



Research Article

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CLINICAL EVOLUTION OF KADALI KSHARA SUTRA IN THE MANAGEMENT OF BHAGANDAR WITH SPECIAL REFERENCE TO FISTULA-IN-ANO

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ABSTRACT

Background: Bhagandar or fistula is an anorectal disease affecting many of the world's population and decreasing the quality of life after haemorrhoids. This disorder's most common etiological are Cryptoglandular origin, Fissure in ano, haemorrhoidectomy, Infections, trauma and malignancy. Kadali kshara sutra is explained in Ayurvedic classics for the management of Bhagandar. So, betterment of human-being and to rule out the clinical efficacy of Kadali kshara sutra in Bhagandar or fistula-in-ano, this study was conducted. Aims and Objectives: To determine the clinical effectiveness of Kadali kshara sutra in Bhagandar management. Methodology: 10 patients of Bhagandar were selected randomly from the Shalya O.P.D of sex, race, and religion. All the ingredients were purchased from the local market and authenticated by the RSBK department, and Kadali kshara sutra was prepared in a teaching pharmacy under an aseptic method. Conclusion: Kadali kshara sutra showed 61.77% clinical efficacy in managing Bhagandar.

Keywords: Fistula, Kshara Sutra, Anorectal Disorder, Kadali kshara sutra

INTRODUCTION

The anorectal disorder Fistula-in-ano is defined as an abnormal communication between the anal canal and perianal skin¹ with similar features, and clinical sign symptoms of the disease known as Bhagandar were charmingly explained by Acharya Sushruta². Bhagandar is considered one of the asta mahagada, and the disease Bhagandar starts as deep-rooted pidika (boil) around the guda within two angulas (finger length) circumference, producing fever and pain³. According to Vijayarakshita and Srikantadutta had told that three structures, namely bhaga (vagina), basti (urinary bladder) and guda (ano-rectal canal), are considered bhaga. Acharya Charaka describes Bhagandar as a disease which occurs on the guda after the bursting of suppurated painful Bhagandar pidika⁴. Fistula-in-ano results from an anorectal abscess, which burst opened inadequately⁵. Kshara sutra is one type of ancient chemical. It may be adjuvant to surgical measures. Kshara sutra is indicated in Bhagandar⁶. The actual number of Bhagandar patients is unknown⁷. Bhagandar causes various prolonged or intermittent symptoms, including pain, discharge, and social embarrassment⁸. Fistulotomy is open of a fistula track⁹. In clinical practice, Apamarga kshara sutra is used most. In "Ksharapakavidyaya", Acharya Sushruta mentioned Kadali is one of the kshara with having properties like madhura rasa, guru and snigdha guna, sheeta veerya, madhura vipaka and pitta-vatahara properties. So, to find out the clinical efficacy of Kadali kshara sutra in Bhagandar or fistula-in-ano, this study was conducted.

MATERIALS AND METHODS**Method of Drug Preparation**

A few surgical linen threads of number 20 were spread out lengthwise to the kshara sutra hangers. Then the Snuhi ksheera was smeared over the thread on its length using sterile gloves under an aseptic method. Then the wet threaded hanger was placed in the kshara sutra cabinet for one day. Then, the next morning, the dried thread was again smeared with the same Snuhi ksheera. Snuhi ksheera's procedure was repeated for 11 days. On the twelve days again, the thread was smeared with Snuhi ksheera, and in the wet condition, the thread was spread with Kadali kshara powder. Once again thread was dried, and the same procedure was repeated 7 times for 7 days. On the day of the 19th, the thread was smeared with Snuhi ksheera then, in a wet state, it was spread with Haridra churna. The procedure was repeated for three successive days. This way, a thread has a total of 21 coatings of Snuhi ksheera, 7 coatings of Kadali kshara powder, three coatings of Haridra churna and the prepared kshara sutra were stored in the vertical kshara sutra cabinet (Table 1, Figure 1).

