



Review Article

A COMPREHENSIVE REVIEW OF AYURVEDIC AND MODERN SURGICAL APPROACHES IN THE TREATMENT OF BHAGANDARA (FISTULA IN ANO)

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Article info

Article History:

Received: 24-09-2024

Accepted: 26-10-2024

Published: 20-11-2024

KEYWORDS:

Bhagandara,
Fistula In ano,
IFTAK, Multistage
Ksharasutra,
Sushrut Samhita

ABSTRACT

One of the most common conditions affecting the anorectal region is *Bhagandara* i.e., fistula-in-ano. The "Father of Surgery," *Acharya Sushruta*, described this condition as one of the *Ashtamahagada* (eight major diseases) in ancient Ayurvedic literature. Fistula-in-ano is a challenging anorectal disorder, notorious for its high recurrence rates despite various available surgical interventions in modern medicine. Among the treatment modalities, the Ayurvedic para-surgical procedure, *Ksharasutra*, has been recognized for its effectiveness in managing fistula-in-ano with significantly lower recurrence rates than conventional surgical methods. This review article compiles and synthesizes the scattered descriptions of *Bhagandara* across various Ayurvedic and modern surgical texts, tracing its understanding from ancient times, as documented by *Acharya Sushruta* and other classical *Samhitas*. Moreover, this article discusses modern techniques, including modifications of classical Ayurvedic procedures, which target different levels of the fistulous tract to promote healing without complications or recurrence. While these methods show promise, further large-scale comparative clinical studies are needed to validate their efficacy in managing fistula-in-ano.

INTRODUCTION

Ayurveda states that specific medical conditions may necessitate surgical treatment for optimal healing. *Charaka's* primary focus is on *Kayachikitsa* but he has also mentioned that conditions such as *Gulma*, *Arsha*, *Bhagandara*, and *Ashmari* might need surgical treatment. *Sushruta* has extensively covered different *Shashtra karma* (surgical procedures) and *Anushastra karma* (parasurgical procedure). *Bhagandara*, a condition mentioned in Ayurveda, is comparable to fistula in ano. This disease causing severe referred pain to *Bhag* (perineum), *Guda* (anal) and *Basti* (pelvis) is called *Bhagandara*. The manifestation begins with a boil (abscess) around peri anal region and if it is not treated properly can burst &

convert into discharging track and is named as *Bhagandara*.^[1] It begins with the development of a *Pidika* (Abscess) called *Bhagandara Pidika* in the perianal region. ^[2] If *Bhagandara Pidika* is not treated correctly, it can lead to the development of *Bhagandara*. It is identified by one or more openings near the *Guda Pradesha* with various forms of discharge accompanied by intense discomfort. *Acharya Sushruta* categorizes *Bhagandara* into five types based on *Dosha* involvement and one based on foreign body presence. ^[3]

Fistula-in-Ano is an inflammatory tract, which has an external opening (secondary opening) in the perianal skin and an internal opening (primary opening) in the anal canal or rectum.

This tract is lined by unhealthy granulation tissues and fibrous tissues. ^[4]

In the surgical management of *Bhagandara* (Fistula-in-ano), both Ayurvedic and modern techniques offer distinct yet effective approaches. Ayurveda primarily employs *Ksharasutra* therapy,

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<https://doi.org/10.47070/ayushdhara.v11i5.1736>

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where a medicated alkaline thread is passed through the fistulous tract to gradually cut through and heal the tissue, along with traditional procedures like *Chedana* (excision) and *Bhedana* (incision) for drainage. These techniques emphasize minimal invasiveness and natural healing. In contrast, modern surgery includes methods like fistulotomy and fistulectomy, which involve laying open or excising the fistulous tract, and seton placement for complex cases to avoid sphincter damage. Advanced options such as laser fistula surgery and Video-Assisted Anal Fistula Treatment (VAAFT) provide minimally invasive, sphincter-sparing alternatives with quicker recovery times. Both systems aim to treat the condition effectively while minimizing recurrence and complications.

AIM AND OBJECTIVES

Aim

To explore classical Ayurvedic surgical procedures and recent modern techniques in the management of *Bhagandara*.

Objectives

1. To understand the fundamental principles of Ayurveda in relation to *Bhagandara*.
2. To discuss surgical practices of *Bhagandara* as per Ayurveda and modern.

