

A CASE STUDY ON THE CLINICAL EFFECTIVENESS OF TILANALA
KSHARASUTRA IN BHAGANDARA WITH SPECIAL REFERENCE TO FISTULA-IN-
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ABSTRACT

Background: Bhagandara (Fistula-in-Ano) is a complex anorectal disorder marked by an abnormal tract between the anal canal and perianal skin, often associated with pain, discharge, and recurrence. Conventional management typically involves surgical intervention, which may be associated with postoperative complications and recurrence. Tilanala Ksharasutra, a specialized Ayurvedic para-surgical modality, is considered a minimally invasive alternative for the management of this condition. **Objective:** To assess the clinical effectiveness of Tilanala Ksharasutra in the management of Bhagandara (Fistula-in-Ano) with reference to symptom relief, tract healing, and overall patient outcome. **Case Presentation:** A 35-year-old male patient clinically diagnosed with Bhagandara presented with complaints of persistent pain, swelling, and purulent discharge in the perianal region. The patient was managed with Tilanala Ksharasutra therapy, wherein a medicated thread coated with herbal and alkaline formulations was inserted into the fistulous tract. **Methods:** The Tilanala Ksharasutra was placed in the tract and changed at regular intervals over a treatment duration of eight weeks. Periodic clinical evaluations were carried out to observe the progress of healing, reduction in symptoms, and any potential adverse reactions. **Results:** Marked clinical improvement was observed following Tilanala Ksharasutra therapy. There was a substantial reduction in pain, discharge, and local inflammation, with gradual cutting and healing of the tract. Complete healing and closure of the fistulous tract were achieved by the end of the treatment period. The patient experienced minimal discomfort and no recurrence was noted during the follow-up. **Conclusion:** Tilanala Ksharasutra therapy proved to be an effective, safe, and minimally invasive modality in the management of Bhagandara (Fistula-in-Ano). The positive clinical outcomes indicate that this Ayurvedic para-surgical technique can serve as a reliable alternative to conventional surgical procedures, ensuring effective healing with better patient compliance and reduced recurrence.

KEYWORDS: Bhagandara, Fistula-in-Ano, Tilanala Ksharasutra, Ayurveda, Ksharasutra Therapy.**INTRODUCTION**

Bhagandara^[1], which is clinically comparable to Fistula-in-Ano, is a complex anorectal disorder characterized by the formation of an abnormal tract between the anal canal and the perianal skin. If left untreated, the condition may result in recurrent infections, abscess formation, and considerable discomfort, thereby significantly affecting the patient's quality of life. Conventional management primarily involves surgical

procedures; however, these methods are often associated with the risk of recurrence, postoperative complications, and prolonged recovery.

In Ayurvedic practice, Ksharasutra therapy, a medicated alkaline thread technique, has been traditionally indicated for the management of Bhagandara. This para-surgical approach is valued for its minimal invasiveness, effective drainage, enhanced wound healing, and

comparatively lower recurrence rates than conventional surgical interventions. Among its various modifications, the Tilanala Kshara Sutra^[2] has demonstrated encouraging therapeutic outcomes. The present case study is undertaken to evaluate the clinical efficacy of Tilanala Kshara Sutra in the management of a patient diagnosed with Bhagandara (Fistula-in-Ano). Through systematic documentation of treatment progress and outcomes, the study aims to emphasize the potential of this Ayurvedic modality in improving healing and minimizing recurrence in anorectal disorders. In contrast, modern medical management of fistula-in-ano mainly includes surgical procedures such as fistulotomy, seton placement, and advanced techniques like the LIFT procedure.

Tila Nala Kshara Sutra: An Overview

Tilanala Ksharasutra is a specially prepared medicated thread used in Ayurveda for the treatment of anorectal diseases, particularly Bhagandara (Fistula-in-Ano). It represents a modified form of the classical Ksharasutra therapy, a well-established Ayurvedic para-surgical technique recognized for its efficacy in managing fistulae, hemorrhoids, and sinus tracts.

Composition^[3] and Preparation

The preparation of Tilanala Ksharasutra involves a surgical linen or cotton thread that is repeatedly coated with herbal and alkaline substances. The principal ingredients include.