Table 1: Kadali Kshara Sutra

Ingredients	Latin Name	pH
Snuhi Ksheer	<i>Euphorbia neriifolia</i> L.	5.6
Kadali Kshar	<i>Musa paradisiaca</i> L.	11.74
Haridra Powder	<i>Curcuma longa</i> L.	6.2



Figure 1: Kshara Sutra Chamber

Method of application of Kadali Kshara Sutra: Bhagandar patients were instructed to lie in a lithotomy position, and the perianal region was cleaned with antiseptic lotions under an aseptic method inward to outward. For the relaxation of the anal sphincters, hot fomentation was used by nadi sweda yantra. A probe was passed through the external opening of the fistula. Then Kadali kshara sutra was taken and threaded into the eye of the probe. After that, the probe was pulled out through the anal orifice to leave the thread behind in the fistulous track.

Source of Data: 10 patients of Bhagandar were selected randomly by sex, race, and religion from Shalya O.P.D of SKS Ayurvedic Medical College and Hospital, Mathura, Uttar Pradesh, India. The study was carried out per the International Conference of Harmonization-Good Clinical Practices Guidelines (ICH-GCP). The study was conducted after I.E.C approval and after getting patients' written consent. I.E.C approval number SKSAMCH/Shalya/211/2022.

Inclusion criteria: Patients between the ages of 35-65 years of either sex with pre-diagnosed as Bhagandar.

Exclusion criteria

1. Carcinoma of the rectum.
2. Patient suffering from fistula-in-ano associated with haemorrhoids.
3. Who are not willing to give written consent
4. Diabetes Mellitus

Assessment Criteria: The improvement of the patient was assessed according to the degree of changes in subjective and objective parameters (Table 2-5). The analysis was done using SPSS 19.0 software (IBM, Bangalore, India). The student "t" test was used for analysing the clinical efficiency of Kadali kshara

sutra in the management of Bhagandar, and P < 0.05 was considered statistically significant for the "t" test.

Table 2: Subjective and Objective Parameters of fistula-in-ano

Subjective	Objective
Ruja (pain), Srava (discharge)	Granulation Tissue

Table 3: Grading of Ruja (Pain)

Severity of symptom	Grading
No pain	0
Mild	1
Moderate	2
Severe	3

Table 4: Grading of Srava

Severity of symptom	Grading
No discharge	0
If vrana wets ½ x ½ cm gauze piece (Mild)	1
If vrana wets 1 x 1cm gauze piece (Moderate)	2
If vrana wets more than 1cm (Severe)	3

Table 5: Grading of Granulation Tissue

Severity of symptom	Grading
Healthy	0
Moderate	1
Hypergranulation	2
Granulation absent	3

Table 6: Gender-wise patients' distribution

Male	Female	Total
3	7	10
20%	70%	100%

Table 7: Age-wise patients' distribution

Age	Number of patients	Percentage
35-45 years	2	20%
46-55 years	5	50%
56-65 years	3	30%

Table 8: Diet-wise patients' distribution

Diet	Patients	Percentage (%)
Vegetarian	2	20
Non-vegetarian	7	70
Mixed diet	1	10

Table 9: Changes in Subjective and Objective Parameters

Criteria	Mean score		SEM		df	± SD	SE	T	P	Results
	BT	AT	BT	AT						
Ruja (Pain)	2.80	1.40	0.13	0.16	18	0.42±0.52	0.21	6.64	0.0001	ES
Srava	2.70	0.50	0.15	0.22	18	0.48±0.71	0.27	8.12	0.0001	ES
Granulation Tissue	1.20	2.60	0.16	0.25	18	0.52±0.79	0.29	4.69	0.0002	ES

BT: Before Treatment, AT: After Treatment, ES: Extremely Significant

Table 10: Clinical Improvement in Subjective and Objective Parameters

Symptoms	Clinical improvement
Ruja (Pain)	50%
Srava	81.48%
Granulation Tissue	53.84%

