



Review Article

A ROLE OF UDUMBARA KSHEER SUTRA IN ANO RECTAL FISTULA: AN AYURVEDIC REVIEW

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ABSTRACT

Acharya Sushrut has involved *Bhagandara* among the *Ashtamahagad* (8 dreadful diseases). At first it is present as *Pidika* (boil/abscess) in *Apakwa* (non-suppurated) state, become *Bhagandara* when it becomes *Pakwa* (suppurated). As defined in modern science, it is associated with fistula in ano. An anal fistula is an abnormal track having an external opening in the perianal region and internal opening in the anal canal and/or rectum.

Ayurveda has a special approach to fistula management. All anal fistulas counter well to different forms of *Kshar* and *Ksheer Sutra* therapy. They are nothing but the medicated seton. The *Ksheer sutra* mechanical and chemical action of drugs coated on the thread work jointly to cut, cure, drain and clean the fistulous tract, thereby promoting track/wound healing. Though *Bhrihatrayi*, (chief three texts of Ayurveda) stated the use of *Kshar Sutra*, there is no proper description of their method of preparation. In eleventh century, Chakrapani Datta mentioned the preparation method of *Ksheer sutra* in his book *Chakradatta* for the first time which is indicated in *Arsha* and *Bhagandara*.

Apamarga Kshar Sutra is the standard *Kshar Sutra*, and but it has some disadvantages. A variety of other *Kshar Sutra*, as well as *Ksheer Sutra*, have been prepared to resolve these inconveniences of *Apamarga Kshar Sutra*. One of them is *Udumbara Ksheer Sutra* which was founded by Prof. P.J Deshpande and M.K Jalan in 1984. *Udumbara* is one among the *Nyagradhadi Gana Dravya* mentioned by *Acharya Sushrut*. He described in *Bhagandara Chikitsa* that the *Nyagradhadi Gana Dravyas* are *Bhagandaranashak*.

INTRODUCTION

Bhagandara^[1] is a chronic purulent disease usually affects *Bhaga* (pelvic, perianal region and around anus) and it proceeds initially with an abscess^[2]. The pathological process of different types of *Bhagandara* are studied and determined that different types of *Bhagandara* affect the surrounding tissues of ano-rectal region with varying course of tract and discharge of pus, fecal matter, urine and other by products through the sinus are the common clinical features^[3]. Hence, *Bhagandara* can be defined as a suppurative secondary ulcerative manifestation to an eruption at ano-rectal, pelvic-rectal or perianal region which can be simulated with fistula-in-ano^[4].

A *Saririka vranasopha* following the course of shat *Kriyakala*, *Bhagandara* initial exposures with a localized inflammatory lesion called *Pidika* which subsequently undertakes three important pathological stages *Ama*, *Pachyamana* and *Pakwa avastha*. *Bhagandara* has been described as five types^[5].

- i. *Vatika bhagandara (Sataponaka)*
- ii. *Paittika bhagandara (Ustragreeva)*
- iii. *Kaphaja bhagandara (Parisravi)*
- iv. *Sannipataja bhagandara (Sambukavarta)*
- v. *Agantuja bhagandara (Unmargi)*

Now-a-days, management of *Bhagandara* by the use of *Ksharasutra*^[6-7] grew popularity due to least reoccurrence.

The anal fistula is an infamous disease due to its recurrence rate. *Bhagandara* is varyingly defined as a tear, ulcer or boil at *Bhaga* within 2 finger circumferences of it, causing painful abscess when opened is called. The word '*Bhagandara*' has got two components- *Bhaga* and *Darana*. *Bhaga* means perianal region and *Darana* means to tear. Acharya

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Sushruta has promoted various types of operations in *Sushruta Samhita*.

He has promoted *Kshara Sutra* treatment due to probability of recurrence after surgery. *Sushruta* describes different kinds of *Kshara* like *Palasa*, *Kadali*. The most remarkable is *Udumbara (Ficus Glomerata)* among them. The present treatment modality *Udumbara Ksheer Sutra* has been found effective due to its action of proper drainage of pus from the fistula that leads to a proper healing and as adjuvant therapy by avoiding recurrence in Fistula in ano.

Subsequently Dr Subhashchandra Varshney carried out a study titled, Management of Fistula in ano by *Udumbara ksheer sutra* around 800 participants were chosen, and significant results were obtained^[8]. Its use is in vogue from last many years but yet not standardized. As standardization of any medical drug or device or any other product is mandatory, so to maintain its quality level depending on different parameter there is a need for the standardization of the *Udumbara ksheer sutra* too. The present study is an attempt to standardize *Udumbara ksheer sutra* and

examine the efficacy of standardized *Udumbara ksheer sutra* over standard *Apamarga kshar sutra*. This study is also proposed to evaluate antimicrobial activity and self-life period of *Udumbara ksheer sutra*.

Preparation of Udumbara Ksheer Sutra

Chakrapani Dutta was the first person to mention the method of preparation with its indication in *Bhagandara* (fistula in ano) and *Arsha* ^[9] (hemorrhoid). He described method of preparation as smearing a thread repeatedly in latex of *Snuhi (Euphorbia neriifolia)* and *Haridra* (turmeric) powder ^[10].

भावितं रजनी चूर्णं सुहीक्षीरे पुनः पुनः ।

बन्धनात् सुदृढं सूत्रं भिनत्यर्शो भगन्दरम् ॥

चक्रदत्त अर्श चिकित्सा 5/148) (भै.र.अर्शोधिकार चिकित्सा 9/271) ^[11]

Materials and Method

1. *Udumbara ksheer*-Collects in early morning in sterile container.
2. *Haridra* powder



Figure 1: Udumbara ksheer and Haridra powder

According to Acharya chakrapani made this *Ksheer sutra*^[12]. 11 coatings of *Udumbara ksheer* and 03 coating of *Haridra* was made on the thread. Every coatings was used in fresh *Ksheer*. The pH of the thread is 8.5.



