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PARTIAL FISTULECTOMY FOLLOWED BY KSHARA SUTRA LIGATION IN THE MANAGEMENT OF TRANS SPHINCTERIC FISTULA IN ANO – A CASE STUDY

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ABSTRACT

Fistula-in-ano is a chronic abnormal communication, usually lined to some degree by granulation tissue, which runs outwards from the anorectal lumen (the internal opening) to an external opening on the skin of the perineum or buttock (rarely in women to the vagina). In modern medical science various treatment modalities has been explained but they are having its own merits and demerits. Ksharasutra is a medicated thread, indicated in ano-rectal disorders particularly in the management of Bhagandhara. In plane Kshrasutra the required time for cut through and healing of wound is more, so patients are mentally disturbed with this disease. Hence to minimize the required time, multiple interventions along with Ksharasutra is opted.

In this case report, a patient of long trans-sphincteric fistula- in- Ano having 15cm length & 7.1 mm thickness extending from underneath the penis to its internal opening at 12 o'clock position i.e. 21mm from anal verge was treated with partial fistulectomy with Ksharasutra ligation. Alternate day dressing was done for the partial fistulectomy wound and old Ksharasutra was changed with a new one by rail-road method on every week for the remaining part of fistulous tract. The unit cutting time (UCT) was measured and noted at every week. This case was cured completely within 16 weeks. Hence the study concluded that the long trans sphincteric Ano-cutaneous fistula cases can be treated with Partial fistulectomy with Ksharasutra ligation.

KEY WORDS: *Bhagandhara, Fistula in Ano, Partial Fistulectomy, Apamaraga Kshara Sutra, Sphincter Saving Procedure.*

INTRODUCTION

A fistula in ano is a common perianal condition that is associated with appreciable morbidity and inconvenience to the patient. In simple terms, a fistula can be described as a chronic granulating track connecting two epithelium lined surfaces, either cutaneous or mucosal. Fistulotomy, fistulectomy, LIFT, VAAFT, IFTAK and seton insertion are the most commonly performed surgical procedures for this condition. Fistulectomy done for complete removal of fistula tract but it creates difficulties in case sphincter saving. Hippocrates, in about 430 BC, made reference to surgical therapy for fistulous disease and he was the first person to advocate the use of a seton (from the Latin seta, a bristle). Susrutha has described explicitly the surgical procedure to be undertaken for each type of Bhagandara. Ksharasutra (medicated seton) is mentioned as the treatment of choice for Bhagandara by Charaka and Vagbhatta. Sushruta has mentioned Ksharasutra in the management of Nadivrana (sinus) and Bhagandara. The surgeon has to keep in mind the trade off between the extent of sphincter division, postoperative healing rate, and functional loss. Ksharsutra has been used to manage anal fistula from hundreds of years; however, in the literature, ksharsutra were commonly used only for high or complex anal fistula in order to avoid fecal incontinence and recurrence. This fistulectomy with Ksharasutra offers a unique treatment modality by sparing the sphincter muscles and thus preventing incontinence. It also decreases the patient discomfort and loss of the job hours.

MATERIAL & METHODS

This is a single case study of patient with fistula in ano. Patient came to Gopabandhu Ayurveda Mahavidyalaya, Puri. Patient was examined at OPD. On examination we diagnosed a case of anterior trans sphincteric fistula in Ano extending from scrotum to anal canal . In this case after all pre-operative major profile and MRI, we performed partial fistulectomy along with Kshar sutra ligation.

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CASE REPORT

Chief complaints:

Patient complaints of pain at perianal region, with Boil at scrotal Region, with itching and pus discharge from boil since 6 months.

History

- No history of hypertension, CAD, CKD, epilepsy, tuberculosis, etc.
- Diabetes under controlled
- No previous surgery
- Appetite, bowel movements, sleep: normal
- Vitals: Stable ***Local examination On***

Inspection

One external opening noted at inferior aspect of left side scrotal wall i.e. underneath the penis approx 15 cm away from Anal Verge.

On Palpation

Soft tissue oedema at left side scrotal wall & no supra levator extension.

P/R Digital examination

Internal Opening at 12 o'clock position approx 21.0 mm from anal verge.

MRI report

Long trans- spincteric ano-cutaneous fistulous tract with its internal opening into anal canal at 12 0' clock position and external opening in inferior aspect of left side scrotal wall with associated soft tissue edema. SJUH grade -3.

Image of MRI Report



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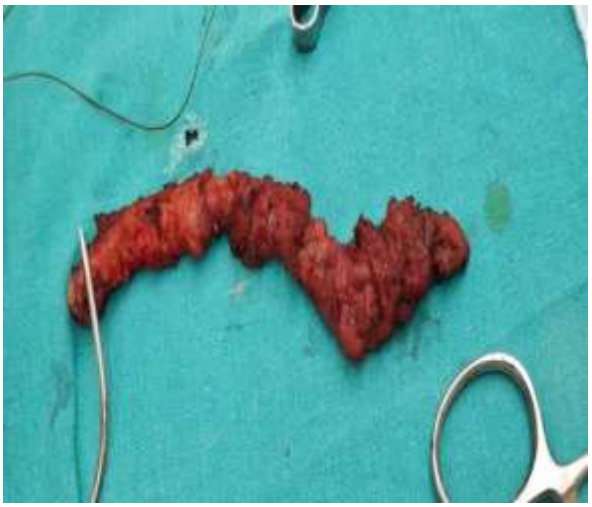
Technique

In the operation room, under spinal anaesthesia patient was evaluated in the lithotomy position. Proctoscopy was done prior to any intervention. Betadine with hydrogen peroxide in a 5 mL syringe was used to stain the entire tract by injecting into the external opening. The external opening was gently probed using a copper probe with an eye. Copper probe is used because it is highly malleable. After that coring started and fistulous track cored out till external sphincter with clinical

judgment and after that passing the copper probe through internal opening at 12 o'clock position. Then a Ksharsutra is tied to the eye of the copper probe and the probe is brought out through the anal canal, during the manoeuvre the Kshar sutra is also dragged along the course of the fistulous tract. Now the Kshar sutra which was brought through the only part of anal sphincters to internal opening, thus traversing the whole path of anal sphincters is tied by Ksharsutra. This is a purely sphincter saving method, around 3-4 cm part of track is tied over and this took around 16 week for completely cut through. Patient was advised to come for Kshar sutra change weekly once.



