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Case Report

Surgery Section

Management of *Shambukavarta Bhagandara* (Horseshoe Fistula in Ano) by using Interception of Fistulous Tract with Application of Ksharsutra (IFTAK) Technique: A Case Report

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ABSTRACT

Bhagandara is a well known ailment due to its high recurrence rate and complexity in management. *Sambukavarta Bhagandara* classifies it as an *Asadhyaya* ailment and describes it as a *Tridoshaj Bhagandara*. In present terminology, it is a synonym for Fistula in Ano. Here, the authors present a 45-year-old female with an anal fistula who had never received therapy or undergone surgery. In her case, an innovative technique called 'Interception of Fistulous Tract with Application of Ksharsutra (IFTAK)' was used for the *Ksharasutra* application. Five mL of *Chandanbalalakshadi* Tail Basti was administered every day. The patient was completely cured four to six weeks after the procedure. In situations with a horseshoe-shaped anal fistula, *Ksharasutra* therapy utilising the Windows (IFTAK) technique is exceptionally successful, resulting in less scar development, a shorter hospital stay, allowing patients to return to work sooner, causing fewer complications following surgery, and *reducing* the risk of recurrence.

Keywords: Anal fistula, Anorectal abscess, Interception of fistulous tract with application of ksharsutra

CASE REPORT

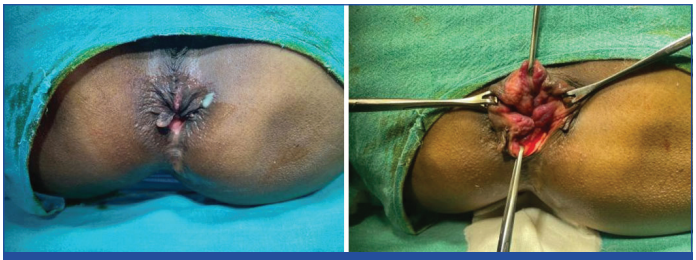
A 45-year-old female patient, who had been healthy for six months, gradually began to experience pain and a burning sensation in the anal region, as well as hard stools and pus discharge from the anal and perianal regions starting one month ago. She sought further treatment at the Ayurved Hospital at the Shalya Outpatient Department (OPD). No previous surgical history, drug intake history, and allergic reactions were observed. There was no previous history of bladder complaints, and no history of trauma was noted. The patient was not suffering from any co-morbidities.

A per rectal examination was performed, revealing mild anal spasm and redness. An internal opening was present at the 2 o'clock position, with another opening at the 6 o'clock and 7 o'clock positions. Interoexternal haemorrhoids were present at the 1, 3, 7, 9, and 11 o'clock positions. There was no active bleeding, but pus discharge was present.

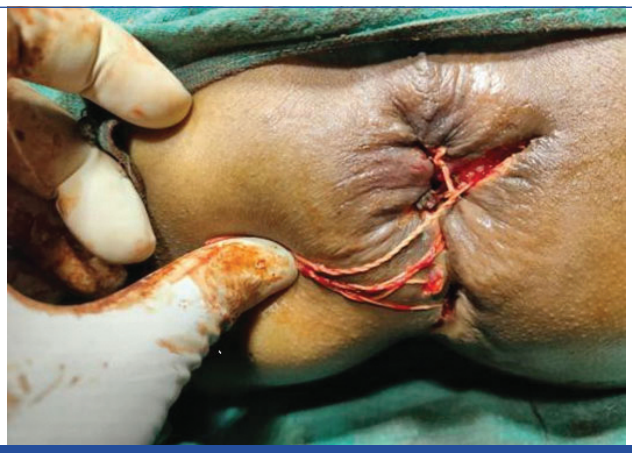
Biochemical parameters were normal. The patient was not anaemic, and blood sugar levels were normal. An Magnetic Resonance Imaging (MRI) Fistulogram (Perianal region) was performed, revealing a perianal complex branching fistula with a primary branched trans-sphincteric fistulous tract and a secondary left extrasphincteric sinus tract blindly ending in the collection in the left levator ani.

The patient was Nil Per Oral (NPO) from midnight, and inj. TT 0.5 cc IM was given. A sensitivity test was performed using Inj. xylocaine 0.5 cc subcutaneously. One day before the operation, Tab. Triphala guggul two tabs along with Triphala churna two tsp with lukewarm water were administered.