Methodology

Ayurvedic text books are reviewed for this article. Materials for *Bhagandara* and its management are collected. Main Ayurvedic texts which are used for this study are *Charak samhita*, *Sushruta Samhita*, *Ashtanga Sangraha*, *Ashtanga Hridaya*. Modern texts related to management of fistula-in-ano is also searched from various databases.

RESULT

Conceptual study

Acharya Sushrut has beautifully described the pathogenesis of *Bhagandara*. He quoted that when a person is indulged in *Mithya Aahar-Vihaar* (unsalutary lifestyle and food habits), *Vata* in his body gets aggravated and localized in anal canal. Further, it vitiates the muscle and blood, giving rise to *Pidika* (boil) and if this condition is not treated in time, this *Pidika* suppurate and burst to result in a discharging track which is known as '*Bhagandara*'.^[5] The anal swelling and burning feeling surrounding the perianal area, the lower backache and pain in the anal region after extended driving, and the suppurative induration (abscess formation) at the perianal region are the prodromal characteristics of *Bhagandara*. Severe pain related to *Bhag* (perineum), *Guda* (anal), and *Basti* (pelvis) is the symptom of *Bhagandara*.^[6] The clinical features are described beautifully as per the stages as

per the pre-dominance of *Dosha* like in *Vataj* type the discharge is associated with flatus, feces and pricking pain. Similarly, in *Pitta j*type there is very foul smell with burning pain and in *Kaphaj* type there is a sticky discharge with comparatively more itching.^[7]

Ayurvedic surgical management of *Bhagandara*

1. *Ksharasutra* therapy

Ksharasutra which is a prepared from Ayurvedic drugs viz., *Apamarga* (*Achyranthus aspera* Linn.), *Snoohi Ksheera* (*Euphorbia nerilifolia* latex) and *Haridra* (*Curcuma Longa*). The method of preparation is mentioned in *Chakradatta*. Recently *Ksharasutras* prepared as per P. J. Deshpande method by 21 coatings.

Ksharasutra therapy which is mentioned for the management of *Nadivrana* (pilonidal sinus) by *Acharya Sushruta* and is widely used at recent time for the management of *Bhagandara*. It is a time tested procedure and gives a better result with preventing the continence and sphincter saving procedure.

2. Modified Conventional *Ksharasutra* Therapy

Modified conventional *Ksharasutra* therapy involves the conventional treatment like partial fistulotomy with *Ksharasutra* therapy and Partial fistulectomy with *Ksharasutra* therapy. This procedures reduce the time of fistula healing with less damage of the tissue thus prevents the sphincter complex.

3. IFTAK (Interception of fistulous tract and application of *Ksharasutra*)

As today's era is of minimal invasive technique which saves the time of patient and surgeon both, which involves minimal manipulation of the tissues with less scar mark. IFTAK technique which is developed by Dr. Manoranjan Sahu sir for the management of complex fistulas like curved fistulous tract, horse shoe type fistula, long or multiple tract, fistula with multiple opening and post surgical recurrent fistula.

The procedure mainly involves identification of cryptoglandular site, interception of fistulous tract and ligation of *Ksharasutra*.

4. Multistage *Ksharasutra* Technique^[8]

The multistage *Ksharasutra* technique involves several stages of thread replacement to ensure complete healing. This technique is particularly useful for complex or high-level fistulas and has shown good success rates in studies, with minimal risk of incontinence. Recent modifications and standardization of this technique have improved its outcomes and expanded its application in clinical practice, particularly in countries where traditional medicine is integrated into mainstream healthcare.

This procedure was done in a case of non-specific inter-sphincteric grade-II fistula in ano.

Modern surgical modalities for Fistula in ano

1. Fistulotomy

Procedure contains identification of external and internal opening followed by probing. After probing laying open of the fistulous tract. Thus whole tract is opened and wound healing is achieved. This technique is mainly useful for fistula having short tract like low intersphincteric fistula, subcutaneous fistula.

2. Fistulectomy

After identification of external and internal opening of fistula probing is done. Then coring of the fistulous tract is done using cautery. This makes a wound deeper than fistulotomy. This technique is useful for intersphincteric fistula, low trans sphincteric fistula and the fistula

3. Video-Assisted Anal Fistula Treatment (VAAFT)

VAAFT uses a fistuloscope to visualize the fistula tract, allowing the surgeon to precisely identify and treat the internal opening without damaging surrounding tissues. This minimally invasive approach reduces postoperative pain, accelerates recovery, and minimizes recurrence, with high patient satisfaction rates.

