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***Ksharasutra* Therapy for Fistula-In-Ano: A Single Case Study**

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Abstract

Introduction:

Fistula-in-Ano is characterized by an abnormal tract extending from the anal canal to the skin surface, often resulting from untreated perianal abscesses. Its management in contemporary medicine includes surgical procedures with varying success rates and high recurrence rates. In Ayurveda, the analogous condition, *Bhagandara*, is described along with specific treatment modalities such as *Ksharasutra*, which involves the use of medicated threads to effectively manage and heal fistulous tracts. This case study aims to explore the efficacy of *Ksharasutra* in treating Fistula-in-Ano, emphasizing the importance of *Ayurveda* principles in contemporary clinical practice.

Materials & Methods:

A 21-year-old male patient presenting with Fistula-in-Ano was evaluated at the Outdoor Patient Dept. of *Shalyatantra*. Clinical examination confirmed the diagnosis, and treatment using *Ksharasutra* was initiated. The procedure involved the insertion and periodic tightening of medicated threads into the fistulous tract to induce cutting and healing of unhealthy tissues. Regular follow-ups were conducted to

monitor healing progress and assess any complications or recurrence.

Results:

The use of *Ksharasutra* in the management of Fistula-in-Ano resulted in significant clinical improvement for the patient. The procedure effectively promoted the closure of the fistulous tract, with minimal complications observed during the treatment period. Follow-up evaluations indicated satisfactory healing and absence of recurrence, demonstrating the efficacy of *Ayurveda* intervention in managing this chronic condition.

Discussion:

The case study highlights the role of *Ksharasutra* as a viable treatment option for Fistula-in-Ano, aligning with *Ayurveda* principles of targeted therapy aimed at eliminating diseased tissue and promoting natural healing. Compared to conventional surgical approaches, *Ksharasutra* offers advantages such as reduced risk of complications, faster recovery times, and potentially lower recurrence rates. The integration of *Ayurveda* practices in modern clinical settings provides an alternative perspective on managing challenging conditions like Fistula-in-Ano, emphasizing personalized care and holistic treatment approaches.

Keywords: *Bhagandara, Ksharasutra, Fistula-in-Ano, Ayurveda*

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Introduction

The dietary habits and lifestyle of humans are increasingly adopting undesired patterns, leading to various ailments affecting the gastrointestinal tract. Constipation, a common consequence of altered lifestyles and food habits, is a primary cause of many ano-rectal diseases. Among these, Fistula-in-Ano stands out as one of the most prevalent.

Fistula-in-Ano exhibits a higher prevalence in men than women, with rates of 12.3 cases per 100,000 and 5.6 cases per 100,000, respectively. Typically diagnosed around the age of 38, this condition predominantly affects individuals between 20 to 40 years old. Contributing risk factors include obesity, diabetes, smoking, hyperlipidemia, and a sedentary lifestyle [1].

Despite advancements in surgical techniques, treating anal fistulas remains challenging, with high failure and recurrence rates. The recurrence rates for various types of anal fistulas range from 7% to 50%, necessitating multiple surgical interventions for most patients [2].

Ayurveda, an ancient system of medicine, offers *Kshara* as a therapeutic approach to treating various conditions, including Fistula-in-Ano. *Kshara*, characterized by its ability to destroy vitiated tissue through actions akin to excision, cutting, and scraping, while also balancing the three *Dosha* (~biological energies), holds significant therapeutic potential [3]. *Acharya Sushruta*, an eminent ancient *Ayurveda* surgeon, advocates the use of *Ksharasutra* for cutting open *Nadivrana* (sinus tracts) [4].

In this study, a case is presented

where *Ksharasutra* was employed to treat a patient with Fistula-in-Ano. The procedure involved preparing the *Ksharasutra* thread with specific coatings: initially dipping a Barbour thread in *Snuhiksheera* (latex of *Euphorbia neriifolia*) for four days, followed by mixing *Snuhikseera* with *Haridra Choorna* (powdered turmeric) into a paste for subsequent coatings over the next three days, dried in sunlight.

Case History:

Anush Kumar, a 21-year-old student, presented on 20th March 2024 with complaints of swelling, pus discharge, and pain in the left perineal region persisting since 20th March 2023. He had no history of diabetes mellitus or hypertension prior to the onset of symptoms.

On 20th March 2023, Anush experienced sudden onset pain and fever in the left perineal region. He sought medical attention at a local hospital where incision and drainage (I&D) were performed, and medications were prescribed, although the specific details were not recalled by the patient. Following this treatment, he experienced relief.

Two months later, on 20th May 2023, Anush had a recurrence of symptoms and sought treatment at an Ayurveda hospital. However, he did not follow up after the swelling spontaneously opened, draining pus, and providing relief on its own.

After an interval of eight months, on 20th January 2024, Anush presented to our clinic with worsening symptoms. He reported persistent swelling and pus discharge for two months, exacerbated by severe pain over the past week.

On inspection on 20th January 2024, an external opening was noted at the 1 o'clock position, situated 8 cm from the anal verge. Redness was observed around the external opening. Digital examination revealed normal sphincter tone, with induration identified at the 1 o'clock position. Upon probe insertion, an internal opening was confirmed at the same location. The diagnosis was confirmed to be Fistulo-In-Ano which very well has similarities with *Bhagandara* mentioned in Ayurveda classics.

