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BHAGANDARA (FISTULA-IN-ANO) - A REVIEW OF LITERATURE

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1. ABSTRACT

Bhagandara is one of the most important anorectal disorders described in Ayurvedic literature and is included among the Ashta Mahagada (eight grave diseases) by Acharya Sushruta. The disease is characterized by the formation of a chronic tract in the perianal region associated with pain, discharge, and recurrent inflammation. Owing to its clinical features and pathological course, Bhagandara can be closely correlated with Fistula-in-Ano described in modern surgery. The present review was undertaken through a systematic analysis of classical Ayurvedic texts including Sushruta Samhita, Charaka Samhita, Astanga Hridaya, Astanga Samgraha, Madhava Nidana, Sarangadhara Samhita, and Bhavaprakasha, along with contemporary surgical literature and research publications related to Fistula-in-Ano. Relevant information regarding etiology, pathogenesis, classification, clinical manifestations, diagnosis, prognosis, and management was critically reviewed and compiled. Classical Ayurvedic literature describes Bhagandara as a disease originating from Bhagandara Pidika due to vitiation of Doshas, predominantly Vata, involving Rakta and Mamsa Dhatu in the Guda Pradesh. Various types such as Sataponaka, Ustragreva, Parisravi, Shambukavarta, and Unmargi have been described based on Doshic predominance and clinical presentation. Modern medicine recognizes Fistula-in-Ano as an abnormal communication between the anal canal and perianal skin, most

commonly arising secondary to cryptoglandular infection and anorectal abscess. Both systems describe chronic discharge, pain, recurrent infection, and tract formation as key pathological features. The review reveals significant conceptual similarities between Bhagandara and Fistula-in-Ano with respect to etiology, pathogenesis, clinical manifestations, and principles of management. Ksharasutra therapy, one of the unique contributions of Ayurveda, has gained global recognition due to its effectiveness, low recurrence rate, and preservation of anal continence. An integrative understanding of Ayurvedic and contemporary surgical concepts may provide a comprehensive approach for the management of this challenging anorectal disorder.

2. **KEYWORDS:** Bhagandara, Fistula-in-Ano, Ksharasutra, Shalya Tantra, Ano-rectal Disorders, Ayurveda, Fistula Management.

3. INTRODUCTION

Bhagandara is one of the most common and challenging anorectal disorders described in Ayurvedic literature. Among the diseases affecting the Guda Pradesh (ano-rectal region), it occupies a special place due to its chronic nature, tendency for recurrence, and difficulty in management. Acharya Sushruta, regarded as the father of surgery, has included Bhagandara among the Ashta Mahagada (eight grave diseases) owing to its complicated course and unfavorable prognosis when neglected. The disease is characterized by the formation of a tract in the perianal region associated with pain, discharge, inflammation, and tissue destruction.

The term Bhagandara is derived from two words, namely *Bhaga* and *Darana*. Bhaga refers to the perineal region situated between the genitalia and anus, while Darana denotes tearing or destruction. Thus, Bhagandara refers to a pathological condition involving tearing, suppuration, and destruction of the tissues surrounding the ano-rectal and perineal region. According to Ayurvedic classics, the disease develops from Bhagandara Pidika, a suppurative lesion occurring near the Guda, which subsequently bursts and forms a chronic communicating tract.

Detailed descriptions of Bhagandara are available in Sushruta Samhita, Charaka Samhita, Astanga Hridaya, Astanga Samgraha, Madhava Nidana, Sarangadhara Samhita, and Bhavaprakasha. These texts elaborate its etiological factors (Nidana), pathogenesis (Samprapti), classification, clinical manifestations, prognosis, and treatment principles.

Various factors such as improper dietary habits, excessive physical exertion, prolonged sitting in awkward postures, trauma, foreign body injury, and vitiation of Doshas have been implicated in its causation.

Ayurveda describes multiple varieties of Bhagandara including Sataponaka, Ustragreva, Parisravi, Shambukavarta, and Unmargi, each possessing distinct clinical characteristics based on Doshic predominance and pathological changes.

In contemporary surgical science, Bhagandara can be closely correlated with Fistula-in-Ano. Fistula-in-Ano is defined as an abnormal epithelialized tract communicating between the anal canal or rectum and the perianal skin. It commonly develops as a sequela of anorectal abscess resulting from cryptoglandular infection. Patients typically present with recurrent perianal discharge, pain, irritation, swelling, and repeated episodes of abscess formation. The condition remains a significant surgical challenge because of its chronicity, risk of recurrence, and potential impairment of anal continence following surgical intervention.