Painting and draping were completed in the lithotomic position under spinal anaesthesia and aseptic care. Lord's anal dilation was completed up to four fingers. The Sims speculum visualised the anal canal as shown in [Table/Fig-1]. An internal opening at 2 o'clock was discovered to be fibrous, and another internal opening at 6 o'clock was also discovered. Intero-external haemorrhoids were observed at positions 3, 7, 9, 11, and 1 o'clock as shown in [Table/Fig-2]. The first retrograde probe was initiated at position 6 o'clock and opened at position 7 o'clock. About 4 cm from the anal verge, this tract was ligated by Ksharasutra. A window was created at 6 o'clock, 5 to 6 cm from the anal margin in midway, and the thread was tied along with the distal portion of the thread that was laid open as shown in [Table/Fig-3]. Probing had begun from the 2 o'clock position, and internal opening at 2 o'clock Ksharasutra



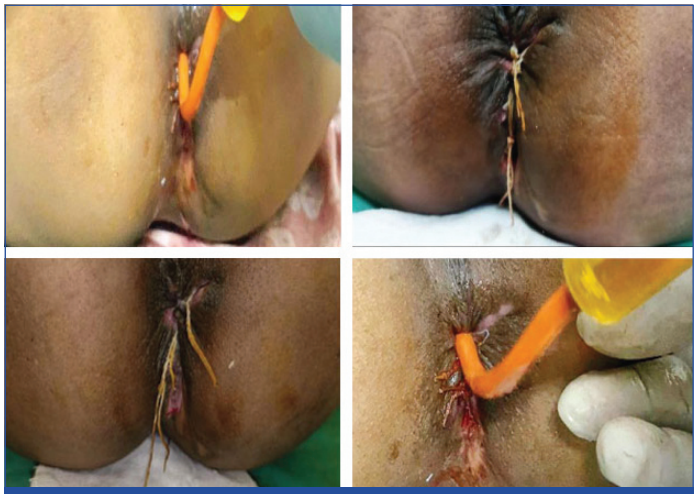
[Table/Fig-1]: Preoperative image showing pus discharge from external opening at 2'o clock position and external opening at 6'o clock position.
[Table/Fig-2]: During the operation image there are interno-external haemorrhoids seen at 3,7,11, 1, and 9'o clock positions. (Images from left to right)



[Table/Fig-3]: Postoperative image, there is Kharsutra ligation (IFTAK technique) done.

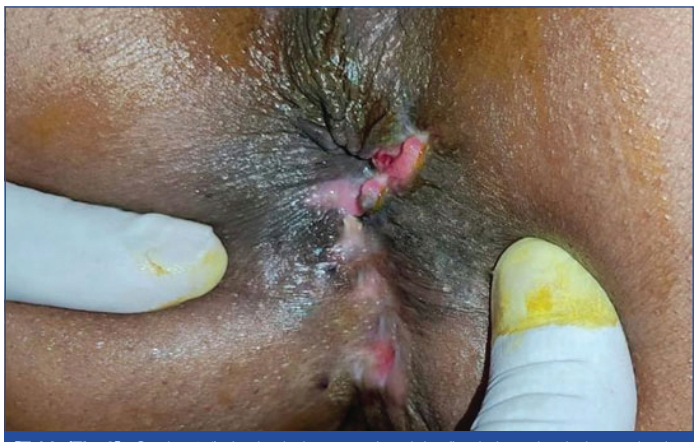
ligation was done as shown in [Table/Fig-3]. At 3 o'clock, an internal-external haemorrhoid was ligated and removed using a laser. Similarly, interno-extrinsic haemorrhoids at positions 7, 9, and 11 o'clock were ligated and excised by laser as shown in [Table/Fig-3]. Haemostasis was achieved. After inserting a betadine and jelly pack, the patient was moved to a ward in a stable state.

After the operation, the patient was advised nil per oral for six hours, along with sitz bath with lukewarm water three times a day. For diet, she was advised to take a soft diet on Postoperative Day (POD)-0 and POD-1. From POD-2, she was shifted to a normal diet. After operating for POD-0 and POD-1 (2 days), Inj. Ceftriaxone 1 gm i.v. Twice a Day (BD), Inj. Pan 40 mg i.v. Once Daily (OD), Inj. Metrogyl 100 mg i.v. thrice were given. If the patient complained of pain, then Inj. Diclo 75 mg IM could be administered Si Opus Sit (SOS). After POD-2, Tab. Cefixime 200 mg BD, Tab. Pan 40 mg OD, and Tab. Emanzen DP 400 mg BD were administered for the next five days. In Ayurvedic management, from POD-1, Chandanbalalakshadi Tail 10 mL basti was given twice a day as shown in [Table/Fig-4], Tab. Triphala Guggulu two Tab. with a cup of lukewarm water, Panchsakar Churna 5 gm with a cup of lukewarm water twice a day, also Syrup Abhayarista 4 tsp twice for the next 15 days. Follow-up was taken every week for Ksharsutra changing by railroad technique and simultaneously observed the healing [Table/Fig-5-7].