Figure 2: Udumbara Ksheer Coating



Figure 3: Haridra coating



Figure 4: After coating of Ksheer sutra will be placed in Kshara sutra drying oven

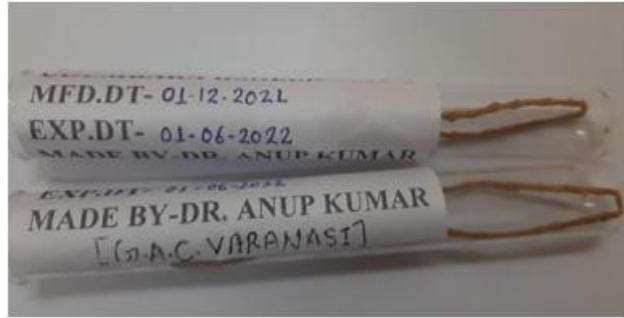


Figure 5: After drying Ksheer sutra will be packed in sterile tube

Primary Outcomes

Udumbara Ksheer Sutra will be useful for the management of *Bhagandaraa* which will reduce pain, itching, discharge and burning sensation and at the same time it will cut and heal the fistulous tract. This study also includes analytical standardization of *Udumbara Ksheer Sutra* which will set a consistent parameter for quality assurance of *Udumbara Ksheer Sutra* along with applied clinical as well as professional aspect.

The *Udumbara ksheer Sutra* acts by its alkaline nature which promotes cutting and healing of fistulous tract.

Secondary Outcomes

As the ingredient for the chosen intervention is easily available all over India hence this study will contribute to cost effective, safe, readily available, simple preparation and a good remedy for managing *Shalya tantra*.

Use of *Udumbara ksheer Sutra* is found to be very effective in avoiding recurrence. There is no recurrence after one year.

Standardization of *Udumbara Ksheer Sutra*^[13,14]

Standardization will be done by organoleptic and physicochemical testing of *Udumbara Ksheer* and *Udumbara Ksheer Sutra* and then the standards of *Ksheer Sutra* will be determined. It will be conducted at Govt. Ayurvedic College and Hospital Varanasi.

The analysis is conducted in three stages

- i. Raw material
- ii. Intermediate (in the process) product
- iii. Final product

Various characteristics of an ideal *Ksheer sutra* based upon these analyses are as follows:

- PH= 10.1
- Length: 30±1cm
- Diameter: 1.9mm
- Min. breaking load: 5.83kg

Weight of coating: 0.83gm

Thickness of thread after coating: 210+0.11mm

Sterilization Sealing and Preservation

For sterilization we kept *Ksheer Sutra* in *Ksharsutra* cabinet under expose of ultra violet rays. After sterilization *Ksheer sutra* kept in glass tubes and sealed with cork finally labeled for ready to use.

Recent advances in *Ksheer sutra*

Although the standard *Apamarga*^[15] *Ksharasutra* is used successfully in the management of various surgical diseases, the difficulties in its preparation and application are worth noting. These problems have put necessity of further modifications. One of the essential components of above thread is *Snuhi* latex. Latex creates many problems during preparation of the thread. A very little amount of latex collected after the incision of the stem. It coagulates if not used early. Collection becomes more it is difficult to collect latex in summer, so preparation of *Kshar sutra* is possible only in limited seasons. Another disadvantage is severe pain felt by the patients during the application of thread. In few cases, the intensity of pain is so severe that the patients discontinue the therapy, allergic reactions are also noted. To overcome these problems, several researches have been carried out searching for the drugs having better actions and acceptability than that of *Snuhi* latex and *Apamarga kshara* and different types of *Kshara sutra* were prepared. By keeping above in mind we prepare *Udumbara ksheer sutra* for complication free treatment of fistula in ano.

DISCUSSION

Ayurveda has been evidenced successful in managing several diseases and chronic conditions.^[16-29] Studies on Fistula in ano were described by Chandak et al^[30] and Lamture et al.^[31] Studies from the global burden of disease are available.^[32-34] *Bhagandara* is accomplished by various modern surgical and medical

treatments, but all therapies have limitations and the chance of recurrence. Complication free treatment of *Bhagandara* i.e., *Ksheer Sutra* is a minimal invasive para surgical measure capable of performing excision or *Chhedan*; under its mechanical pressure and phytochemical cauterization. Although the standard *Apamarga Kshar Sutra* is used successfully, the difficulties in its preparation and application are worth noting. Various researches have been conducted on this Sutra but the product has not yet been fully standardized and not comparatively evaluated with *Apamarga Kshar Sutra*. With a few to lay down standards for identity and quality control of the constituent as well as the finished product, standardization is the necessity.

CONCLUSION

So, this study is undertaken to standardize *Udumbara Ksheer Sutra* and also evaluate its efficacy in the management of *Bhagandara* as well as its comparative evaluation with the efficacy of Standard *Apamarga Kshar Sutra* in a systematic way. If *Udumbara Ksheer Sutra* proved to be more efficient in managing *Bhagandara* compared to *Apamarga Kshar Sutra* then it will provide more acceptable as well as convenient treatment and alternative to the conventional surgical methods. Moreover, if the duration of healing is found to be less compared to *Apamarga Kshar Sutra*, then this work will have significant value in treating *Bhagandara* with minimized therapeutic duration than the current duration.

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