

## EFFECT OF MADHU-KSHARA SUTRA IN THE MANAGEMENT OF BHAGANDARA [FISTULA-IN-ANO]

### Research Article

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#### Abstract

*Bhagandara* (Fistula-in-ano) is a cumbersome disease which occurs in Anorectal region, it is second commonest disease after haemorrhoids. In this context, a comparative study was carried out to evaluate the efficacy of *Madhu-Kshara Sutra* in the management of *Bhagandara*. It consists of *Madhu*, *Apamarga* (*Achyranthus Aspera*) and *Haridra* (*Curcuma longa*). The subjects were treated with *Madhu Kshara Sutra* in study group and *Apamarga Kshara Sutra* in control group and the results were encouraging.

**Keywords:** *Bhagandhara, Madhu Kshara Sutra, Apamarga, Haridra*

#### Introduction

The word fistula is derived from a Latin word a reed, pipe or flute. It is an abnormal communication between two epithelial-lined surfaces. It usually results from an ano-rectal abscess, which burst spontaneously or opened inadequately. As the wound is located in anal region which is a storehouse for faeces so it is more prone for infection, thus takes long time to heal and the condition remains difficult to cure, various operative procedures often leads to complications like recurrences, scars and faecal incontinence.

In *Ayurvedic* classics, *Bhagandara* has been described as one of the *Asta Mahagada* means which is difficult to cure and it has similar signs and symptoms of *Fistula-in-ano*. The *Kshara Sutra* therapy was practiced and used since long time with great success and negligible

recurrences. As the collection and preservation of *Snuhi ksheera* is difficult and time taking process, *Madhu* is easily available, preservable and equally effective. So *Madhu* was selected instead of *Snuhi Ksheera* in the preparation of *Kshara Sutra*, as *Madhu* is inherited with the properties of *Vranashodana* (Wound cleansing), *Vranaropana* (Woundhealing) and *Lekhana* (Scraping).

#### Materials and method

##### Source of data

A clinical study was planned on *Madhu-Kshara Sutra* and *Apamarga Kshara Sutra* in diagnosed cases of *Fistula-in-ano* from the OPD and IPD of Dept. of P.G.Studies in Shalyatantra, SDM College of Ayurveda and Hospital, Hassan, Karnataka and studies on 20 patients in each group.

##### Inclusion criteria

The cases were selected above age 12 years, both sexes, operative recurrences, different duration of signs and symptoms of *Bhagandara* (*Fistula-in-ano*).

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**Exclusion criteria**

1. Post operative incontinence of stool
2. Secondary fistula due to Crohn’s disease, Tuberculosis, Ulcerative colitis and Carcinoma of Rectum.

**Preparation of Madhu-Kshara Sutra**

**Table-1 pH of different drugs in Apamarga Kshara Sutra and Madhu-Kshara Sutra**

S.No.	Drugs	pH
1.	<i>Apamarga Kshara Sutra</i>	9.7
	<i>Snuhi</i>	5.6
	<i>Apamarga Kshara</i>	9.7
	<i>Haridra</i>	6.2
	<i>Madhu-Kshara Sutra</i>	8.9
	<i>Madhu</i>	3.6
	<i>Apamarga</i>	9.7
	<i>Haridra</i>	6.2

**Assessment criteria**

- Total No. of days taken for cut through =....days/cm
1. U.C.T. =  $\frac{\text{Initial length of track in cms.}}{\text{Total No. of days taken for cut through}} = \dots \text{days/cm}$
  2. Pain
  3. Granulation Tissue
  4. Discharge
  5. Healing time after cut through

**Gradings :**

**2) Pain**

- Grade 0 - No pain
- Grade 1 - Mild
- Grade 2 - Moderate
- Grade 3 - Severe

**3) Granulation Tissue**

- Grade 0 - Healthy
- Grade 1 - Moderate
- Grade 2 - Hypergranulation
- Grade 3 - Granulation absent

**4) Srava**

- Grade 0 - No discharge

Grade 1 - If Vrana wets ½ x ½ cm gauze piece (Mild)

Grade 2 - If Vrana wets 1 x 1cm gauze piece (Moderate)

Grade 3 - If Vrana wets more than 1cm (Severe)

**5) Healing time after cut through:**

Area of Group A and Group B of patients were compared with wound square cm area (compared) with the following formula.

$$U.H.T. = \frac{\text{Total no. of days of wound healing}}{\text{Initial length x Breadth x height}} = \dots \text{days/cm}$$

**6) Size of the wound:**

- Grade 0 - Healed
- Grade 1 - (0.5-1cm) wound within 0.5-1cm
- Grade 2 - Wound within 1-2 cm
- Grade 3 - Wound within 2-3cm