- **Tilanala (*Sesbania grandiflora*):** The chief medicinal component, known for its anti-inflammatory, wound-healing, and antimicrobial properties.
- **Snuhi (*Euphorbia nerifolia*) Ksheera:** A latex secretion used as a binding medium to facilitate the adherence of other medicinal coatings.
- **Apamarga Kshara (*Achyranthes aspera* ash):** An alkaline preparation that aids in chemical cauterization, debridement, and healing of the diseased tract.
- **Haridra (*Curcuma longa*):** A potent antiseptic and anti-inflammatory agent incorporated to promote wound healing and prevent infection.

Preparation^[4]

Tilanala Kshara Sutra is prepared using Barbour's surgical linen thread No. 20. The thread is sequentially coated with 11 layers of freshly collected Snuhi Ksheera, followed by 7 coatings of Tilanala Kshara and finally 3 coatings of Haridra Churna, adhering to the standard Ksharasutra preparation protocol.

Mechanism of Action of Kshara Sutra^[5]

Tilanala Ksharasutra functions on the principle of gradual chemical cauterization combined with mechanical action. After placement within the fistulous tract, it acts through the following mechanisms.

- **Cutting:** The sustained mechanical pressure of the thread facilitates the gradual cutting through of the fistulous tract.

- **Healing:** The medicated coatings reduce inflammation, encourage granulation tissue formation, and support progressive wound healing.

- **Cauterization:** The alkaline nature of Kshara produces controlled cauterization of unhealthy tissue, leading to effective debridement, reduced infection, and a lower likelihood of recurrence.

Application

Tilanala Ksharasutra is employed by passing the medicated thread through the fistulous tract with the help of a probe. Once positioned, the thread is retained within the tract and replaced or tightened at regular intervals during the course of treatment. This facilitates simultaneous cutting and healing of the tract in a gradual and controlled manner, leading to progressive eradication of the fistula while preserving the surrounding healthy tissues. The procedure is usually performed on an outpatient basis, allowing the patient to continue routine daily activities during the treatment period.

Clinical Benefits

- **Minimally invasive and less painful:** In comparison to conventional surgical procedures, Tilanala Ksharasutra therapy is less invasive and associated with minimal discomfort.

- **Lower recurrence rate:** Clinical observations indicate significantly reduced recurrence rates following Ksharasutra therapy when compared to traditional surgical management.

- **Cost-effective:** The procedure is economical and generally does not necessitate prolonged hospitalization.

- **Reduced complications:** The risk of complications such as anal sphincter injury, incontinence, and postoperative morbidity is comparatively lower than in surgical interventions.

CASE REPORT

Gender: Male

Age: 35 years

Occupation: Carpenter

Date of Admission: 11/10/2023

Date of Recovery: 08/11/2023

Chief Complaints and Duration

The patient presented with complaints of pain, swelling, and purulent discharge from the anal region for the past two weeks.

History of Present Illness

A 35-year-old male patient attended the OPD on 11/10/2023 with complaints of painful swelling and discharge located at the anterior aspect of the anal region, associated with induration. The patient had a past history of surgery for fistula-in-ano and had undergone fistulotomy under spinal anesthesia on 28/01/2023, approximately eight months prior to the present visit. On current examination, discharge was observed from a tract situated at the 11 o'clock position in the anterior perineum, posterior to the scrotum, accompanied by

severe pain and tenderness. The diagnosis had earlier been confirmed by fistulography on 10/01/2020, suggestive of a high scrotal anal fistula with the internal opening at the 12 o'clock position. The present condition was diagnosed as a recurrent fistula-in-ano.

History of Past Illness: No history of any other major systemic illness was reported.

General Examination

- General Condition (GC): Moderate
- CVS: S1 and S2 heard
- Pulse: 82/min
- BP: 120/70 mmHg
- RS: Bilateral air entry clear
- Digestive System: Appetite – Normal; Bowel – Normal
- Urogenital System: NAD

On local examination in the lithotomy position, a small external opening was observed at the 11 o'clock position in the perianal region, with seropurulent discharge present at the anterior perineum just behind the scrotum near the root of the penis. Tenderness and induration were noted around the external opening. Probing of the tract revealed an internal opening with an approximately 6 cm long tract extending within the anogenital space. Proctoscopic examination did not reveal any associated anal pathology. After thorough anorectal evaluation, the condition was diagnosed as a recurrent complicated high scrotal-anal fistula.