The incidence of Fistula-in-Ano is higher among males and predominantly affects individuals in the third to fifth decades of life. Despite the availability of numerous surgical procedures such as fistulotomy, fistulectomy, seton placement, ligation of intersphincteric fistula tract (LIFT), advancement flap procedures, video-assisted anal fistula treatment (VAAFT), fibrin glue application, and fistula plugs, recurrence continues to be a major concern. Preservation of sphincter function and prevention of recurrence remain the primary goals of treatment.

Ayurveda offers a unique and scientifically recognized approach for the management of Bhagandara through Ksharasutra therapy. The Ksharasutra technique, originally described by Acharya Sushruta and later standardized through modern research, has gained widespread acceptance due to its minimal invasiveness, low recurrence rate, cost-effectiveness, and preservation of anal sphincter integrity. Numerous clinical studies have demonstrated its effectiveness in the treatment of various types of fistulous tracts.

Although the descriptions of Bhagandara in Ayurvedic literature and Fistula-in-Ano in modern medicine originate from different conceptual frameworks, significant similarities exist regarding their etiology, pathogenesis, clinical presentation, and management principles. A comprehensive review of both perspectives is therefore essential for understanding the disease in an integrative manner.

The present review aims to critically analyze the classical Ayurvedic descriptions of Bhagandara and correlate them with the contemporary understanding of Fistula-in-Ano. The review further explores the etiopathogenesis, classification, clinical features, diagnostic approaches, and therapeutic modalities described in both systems of medicine, with special emphasis on the role of Ksharasutra therapy in the management of this challenging ano-rectal disorder.

4. MATERIALS AND METHODS

4.1 Study Design

The present study is a systematic literary review conducted to analyze and correlate the concept of Bhagandara described in Ayurveda with Fistula-in-Ano described in modern surgery. The study involved a qualitative and comparative evaluation of classical Ayurvedic texts and contemporary scientific literature.

4.2 Data Sources

4.2.1 Ayurvedic Literature

Primary data were collected from classical Ayurvedic compendia including Sushruta Samhita, Charaka Samhita, Astanga Hridaya, Astanga Samgraha, Madhava Nidana, Sarangadhara Samhita, Bhavaprakasha and Chakradatta. Relevant commentaries and translations were also reviewed to ensure accurate interpretation of concepts related to Bhagandara, its Nidana, Samprapti, Bheda, Lakshana and Chikitsa.

4.2.2 Modern Scientific Literature

Secondary data were retrieved from electronic databases including PubMed, Google Scholar and Scopus, along with standard surgical textbooks and published research articles related to anorectal disorders.

Search terms used included: Bhagandara, Fistula-in-Ano, Anal Fistula, Ksharasutra, Ano-rectal Disorders, Ayurveda, Cryptoglandular Infection and Fistula Management.

5. REVIEW OF BHAGANDARA IN AYURVEDIC CLASSICS

5.1.1 Paribhasha (Definition)

The term Bhagandara is derived from two words namely "Bhaga" and "Darana". Bhaga refers to the perineal region situated between the genitalia and anus, while Darana denotes tearing, splitting, or destruction of tissue. Therefore, Bhagandara can be understood as a disease

characterized by destructive suppurative lesions involving the Guda, Bhaga, and Vasti regions. According to Acharya Sushruta, before suppuration the lesion is known as Bhagandara Pidika, whereas after bursting and formation of an abnormal tract it is termed Bhagandara.

