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# A CASE REPORT ON BHAGANDARA TREATED WITH PARTIAL FISTULECTOMY AND GUGGULU KSHARASUTRA THERAPY

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## ABSTRACT

Ksharasutra therapy, a medicated thread technique described in the Indian system of medicine, is widely utilized in the management of anorectal disorders, especially Bhagandara (fistula-in-ano). In the present case, a Guggulu-based Ksharasutra was prepared in accordance with the standards of the Ayurvedic Pharmacopeia of India, using Apamarga Kshara (derived from Achyranthes aspera), Guggulu (Commiphora mukul), and Haridra (Curcuma longa). A patient diagnosed with a low trans-sphincteric fistula located in the anterior region of the anal canal was managed through a combined approach of partial fistulectomy followed by application of Guggulu-based Ksharasutra in the residual tract. The Ksharasutra was replaced at weekly intervals using the railroad technique. The length of the tract was recorded regularly to evaluate the unit cutting time (UCT). Postoperative wound care was carried out with daily dressing using Shatadhauta Ghrita. Throughout the treatment period, the patient was able to continue routine daily activities without significant discomfort. Complete transection of the fistulous tract was achieved within two months, with eight Ksharasutra changes. The surgical wound healed satisfactorily, resulting in a healthy scar and no observed complications. This case highlights the effectiveness of combining partial fistulectomy with Guggulu- based Ksharasutra therapy in the management of fistula-in-ano, demonstrating comparatively faster healing than Ksharasutra therapy alone.

**KEYWORDS**: Fistula-in-Ano, Bhagandara, Ksharasutra Treatment, Guggulu, Surgical Management.

## INTRODUCTION

In Ayurveda, Bhagandara (fistula-in-ano) is categorized among the Ashtamahagada (eight severe diseases) owing to its chronic nature and the difficulty encountered in its management.[1] From a modern medical perspective, anal fistula is considered a manifestation within the spectrum of perianal sepsis and most commonly develops as a sequela of an anorectal abscess. Clinically, it presents with symptoms such as pain, persistent discharge, itching, and often leads to significant discomfort and social distress.[2] Various surgical modalities are available for the treatment of fistula-in-ano, including fistulectomy, fistulotomy, and newer techniques such as fibrin glue application, fistula plug insertion, Video-Assisted Anal Fistula Treatment (VAAFT), and Ligation of the Intersphincteric Fistula Tract (LIFT). Despite these advancements, each method has its own limitations.[3] Furthermore, surgical management is often associated with concerns regarding recurrence and potential complications, particularly impairment of continence. In certain cases, patients may experience altered bowel or bladder control following operative procedures.[4] Acharya Sushruta, regarded as the pioneer of surgery, advocated the use of Kshara (alkaline substances) in the treatment of Bhagandara.[5] Subsequent scholars such as Chakrapani and Bhavamishra further elaborated on the preparation and therapeutic application of Ksharasutra for this condition.[6,7]

The present case report describes the management of a low trans-sphincteric fistula-in- ano located in the anterior region, with the external opening at the 1 o'clock position and the internal opening at the 12 o'clock position. Treatment was carried out using Ksharasutra therapy. In this case, a Guggulu-based Ksharasutra was prepared following the guidelines of the Ayurvedic Pharmacopeia of India.[8] Instead of the traditionally used Snuhi latex (Euphorbia nerifolia), Guggulu (Commiphora mukul) was utilized, while maintaining the standard preparation protocol. The patient was successfully managed with this modified Ksharasutra approach, achieving complete healing without any complications.

## CASE HISTORY

A 35-year-old male presented to the Shalya Tantra Outpatient Department of IPGT C RA Hospital, Jamnagar, Gujarat, with complaints of pain in the perianal region, purulent discharge, constipation, and intermittent fever for the past seven days. These symptoms were affecting his daily routine. The patient reported a similar episode approximately one and a half years earlier, characterized by discharge, which had subsided following treatment with antibiotics and analgesics. His dietary habits included regular consumption of non-vegetarian and spicy foods, along with tobacco use.

