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Review Article

A CRITICAL REVIEW OF *BHAGANDARA* W.S.R. FISTULA-IN-ANO

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ABSTRACT

In Ayurveda, *Bhagandara* described by *Aacharya Sushruta* can be categorized under *Dusta vrana* i e. noncollapsable, unhealthy infected wound with persistent drainage of pus. *Bhagandara* can be compared to Fistula-in-ano in modern science on the basis of similarities in the symptomatology mentioned in *Ayurvedic* and Modern text books. According to modern science fistula in ano is one of the most common ano-rectal diseases in which the chronic granulating track run from the anal canal or rectum to the peri-anal skin or perineum and is associated with considerable discomfort and morbidity to the patient.

KEYWORDS: *Bhagandara,* Ano-rectal diseases, Fistula in ano

INTRODUCTION:

On the basis of parallels in symptomatology revealed in Ayurvedic and Modern text texts, fistula in ano can be likened to *bhagandara* in ayurveda. Fistula in ano, according to contemporary science, is one of the most frequent ano-rectal illnesses in which a persistent granulating track runs from the anal canal or rectum to the perianal skin or perineum, causing the patient substantial discomfort and sickness.[1]. According to sushruta treatment given for *bhagandara* is *chedana karma* along with *kshara sutra chikitsa*[2]. In modern science surgical techniques are elected in infected stage of the wound. It may lead to complications like reappearance infection and incontinence. *Kshara sutra* is a device to provide medicine to the non- approachable wound surface causes *shodhan*a (purification*) Ropana* (healing) of fistulous tract.

AIM:

Aim of present study are to scrutinize the available literature for related conditions *bhagandar* in Ayurveda & fistula in ano in contemporary science.

Bhagandar:

The *Bhagandar* is one among the *Asta Mahagadas* described by *Acharya Sushrut*, which is very difficult to cure. *Bhagandar* is one of the commonest disease occurring in Anorectal area. Most of the *Ayurvedic* classics the description of the disease is available but *Acharya Sushrut*, the father of Indian surgery has described all the detail of *Bhagandar*.

Definition: Bhagandar is the Darana of Bhaga Guda and vasti with surrounding surface of the skin, as per Acharya Sushrut. Bhagandar pidika is a depth apakva pidika characterized by pain and fever that is located within two angula perimeter walls of Guda Pradesh. Bhagandar is the name for when this pidika deepens and erupts[3].

- According to Acharya Charak, when a hurting and festering pidika in the guda region bursts, it leads to Bhagandra.[4]

- A vrana the length of a pidika develops at an angula or two angula from of the anus or within the anus, as per Acharya Vagbhata. Rakta and Mamsa are associated as dushya in this illness, creating a sinus infection with pus discharge throughout the anus, perineum, and bladder. The sopha is recognized as pidika in apakvavastha and Bhagandar after it bursts.[5]. If the Pidika is deep into two Guda fingers (anus), there is discomfort and fever. it is characterized as Bhagandar-pidika.
- ***BHAGANDARA'S NIDAN, AS PER DIFFERENT ACHARYAS:-***

Nidan[6,7]	*Charaka*	*Sushruta*	*Vagbhata*	*M.Ni.*
(A) *"Aharaja* Nidan"				
1. "*Kashaya-rasa sevana"*	-	-	-	+
2. "Asthi yukta ahara sevana"	-	-	-	+
3. "Mithya-ahara"	+	-	-	-
(Apathya sevana)				
4. "Ruksha sevana"	+	+	+	-
(C*)"Agantuja Nidan"*				
9. "*krimi* Aghata"	-	+	-	-
10. "*Asthi* Aghata"	-	+	-	+
11. Inappropriate of "*vasti-netra"*	-	-	+	-
12.Nidan of Arsha	-	-	+	-
(D)*Manasika* Nidan	-	-	+	-
13. *"Sadhu niradaer ninda"*	-	-	+	-
14. *"Papakarma"*				

PURVA RUPA:

The purvarupa of any illness suggests that the disease has not yet appeared and is in the pathogenesis stage. Bhagandara's purvarupa includes kati-kapala vedana (pelvic discomfort), itching (kandu), burning sensation (daha), and swelling (Sotha) in the anorectal area. During the evacuation, these symptoms became more

severe. Bhagandara pidika becomes deeply entrenchedBhagandara pidika. These prodromal signs indicate that Bhagandara pidikan will develop in the later.[8]

LAKSHANA OF BHAGANDARA (CLINICAL MENIFESTION):

A Vrana with a history of rupture on the inside of the two-finger border of the guda pradesh (perianal region). The most frequent symptoms of Bhagandara are Bhagandara pidika, which heals and recurs repeatedly and is painful.