Therapeutic Intervention:

Preoperative investigations on 20th January 2024 revealed slightly elevated total count (T.C), neutrophils, and erythrocyte sedimentation rate (ESR), while all other investigations were within normal limits.

Preoperative Procedures:

The patient consented for the procedure after dinner, and from 9:00 PM, nil by mouth instructions were followed. Preoperative preparation included administration of 0.5 ml of tetanus toxoid intramuscularly, and a subcutaneous test dose of 0.2 ml plain 2% xylocaine was given. An intravenous line was secured, and soap water enemas were administered at 6:00 AM and again at 8:00 AM. The surgical site was prepared for the procedure.

Operative Procedure:

The patient was positioned in lithotomy. The surgical field was prepared with painting and draping, followed by local anesthesia infiltration using 2% xylocaine. A probe was inserted to identify the internal opening, and due to the length of the

fistulous tract, a partial fistulotomy was performed, reducing the tract length from 8 cm to 5 cm. A cruciate incision was made to facilitate drainage of pus and improve access to the surgical field. Subsequently, a ksara sutra (medicated thread) was inserted behind the probe, the probe was removed, and the *Ksharasutra* was tied. The wound was dressed meticulously to ensure proper closure and hemostasis was achieved before shifting the patient to the postoperative ward.

Postoperative Care:

After half an hour, the patient was provided with *kanji* (a rice-based porridge). Vital signs including blood pressure, pulse rate, temperature, and oxygen saturation were monitored hourly for the next six hours. Medications prescribed included Tab. Mox 500 mg twice a day for 7 days, Tab. Pan D 40 mg 1-0-0 before food, and Tab. Ultracet as needed. Additionally, Ayurveda medications were administered: *Chirabiltvadi Kashayam* 60 ml twice daily, *Triphala Guggulu* 1-0-1 before food, *Gandaka Rasayana* 500 mg twice a day before food, *Kaishora Guggulu* 500 mg twice a day before food, and *Brihat Triphaladi Choornam* 5 grams with lukewarm water at bedtime. The patient was instructed to take sitz baths in warm water with a few drops of iodine solution and ensure regular cleaning and dressing of the wound.

The follow up & outcome are depicted below in table 1. The operative & post-operative healed wound are depicted in Figures:1&2.

Table 1: Follow-Up and Outcome

Week	Size in cm (Length of Fistula)	Medications	Procedures/Notes
1st week	4.2 cm	- Stop antibiotics and antacids - Continued other prescribed medications	- T. Ultracet SOS
2nd week	3 cm	- T. Ultracet SOS	- Continued other prescribed medications
3rd week	2 cm	- T. Ultracet SOS	- Continued other prescribed medications
4th week	0.8 cm	- T. Ultracet SOS	- Continued other prescribed medications - Complete fistulotomy under local anesthesia - Wound dressing done - Instructed to continue medications
5th week	Wound completely healed	- Continued medications as per regimen	



Figure 1: Ksharasutra Applied to bhagandara



Figure 2: Healed wound

Discussion:

Acharya Sushruta, ancient *Ayurveda* clinician & surgeon, classified the treatment of *Bhagandara* (fistula-in-ano) into *Bheshaja*, *Ksarakarma*, *Agnikarma*, and *Shastrakarma*. In modern medicine, treatments such as fistulotomy, fistulectomy, and seton ligation are commonly performed. However, these procedures are associated with higher recurrence rates and

complications including postoperative bleeding, infection, pain, and delayed healing.*

In comparison, *Ksharasutra* ligation offers several advantages due to its minimal complications and low recurrence rates. It avoids complications like fecal incontinence and anal stricture, which can occur with conventional surgical methods.

The efficacy of *Ksharasutra* can be

attributed to its unique properties. *Snuhi ksheera*, used in the preparation of *Ksharasutra*, possesses both cleansing (*Shodhana*) and healing (*Ropana*) properties [6]. The herbs *Apamarga*, *Tilanala*, and *Snuhi*, which form part of the *Ksharasutra* ingredients, exhibit bitter (*Katu*), pungent (*Tikta*) tastes, and have hot potency (*Ushna Virya*), sharp post-digestive effect (*Katu Vipaka*), and pacifying properties for *Kapha* and *Pitta Dosh*.

Haridra (turmeric) powder, known for its antiseptic properties, aids in the healing of the fistulous tract.

Conclusion

Fistula-in-ano is a chronic inflammatory condition characterized by a

tubular structure with openings in the anorectal canal and perineal skin. This clinical entity correlates with the *Ayurveda* concept of *Bhagandara*. The present study demonstrates complete healing of the fistula within 5 weeks of intervention, facilitating debridement and preventing bacterial infections.

Ksharasutra therapy offers a dual benefit of cutting and healing simultaneously, making it suitable for various types of fistulous tracts. Therefore, we conclude that *Ksharasutra* treatment is a superior option for fistula-in-ano due to its minimal complications, allowing patients to resume normal activities earlier.

Informed Consent: Taken

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Conflicts of Interest: Nil

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