5.1.2 NIDAN

According to Charaka

1. Krimi
2. Asthi
3. Sukshma
4. Kshanan
5. Vyavaya
6. Pravahana
7. Utkarsana
8. Avagharshana

According to Sushruta Samhita

1. Vata, Pitta, Kapha prakopajanya ahara vihara
2. Asthi shalya
3. Mamsa lobh by Mudha

Sushruta has not described general clinical features of *Bhagandara.* He has mentioned the causes while describing each type of *Bhagandara.* According to Astanga Hridaya and Astanga Samgraha

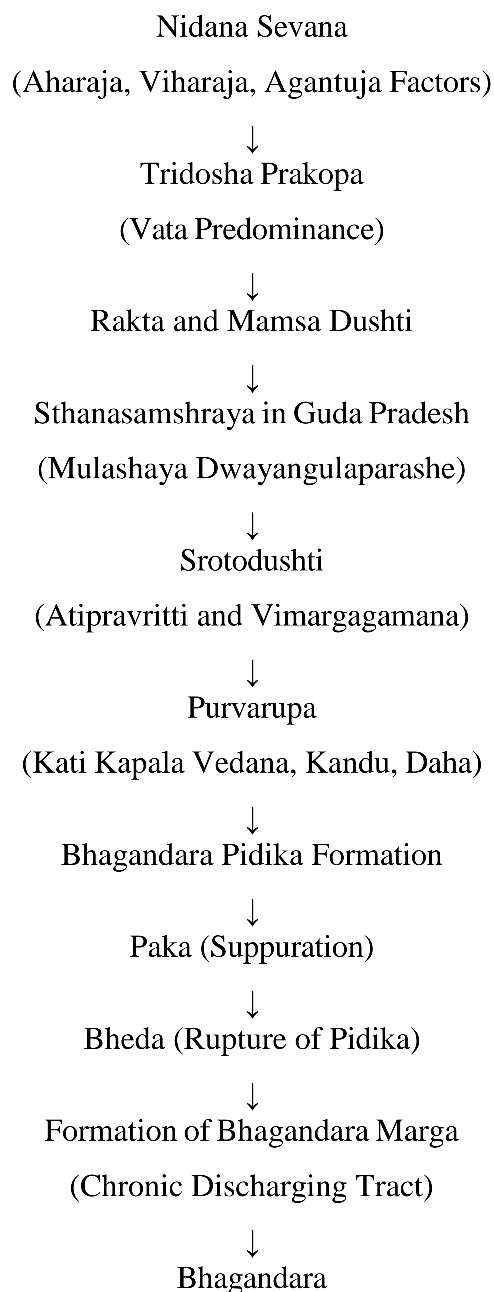
1. Hasti, aswa pristha gamana
2. Utkatasana
3. Similar to Avagharshanam
4. Anista Adrishtapaka
5. Sadharanana

Table: Etiological factors of *Bhagandara.*

S. No.	Etiological factors	Charaka	Sushruta	A.S & A.H	M.N.
A. Aharaja factors					
1.	Kashaya rasa sevana	-	-	-	+
2.	Ruksha sevana	-	-	-	+
3.	Apakva sevana	-	+	-	-
4.	Asthi yukta ahara sevan	+	+	+	-
B. Viharaja factor					

5.	Excessive Sexual Activity	+	-	-	-
6.	Sitting in awkward position	+	-	+	-
7.	Frequent atipravahana	+	-	-	-
8.	Horse or elephant riding	+	-	+	-
C. Agantuja factor					
9.	Bite by krimi	+	-	-	-
10.	Trauma by asthi	+	-	-	+
11.	Improper use of Vasti Netra	-	-	+	-
D. Mansika factor					
12.	Papa Karma	-	-	+	-
13.	Sajjan ninda	-	-	+	-

5.1.3 SAMPRAPTI



5.1.4 CLASSIFICATION OF BHAGANDARA

Brihatrayee

Table: Classification of Bhagandara in Brihatrayee.

Sushruta Samhita	Charak Samhita	Astanga Hridaya	Astanga Samgraha
Sataponaka	No classification has been mentioned	Sataponaka	Sataponaka
Ustragreva		Ustragreva	Ustragreva
Parisravi		Parisravi	Parisravi
Shambukavarta		Shambukavarta	Shambukavarta
Unmargi		Unmargi	Unmargi
		Parikshepi	Parikshepi
Again in Chikitsa sthana: 2 types		Hriju	Hriju
- Arvachina		Arshobhagandara	Arshobhagandara
- Parachina			

Laghutrayee

Table: Classification of Bhagandara in Laghutrayee.