TYPES OF BHAGANDAR:-

Based on *doshik* involvement and clinical presentation of *bhagandra* ***Acharyas*** have classifiedthe *Bhagandar*.

1. According to charaka no explanation of *Bhagandar's type.*
2. There are five varieties of Bhagandar, according to Susruta.[9]

A. "Shatponak" - *Vata dosh* involvement

B. "Ushtragreev" - *pitta dosh* involvement.

C. "Parishravee" - *Kapha dosh* involvement.

D. "Shambukavart – *Tridosh* involvement.

E. "Unmargee" - Agantuja factors involvement

3. As per the Astanga Samgraha and Hridya Samhitas, there are eight varieties of Bhagandar. There are five kinds of Susruta and three additional types[10].

a. "Parikshepi" is a technique for combining Vata and Pitta dosha.

b. Riju is made up of Vata and Kapha dosh.

c. It is called "Arsho-Bhagandar" because it is made up of pitta and kapha dosha.

F. According to *Madhavakar* 5 types of Bhagandar similar that of *Acharaya Susruta*.[11]

G. According to *Bhava Mishra* five types with two other types[12]

1) Vatika **2**) Paittika

3) Shlashmika **4)** Sannipatika

5) Shalyaja

a. "parachina" (Bahirmukham) – a structure with an external opening

b. "Arvachina" (Antarmukham) - with an internal aperture

According to Sharangdhar eight types of Bhagandar similar that of *Acharya Vagbhatta.*

Samprapti and samprapti ghatka

As per Shatkriya kala, Bhagandar's growth may be summarised as follows.

1. Sanchayawastha;- The physiological reaction to a variety of endogenous and exogenous stimuli is normal. Sanchayavastha is performed on the Dosha.
2. *Prakopawastha;-* They suffer from Dosha and Dushya vitiation as a result of the application of the specific etiological component. Then they become irritated in their usual location..
3. *Prasarawastha;-* The disturbed Dosha spreads throughout the body.
4. *Sthanasanshray;-* Ultimately After vitiating Rakta and Mamsa, vitiated dosha lodges in Guda. Patients will experience various Purvarupa at this stage, including discomfort in the waist (Katikapala Vedana), itching, burning sensations, and swelling in the anus, as well as the development of Bhagandra Pidaka.
5. *Vyaktawastha;-* Bhagandra Pidika suppurates at this stage and continues to releasevarious forms of discharge through it, including a variety of pains.

Bhedavastha;- If Vyaktawastha is ignored, it produces Darana of Guda, Vasti, and Bhaga, as well as the release of Vata, Mutra, Pureesha, and Retash, which is known as

6. Bhedavastha

Nidan	-	*Aagantuja Nidan and Mithya aahar vihar*
Dosha	-	*Vata*
Dushya	-	*Rakta ,Mamsa,*
Adhisthan	-	*Guda*

***Sadhyasadhyata* (Prognosis)-** *Bhagandar* is difficult to cure. So it is considered as one of the *Mahagada by Acharya sushruta.*[13,14]

- All varieties of Bhagandar are Krichchhsadhya (curable with difficulty) as per sushruta, with the exception of Shambukavarta (Tridoshaja) and Unmargi (Agantuja), that are Asadhya (incurable).
- The Nadi (track) of Bhagandar that crosses Pravahini vali and Sevani, according to Acharya Vagbhata, is incurable.
- According to Madhav Nidan and Yoga Ratnakar Bhagandar, a person with a soft body

structure (Sukumara) and who is scared (Bhiru) is difficult to cure.

Bhagandar Chikitsa –

Surgical management of *Bhagandra*

Specific Surgical procedures for specific Type of *Bhagandar*

1. Shatponaka Bhagandar[15]

   - Multiple exterior holes on the skin surface are a distinguishing feature of this kind. As a result, it has been proposed that each sinus be treated separately and sequentially.

Incisions in *Shataponaka Bhagandar*[16]

1. Ardhalangalaka (L-shaped incision with one arm)

2. Langalaka (incision with two equal arms extending on either side) - T-shaped

3. Sarvatobhadraka) (Surrounding the anal canal.)- In a circle

4. Gotirthaka- Semicircular incision in the shape of a cow-khura.

Paschata karma - Anulomaka dravya is taken orally, and the wound is irrigated with Madhuka tail and oil treated with Vatahara dravya. To relieve pain and discharge, fomentation with recommended XXX sedative medicines, Krishara, Payasa, and the meatof Gramya, Anoop, and Audik animals should be administered promptly.