4. Fistula Laser Closure (FiLaC)

FiLaC uses a radial laser probe to ablate the fistula tract, promoting healing while preserving sphincter integrity. It is particularly beneficial for complex fistulas or those involving the sphincter muscles, with studies reporting high healing rates, minimal postoperative discomfort, and low recurrence rates.

5. Over-The-Scope Clip (OTSC)

The OTSC technique involves using an endoscopic clip to close the internal fistula opening, promoting healing and reducing recurrence. It is particularly effective for recurrent or complex fistulas where traditional surgical approaches may fail, with recent studies showing promising outcomes in terms of healing rates and patient safety.

6. Ligation of Intersphincteric Fistula Tract (LIFT)

The LIFT procedure involves ligating the fistula tract between the sphincter muscles, minimizing the risk of incontinence. Recent modifications to the LIFT technique, including using bioabsorbable plugs or fibrin glue, have further improved success rates and reduced recurrence.

7. Seton Placement

Different types of setons (cutting, loose, medicated) are used based on the fistula's complexity. Newer materials and techniques have improved

outcomes, reducing pain, infection rates, and recurrence.

DISCUSSION

Fistula in ano is challengeable disease for the surgeon especially complex fistula due to high recurrence rate even after surgery. There are many surgical treatment modalities available for fistula in ano. Among these modalities Ayurveda includes *Ksharasutra* therapy, IFTAK, Modified conventional *Ksharasutra* therapy and multistage *Ksharasutra* therapy. *Ksharasutra* therapy which has proven its efficacy in the management of fistula in ano with less recurrence rates and it properly drains the pus pocket, thus curing the fistula. Modified conventional *Ksharasutra* therapy reduces the tract length, duration of wound healing and does effective drainage. IFTAK is an minimal invasive technique thus creates minimal scar and less tissue damage, prevents fecal incontinence and also showed good results in recurrent cases of fistula in ano. Multistage *Ksharasutra* therapy is useful in high anal fistulas. Ultimately the *Ksharasutra* having high success rates with no or less recurrence.

Modern surgical techniques include fistulotomy, fistulectomy, VAAFT, FiLaC, OTSC, LIFT and seton replacement. Fistulotomy is useful for small fistulous tracts as it opens the whole tract. Fistulectomy creates a big wound comparison to fistulotomy and takes time to heal. While VAAFT is the minimal invasive technique and sphincter saving procedure for complex fistulas having 76% success rate.^[9] LIFT is a novel procedure based on secure closure of internal opening.^[10] It has an success rate of 60-95% and takes upto eight weeks time for wound healing.^[11] FiLaC prevents the sphincter complex, causes minimal discomfort with low rate of recurrence. It is a safe and effective modality for transsphincteric fistula in ano.^[12] OTSC is a novel procedure based on high technology and it is also a sphincter preserving technique. It includes closure of internal opening by the use of clip. Seton is a type of surgical thread which is inserted into fistulous tract to drain the tract properly and for the avoidance of sphincter complex damage.

The modern technique of fistulectomy bears similarities to the *Chhedana Karma* described by *Acharya Sushruta* for the treatment of *Bhagandara*. Both procedures involve the surgical excision of the fistulous tract, with the goal of removing diseased tissue to promote healing.

These all modern and Ayurvedic surgical techniques help to cure from fistula by one or another way depending upon the techniques chosen and on the type of fistula.

CONCLUSION

Minimally invasive procedures like Video-Assisted Anal Fistula Treatment (VAAFT), Fistula Laser Closure (FiLaC), and Over-The-Scope Clip (OTSC) have demonstrated high success rates with minimal complications and reduced recurrence, making them valuable options for treating complex or recurrent fistulas. Additionally, Multistage *Ksharasutra* Technique offer promising outcomes by leveraging regenerative properties and traditional practices, respectively, for complex cases.

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Cite this article as:

Satya Santosh Sahoo, P. Hemantha Kumar, Lokendra Pahadiya, Vivek Singh Bhadauria, Tapaswini Dalasinghray. A Comprehensive Review of Ayurvedic and Modern Surgical Approaches in the Treatment of Bhagandara (Fistula in Ano). *AYUSHDHARA*, 2024;11(5):242-245.

<https://doi.org/10.47070/ayushdhara.v11i5.1736>

Source of support: Nil, Conflict of interest: None Declared

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