He was employed as an engineer, and he noted that his symptoms tended to worsen during working hours, often requiring medication for temporary relief. On local examination in the lithotomy position, a single external opening was identified at the 1 o'clock position, situated inferior to the scrotum. On probing, a tract was traced extending toward the anal canal, suggesting communication with an internal opening at the 12 o'clock position. Further confirmation was obtained through transrectal ultrasonography (TRUS), which demonstrated a linear, non-branching fistulous tract measuring approximately 6 cm in length in the right perianal region. The tract extended from the external opening at the 1 o'clock position to an internal opening at the 12 o'clock position, located just proximal to the anal verge. Routine hematological and urine investigations were performed and found to be within normal limits. There was no history of previous surgical interventions or other significant medical conditions. Based on clinical and radiological findings, the case was diagnosed as Bhagandara (anterior low trans-sphincteric fistula-in-ano). The patient was subsequently admitted to the Shalya male ward for further management.

## EXAMINATION FINDINGS

- **General Examination**

The patient was conscious, oriented, and cooperative. Vital parameters were within normal limits. No signs of systemic illness such as fever, pallor, icterus, cyanosis, clubbing, lymphadenopathy, or edema were observed.

- **Local Examination (Perianal Region)**

Inspection of the perianal area revealed an external opening located at the 1 o'clock position in the anterior aspect of the anal region. The surrounding skin appeared mildly inflamed with minimal induration. Seropurulent discharge was noted from the opening. On palpation, a cord-like indurated tract was felt extending from the external opening toward the anal canal. Mild tenderness was present along the tract. No evidence of acute abscess formation was observed at the time of examination.

- **Digital Rectal Examination (DRE)**

Digital examination revealed normal anal sphincter tone. Induration corresponding to the fistulous tract was palpable. The internal opening was identified at the 12 o'clock position within the anal canal.

- **Proctoscopic Examination**

Proctoscopy confirmed the presence of the internal opening at the 12 o'clock position. No additional internal openings, hemorrhoids, or other rectal pathologies were noted.

**Provisional Diagnosis**

Based on clinical examination, the case was diagnosed as a low trans-sphincteric fistula-in-ano.

**PRE-OPERATIVE MANAGEMENT**

Informed written consent was obtained from the patient prior to the procedure. The perianal region was prepared with appropriate shaving and aseptic measures. A proctolysis enema was administered in the early morning on the day of surgery to ensure bowel clearance. Prophylactic tetanus toxoid (0.5 ml, intramuscular) was given, and an intradermal sensitivity test for lignocaine was performed to rule out any allergic reaction.

**OPERATIVE PROCEDURE**

The procedure was carried out in the operation theatre with the patient placed in the lithotomy position under spinal anesthesia. The perianal area was cleaned with povidone-iodine solution and draped in a sterile manner. A probe was gently introduced through the external opening, confirming the internal opening at the 12 o'clock position. The fistulous tract was excised from the external opening up to the level of the anal sphincter using electrocautery. The remaining portion of the tract was managed by placement of a Ksharasutra. The surgical wound was packed with povidone-iodine–soaked gauze. Additionally, a chronic fissure with a sentinel tag located at the 6 o'clock position was excised using electrocautery. After achieving adequate hemostasis, a medicated pack was placed in the anal canal, followed by T-bandaging.

**POST-OPERATIVE MANAGEMENT**

From the first postoperative day, the patient was advised to undergo Avagaha Swedana (warm sitz bath) using Panchavalkala decoction twice daily until complete wound healing. Dietary recommendations included intake of fiber-rich foods such as green vegetables, fruits, and adequate fluids. The patient was instructed to avoid non-vegetarian food, spicy and oily items, junk food, tobacco, and alcohol during the recovery period. Lifestyle modifications were also advised, including avoidance of prolonged sitting and excessive travelling or riding. To prevent constipation, Eranda Bhrishta Haritaki powder (5 g) was prescribed at bedtime with lukewarm water.

