



ROLE OF GUGGULU TANKANA KSHARASUTRA IN THE MANAGEMENT OF FISTULA -IN - ANO: A REVIEW ARTICLE

Dr. Rajesh Veer Pratap¹, Dr. Mandakini Dwivedi², Dr. Alok Kumar Srivastava³

¹PG Scholar, Department of Shalya Tantra, Chandra Shekhar Singh Ayurvedic Sansthan, Kaushambi, Mahayogi Guru Gorakhnath Ayush University, Gorkhpur, Uttar Pradesh

²Assistant Professor, Department of Shalya Tantra, Chandra Shekhar Singh Ayurvedic Sansthan, Kaushambi

³Associate Professor, Department of Shalya Tantra, Chandra Shekhar Singh Ayurvedic Sansthan, Kaushambi

ABSTRACT

Due to its higher recurrence incidence, Sushruta ranked Bhagandara as one of the Ashta Mahagaroga's (eight important diseases) in Ayurveda. These days, sedentary lifestyles and other reasons are contributing to the rise of anorectal illnesses. The term Bhagandara, which is made up of the words Bhaga and Darana, refers to a prevalent condition that affects the anorectal area surrounding the anus and extending to the genitalia. Pidika's formation, which is typified by an opening around Guda Pradesha with a painful discharge, drives the growth of Bhagandara. Fistula in ano is still a confusing surgical condition despite almost two millennia of efforts to prevent its recurrence and complications, despite the evaluation of numerous approaches over the past few decades. Fistula in ano has signs and symptoms with Bhagandara, which is recorded in the classics of Ayurveda. Many current scientific modalities are utilized to cure Bhagandara, however as of yet, no one modality has been shown to be effective in treating fistula. An Ayurvedic parasurgical method called ksharasutra provides a less invasive option. A modified version, Guggulu Tankana Ksharasutra, makes use of both Guggulu and Tankana to improve accessibility and efficacy. Using both contemporary research and traditional Ayurvedic references, this review addresses its preparation, mechanism, therapeutic results, and advantages.

KEYWORDS: Bhagandara, Fistula in ano, Guggulu tankana Ksharasutra.

INTRODUCTION

The word "fistula" is derived from a Latin word that means "reed," "pipe," or "flute." Fistula in ano is an irregular communication between the anal canal and the rectum with the outside (perianal skin) ¹, typically arises from an anorectal abscess that either spontaneously ruptured or opened up sufficiently. It is a channel of communication between two epithelial surfaces, most frequently between two hollow viscera (internal fistula) or between a hollow viscus and the skin (external fistula). Granulation tissue, which is later epithelialized, lines the track². Because of its anatomy, recurrences, and difficulty in curing, it becomes a very infamous disease. Fistula-in-ano is most frequently caused by anal gland infection. Simply put, the fistulous track is a channel of fibrous tissue with walls that cannot collapse. The fibrous tissue prevents the new, healthy granulation tissue from covering the area. Millions of people worldwide suffer with fistula in ano, one of the most prevalent anorectal diseases ³. It is the second most common after hemorrhoids⁴. In Ano, 10% of fistulas are non-cryptoglandular (caused by other factors), whereas 90% are cryptoglandular⁵. Similar disorders, known as Bhagandara in Ayurveda, have been documented in a number of books. Bhagandara is one of the eight Mahagdas that have been recounted by Sushruta, the father of surgery ⁶. According to the text, its cause is an imbalance of the Vata, Pitta, and Kapha doshas, which is frequently brought on by infection or trauma.