Removal of fistula Tract



Fistula Tract

POST-OPERATIVE CARE



After 7 days

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After 15 days





After 30 days After 45 days



After 90 days

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The Kshara Sutra was changed weekly using the railroad technique. Antiseptic dressing was performed on alternate days to support wound healing. The patient was advised to take sitz bath twice a day after stich removal of fistulectomy to keep the operated area clean and dry.

Medications Prescribed
- ***Saptavimsati Guggulu:*** *2 tablets BD after food*
- ***Arogyavardhini Vati:*** *2 tablets BD before food*
- ***Curcumin:*** *2 tablets BD after food*
- ***Jatyadi Ghrita:*** *Local application*
- ***Kshara Sutra Change:*** *Once weekly*
- ***Diet:*** *Fiber-rich diet advised*

Follow-up and Progress
Regular follow-ups were conducted to assess the patient's symptoms: pain, pus discharge, and tenderness. Discharge and pain were present during the initial 15 days and gradually subsided. Complete wound healing was observed within 15 days post thread cut-through.

Follow-up Observations:
Pain: *+++ (1st) → ++ (2nd) → + (3rd) → - (4th)* ***Discharge:*** *+++ (1st) → ++ (2nd) → + (3rd) → - (4th)* ***Tenderness:*** *++ (1st) → + (2nd) → - (3rd & 4th)*

DISCUSSION
Here we emphasized the treatment of fistula in Ano through the partial fistulectomy & use of Kshara Sutra. In this procedure complete removal of fistula tract up to 12cm & after that kshara sutra ligation done for proper drainage of pus and collections. It is a purely sphincter saving procedure, fastest healing, low recurrence rate, less hospital visit, less discomfort, speed recovery rate. This method involves the alternate day dressing & removal of fistulectomy suturing after 12 days and application of a medicated thread prepared with layers of herbal alkaline compounds (primarily Apamarga Kshara), latex (Snuhi), and antimicrobial agents like Haridra (turmeric). The Apamarga Kshara Sutra employed in this study exhibits multiple pharmacological actions due to its composite properties: Shodhana (cleansing), Ropana (healing), Lekhana (scraping), and Krimighna (antimicrobial).

MODE OF ACTION OF APAMARGA KSHARA SUTRA
i) Mechanical Action: As the thread is gradually tightened or replaced weekly, it exerts a controlled mechanical pressure that slowly cuts through the sinus tract. This cutting through is atraumatic and allows for simultaneous healing from the base, thereby avoiding open surgical wounds or large scars.

ii) Chemical Action
- **Shodhana (Debridement and Cleansing):** The alkaline nature of Apamarga Kshara facilitates liquefaction and removal of necrotic tissue, slough, and purulent material. This helps in detoxifying the local wound environment, allowing healthy granulation tissue to form.
- **Ropana (Healing Promotion):** Snuhi latex and Haridra possess wound healing and anti-inflammatory properties that enhance tissue regeneration. These ingredients stimulate fibroblast activity and epithelialization, expediting wound closure.
- **Lekhana (Scraping Action):** The scraping quality helps remove unhealthy granulation tissue, sinus tracts, and accumulated debris within the sinus cavity, ensuring complete tract obliteration.
- **Krimighna (Antimicrobial):** Haridra and Kshara have proven antimicrobial activity against common pathogens. This reduces local microbial load and prevents secondary infection.
- **Ushna (Hot) and Tikshna (Penetrative) Properties:** These enhance tissue penetration, cauterization of crypts and sinus branches, and destruction of infected glandular tissue or hair follicles, which are often the nidus for recurrence.

iii) Immunomodulatory and Anti-inflammatory Effect: Ingredients like Haridra also modulate local immune responses, reducing chronic inflammation that sustains sinus tract formation. This results in reduced pain, swelling, and faster resolution.
iv) Drainage and Ventilation: The presence of the thread allows continuous drainage of pus or debris from the sinus tract, preventing accumulation and abscess formation. It also provides a controlled path for healing tissue formation from within.
v) Minimal Tissue Damage and Low Recurrence: Unlike conventional surgeries that involve wide excision and potential loss of tissue planes, Kshara Sutra enables natural wound contraction without creating new dead spaces. This reduces the risk of recurrence significantly.

CONCLUSION
In this case, complete cut-through of the tract was observed within 16 weeks, followed by full healing in 10 days post cut-through.

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There were no post-operative complications or recurrence during the 3-month follow-up period. The patient resumed daily activities. In this case Partial fistulectomy with Kshara Sutra ligation therapy ensures removal of infected debris, low recurrence rate, purely sphincter saving, fastest healing, less hospital visit, less discomfort, speed recovery rate. This case study highlights the effectiveness of fistulectomy with Apamarga Kshara Sutra as a reliable therapeutic modality in managing Fistula in Ano.