2. ***Ushtragreeva Bhagandar*[17] -** For Ustragreeva, no specific form of incision has been reported. After probing the track, it should be removed and treated with Kshara (caustic alkali) to remove the rotten tissue. Due to the aggravation of Pitta Dosha, Agnikarma is absolutely prohibited.

3. ***Parishravi Bhagandar:*[18]** Bhagandar Parishravi First, the discharge tract should be scraped, and then the tract should be cauterised with Agni or Kshar. Lukewarm anu taila should be used to irrigate the anal area. Poultices and heated pastes containing Kshar and cow's urine should be used.

Parishravi Bhagandar[19] has a variety of incisions.

A. Kharjura patraka (palm leaf shape)

B. Chandrardha (semi-lunar shape)

C. Chandra charka (Circular like full moon)

D. Suchimukhi, (Pin pointed)

E. Avangamukhi, (Same incision in opposite direction.)

4. ***Unmargi[20]:*** First, the tract should be scraped gently, and then the wound should be cauterised with a jamboushtha (red hot tool) shalaka. It is also necessary to carry out the operation for killing the organism and removing alien substances.
5. **Shmbukavarta[21]:** Because all three doshas have been vitiated, it is an ashadhya kindof bhagandar. Surgical operations are not described in any way..

PARASURGICAL MANAGEMENT OF *BHAGANDARA:*

- The use of para surgical, either alone or in combination, as a help to the surgical process has been discussed in the management of Bhagandar. Various Acharya outline the most frequent parasurgical techniques.

- *Rakta mokshan (blood letting)*
- *Agni karma (thermal cauterization)*
- *ksharakarma(chemical cauterization)*
- *Ksharsutra*
- *Ksharvarti*

PATHYA: *Shali dhanya, Patola, Jangal Mansa Rasa, Bal mulaka, Shigru, Mudga, Ghrita, Madhu (Honey),Vilepi*

APATHYA

The patient should avoid following *Ahar-Vihar* after cure of *Bhagandara* up to one year. *Vyayama, Madya, Ajeerna, Vyavaya, Guru aahar, Asatmya aahara, Kopa, Vegaavarodha, Ashwaprishthagamana.*

FISTULA-IN-ANO

The Fistula-in-ano is an abnormal communication between the anal canal and the perianal skin. It usually results from an Ano-rectal abscess, which burst naturally or opened inadequately.

In surgery, fistula-in-on implies a chronic granulating track connecting to epithelial lined surfaces, may be mucosal or cutaneous. It is characterized by one or more small opening around anal orifice. In its simplest form, it is a single track with an external opening in the skin of perianal region, and internal opening in the modified skin or mucosa of anal canal or rectum. The wall of the track is composed of thick tough layer of fibrous tissues, which is the intact fistula forms a fibrous tube lined on its inner aspect by a layer of granulation tissue. The external opening ooze out purulent discharge when burst open spontaneously or incised surgically. But when opening is closed due to superficial healing, the resulting pocket or pus or the abscess may present with pain from mild to severe intensity.

The majority of anal fistulae starts as an anal intersphincteric abscess secondary to infection of intra muscular anal glands. The abscess may track in five direction. Up & down, medially & laterally and circumferentially around the anus & rectum.

Aetiology for Fistula-in-ano can be divided into two[22]

1. **Non specific** - Which caused by cryptoglandular infection andprevious anorectal abscess. 90% of Fistula in ano belongs to this catogery.
2. **Specific** - Which caused by different diseases as Tuberculosis, Crohn‟s disease, Ulcerative colitis, Lymphogranuloma, Carcinoma of rectum and anal canal, Other abdominal condition which is producing a pelvic abscess, venerum, Actinomycosis, Previous rectal or Gynological operations and etc .

PATHOGENISIS OF FISTULA-IN-ANO (explained by Buie)

Stage I - Stage of infection	Infection of anal cypts Formation of primary opening of fistula Seating of edematous crypts and spread of infection

State II-State of burrowing	Burrowing fistulous track may precede in any one or more than one direction Subcutaneous Submucous Through external sphincter Through internal sphincter Between external and internal sphincter Infection may go either superior or inferior to levator ani muscles.
State III- Stage of abscess formation	Abscess formation Appearance of clinical symptoms Subcutaneous abscess Submucous abscess Supralevator abscess Ischiorectal abscess Pelvirectal abscess
Stage IV Stage of formation of secondary opening	Spontaneous abscess Rupture or drained surgically. Opening either inside anorectal region or externally on perianal region.

CLASSIFICATION OF FISTULA-IN-ANO[23]

Milligan and Morgan (1934) classified fistulae according to their relationship to the anal sphincters in particular to the anorectal ring.