The literal meaning of Bhagandara is "splitting or Daran of Bhaga.guda,basti region⁷". According to acharya charak Bhagandara is the outcome of a very painful boil near the anus that suppurates and bursts⁸. In a similar vein, Sushruta describes Bhagandara as the perianal region's suppurating stage of a boil. For Bhagandara (~Fistula in Ano), Acharya Sushruta provides a detailed explanation of the Nidana (~Cause), Poorvaroop, Roopa/Lakshana (~Clinical Feature), Samprapti (~Pathogenesis), Prakara (~Types), Upadrava (~Complication), Sadhya-Asadhyata (~Prognosis), and its Chikitsa (~Management). Therefore, it suggests that fistula-in-ano is an extremely uncomfortable, painful, and dischargeable disease that poses a difficult scenario from the perspective of surgeons and is a continual cause of worry and agitation for the patient. When discussing fistula symptoms, the perianal area experiences pain and recurring pus discharge. Fistulotomy, fistulectomy, fibrin glue, anal fistula plugs, VAAFT, Seton, LIFT, and more methods have been developed over the years to manage fistulas. But nobody has ever been able to completely eradicate the risks and difficulties associated with this illness. For most surgeons, managing fistula in Ano still presents challenges. The classical Indian surgeon Acharya Sushruta has described the use of Kshara Sutra in the treatment of Bhagandara and Nadivrana (Sinus). Acharya Chakrapani goes into great detail on the Kshara Sutra preparation procedure, whereas Acharya Sushruta makes no mention of it.



Contemporary surgical procedures such as fistulotomy are associated with a 15–25% chance of recurrence and sphincter injury. Ksharasutra treatment, developed by Sushruta, effectively treats fistulas by combining chemical cauterization and mechanical cutting. Snuhi latex, Apamarga Kshara, and Haridra powder are used in the traditional Ksharasutra. The goal of Guggulu Tankana Ksharasutra is to make preparation easier and enhance patient comfort by combining Guggulu (Commiphora mukul resin) and Tankana (borax).

Guggulu is suggested in DustaVrana, Nadivrana, Bhagandara, Gulma, Sotha, and other places, according to Maharshi Sushrut⁹, demonstrating its antibacterial, anti-inflammatory, and wound-healing qualities. In addition to citing other Ayurvedic textbooks, Shodit Tankana Kshara helps to cleanse and mend wounds while negating the negative effects of vitiated Vata-Kapha Dosha¹⁰. You may get Shodit Guggulu & Shodit Tankana all year long. Due of its binding properties, Guggulu Niryas is easier to obtain and maintain than Snuhi Latex. All of these characteristics can enhance the Guggulu-Tankana Kshara sutra's therapeutic impact.

CLASSICAL AYURVEDIC PERSPECTIVE ON BHAGANDARA AND KSHARASUTRA

Two words, Bhaga and Darana, are combined to produce the word Bhagandara in Ayurveda. Bhaga signifies perineum, although it also refers to the bladder (Basti), the rectum (Guda), and the tissue-breaking or tissue-tearing (Darana).¹¹

Sushruta claims that Bhagandara has a deep-seated Pidika (boil) that surrounds the Guda in two angular circles and causes pain and heat.¹²

Bhagandara has four distinguishing characteristics:

1. The formation of a boil known as Pidika, which is known as Bhagandara when it explodes.
2. The boil must be within two fingers' radius of the anal opening.
3. Deeply ingrained with one or more apertures.
4. Linked to fever, discharge, and pain.

It is also known as Bhagandara, and it occurs when the Pidika (abscess) ruptures and pus is released. Fistula-in-ano, as defined by contemporary literature, is an aberrant communication between the anal canal and the perianal skin that typically arises from an anorectal abscess that ruptures on its own or is not properly opened. Bhagandara and fistula-in-ano are therefore very similar.

According to Sushruta, there are five types of Bhagandara:

1. Shataponaka: Originating from Vata
2. Ushtragreeva: Originating from Pitta
3. Parisravi: Originating from Kapha
4. Shambukavarta: Originating from Tridosha
5. Unmargi: Caused by trauma.¹³

Ksharasutra is emphasized by Sushruta as the main treatment for fistulous tracts; it is described as a medicinal thread that simultaneously cuts and heals¹⁴. In support with Ksharasutra's mechanism, Charaka Samhita¹⁵, also recommends alkaline

chemicals (Kshara) for debriding diseased tissues in chronic wounds.

Guggulu is a good alternative to Snuhi latex because of its ability to promote wound healing and reduce inflammation, as highlighted in the Bhaishajya Ratnavali¹⁶. Tankana is lauded for its tissue-cleaning and cauterizing qualities in Rasatarangini¹⁷, which supports its use in modified Ksharasutra.

