

IFTAK - An Innovative Technique for managing *Shambukavarta Bhagandara* (Posterior Horseshoe Fistula-In-Ano) - A Case Report

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ABSTRACT:

Fistula-in-ano is an abnormal tract connecting the anal canal to the perianal skin, which is usually due to cryptoglandular infection. Although advanced surgical techniques are available, management of horseshoe fistula has very low success rates. Interception of fistulous tract with application of *Ksharasutra* (IFTAK) is an emerging technique to manage horseshoe fistula-in-ano. A 34-year-old female patient presented with pus discharge from right perianal area for 4 months. Local examination revealed two external openings in perianal area at 7 & 3 o'clock positions (approximately 6cm and 4cm from anal verge). Induration and tenderness felt at posterior midline just above dentate line. It was diagnosed as a *Shambukavarta Bhagandara* (posterior horseshoe fistula-in-ano) and managed by interception of fistulous tract with application of *Ksharasutra* (IFTAK) technique. Fistulous tract was completely healed by 6 weeks with minimum discomfort. No recurrence was observed in 2 years follow up period. IFTAK is a safe, ambulatory, sphincter preserving technique for horseshoe fistula-in-ano.

KEY-WORDS: *Bhagandara*, Horseshoe fistula, IFTAK, *Ksharasutra*.

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INTRODUCTION:

Fistula-in-ano is developed mostly due to crypto-glandular infection and, it is an abnormal communication lined by unhealthy granulation tissue with an external opening in the perianal skin and an internal opening in the anal canal.^[1] The prevalence of non-specific anal fistulae has

been estimated to be 8.6 to 10 in 01 lakh population per year with male to female ratio 1.8:1. ^[2] A trans-sphincteric anal fistula is found in about 40% of cases.^[3] When it is wrapped around the anal canal in a 'U' shape with external openings at both perianal areas and an intercommunicating tract lying posterior midline of the anal

canal, it results in a posterior horseshoe fistula.^[4] *Sushruta* has mentioned *Shambukavarta Bhagandara* which can be correlated with horseshoe variety of fistula-in-ano.^{[5][6]}

Different types of treatment modalities such as *Shastrakarma* (Surgical techniques), *Dahanakarma* (Cauterization), *Ksharasutra* (Medicated Seton) have been mentioned for *Bhagandara*.^[7] Horseshoe fistula is considered as a complex variety and, it is treated surgically by laying open of both sided tracts at a time or one after another depending upon the amount of sphincter muscle(s) affected.^[8] Other techniques like anal advancement flap and seton technique are also being opted for the management of horseshoe fistula, but the overall success rates are low. Conventional *Ksharasutra* therapy takes a long time to complete the treatment which is considered as its demerit. Hence, a new technique, interception of fistulous tract with application of *Ksharasutra* (IFTAK) was developed to achieve complete closure of fistulous tract with the eradication of infection in a shorter period. In this new technique, the fistulous tract will be intercepted in the intersphincteric space at midline of anal canal, where both side tracts join so that, the rest of the tract can be separated from primary source of infection. The proximal tract that is connected with the anal canal will be treated with *Ksharasutra* to eradicate the infected anal crypt.^[9]

CASE REPORT:

A 34 year old housewife who is non-diabetic and normotensive presented with complaints of pus discharge (on and off) from the right peri-anal region, pain in sitting and occasional feverish feeling for the last 4 months. These complaints were developed gradually after six months of

incision and drainage for an ischio-rectal abscess at right side of anal canal.

Blood and urine investigations including complete blood count, blood urea, serum creatinine, fasting blood sugar, postprandial blood sugar and urine routine were found within normal range. Serology report including HIV, HBsAg, HCV and VDRL was negative. Blood pressure, pulse rate and temperature were also within normal range. Bowel habit was regular. On inspection of perianal area, two external fistulous openings were noted, one at 7'o clock and the other at 3'o clock position approximately 6cm and 4cm from anal verge respectively. (Figure - 1). A curvilinear cord-like structure was felt on palpation from 7'o clock towards 6'o clock position. On digital rectal examination, hypertonic anal sphincter with mild tenderness and induration at 6 o'clock position was felt just above the dentate line. Slit proctoscope examination revealed the internal opening at 6 o'clock position. A gentle probing was done through the external openings and probes had touched each other at the level of posterior-sphincteric space. The diagnosis was confirmed by magnetic resonance image which suggested a trans-sphincteric posterior horseshoe fistula-in-ano, that is compared in *Ayurvedic* parlance with *Shambukavarta Bhagandara*.

