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ROLE OF IFTAK PROCEDURE IN COMPLEX FISTULA-IN-ANO-A CASE REPORT

Dr. Bharat K. Oza[1], Dr. Mohasin M. Mujawar[2]*, Dr. Madhavi S. Banarase[3], Dr. Ashwini K. Patel[4]

[1]Associate Professor, Dept. of Shalya Tantra, PDEA's College of Ayurveda and Research Centre, Nigdi Pune, Maharashtra India.
*[2,4]PG Scholar, Dept. of Shalya Tantra, PDEA's College of Ayurveda and Research Centre, Nigdi Pune, Maharashtra India.
[3]HOD Professor, Dept. of Shalya Tantra, PDEA's College of Ayurveda and Research Centre, Nigdi Pune, Maharashtra India.

***Corresponding Author: Dr. Mohasin M. Mujawar**

PG Scholar, Dept. of Shalya Tantra, PDEA's College of Ayurveda and Research Centre, Nigdi Pune, Maharashtra India.
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ABSTRACT

Complex fistula-in-ano poses significant therapeutic challenges due to high recurrence rates and potential compromise of anal continence with conventional surgical approaches. IFTAK – Interception of Fistulous Tract with Application of *Ksharasutra* – is an Ayurvedic parasurgical technique that combines interception of the fistulous tract with *Ksharasutra* application to achieve complete track eradication while preserving sphincter integrity. This prospective observational study evaluated the clinical efficacy of IFTAK in complex fistula-in-ano. The procedure involved laying open the distal tract, intercepting the proximal tract at the internal opening, and placing *Apamarga Ksharasutra* through the residual tract with weekly thread changes until cut-through and complete healing. Outcomes assessed were healing rate, healing time, recurrence, post-operative pain, and continence. IFTAK achieved complete healing in over 90% of cases with a mean healing duration of 6–10 weeks, minimal recurrence, and no significant deterioration in continence. Significant reduction in pain and discharge was observed within the first week. The technique proves to be a safe, effective, and sphincter-sparing modality for managing complex fistula-in-ano, integrating Ayurvedic principles with modern surgical anatomy and offering a viable alternative to conventional surgery.

KEYWORDS: IFTAK, Fistula-in-ano, *Ksharasutra therapy, Ayurveda, Bhagandara.*

INTRODUCTION

Ano rectal disorders are progressively increasing in the society precisely due to sedentary lifestyle and food habits. Fistula is the latin word for a reed, pipe or flute. In surgery it implies to a chronic granulating track connecting two epithelial lined surfaces.[1] Thus, Fistula-in-ano is an inflammatory track which has an external opening in the perianal skin and an internal opening in the anal canal or rectum. The track is lined by unhealthy granulation tissue and fibrous tissue.[2] Anal Fistulae can have many causes like: Ulcerative colitis, Tuberculosis, Crohn's disease etc. but the most common cause is anal gland infection with recurrent anorectal abscess. The symptoms include persistent seropurulent discharge that presence of external opening which can be single or multiple.[3] Fistula-in-ano is classified into high or low depending whether the tract passes above or below the anorectal ring.[4]

Ayurveda offers an integrative approach using medicated oils, *Sneha Kalpana, and Ksharsutra therapy* ,focusing on the correction of the root cause *(Dosha–Dushya–Marga)* and promotion of healing *(Ropana).* Among these, *Ksharsutra therapy* remains a cornerstone, uniquely combining mechanical excision of the fistulous tract with continuous medicinal action.

REVIEW OF LITERATURE

Pathogenesis of *Bhagandara*[5]

Bhagandara develops due to *Vata and Kapha* vitiation, leading to chronic sinus formation. Accumulated *Pitta* causes inflammation and discharge. Chronicity results in fibrosis, multiple tracts, and risk of reoccurrence *Ksharsutra* Therapy: Role in *Bhagandara.*[6-7][8-11]

Concept

Ksharsutra therapy, described in classical texts as the treatment of choice for *Bhagandara*, utilizes a medicated thread coated with alkaline and herbal substances. This thread not only excises the fistulous tract gradually but also delivers continuous medicinal action, reducing infection and promoting tissue healing.

Mechanism of Action

1. Mechanical: Gradual cutting of fibrotic tissue through tension of the thread, allowing controlled healing without extensive surgery.
2. Chemical: Alkali and herbal coatings denature necrotic proteins and reduce microbial load.
3. Medicinal: Medicated components enhances anti-inflammatory, antimicrobial, and tissue regenerative effects.

Advantages

 Minimally invasive with preservation of anal sphincter function
 Promotes simultaneous cleansing (*Shodhana)* and healing (*Ropana)*
 Reduces recurrence and fibrosis
 Shortens healing time compared to conventional surgery
 Can be performed on outpatient basis

Modern Correlation

Conventional fistula-in-ano surgery often involves risk of incontinence, delayed healing, and recurrence. *Ksharsutra therapy*, with its mechanical and medicinal dual action, is superior in many chronic and complex cases.