DRUG REVIEW

• Preparation of guggulu tankana ksharasutra

In the traditional method of preparing Ksharasutra, eleven layers of Snuhi latex, seven layers of Apamarga Kshara, and three layers of Haridra powder are applied to a linen or cotton thread. However, because Snuhi latex is only available during certain seasons, it is challenging to get. The ingredients of Guggulu based Kshara sutra are Barbour thread no. 20, Shodit Guggulu (Shodhana done in Triphala Kwath), Shodit Tankana Kshara and turmeric powder.

According to Guggulu Tankana Ksharasutra, this procedure is altered:

1. To produce a binding medium, 95% ethyl alcohol is used to extract guggulu resin.
2. In accordance with Rasatarangini instructions, tankana is converted into an alkaline Kshara.
3. The linen barber thread number 20 was placed on the hanger after being removed and autoclaved. 11 coats of plain Guggulu were applied first, followed by 7 coats of Guggulu with Tankana Kshara. Lastly, 3 coats of turmeric and guggulu were applied. Following each coating, the hangers were kept in the Kshara sutra cabinet to dry and sanitize them. Twenty-one coatings were applied to the Guggulu-based Kshara sutra, which was kept in an airtight glass tube.
4. The thread is preserved in airtight glass containers after being dried in a sterile setting under UV light.

Tankana improves tissue debridement, whereas Guggulu has antibacterial and anti-inflammatory properties. Haridra lowers the danger of infection by adding antibacterial qualities.

• How does Guggulu Tankana Ksharasutra function?

1. Mechanical action - The thread, which is placed into the gently presses on the fistulous tract, gradually severing it.
2. Chemical action - The alkalinity of Tankana Kshara clears pus and breaks down fibrous tissue, while Guggulu encourages the regeneration of healthy tissue. Haridra reduces the growth of microorganisms.

In order to enable simultaneous cutting and healing, the railroad approach is used to replace the thread once a week. This is described as Chedana (cutting) and Lekhana (scraping) in classical writings, guaranteeing full tract resolution. Pain is lessened by guggulu's calming effects than by Apamarga Ksharasutra.



MECHANISM OF ACTION OF GUGGULU TANKANA KSHARASUTRA

The mode of action of Kshara Sutra therapy in the management of Bhagandara is as follows:

1. By application of Tankan Kshara Sutra, it does cutting (by tension due to tying) layer by layer and there is continuous drainage of fistulous track which helps in healing.
2. The medicaments which are used to prepare the thread will dissolve the fistulous tissue of the track (Debridement by the Ksharana process) and Tankan stimulate the healthy granulation tissue for healing.
3. Kshara Sutra-in-situ encourages healing by Shodhana property & ropana property, so new granulation tissue formation develops from the base.
4. Important factor is it maintains continuous aseptic condition of the track.
5. It not only cuts the tissue, but also does continuous drainage of the wound, which enables to lay the track open.

DISCUSSION

With simultaneous healing effects on the fistulous pathway, Guggulu-Tankana Kshar Sutra gradually cuts the tissue chemically and mechanically.

Haridra powder is beneficial for Vrana Ropana (wound healing) and possesses qualities like Rakta Shodhaka (blood purifier), Shothahara (anti-inflammatory), Vatahara (alleviate Vata), and Vishaghna (antimicrobial)¹⁸. Due to its anti-inflammatory, antibacterial, and restorative qualities, guggulu aids in the treatment of ano fistula.¹⁹

The antibacterial and anti-inflammatory properties of guggulu are widely known for aiding in the healing of wounds. The ushna, tikshna, and sara guna in tankana kshara work as a cutting agent. Haridra churna promotes lymphatic recovery and lessens caustic reactions. Guggulu, turmeric, and Tankana Kshara all work together in Ksharasutra, a special medicinal composition that is supposed to cut and repair fistulous tracts.

Advantages of guggulu tankana ksharasutra :

1. Sphincter Preservation: lowers the risk of incontinence compared to fistulotomy.
2. Low Recurrence: 5-6% recurrence rates In contrast, 15–25% in surgery.
3. Cost-Effective: Tankana and Guggulu are commonly accessible and reasonably priced.
4. Outpatient-Based: Provides more convenience for patients by not requiring hospitalization.
5. Holistic Approach: Integrates Ayurvedic concepts of cutting, cleaning, and healing.