THERAPEUTIC INTERVENTION:

After obtaining written informed consent, the patient was kept in lithotomy position. Approximately 14 ml of inj. Lignocaine with ADR 1% was infiltrated at posterior extra sphincteric region and around both external openings. After achieving adequate anaesthesia, a vertical incision (window) of about 2cm was created at post anal area sparing anal sphincter (Figure - 2) and fistulous tract was intercepted into

proximal and distal parts. The interception was confirmed by injecting diluted hydrogen peroxide from external openings which came out freely through the interception site. A Barbour Linen thread no. 20 was loosely tied to the proximal tract through the intercepted site by applying reef knot. Antiseptic dressing and packing of the wound were done with *Jatyadi Taila*. Complete haemostasis was achieved. *Gandhaka Rasayana* 250mg twice daily after meals, *Triphala Guggulu* (500mg), 2 tablets thrice daily after meals, *Shilajitwadi Lauha* (250mg) 2 tablet twice daily after meals, *Panchavalka Kwatha* for sitz bath twice daily, daily antiseptic dressing with *Jatyadi Taila* and *Jatyadi Taila Matravasti* 20ml at bedtime was advised from first postoperative day. Inj. Ringer's Lactate 500ml and inj. Dextrose normal saline 500 ml were administered intravenously. Inj. Cefotaxime was given intravenously 30 minutes before the surgery and 12 hours after the initial dose. Inj. Diclofenac sodium

75mg was given intramuscularly 8 hourly for 2 days.

FOLLOW UP AND OUTCOMES:

After subsiding inflammation, plain thread was replaced with *Guggulu Ksharasutra* [10] on the 5th postoperative day (Figure-3) and was changed 04 times on weekly interval by railroad technique. Adequate drainage through the intercepted site was ensured by syringing the *Panchavalka kwatha* from both the external openings towards the window site. The pain was moderate in the first week, which reduced gradually. From 2nd week onwards, discharge became nil, and the distal tracts closed gradually. After 4 weeks of *Ksharasutra* treatment, the remnant part of fistulous tract was cut through and *Ksharasutra* was removed (Figure - 4). The wound was healed completely in 6 weeks (Figure - 5). Sphincter function and anal mucosa were intact after the treatment. No recurrence noted in 2 years of follow up (Figure - 6).

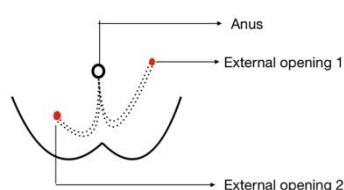


Figure 1 - Diagrammatic representation of local examination findings

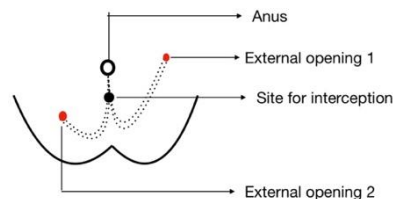


Figure 2 - Diagrammatic representation of site for interception



Figure 3 - Ksharasutra applied through the interception site



Figure 4 - cut through of the tract



Figure 5 - Complete healing of the tract



Figure 6 - After follow up

DISCUSSION:

In *Shambukavarta Bhagandara*, the fistulous tract is curved around the anal canal in the architecture of a conch shell. It resembles a trans-sphincteric horseshoe fistula-in-ano. Here, the infection passes from one ischiorectal fossa to the other through deep post-anal space in a horseshoe manner with the involvement of sphincteric muscles.^[11] Conventional surgery has disadvantages like anal incontinence and higher recurrence rate (7% to 50%) as compared to *Ksharasutra* therapy (3.33%).^[12] In advanced surgical techniques like anal flaps, the recurrence rate was reported up to 21%.^[13]

Ksharasutra therapy promotes healing by curetting the unhealthy epithelialized tissues and simultaneous cutting of the fistulous tract. Conventional *Ksharasutra* therapy takes a long time to complete the treatment, which leads to physical as well as psychological stress to patients. IFTAK is based on the concept of Cryptoglandular infection of anal fistula. This facilitates drainage from both ischioanal fossae through the site of interception. This eradicates the source of infection in a short duration with minimal scar and less discomfort to the patient, without disturbing the sphincteric muscle.

Gandhaka Rasayana pacifies vitiated *Doshas* and increases metabolic power.^[14] It helps in wound healing, reduces post-operative

pain, has antibacterial and antifungal properties.^{[15], [16]} *Triphala Guggulu* reduces *Kleda*, *Paaka*, *Putigandha* & *Shotha* thereby reducing pain and discharge.^[17] It also inhibits hyaluronidase and collagenase activity and is a proven antimicrobial drug.^[18] *Shilajitvadi Lauha* has antioxidant, and bio-enhancing properties that help in wound healing.^[19] *Panchavalkala Kwatha* helps in *Shodhana* and *Ropana* of wound.^[20] Local application of *Jatyadi taila* maintains the wound moisture due to soothing effect and carry out *Shodhana* and *Ropana*.^[21] It contains antimicrobial drugs like *Nimba* (*Azadirachta indica* A.juss), *Haridra* (*Curcuma longa* L), *Daruharidra* (*Berberis aristata* DC) etc., that improves re-epithelialization and neovascularization.^{[22],[23],[24],[25]} *Matravasti* helps in easy evacuation of stool thereby reducing postoperative pain.^[21]

CONCLUSION:

A case of *Shambukavarta Bhagandara* (Posterior horseshoe fistula-in-ano) was managed successfully by IFTAK technique. The fistulous tract was healed completely in a short period without any complications. There was no recurrence in 2 years follow up period. It is a safe, ambulatory and sphincter preserving technique.

LIMITATION OF THE STUDY:

This is a single case report. Comparative clinical trials with other treatment modalities are needed.

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