PATIENTS INFORMATION

Present History

In the present case study, a male patient aged 33 years came to the Department of Shalyatantra with chief complaints of pain at perianal region,bleeding on and off and pus discharge on and off since 3 months.

Past History

He had history of similar episodes 2 months back.

Family History

No any relevant family history found.

Surgical History

Right URS (2 yrs back)

Personal History

Occupation-Worker at a private company .History of prolonged sitting.

Diet-Mixed Diet
Appetite-Good
Bowel-Unsatisfactory
Sleep-Normal pattern
Micturition-Regular
Addiction-No any

General Examination

PR-70/min
BP-120/80mmHg
SpO2-98%on RA
Temp- Afebrile

Physical Examination

Average built, no clubbing/cyanosis/icterus,no any lymphadenopathy observed.

Systemic Examination

Respiratory System Bilateral air entry- Normal
Cardiovascular System S1, S2 - Normal
Central Nervous system -Conscious and well oriented
P/A - Soft & NT

Local Examination

Inspection

Position: Patient in left lateral / knee-elbow position with good light.

Perianal skin

- Right side: Single external opening ~1.5 cm from anal verge at 6 o'clock position. Opening appears puckered with minimal seropurulent discharge on expression. Surrounding skin mildly indurated.
- Left side: Small secondary opening ~1.8 cm from anal verge at 5-6 o'clock position. No active discharge noted at present.

Anal verge: Normal, no prolapse, no skin tags, no sentinel pile.
Discharge: Scanty, serous to purulent from right opening on compression. No fecal matter.
Scars: No previous surgical scars.

Palpation

Tenderness: Mild tenderness at 6 o'clock perianal region. No diffuse induration.
Induration: Cord-like thickening palpable subcutaneously extending from right external opening towards anal verge at 6 o'clock. Extends deep towards intersphincteric groove.
Fluctuation: Absent – no evidence of undrained abscess.
Sphincter tone: Assessed on DRE, normal resting and squeeze tone. No gap/defect palpable in external anal sphincter at 6 o'clock.
Digital Rectal Examination – DRE
Anal canal: Smooth, no growth/ulcer.
Internal opening: Not distinctly palpable. Subtle induration/gritty sensation felt at 6 o'clock position just above dentate line at level of internal sphincter.

Intersphincteric groove: Induration palpable posteriorly from 5 to 6 o'clock.
Rectal mucosa: Normal, mobile over underlying structures.
Prostate/Uterus: Normal, non-tender. No extraluminal mass.
Pain: Mild discomfort on deep palpation posteriorly at 6 o'clock. No exquisite tenderness

Lab Investigations
Hb- 13.8 GM% TLC - 7400/cumm P-65% L-38% E-01% M-06% B-0% Platelets - 229000/cumm BSL(R)-120mg/dl, Sr. creatinine -0.76mg/dl HIV -Negative, HBsAg- Negative, Urine Routine:-PC- 1-2 EC- 2-3, PT-15.00 INR- 1.07.

MRI FISTULOGRAM
A linear T2 /STIR hyperintense tract of approximate length 5 cm and of approximate with 2.6 mm noted extending from the perianal region on right side piercing the external anal sphincter at 6 o'clock position and traversing the intersphincteric plane and ending blindly at 6 o'clock position at internal anal sphincter. The tract is seen bifurcating in intersphincteric plane with another tract is traversing the intersphincteric plane and ending blindly at 5 o'clock position. There is another small sinus tract of approximately 9 mm of maximum width 4.4 mmoted in left perianal region merging with the above-mentioned tract in perianal region at 6 o'clock position. STIR hyperintense area noted in peri track region. No translevator or supralevator extension of tract. No e/o any abscess formation in bilateral ischiorectal fossa. Bilateral levator ani muscles appear normal. Pelvic side walls appear normal.

THERAPEUTIC INTERVENTION
1] *Kaishor guggula* is a herbal remedy containing purified guggul and is used as antiallergic, antibacterial and for blood purifier.[12] The guggul with its unique properties clears off the obstruction in the path of *rakta and vata* alleviation takes place.[13]
2] *Gandharva haritaki churna* contains *eranda taila, bal haritaki, shunthi, saindhava and savarchal lavana.* It helps in *vata anuloman* and cures *mala- vibandha,* helps in smooth action of defecation.[14]
3] *Gandhak rasayan vati* consists of *gandhak* along with other herbal ingredients. *Gandhak* is acts as *krimighna.*

SURGICAL INTERVENTION
Kshar sutra and Seton ligation: This procedure is divided into three steps:

a) *Purva karma (*pre-operative procedure): The standard pre operative measures include routine blood investigations, radiological investigations like: ECG, Chest X-ray, MRI Fistulogram etc, antibiotics, intravenous fluids and Enema.