Madhav Nidan	Sarangadhar Samhita	Bhav Prakash
Sataponaka	Sataponaka	Vataja
Ustragreva	Ustragreva	Pittaja
Parisravi	Parisravi	Kaphaja
Shambukavarta	Shambukavarta	Sannipataja
Unmargi	Unmargi	Shalyaja
	Parikshepi	
	Hruju	
	Arshobhagandara	

5.1.5 CLASSIFICATION OF FISTULA-IN-ANO (ACCORDING TO MODERN SCIENCE)

Milligan and Morgan (1934)

1. **Low fistula** - opening into anal canal at the level of pectinate line
   a. Submucous
   b. Subcutaneous
   c. Trans sphincteric

2. **High fistula** - all other varieties of fistula

Parks et al (1976)

1. **Intersphincteric**

a. Simple low track
b. High blind track
c. High track with rectal opening
d. Rectal opening without perineal opening
e. Extra rectal extension
f. Secondary to pelvic disease

2. **Transsphincteric**

a. uncomplicated
b. High blind track

Goligher (1975)

1. Subcutaneous
2. Submucous (High intermuscular)
3. Low anal
4. High anal
5. Ano-rectal

- Ischiorectal or infralevator
- Pelvirectal or supralevator

3. **Suprasphincteric**

a. Uncomplicated
b. High blind track

4. **Extrasphincteric**

a. Secondary to anal fistula
b. Secondary to trauma
c. Secondary to ano rectal disease
d. Secondary to pelvic information

5.1.6 CLINICAL FEATURES OF BHAGANDARA

According to Susruta

1. **Shatponaka**: Dosha - Vata, Feature- Toda, Tadana, Chedana, Vyadhana, Gudadarana, Discharge - Continuous Phenolic Discharge, Appearance-Water can or sieve like,

multiple fistula.

2. **Ustragreva**: Dosha - Pitta, Features- Chosha pain like Kshara or Agni being applied to a wound, Discharge- Ushna & Durgandhita smelling, Appearance- Camel's neck.
3. **Parisravi**: Dosha- Kapha, Feature- Kandu, less painful. Discharge- Continuous and slimy, Appearance- Whitish.
4. **Shabukavarta**: Dosha- Vata along with Pitta - Kapha, Features- Toda, Daha, Kandu migratory pain around the Anal canal, Discharge- Multi colour, Appearance – Tip of great toe, turns of conch.
5. **Unmargi/Agantuj**: Dosha - Trauma to Rectum or Anal canal, Features- Kotha of Mamsa and Rakta infestation with Krimi, Discharge- Pus, faces, flatus, urine, semen, Appearance- No specific course of track.

According to Ashtanga Sangrah & Ashtanga Hridaya: In these two Samhitas eight types of Bhagandra are described. Among these five types are same described by Sushruta and other three types are

6. **Parikshepi**: Dosha- Vata & Pitta, Feature- curved track is formed all around the Anal canal, Discharge- Pus & blood, Appearance- Horse shoe shaped fistula.
7. **Riju**: Dosha–Vatta & Kapha, Feature – Linear track associated with pain, Discharge - Pus, Appearance- Short straight track.
8. **Arsho**: Bhagandara- Dosha- Kapha & Pitta, Feature- Located at the base of the Arsha, burning pain and itching sensation, Discharge- continuous discharge, Appearance- fistula arises following infection of fissure bed with sentinel tag.

5.1.7 Clinical Features of Fistula-in-Ano

- Persistent discharge
- Pain
- Recurrent abscess
- Perianal swelling
- Pruritus ani
- External opening
- Fever (when abscess present)

5.1.8 Diagnosis of Fistula-in-Ano

The diagnosis of Fistula-in-Ano is based on clinical history, physical examination, and

radiological investigations.

Clinical History

- Recurrent perianal discharge
- Pain and swelling around the anus
- History of anorectal abscess
- Pruritus and irritation

Clinical Examination

- Inspection of the external opening
- Palpation of the fistulous tract
- Digital rectal examination
- Proctoscopy for identification of the internal opening

Radiological Investigations

- MRI Fistulography
- Endoanal Ultrasonography (EAUS)
- CT Fistulography (selected cases)

These investigations help in identifying the course of the fistulous tract, secondary extensions, internal opening, and classification of complex fistulae, thereby facilitating appropriate treatment planning.

6. PROGNOSIS

Bhagandara is considered as one of the Mahagada i.e. the disease that is difficult to cure. All types of Bhagandara are Krichchhsadhya (curable with difficulty) except Shambukavarta (Tridoshaja) and Unmargi (Agantuja), which are Asadhya (incurable).

