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Management of Complex Fistula in Ano, by IFTAK technique and Partial Fistulotomy - A Single Case Study

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ABSTRACT

Since ancient time, fistula in ano has been the most prominent condition of all anorectal disorders. Despite two millennia of efforts, fistula in ano still remains a challenging surgical condition. Over the past few decades, various techniques have been evaluated in terms of preventing its recurrence and complications. The sign and symptoms of fistula in ano resembles with *Bhagandara* described in *Ayurveda* classics. Many treatment modalities are listed in *Ayurveda* classics for the management of this painful disease, *Ksharasutra* therapy is one among them that has been proved to be highly efficacious. Though *Ksharsutra* therapy is a popular treatment for fistula in ano, it does have few drawbacks. Long duration of treatment, post procedural pain and long scar are some to mention. As a result, in the present era IFTAK is emerging as an innovative technique for the management of fistula in ano, without compromising the outcome compared to traditional method of *Ksharasutra* treatment. In this case study, the IFTAK (Interception of Fistulous Tract and Application of *Ksharasutra*) and partial fistulotomy was used in complex low anal fistula in ano which shows great potential in reducing both the treatment duration and post-procedural pain.

Key words: *Bhagandara, Fistula in ano, IFTAK technique, Partial Fistulotomy.*

INTRODUCTION

Acharya Sushruta discusses in detail about the extensive range of surgical methods including about how to deal with various types of tumors, internal and external injuries, fracture of bones, traumatic complications and their management.

Fistula in ano is an abnormal tract connecting the anorectum with skin. Fistula connects two epithelial surfaces and the tract is usually lined by unhealthy granulation tissue. The main cause known for fistula in ano is crypto glandular infection of anal crypts.[1] Mostly fistula in ano indicates the acute and chronic condition of the same disease process of infective origin. From the anal abscess the incidence of fistula ranges from 26 to 38%. Although there is uncertainty regarding the prevalence of fistula in ano, a study showed that the prevalence rate of fistula in ano is 8.6 cases per 100,000 populations. This disease is four times more common in males as compared to females and the mean age of affected population is about 38.3 years.[2] Though the disease is not life-threatening, the discomfort and pain it causes disrupts the everday life. At first it presents as *Pidika* around the *Guda* and when it bursts out, it is called *Bhagandara*.[3]

Bhagandara is classified into five types as *Vataja-Shatponaka, Pittaja-Ustragreeva, Kaphaja-Parisravi, Sannipataja-Shambuka* and *Agantuja-Unmargi*.[3] *Bhagandara* is one such disease where the morbidity can be significant due to complex presentation making the prognosis *Kruchra Sadhya/Ashadhya.* Hence,

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rightly the disease is named one among the *Ashta Mahagada*.[4]

Bhagandara is the disease occurring in and around *Guda* and is treated by *Bhesaja, Shashtra, Kshara* and *Agnikarma*. There are many treatment modalities available for the management of fistula in ano. Modern surgical management includes fistulotomy, fistulectomy, seton placing, ligation of inter-sphincteric fistula tract (LIFT), fibrin glues, advancement flaps, and expanded adipose derived stem cells (ASCs).[5] *Acharya Sushruta* has described different therapeutic measures for the management of *Bhagandara* in terms of various oral medications, local applications, surgical procedures and para-surgical interventions. Presently *Ksharsutra* therapy is found most approaching and attractive treatment modality for fistula in ano.[6] *Ksharsutra* is prepared by a methodical coating of specific herbs and *Kshara* over Barbour's linen no.20 thread. It is a standard surgical practice for the management of fistula in ano as the therapy has revolutionized the treatment of fistula in ano in terms of minimizing re-occurrence and anal incontinence. Although the treatment is popular and effective, it is not devoid of adversities. Disadvantages of *Ksharasutra* treatment are post procedural pain, mucopurulent discharge, longer duration of treatment and scar. IFTAK (Interception of Fistulous tract with application of *Ksharasutra*), is a technique based on the concept of intercepting the fistulous tract close to the anal verge and treating the proximal part of the fistulous tract with *Ksharasutra*. As the primary site of infection involving the anal crypt is constantly treated by the *Kshara* and drained by *Ksharasutra*, cure ensues. Distal part of the tract is left untreated and heals eventually as this part of the tract is not in continuity with the infective focus. IFTAK approach with partial fistulotomy was planned in this case as the fistula was complex presenting with two external openings. Result was encouraging with complete healing of the Fistula, short treatment period, reduced discomfort in terms of pain and discharge and an acceptable scar.