Ernestmile classified fistulae according to arrangement of lymphatic plexus around the rectum & anus. Recently Parks et al (1976) have formulated a new classification which takes into account the work of Eisenhammer (985, 1961) Parks (1961) and stelzner (1976) on the pathogenesis and course of anal fistulae.

It emphasizes especially the relationship of fistulae to the external sphincter.

Comparison of classification of fistula-in-ano

Milligan & Morgan (1934) Goligher (1975)		Parks et al (1976)
Subcutaneous (5%)		Scarcely recognized
low anal (75%)		low intersphincteric
High anal (8%)		Transphincteric
Anorectal (7%)		
1.	Ischiorectal/ infra levator	Transphincteric with high blind infralevator extension
2.	Pelvirectal/supra levator	Trans or suprasphincteric with blind supralevator extension,Extrasphincteric
Submucuous (5%) (high intermuscular)		High intersphincteric

PARK'S CLASSIFICATION OF FISTULA IN ANO.

1. Intersphincteric(45%)
2. Transphincteric(30%)
3. Suprasphincteric(20%)
4. Extrasphincteric(5%)

CLINICAL FEATURES

Symptoms

1. Recurrent discharge
2. Pruritis Ani
3. Pain

LOCAL EXAMINAITON:

1. Inspection -

On inspection Single or multiple external openings can be seen. Sometimes mouth of external

opening is located on top of a little pink or red nodule and may cover with a sprout of unhealthy granulation tissue. It may also present with foul smelling, thick, creamy pus. Perianal skin may show scars of previous surgeries.

2. Palpation –

By digital palpation with keeping one finger in the anal canal and the other finger over the perianal region can be indicated probable position of fistulous track relative to external opening can be marked by the indurations felt. But high levelfistula tract cannot be felt. The introduction of betadine/methylene blue/ hydrogenperoxide through syringe (syringing/ Betadine test) into the external opening helps in localizing the internal opening.

3. Proctoscopy -

By this method it can use to identify the internal opening which has not been clearly demonstrated by palpation, passage of probe. It will be differentiated between a rectal and a high anal internal opening and also may shows the state of rectal mucosa.

4. Probing-

After determining the direction of fistulous tract by palpation gentle probing is done ,Under Suitable anesthesia to find out probable course of the fistulous track for probing it is use a medium sized malleable copper probe. Sometimes we can use a probe with pointed end which can easily be curved as per need.

5. X-Ray Fistulorgam / MRI Fistulorgam - (if required)

For routine fistula evaluations usually imaging studies are not needed. But if there are recurrent diseases, multiple fistulas, difficulty to identify primary opening or secondary tracts we can use imaging studies.

Treatment

Surgery is the only form of treatment that offers any reliable prospect of cure. But it has a unenvitable reputation, for subsequent recurrence and impairment of anal continence. Here the quality of result is so much influenced by technical skill of the surgeon.

surgical procedures are:

1. Fistulotomy

2. Fistulectomy
3. Endorectal mucosal advancement flap
4. Fibrin glue
5. Surgises anal fistula plug
6. Seton

Complication of surgery -

Early Post-Operative -

Urinary retention, bleeding, cellulitis, Fecal impaction, acute external thrombosed hemorrhoids.

Delayed Post-Operative -

Recurrence, incontinence, persistent sinus, stenosis, rectovaginal fistula, delayed wound healing

Causes of recurrence in fistula-in-ano:

1. The commonest cause is failure to identify and treat the primary internal orifice.
2. Presence of infective anal gland in the intersphincteric space.
3. Failure to detect and treat lateral or upward extensions.
4. Failure to open the fistulous track for fear of causing incontinence.
5. Failure in excision of adequate anal wall surrounding the crypts.
6. Remnants of foreign body inside the track.
7. Deep seated pus-pockets if not curetted properly.
8. Improper and inadequate drainage of the abscess cavity.
9. Any fibrous tissue remains during surgical procedure.
10. The disease that is the primary cause of fistula, if untreated.
11. Presence of systemic disease without prompt therapy.
12. Exposure of the wound to the moisture which enhance the bacterial growth.
13. Presence of fecal impaction during postoperative time.

Conclusion

- *Bhagandara* (fistula-in-ano) has been described in indian ancient literature like *vedas*

,puranas&*samhitas* in a very elaborate manner.*bhagandar* (fistula in ano) is found from ancient era in human being.*ksharasutra* treatment is the most suitable, cost effective, safe, minimum invasive and globally accepted easily applicable surgical modality in the management of *bhagandara (fistula in ano).*

- Patient's life style and bowel habit (constipation) paly important role to develop fistula inano in future.

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