7. MANAGEMENT OF BHAGANDARA

The management of Bhagandara described in Ayurvedic classics can be broadly classified into four categories

A. Preventive Measures Dietary Factors to Avoid

- Guru Ahara (heavy food)
- Madya (alcohol)
- Asatmya Ahara (unwholesome food)

- Viruddha Ahara (incompatible food combinations)
- Vishama Ahara (irregular dietary habits)

Lifestyle Factors to Avoid

- Strenuous exercise
- Excessive coitus
- Anger
- Uncomfortable riding
- Suppression of natural urges

Curative Measures Medical Management

- **Chedana:** It is the choice of treatment in Bhagandara, but medical management also has its own importance. As it helps in localizing inflammatory and suppuration, facilitates spontaneous drainage of pus in fistulous abscess, post operative care of the patient, wound management. Some of classical preparations being used orally are- Narayan rasa, Navakarshika guggulu, Saptavinshako guggulu, Saptanga guggulu, Vidangadi leha etc. which acts as both systemic and local.
- **Application of Vartee (Medicated Wick):** Vartee made up of Kshara Dravya are used. By virtue of Ksharana(liquefying) property of Kshara, it removes the slough & cleans the fistulous track, thus facilitating drainage. It is commonly used in blind tracks. Eg: Vartee made up of latex of Snuhi (Euphorbia nerifolia), Arka (Calotropis procera) along with Daruharidra (Berberis aristata).
- **Application of Kalka (Medicated Paste):** Kalka made up of drugs like Tila (Sesamum indicum), Haritaki (Terminalia chebula), Lodhra (Symplocus racemosa), Reeta (Sapindus trifoliatus), Haridra (Curcuma longa), Vacha (Acorus calamus) etc are used.
- **Application of Kashaya (Decoction):** Kashaya are use for washing purpose & also it reduces inflammation, pain. Eg: Triphala Kashaya, Kashaya made up of Khadira, Triphala, Guggulu, Vidanga.
- **Application of Taila (Medicated Oil):** These are useful in controlling wound infection & promotes healing. Eg: Vishyanadana Taila, Karaviradi Taila, Nishadi Taila, Saindavadi Taila.

B. Surgical Measures

The general principles of surgical management include

- Virechana (bowel evacuation)
- Eshana (probing of the tract)
- Chedana (excision)
- Patana (laying open of the tract)
- Marga Vishodana (cleansing of the tract)
- Dahana (cauterization)
- Vrana Chikitsa (wound management)
- Ksharasutra Therapy

C. Para-surgical Measures

- **Raktamokshana:** Prevents suppuration and reduces local inflammation.
- **Agnikarma:** Useful for cauterization, haemostasis, and prevention of recurrence.
- **Ksharakarma:** Performed using Kshara, Kshara Varti, Kshara Pichu, or Ksharasutra to facilitate debridement and healing of the fistulous tract.

D. Adjuvant Measures

- Swedana
- Parisheka
- Avagaha Sweda
- Vranashodhana and Vranaropana Lepa
- Varti and Taila preparations
- Guggulu-based formulations
- Ghrita and Arishta preparations
- Deepana, Pachana, and Mridu Rechana therapies

Ksharasutra Therapy

Ksharasutra is a medicated thread-based para-surgical procedure described in Ayurveda for the management of Bhagandara. The therapy combines the principles of excision, drainage, debridement, and healing in a minimally invasive manner. Owing to its low recurrence rate, preservation of anal continence, and cost-effectiveness, Ksharasutra has gained wide acceptance as an effective treatment modality for Bhagandara (Fistula-in-Ano).

Management of Fistula-in-Ano

The treatment of Fistula-in-Ano remains a surgical challenge. The ideal treatment should effectively eradicate the fistulous tract, minimize recurrence, preserve anal sphincter function, and reduce postoperative complications.

1. Fistulotomy

Fistulotomy is commonly performed for low anal fistulae and can be carried out with minimal risk of functional compromise. The tract is laid open to allow healing from the base.

2. Seton Placement

Seton therapy is particularly useful in high, complex, and extrasphincteric fistulae. A seton is a thread-like foreign material placed through the fistulous tract. It facilitates continuous drainage, induces fibrosis, and gradually divides the tract while preserving the sphincter mechanism.