Presenting complaints and medical history

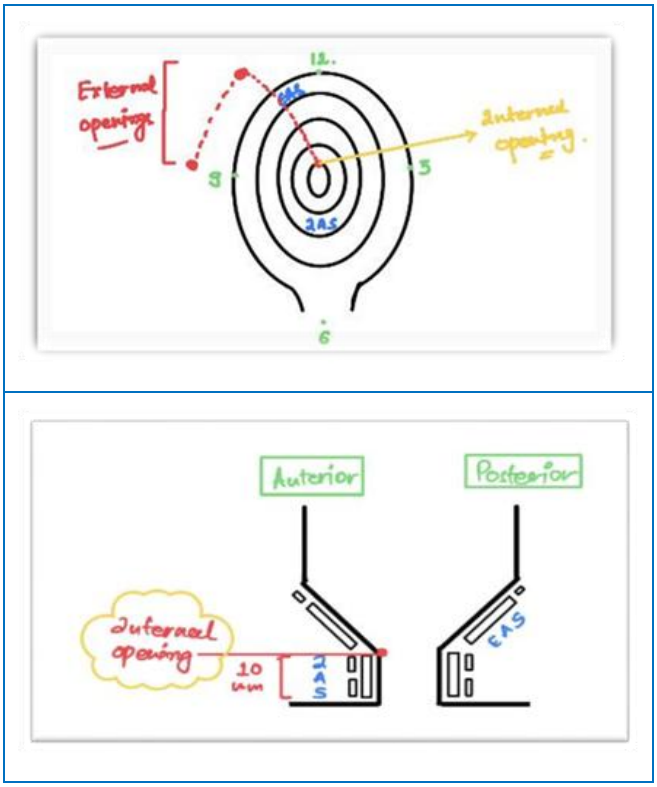
A 30 year old male normotensive, non-diabetic patient came to *Shalya* OPD of Shri Dharmashthala Manjunatheswara Ayurveda Hospital, Udupi, Karnataka, with complaints of pain, itching and discharge from perianal region since 3 months. Patient also c/o pain and burning sensation during defecation since 3 months. History was not significant for any major medical illness, previous surgery and allergy.

Clinical findings

General and systemic examination was not significant for any systemic illness.

On Per Rectal Examination, Two external fistulous openings were noted at 9'O Clock position 5 cm away from anal verge and at 11 O'clock position 4 cm away from anal verge. One Internal opening at 12 O'clock position was found on digital rectal examination and proctoscopy about 1cm proximal to anal verge.

Trans-rectal ultrasound clearly depicted the direction of the fistulous tract with its openings.



Hematological reports before Surgery:

Bleeding Time	2 Min 05 Sec
Clotting Time	4 Min 25 Sec
Blood Group and Rh Type	A Positive

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Blood Urea	22.0 Mg/Dl
Serum Creatinine	1.0 Mg/Dl
Serum Uric Acid	5.1 Mg/Dl
Hiv Test	Negative
HbsAg Test	Negative

Diagnosis

Complex low fistula in ano *(Shataponaka Bhagandara)*

Treatment

After obtaining an informed consent, patient was placed in lithotomy position (Fig. 1). Under Spinal Anesthesia, following aseptic precautions initially probing was done to assess the fistulous tract and Hydrogen peroxide was inserted through the external opening to identify the position of internal opening. A small vertical incision was made at perianal skin at 12 o' clock position approx. 1.0 cm away from the anal verge to intercept the fistulous tract (Fig. 2). Hydrogen peroxide was again injected through the external opening to confirm the proper interception of the fistulous tract. Metallic probe threaded with *Ksharasutra* was introduced through this window at 12 o' clock position and brought out from the internal opening and a snug knot was tied. (Fig. 3, 4) Partial fistulotomy was carried out on the primary tract at 9 o'clock, secondary tract at 11 o' clock position was left as such (Fig. 5). Antiseptic dressing and packing was done with *Jatyadi Taila*. Patient was advised for regular Sitz bath with warm water from the next day and daily dressing with *Jatyadi Taila* until the fistulotomy wound healed.