Treatment Protocol

Ksharasutra Application

Pre-operative Preparation: The operative area was not shaved as the patient declined shaving due to religious reasons. On the morning of the procedure, a Proctoglycerin enema was administered to ensure bowel evacuation. Following adequate bowel clearance, the patient was shifted to the recovery area, where 0.5 ml T.T. injection was administered intramuscularly. A sensitivity test with 2% plain xylocaine was then performed subcutaneously.

Operative Procedure: The patient was positioned in the lithotomy posture on the operating table. After proper painting and sterile draping of the operative field, local infiltration anesthesia using 2% xylocaine was administered around the external opening and anal verge. The fistulous tract was re-evaluated by probing, and the probe was guided through the tract and exteriorized via the anal opening upon reaching the internal opening. Subsequently, Tilanala Ksharasutra was threaded through the tract and securely ligated. Adequate hemostasis was ensured, and T-bandaging was applied at the operative site.

Postoperative Procedure: Ayurvedic medicines were administered, and the patient was advised to take sitz baths. The patient remained admitted to the hospital for 7 days until the next *Ksharasutra* change.



During *Ksharasutra* Procedure



After treatment

Oral Medications

- Triphala Guggulu – TID
- Gandhak Rasayana – TID
- Sitz bath with lukewarm water mixed with Triphala Kwatha – twice daily

OBSERVATIONS

The patient was discharged after the first Ksharasutra change and was advised to undergo subsequent Ksharasutra replacements at an interval of every seventh day until complete cutting of the fistulous tract was achieved. During the treatment period, the patient was instructed to perform regular sitz baths using lukewarm water with Triphala Kwatha to maintain local hygiene and promote healing. Post-discharge, the patient was permitted to continue his routine occupational activities. Complete cutting of the tract was observed after six sittings of Ksharasutra changes, with simultaneous progressive healing of the tract.

DISCUSSION

Acharya Sushruta has elaborately described the management of Bhagandara through various therapeutic modalities such as Bhashaj, Ksharakarma, Agnikarma, and Shashtra Karma. In modern surgical practice, management of fistula-in-ano commonly includes procedures like fistulotomy, fistulectomy, and seton placement. However, these surgical approaches are often associated with higher recurrence rates and postoperative complications, including bleeding, severe pain, delayed wound healing, and extended recovery periods.

In comparison, Ksharasutra ligation serves as a more effective and safer alternative, offering minimal complications and a comparatively lower recurrence rate. Importantly, this therapy preserves the integrity of the anal sphincter and does not usually lead to complications such as fecal incontinence or anal stricture. The therapeutic efficacy of Ksharasutra can be attributed to its combined anti-inflammatory, antimicrobial, and alkaline properties, which facilitate simultaneous cutting, debridement, and healing of the fistulous tract. The gradual cutting action is primarily due to the chemical cauterizing effect of Tilanala Kshara and Snuhi Ksheera, along with the sustained mechanical pressure exerted by the ligated Ksharasutra. Furthermore, the inclusion of Haridra Churna, known for its potent antiseptic and wound-healing properties, significantly enhances tract healing and reduces the risk of infection.

CONCLUSION

The incidence of fistula-in-ano is increasingly observed in the present era, possibly due to sedentary lifestyles and occupations involving prolonged sitting on hard surfaces. Successful management of anorectal disorders necessitates accurate diagnosis, sound anatomical knowledge, and timely intervention. Ksharasutra therapy plays a pivotal role in effective debridement of the fistulous tract while simultaneously providing protection against microbial infection. Its unique dual action of

gradual excision and concurrent healing makes it applicable to various types of fistulous tracts. Hence, Ksharasutra therapy can be considered a superior and minimally invasive treatment modality for fistula-in-ano, associated with fewer complications, lower recurrence, and early resumption of normal daily activities.

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