3. Anal Fistula Plug

The anal fistula plug is a relatively newer treatment modality. The Surgisis® Anal Fistula Plug is a conical device made from porcine small-intestinal submucosa. It is secured at the internal opening and acts as a scaffold for tissue remodeling, thereby promoting closure of the fistulous tract.

4. Endorectal Advancement Flap

Mucosal advancement flap procedures are commonly used for high transsphincteric, suprasphincteric, and extrasphincteric fistulae. The technique involves closure of the internal opening and advancement of rectal mucosa and internal sphincter tissue over the defect.

5. Fistulectomy

Fistulectomy involves complete excision of the fistulous tract. Although it provides removal of diseased tissue, it may create a larger wound that heals by secondary intention and may be associated with delayed healing and recurrence.

6. LIFT (Ligation of Intersphincteric Fistula Tract)

The LIFT procedure is a sphincter-preserving technique particularly useful for intersphincteric and transsphincteric fistulae. The procedure involves identification and ligation of the fistulous tract within the intersphincteric plane, along with removal of infected cryptoglandular tissue.

7. IFTAK (Interception of Fistulous Tract with Application of Ksharasutra)

IFTAK is a modification of the conventional Ksharasutra technique developed to reduce healing time and patient discomfort. In this procedure, the fistulous tract is intercepted at the level of the external anal sphincter through a small incision, and a Ksharasutra is placed in the intercepted tract. The procedure promotes effective drainage, eradication of infection, and gradual healing while preserving sphincter integrity. IFTAK has shown promising results with reduced recurrence, shorter treatment duration, and improved patient compliance.

8. MIKST (Minimal Invasive Ksharasutra Therapy)

MIKST is a minimally invasive modification of Ksharasutra therapy aimed at treating fistula-in-ano with minimal tissue damage. The procedure combines the principles of tract identification, controlled drainage, and Ksharasutra application through a limited surgical approach. MIKST reduces postoperative pain, minimizes hospital stay, preserves anal continence, and facilitates early recovery. It is particularly useful in selected cases of complex fistulae where sphincter preservation is of paramount importance.

8. DISCUSSION

The present review highlights the close correlation between the Ayurvedic concept of Bhagandara and the modern understanding of Fistula-in-Ano. Classical Ayurvedic texts describe Bhagandara as a chronic ano-rectal disorder originating from Bhagandara Pidika due to vitiation of Tridosha, predominantly Vata, along with involvement of Rakta and Mamsa Dhatu. The disease progresses through suppuration and rupture, resulting in the formation of a discharging tract. This sequence closely resembles the modern cryptoglandular theory of fistula formation, wherein infection of the anal glands leads to abscess formation followed by development of a fistulous tract.

The etiological factors described in Ayurveda, including trauma, foreign body injury, excessive physical exertion, and improper dietary and lifestyle habits, can be correlated with various modern risk factors associated with Fistula-in-Ano. Similarly, the clinical features such as pain, discharge, itching, inflammation, and recurrent suppuration described in classical texts are comparable to those observed in modern clinical practice.

Among the various treatment modalities described in Ayurveda, Ksharasutra therapy occupies a unique position due to its minimally invasive nature, sphincter-preserving effect, and low

recurrence rate. Modern surgical procedures such as fistulotomy, fistulectomy, seton placement, LIFT, IFTAK, and MIKST also aim to eradicate the fistulous tract while preserving continence. Therefore, an integrative understanding of both Ayurvedic and modern concepts may contribute to more effective management of this challenging anorectal disorder.

9. CONCLUSION

Bhagandara is a chronic and challenging anorectal disease described in great detail in Ayurvedic classics and can be closely correlated with Fistula-in-Ano of modern surgery. Both systems of medicine demonstrate considerable similarities in their understanding of etiology, pathogenesis, clinical manifestations, and management principles. The classical descriptions of Bhagandara continue to hold significant clinical relevance in contemporary practice.

Among the various treatment modalities, Ksharasutra therapy remains one of the most effective Ayurvedic approaches due to its ability to promote healing with minimal recurrence and preservation of anal sphincter function. A comprehensive understanding of both Ayurvedic and modern perspectives may facilitate improved diagnosis, treatment planning, and patient outcomes. Further clinical and comparative studies are required to strengthen the scientific evidence supporting integrative management of Bhagandara (Fistula-in-Ano).

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