A short course of antibiotic was prescribed for 5 days.

Patient was prescribed with,

1. *Kaishora Guggulu* 750mg 1 tab TDS after food
2. *Gandhak Rasayan* 750mg 1 tab TDS after food
3. *Swadishta Virechan Churna* 50 gm + *Swarna Makshika* 1 gm + *Pravala Bhasma* 5 gm} 5gm HS with luke warm water
4. *Panchtikta Kashaya* 20 ml BD after food
5. *Jatyadi Taila* for local application.

Follow-up and Outcomes

Ksharasutra was changed once a week on OPD basis. Pus discharge was fluent in the first week through the fistulotomy wound which gradually changed to serous and became scanty and then completely disappeared after two weeks. Pain was moderate in the first week and later on gradually subsided. The discharge from the external opening at 11 o' clock position reduced gradually within 4 to 5 days and totally dried up in one week (Fig. 6). *Ksharasutra* completely cut through the fistulous tract in three weeks after the first *Ksharsutra* change and complete healing of the wound was achieved with a scar in 10 days after the cut through. Patient was advised application of *Jatyadi Taila*. The fistulous tract was cut through and healed simultaneously by 4th week with acceptable scar (Fig. 7). There was no complication seen during and after treatment and patient got relief from all the symptoms. After 6 months of follow-up, no recurrence was noted, patient was cured completely (Fig. 8).

Figure 1: Pre-Operative image

Figure 2: Opening of window

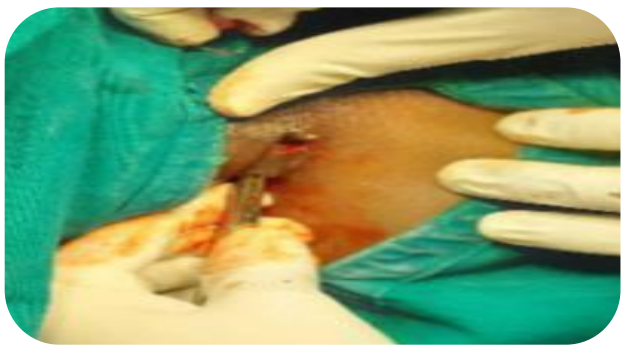

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Figure 3: Probing during surgery at 9 o'clock position