[Table/Fig-4-7]: On postoperative follow-up days -2,7,15,30 the healing was seen. (Images from left to right)

The patient's symptoms, involving pain, tenderness, pus discharge, inflammation, and indurations, rapidly decreased in the second week and almost disappeared by the third week. The patient was completely symptom-free, and the scar tissue had fully healed [Table/Fig-8]. No recurrence was noted during follow-up. No complications were developed.



[Table/Fig-8]: On the 45th day both the wound and the fistula have healed completely.

DISCUSSION

Acharya Sushruta referenced *Bhagandara* (Anal Fistula) in *Ashtamahagada* in Ayurveda [1]. In Ayurveda, a tried-and-true para-surgical tool for the treatment of anal fistulas is the *Ksharasutra* [2,3]. According to a statement made by Acharya *Sushruta* on the *Bhagandara, "Bhag Guda Basti Pradesh Daranach* [4]" refers to the illness that rips the pubic, anorectal, urethral as well as perianal regions [5,6]. Although *Kshara Sutra* therapy is recommended by *Acharya Sushruta* and others for the management of *Bhagandara* and is presently the gold standard treatment, traditional *Kshara Sutra* therapy takes more time and results in unsightly scar tissue formation in cases of *Shambukavarta Bhagandara* or complicated *Bhagandara* [7].

Many procedures for treating Fistula in ano are available in contemporary surgery, including Advancement flaps, Ligation of Inter-sphincteric Fistula Tract (LIFT), Video-assisted Anal Fistula Treatment (VAAFT), fibrin glue, anal fistula stopper, and fistulotomy [8]. Due to recurrence, increasing sphincter injury and incontinence, deformity after surgery, physiological disruption, and depression, fistula in ano is difficult to adequately cure despite improvements in surgery [9].

The Interception of Fistulous Tract with Application of Ksharsutra (IFTAK) or Window method is used to treat horseshoe fistula [10]. The *Ksharasutra* method, when performed to intercept a fistulous tract, promotes excellent healing and has a low (3-7%) recurrence rate [11]. Even today, horseshoe fistulas are more difficult to diagnose and treat, and if the fistula is in the upper part of the anus, the situation worsens. Fistulectomy, fistulotomy, and newly developed techniques such as fistula plug and LIFT are surgical solutions with their own limits [12].

The father of surgery, *Acharya Sushruta*, describes the therapeutic benefits of Kshara (alkaline ash) in the treatment of *Bhagandara* (Anal Fistula) [13]. Later, Chakrapani and Bhavmishra described how to prepare and apply *Ksharasutra* in *Bhagandara* (fistula in ano) [14,15]. Various herbal medications and caustic substances derived from herbal plant ash are coated over Barbour's linen thread in *Ksharasutra*. It is a conventional treatment modality used in surgical practice for the management of anorectal fistulas since the therapy has revolutionised the treatment of anorectal fistulas in terms of recurrence and incontinence [15]. Kshara is composed of many substances in their most concentrated and subtle forms. As a result, it is effective against all doshas. It possesses shodhana characteristics because it contains ushna and teekshna gunas, which aid in the desquamation of sloughs (debridement) and drainage of pus when applied topically. Because of its cleaning and antiseptic characteristics, kshara aids in the ropana or healing process in a vrana (wound) [16].

In the present case, using the window technique, the authors opened the potential space for collection of pus after creating the window, preventing any additional collection in the postanal space, cutting off the source of infection from the cryptoglandular origin, and destroying the infected anal gland by inserting the traditional *Apamarga Kshara Sutra* and debriding any unhealthy granules.

To reduce the likelihood of anal incontinence and a return of the condition, the residual fistulous tract was concurrently cut and healed in addition to the chemical action of the alkali (*Ksharasutra*). In conjunction with the IFTAK approach, tab. Triphala Guggulu was utilised to reduce pain, inflammation, and infection risk. Triphala guggulu is an effective antibacterial [17]. As a result, it could help to prevent infections and speed up the healing of wounds. Also, Triphala possesses immunomodulatory and antibacterial effects against several gram-positive and gram-negative bacteria. The granulation tissue's protein, hydroxyproline, and hexosamine quantities have been observed to be substantially elevated following the local application of Chandanbalalakshadi Taila Matra Basti, which speeds up wound healing. Also, it is useful in reducing discomfort, inflammation, and anorectal bleeding, spasm in the anorectal area [18].