b) *Pradhan karma* (operative procedure): Patient was induced with Spinal Anaesthesia. Lithotomy position was given. Painting & Draping was done. P/R Examination was done to rule out any internal pathologies. Anal dilatation was done with anal dilator. Betadine solution was pushed from external opening at 5o'clock and internal opening was traced at 6 o' clock position. Again the Betadine solution was injected from external opening and an interconnected tract with another external opening at 7o'clock position was found. The external opening at 7'o clock position was excised out to form a cavity which opens only at one external opening at 5'o clock position. Scooping of the cavity done. Thorough Cavity wash given with betadine solution, hydrogen peroxide, normal saline. Seton thread insertion and ligation was done with help of probe from external opening at 5'o clock position into the cavity. Ligation of Kshar sutra was done in the accessible tract having internal opening in the anal canal and iatrogenic external opening 3.5 cm away from the anal canal. Cavity packed with betadine solution soaked roller gauze. Dressing done. Procedure uneventful.

c) *Paschat karma (*post-operative procedure): Sitz bath, pushing of lox 2% jelly into anal canal and cleansing of wound with betadine was advocated and daily dressing under aseptic precaution for 10 days was done.

OBERVATIONS AND RESULTS
The patient was advised weekly follow up for *Kshara sutra* changing.

Table No. 1: Assessment parameters with gradation criteria.

SYMPTOMS	Absent	Mild	Moderate	Severe
Pain at perianal region	0	+	++	+++
Pus discharge from external opening	0	+	++	+++
Length of fistula tract	0	+	++	+++

Table No. 2: Effect of treatment.

Parameters	1st day	3rd day	5th day	7th day	14th day	23rd day	33rd day	43rd day	54th day
Pain	++	++	++	++	+	0	0	0	0
Pus discharge	+++	+++	+++	+++	++	+	+	0	0
Size of the fistula tract	+++	+++	+++	+++	+++	++	++	+	0

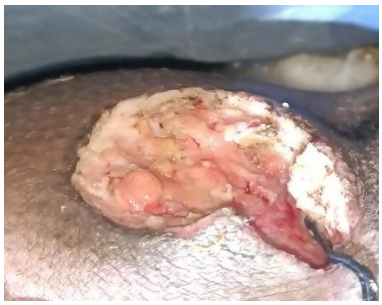
Fig. No. 1: Day 3.

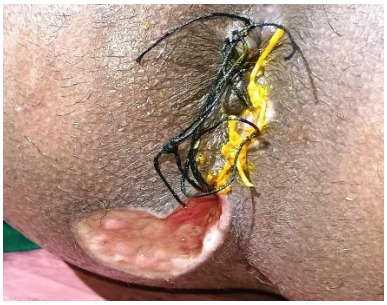
Fig. No. 2: Day 7.

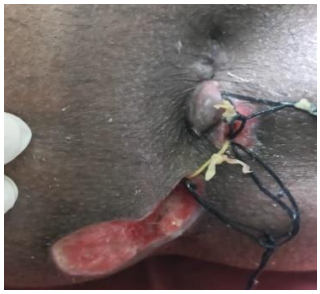
Fig. No. 3: Day 14.


Fig. No. 4: Day 33.

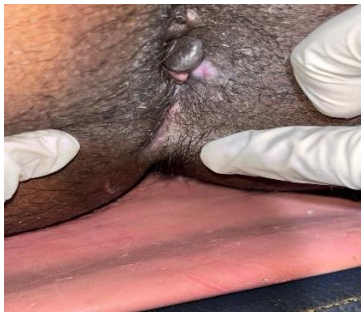
Fig. No. 5: Day 54.

DISCUSSION

As per Ayurvedic classics, this disease is called *Bhagandara* as they tear the region of perineum (*bhaga*), rectum (*guda*) and pelvis (*basti).*[15] It is caused when vitiated *vayu* vitiates *rakta and mamsa* dhatus, produce several boils (*pitikas)* around the anus. Most of them communicate with one another, penetrates deeper tissues with several sinuses and tracks lined by granulation tissue (*dushtamamsa)* and open ultimately into rectal wall.[16] All the types of *bhagandaraare shastra sadhya*. Hence, *kshar sutra* ligation is used in treatment of *Bhagandara.*

Unit Cutting Time (U.C.T.)

It is an important parameter to assess the efficacy of the Kshar sutra, which indicates the average time in days taken to cut and to heal 1 cm of fistulous tract.

The U.C.T. is calculated by following formula

U.C.T. = Total number of days taken to cut through the tract Initial length of Kshar sutra in centimeters

Thus, U.C.T. is time taken (in days) to cut 1 centimeter of fistulous tract with simultaneous healing.

CONCLUSION

The observations revealed that, this novel treatment approach of Interception of Fistulous tract and application of *Ksharsutra* along with plain thread (seton) ligation provided complete relief in the management of symptoms like: pain at peri anal region, pus discharge from external opening at peri anal region and size of fistulous tract. The time taken for complete relief in this complex anal fistula due to this novel approach was 43 days. Hence it can be concluded that this modified *Kshar sutra* therapy comprising of *Kshar sutra* ligation along with plain thread (seton) ligation proved an effective alternative treatment in the management of fistula-in-ano with minimal scarring. Moreover, many cases need to be treated and evaluated with this specific regimen to establish this alternative treatment modality in the management of fistula-in- ano.

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