## OBSERVATIONS AND RESULTS

The patient was discharged on the first postoperative day and was advised to attend daily dressing for the initial seven days. Thereafter, weekly follow-up visits were scheduled for replacement of the Ksharasutra. Daily wound care included sitz bath (Avagaha Swedana) with Panchavalkala decoction, followed by local application of Shatadhauta Ghrita. The Ksharasutra was replaced at weekly intervals using the railroad technique after applying 2% lignocaine jelly to minimize discomfort. This process was continued until complete transection and healing of the fistulous tract were achieved. At each sitting, the length of the Ksharasutra was measured and documented to monitor the rate of cutting and healing. By the end of the second week, the wound showed signs of cleanliness with the appearance of healthy granulation tissue. Continued local care and periodic Ksharasutra changes resulted in progressive wound contraction, epithelialization, and overall healing, as observed during subsequent weekly assessments. Complete cutting of the tract along with satisfactory wound healing was achieved within a period of approximately two months. The calculated unit cutting time (UCT) for this case was 7.5 days per centimeter, indicating effective and steady progress.

## DISCUSSION

Acharya Sushruta described multiple therapeutic approaches for the management of Bhagandara based on the predominance of Doshas. Classical texts consistently emphasize that all varieties of Bhagandara are challenging to treat due to their chronic and recurrent nature.[9] Among the available modalities, Ksharasutra therapy has gained recognition as an effective treatment for fistula-in-ano. Studies conducted under the aegis of the Indian Council of Medical Research (ICMR) have demonstrated that Ksharasutra therapy yields better outcomes compared to conventional procedures such as fistulotomy and fistulectomy, particularly in terms of lower recurrence rates.[10] In the present case, a Guggulu-based Ksharasutra was applied after partial fistulectomy and maintained in situ. Progressive reduction in the length of the thread during weekly replacements indicated gradual cutting of the fistulous tract. The therapeutic effect of Ksharasutra can be attributed to the pharmacological properties of its constituents. The alkaline component (Kshara) exhibits antimicrobial and anti-inflammatory actions, while also facilitating chemical cauterization of unhealthy tissue, thereby promoting both excision and healing.[11] Its alkaline pH further helps in maintaining a relatively sterile environment within the tract. The process of tract division is thought to occur primarily during the initial 1–2 days due to the local action of Kshara and Guggulu, followed by tissue repair and healing over the subsequent days. Guggulu (Commiphora mukul) possesses well-documented anti- inflammatory and antibacterial

properties, contributing significantly to wound healing.[12,13] Haridra (Curcuma longa) aids in reducing local irritation caused by the caustic agents and supports tissue regeneration.[14] Thus, the combined action of Apamarga Kshara, Guggulu, and Haridra in Ksharasutra provides a synergistic effect, enabling simultaneous cutting and healing of the fistulous tract. Adjunctive local care also played an important role in recovery. Panchavalkala decoction, known for its cleansing and wound-healing properties, helped maintain local hygiene and supported tissue repair.[15] The application of Shatadhauta Ghrita further enhanced healing due to its soothing and regenerative properties. Ghrita is considered an excellent Sneha Dravya in Ayurveda, with attributes such as Samskaranuvartana (enhancing the efficacy of associated drugs) and Yogavahi (synergistic action).[16] Its content of vitamins and essential fatty acids contributes to epithelialization, tissue repair, and improved skin integrity by modulating inflammatory mediators.[17] Regular follow-up allowed close monitoring of treatment progress. Complete healing of the wound with satisfactory scar formation was achieved within two months, without any complications. Compared to conventional fistulectomy, which may be associated with higher recurrence rates and potential risk to sphincter function, and standard Ksharasutra therapy, which may require a longer duration for complete healing, the combined approach of partial fistulectomy with Ksharasutra application appears to offer a more efficient and patient-friendly outcome. This case suggests that such a combined modality can reduce treatment duration while maintaining effectiveness and safety.

## CONCLUSION

This case report suggests that anterior fistula-in-ano of considerable length can be effectively managed using a combined approach of partial fistulectomy and Guggulu- based Ksharasutra therapy. Postoperative wound care with Panchavalkala decoction for cleansing and Shatadhauta Ghrita for dressing appeared to facilitate faster healing. However, as this observation is based on a single case, further studies involving a larger sample size are necessary to establish definitive conclusions regarding the efficacy and reproducibility of this treatment modality.

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