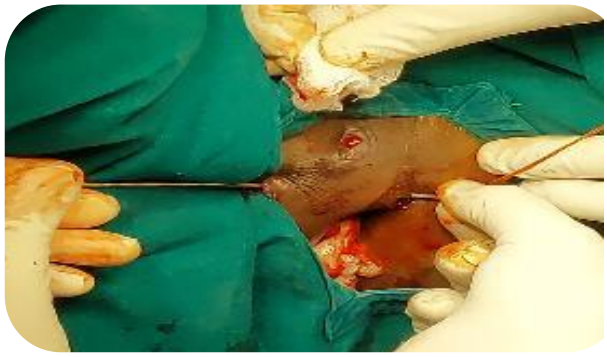

Figure 4: Probing during surgery at 11 o'clock position

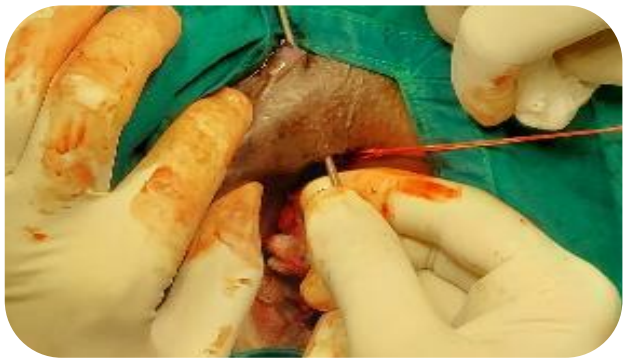

Figure 5: Partial fistulotomy and IFTAK done

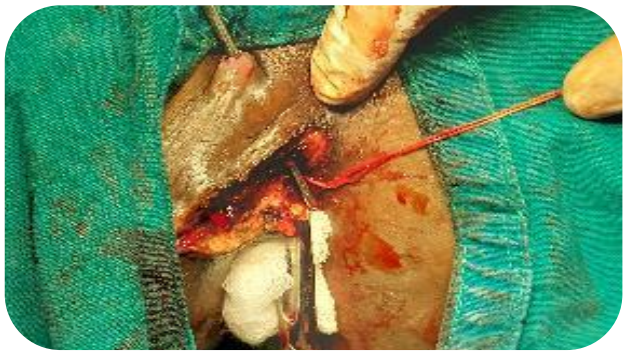

Figure 6: 2nd week: follow-up

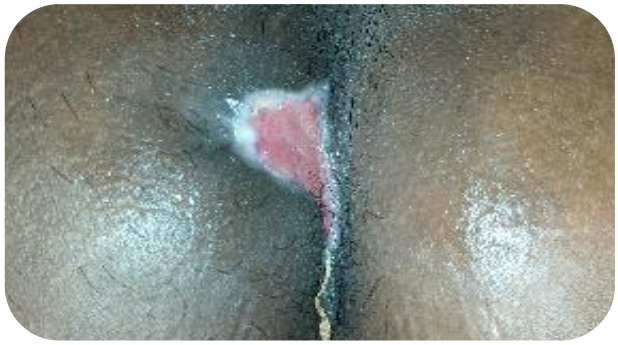

Figure 7: 4th Week: After Complete Cut through by *Ksharasutra*

Figure 8: After 6 Months

Discussion

Ksharasuta treatment is an effective treatment modality for fistula in ano. *Ksharsutra* treatment has high success rate[7] and least recurrence rate (3.33%).[8] When compared to standard treatment modalities, which call for hospitalization, regional or general anesthesia, and consistent post-operative care, it is a very simple, cost-effective, and a low-complication procedure. Conventional surgical treatments are associated with a significant risk of recurrence (0.7-26.5%) and high risk of impaired continence (5-40%).[9] Although the *Ksharsutra* treatment is for fistula in ano and has a number of advantages, it also has a number of drawbacks which are discomfort caused due to discharge, post-procedural pain, frequent hospital visits, a longer treatment duration, and a large post-operative scar, causing low compliance and low acceptability in many patients. The IFTAK (Interception of Fistulous Tract and Application of *Ksharsutra*) technique is used to get good outcomes. By reducing

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the length of the tract and treating the crypto glandular infection where there was no need to treat the remaining tract, the duration of treatment is reduced. In the conventional approach the entire tract is exposed along the axis during the *Ksharsutra* change, increasing the discomfort and burning sensation due to more tissue strangulation. Whereas pain is reduced because of less tissue mutilation following interception (IFTAK). In this case study, the fistula in ano did not adhere to the rules of the Goodsall's forming a complex tract with 2 external openings at 9 and 11 o'clock position respectively connecting to one internal opening at 12 o'clock position. Hence, interception of this complex tract was carried out at 12 o'clock position on the perianal skin and *Ksharasutra* ligation of the tract was done to clear the primary source of infection. Tract connecting with 9 o clock opening, which was more horizontal was treated with sphincter saving fistulotomy to facilitate effective drainage. Tract connecting with 11 o clock position was vertical, causing effective drainage and was left untouched. As a result, the IFTAK technique shortened the duration of complete healing and the pain was also significantly reduced with acceptable scar. The patient was completely cured within one month, and had no recurrence after six months of follow-up. IFTAK is a useful technique in the field of fistula-in-ano which has lot of benefits.

Conclusion

IFTAK combined with partial sphincter saving fistulotomy is a safe, efficient, and useful technique that significantly reduces pain while achieving complete healing with acceptable scar and reduced duration of treatment.

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