Table 11: Overall Clinical efficacy

Overall Clinical efficacy	Clinical efficacy
	61.77%



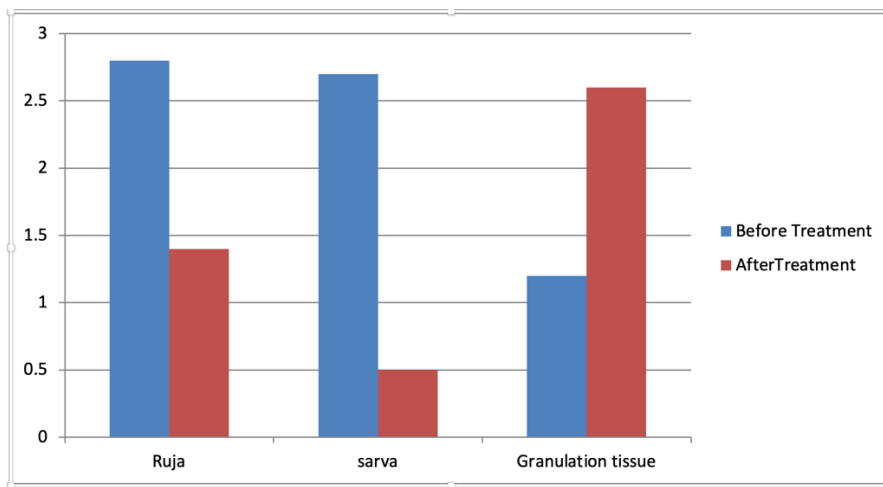
Figure 2: Fistula-in-ano



Figure 3: Fistula-in-ano



Figure 4: Kadali Kshara Sutra in-stu position



Graph 1: Changes in Subjective and Objective Parameters before and after Kadali Kshara Sutra

OBSERVATION AND RESULTS

Gender-wise patient distribution: - In this study, we found the maximum number of Bhagandar patients in the female gender group, 70% (Table 6).

Age-wise patient distribution: - Most patients aged 46 to 55 suffered from Bhagandar, followed by the 56-65 years group (Table 7).

Diet-wise distribution of patients: 70% of the patients of Bhagandar were habituated to taking a non-vegetarian diet (Table 8).

Changes in Subjective and Objective Parameters: In this study, the student “t” test was used for statistical analysis to determine the clinical efficacy of the Kadali kshara sutra. However, the study showed statistically extremely significant results in both subjective and objective parameters. The symptoms like ruja (pain), srava were reduced after treatment and granulation of the tissue was started (Table 9, Figure 2-4)

In this study, the student “t” test was used for statistical analysis to determine the clinical efficacy of the Kadali kshara sutra. However, the study showed statistically extremely significant results in both subjective and objective parameters. The symptoms like ruja (pain) and srava were reduced after treatment, and granulation of the tissue was started.

DISCUSSION

In this study, 70% of female patients suffered from Bhagandar and 30% of male patients. The most common age group of the Bhagandar patients was from 46 to 55 years, with habituated of taking a non-vegetarian diet 70% and followed by a vegetarian diet 20% of the study sample. After the selection of Bhagandar patients from the O.P.D., grading was done based on per rectum and local examination with the help of a questionnaire. The typical symptom found in Bhagandar was srava (discharge). Before and after the Kadali kshara sutra application, subjective and objective parameters were noted and used for comparison. After identifying the Bhagandar track, Kadali kshara sutra was applied under the aseptic method and in the lithotomy position.

The study showed significant clinical improvement in Bhagandar patients after Kadali kshara sutra treatment. After Kadali kshara sutra treatment, ruja (pain) was reduced and showed 50% improvement. Vrana srava (discharge) was reduced, and progress was noted up to 81.48%. 53.84% tissue granulation was found after ksharasutra (Table 10 and Graph 1). Kadali kshara sutra showed 61.77% clinical efficacy in all parameters (Table 11).

CONCLUSION

Fistula-in-ano is the most common ano-rectal disorder in the world. According to Raghavaiah, 1976 reported. Anal fistula constitutes 1.6% of all surgical admissions in India. Ancient Ayurveda classics with similar signs and symptoms of the disease have been described as Bhagandar by the father of Indian surgery, Acharya Sushruta. In this study, we used Kadali kshara sutra in

Bhagandar with special Reference to Fistula-in-ano. In this study, we found that most patients were female in the age group 46 to 55 years. Kadali kshara sutra showed 61.77% clinical efficacy in all parameters.

On the other hand, Kadali Kshara Sutra's ingredients are readily available. The preparation cost is significantly less and almost minimum therapeutic hazards. Maybe it can be replaced by Apamarga Kshara Sutra in future. Kadali Kshara Sutra may act by excision of the track and at the same time by cauterization of the rigid fibrous tissue around the track and help to granulation of tissue and help to drain the fistula track completely.

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