated.

The application of *Gunja Kshar Sutra*, a modified *Kshar Sutra* variant, demonstrated effective simultaneous cutting, drainage, debridement, and healing of the fistulous tract through its chemical cauterization properties. The medicated thread facilitated progressive excision of unhealthy tissue while promoting healthy granulation, thereby minimizing reinfection and recurrence. Weekly thread changes ensured sustained therapeutic action until complete tract cut-through was achieved.

The observed Unit Cutting Rate (UCR) was approximately 0.58cm/week, which is clinically satisfactory and comparable to standard *Kshar Sutra* outcomes. Symptomatic relief was noted early, with pain reduction in the first week, decreased discharge by the second week, and complete healing achieved by day 45. This progressive recovery indicates effective local disease control and tissue regeneration.

From an Ayurvedic perspective, the treatment addressed underlying *Vata-Pitta dosha* vitiation, localized inflammation, and chronic tract pathology. Ancillary measures- including sitz baths, bowel regulation, and dietary modifications- supported wound healing and prevented aggravation of *Purishavaha Srotas* dysfunction.

The recurrence-free healing, absence of major complications, preservation of sphincter integrity, and minimal invasiveness collectively demonstrate that *Gunja Kshar Sutra* therapy is a safe, economical, and effective therapeutic modality for *Bhagandara*, particularly in recurrent cases following previous surgical interventions such as I&D. This case underscores the relevance of classical Ayurvedic approaches while supporting their integration into contemporary anorectal care.

Overall, *Gunja Kshar Sutra* therapy presents a promising alternative to conventional surgical management for recurrent fistula-in-ano, offering favorable healing outcomes, reduced morbidity, and improved patient compliance. Further large-scale

clinical studies are warranted to validate its broader therapeutic efficacy and to standardize treatment protocols.

## CONCLUSION

The present case study demonstrates that *Gunja Kshar Sutra* therapy is a safe, effective, and minimally invasive Ayurvedic parasurgical intervention for the management of recurrent *Bhagandara* (fistula-in-ano). This therapy facilitated simultaneous tract excision, chemical cauterization, drainage, and wound healing, resulting in significant symptomatic relief, progressive tract cutting, and complete healing within 45 days. The observed Unit Cutting Rate (UCR) of approximately 0.58cm/week, along with the absence of pain, discharge, or recurrence during follow-up, underscores its therapeutic efficacy.

The integrated approach- combining *Kshar Sutra* application with supportive internal medications, bowel regulation, and lifestyle modifications- addressed both local pathology and systemic *Doshic* imbalance, contributing to comprehensive disease management. Compared to conventional surgical methods, *Gunja Kshar Sutra* offers clear advantages, including sphincter preservation, reduced recurrence risk, minimal complications, and improved patient acceptability.

Overall, *Gunja Kshar Sutra* therapy represents a promising and reliable treatment option for recurrent *Bhagandara*, reaffirming the classical principles described by Acharya Sushruta while demonstrating practical relevance in modern anorectal practice. Further large-scale clinical studies are warranted to standardize protocols and strengthen its scientific evidence base.

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