CONCLUSION

An inventive modification of the conventional Ksharasutra treatment for Bhagandara is Guggulu Tankana Ksharasutra. According to traditional writings like Sushruta Samhita and Bhaishajya Ratnavali, it tackles practical issues while retaining

efficacy by combining Guggulu and Tankana. It is a better option than traditional surgery due to its low recurrence rate, minimum invasiveness, and affordability. To prove its worldwide applicability, future studies should concentrate on standardizing preparation procedures and carrying out extensive trials. For efficient care of fistula-in-ano, ayurvedic practitioners are urged to use this therapy.

REFERENCES

1. Shenoy K Rajgopal, Shenoy Anita, Manipal Manual of Surgery, 4th edition 2014, New delhi, CBS Publishers, p799
2. A manual on Clinical Surgery; Published by Dr. S. Das, Calcutta, Edition-2004; p. 55.
3. Bhat M SRB's Manual of Surgery edition 5th published by jaypee brother's medical publisher (2016) 25th chapter.
4. Lobo SJ, Bhuyan C, Gupta SK, Dudhamal TS. A comparative clinical study of Snuhi Ksheera Sutra, TilanalaKshara Sutra and ApamargaKshara Sutra in Bhagandara (Fistula in Ano). Ayu. 2012 Jan;33(1):85-91. doi: 10.4103/0974- 8520.100319.
5. Bhat M SRB's Manual of Surgery edition 5th published by jaypee brother's medical publisher (2016) 25th chapter.
6. Ambikadutta Shastri, Susruta samhita Vol-1st Ayurveda Tatva Sandipika Hindi translation, Chaukhambha Sanskrit Sansthan, Varanasi; Edition; Reprint, 2016, Sutra Sthan 33/4-5 p. 96.
7. Shastri Kaviraj Ambikadatta, Sushruta Samhita, Ayurveda Tatva Sandeepika, 2016 edition, Varanasi, Chaukhambha Sanskrit Samsthana, Nidana Sthana,4/4, page no,317
8. Kashinath Pandey and Gorakhnath Chaturvedi, Charak Samhita Vol-2ndVidyotini, Hindi translation, Chaukhamba Bharti Academy, Varanasi; Edition: Reprint, 2013.Chikitsa Sthan 12/96 p.377.
9. Sushruta Samhita; Ayurveda - Tattva - Sandipika Hindi commentary; Edited by Kaviraja Ambikadutta Shastri; Chaukhambha Sanskrit Sansthan, Varanasi, Chikitsa Sthana.
10. A textbook of Rasasastra, Dr Ravindra Angadi, Chaukhamba Surbharati Prakshan, Chap-23, Ksharavarga.
11. Ambikadutta Shastri, Susruta samhita Vol-1st Ayurveda Tatva Sandipika Hindi translation, Chaukhambha Sanskrit Sansthan, Varanasi; Edition; Reprint, 2016, Nidan Sthan 4/4 p. 317.
12. Ibid; Nidan Sthan 4/12 p. 318.
13. Ibid; Nidan Sthan 4/3 p. 316.
14. Sushruta. Sushruta Samhita, Sutra Sthana, Kshara Paka Vidhi, 11/4. Varanasi: Chaukhamba Sanskrit Sansthan; 2009.
15. Charaka. Charaka Samhita, Chikitsa Sthana, Arsha Chikitsa, 12/96. Varanasi: Chaukhamba Bharati Academy; 2011.
16. Shastri RD. Bhaishajya Ratnavali, Chapter 29/12. Varanasi: Chaukhamba Prakashan; 2014.
17. Rasatarangini, Chapter 14/60-62. Translated by Sharma K. New Delhi: Motilal Banarsidass; 2004.
18. Sharma PV, editor. 5th ed. Varanaasi: Chaukhambha Orientalia; 2008. Mahendra Bhaugik, Dhanoantari Nighantuh, Guduchayadivarga, 53,54,55; pp. 25-26.
19. Misra B, editor. Varanasi: Chaukhambha Bharati Academy; 2006. Shri Bhavmishra, Bhavaprakasha Nighantu, Karpooradivarga/40, 41, Reprint Edition; p. 204.