CONCLUSION(S)

The present case was successfully managed using the IFTAK technique. The fistulous tract healed completely in a short period without any complications. It is a safe, ambulatory, and sphincter-preserving technique.

REFERENCES

[1] Sushruta Samhita, Commentary Ayurveda Tatva Sandipika, Ambikadata Shastri, Su.Su. 33/4, Chowkhamba Sanskrit Sansthan, Varanasi, 2001, 12th ed. Page 35.
[2] Chakradata, Sharma PV, C. Chi. 5/148, Chowkhamba Publisher, Varanasi, 2007, 1st ed. Page 87.
[3] Bhavprakash Commentary Vidyotini of Bhavmishra, Mishra BS, Madhya Khanda 5/144, Chowkhamba Sanskrit Bhavan, Varanasi, 2007, 11th ed. Page 66.
[4] Thakral KK, Hindi commentary over Dalhanaacharya Niband Samgrah, Nidan Sthan, Chapter 4 Shloka 3, Choukhambha orientelia Varansi, pg no. 737.
[5] Shashtri AD, Sushrut Samhita in Ayurveda Tatva Sandipika, Nidan Sthanam Chapter 4, Shloka 13, Chaukhamba Sanskrit Sansthan, pg no-318.
[6] Chakradatta, Sri Chakrapanidata, by Sri Jagdishvara Prasad Tripathi, edited by Bhishagratna Pt. Brahmashankara Mishra, Fifth Edition, Arsha hikista, Chowkhamba Sanskrit series Office, Varanasi, 5/148:66.
[7] Shashtri AD, Sushrut Samhita in Ayurveda Tatva Sandipika, Nidan Sthanam Chapter 4, Shloka 8, Chaukhamba Sanskrit Sansthan, Varanasi, pg no-317-318.
[8] Bailey and Love's Short Practice of Surgery, Norman S. Williams, et al. Chapter 74, CRC Press; 27th edition, (2):1365-67.
[9] Dudhamal TS, Maurya S. Management of recurrent horseshoe Fistula-in-ano by Ksharasutra. Indian J Ancien Med Yog. 2021;14(1):29-33.
[10] Sahu M. A Manual Fistula in Ano and Ksharasutra Therapy, National Resource Centre On Kshara SutraTherapy, 2015 edition, Chapter 12 page no.186.
[11] Sahu M, A Manual Fistula in Ano and Ksharasutra Therapy, National Resource Centre On Kshara SutraTherapy, 2015 edition, Chapter 12 page no.191.
[12] Johnson EK, Gaw JU, Armstrong DN. Efficacy of anal fistula plug vs. fibrin glue in closure of anorectal fistulas. Dis Colon Rectum. 2006;49(3):371-76.
[13] Sushruta Samhita, Commentary Ayurved Tatva Sandipika, Ambikadata Shastri, Su.Su. 11/7, Chowkhambha Sanskrit Sansthan Varanasi, 2001 12th ed. Page 35.
[14] Bhavprakahs Commentary Vidyotini of Bhavmishra, Mishra BS, Madhya Khanda 5/144, Chowkhambha Sanskrit Bhavan Varanasi, 2007, 11th ed. Page 66.
[15] Deshpandey PJ, Sharma KR. Treatment of fistula in anorectal region, review and follow up of 200 cases. Am J Proctol. 1973;24(1):49-60.
[16] Shastri A, Editor, (12th ed.). Commentary Ayurved Tatva Sandipika on Sushruta Samhita of Sushruta Sutra Sthana; Chapter 11 Verse 5. Varanasi: Chowkhambha Sanskrit Sansthan, 2001;46.
[17] Mhaiskar Bhushan D, Bharat Chouragad Bari. Management of non-healing infected wound by external application of and Hinsradya Taila Triphala Guggulu. Joinsysmed. 2017;5(2):130-34.
[18] Sherkhane R, Meena P, Hanifa N, Mahanta VD, Gupta SK. IFTAK technique: An advanced Ksharsutra technique for management of fistula in ano. J Ayurveda Integr Med. 2021;12(1):161-64. Doi: 10.1016/j.jaim.2020.06.005. Epub 2020 Aug 13. PMID: 32800397; PMCID: PMC8039351.

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