**Application of Madhu-Kshara Sutra**

The patient is kept in proper lithotomy position and perianal region was cleaned with antiseptic lotions and draped. Patient is reassured and gloved finger was gently introduced into the rectum. Then a probe was passed through the external opening of fistula. The tip of the probe was forwarded along the path of least resistance and was guided by the finger in rectum to reach into the lumen of anal canal through the internal opening and its tip was finally directed to come out of anal orifice. Then a suitable length of Plain surgical linen thread no.20 was taken and threaded into the eye of probe. Thereafter the probe was pulled out through the anal orifice, to leave the thread behind in the fistulous track. The two ends of the thread were then tied together with a moderate tightness outside the anal canal. This procedure is called primary threading and

on second day post-operative day the *Madhu-Kshara Sutra* application is done.

### Change of *Madhu-Kshara Sutra*

All patients were instructed to take hot sitz bath before changing the thread. The *Madhu-Kshara Sutra* was changed at weekly interval. The thread is tied to the previously applied *Madhu-Kshara Sutra* in position towards outer end of the knot. Then an artery forceps is applied inner end to the same knot. Then the old thread is cut between the artery forceps and the knot. Pulling of the artery forceps along with the thread ultimately replaces the old thread by *Madhu-Kshara Sutra*. Then the two ends are ligated and bandaging was done. This procedure is done by Railroad technique. The same procedure is followed for successive changes of *Madhu-Kshara Sutra* at weekly interval.

### Follow-up

All the patients were instructed to visit Ano-rectal clinic once in a week till the complete cut through of the fistulous tract.

### Observations and result

The efficacy of *Madhu-Kshara Sutra* and *Apamarga Kshara Sutra* have been studied in 40 patients of Fistula-in-ano, divided into two groups, control group (Group A) - *Apamarga Kshara*

*Sutra* and treated group (Group B) - *Madhu-Kshara Sutra* were applied.

All 40 patients of fistula-in-ano have been analysed for age, sex, occupation, habitat, nature of diet, *Doshic Prakriti*, type of *Bhagandara*, type of fistula-in-ano, position of the external openings, length of fistulous track and recurrent cases.

The length of the *Madhu-Kshara Sutra* was measured after each change and was noted in every case. After few days of therapy, this Sutra comes out with the knot intact. This stage is known as Cut Through. The Average Unit Cutting Time (U.C.T.) of treated group (*Madhu-Kshara Sutra*) was calculated and compared with control group (*Apamarga Kshara Sutra*). The analysis of average unit cutting time was noted in relation to age, length of track, and previous history of operation and different 'O' clock position in each group.

The process of healing was started with the cutting of the track during the course of treatment. However, the small area was still remained to heal completely at the end of total cut through which took 1-2 weeks in treated groups in complete closure of the wound and where as 2-3 weeks was taken for healing completely in control group.

**Table - 2 Average Unit cutting time Control and Treated Groups**

Group	Average unit cutting time in days/cm
Control (Group A)	8.67
Treated (Group B)	9.35

**Table - 3 Status showing the effect on U.C.T in therapy groups**

	Mean	S.D.	S.E.	t	df	'p' Value	Inference
Group A	8.67 cm	1.085	0.243	35.60	19	<0.001	Highly significant
Group B	9.35 cm	2.016	0.457	20.73	19	<0.001	Highly significant

**Table - 4 Status showing the status of pain criteria in therapy groups**

Treatment	Group A			Treatment	Group B		
	Mean	Mean difference	%		Mean	Mean difference	%
BT	1.95	0.4	20.50	BT	2.2	0.7	31.8
AT	1.55			AT	1.5		

**Table - 5 Status showing the effect of Granulation tissue in therapy groups**

	Mean	S.D.	S.E.	t	df	'p' Value	Inference
Group A	-2.15	4.46	0.997	-2.15	19	<0.02	Insignificant
Group B	-2.00	3.80	0.85	2.35	19	<0.02	Significant

**Table - 6 Status showing the effect on Discharge in therapy groups**

Treatment	Group A			Treatment	Group B		
	Mean	Mean difference	%		Mean	Mean difference	%
BT	2.05	1.65	80%	BT	1.95	1.6	82%
AT	0.4			AT	0.35		

**Table - 7 Status of wound healing in therapy groups after 7 days of cut through**

Therapy groups		Mean	Mean difference	Percentage
Group A	BT	1.25	0.15	12%
	7 Days	1.10		
Group B	BT	1.20	0.40	33%
	7 Days	0.80		

**Table 8 - Status of wound healing in therapy groups after 15 days of cut through**

Therapy groups		Mean	Mean difference	Percentage
Group A	BT	1.25	0.45	36%
	15 Days	0.80		
Group B	BT	1.20	1.10	91%
	15 Days	0.10		

**Discussion**

Average unit cutting time in control group A is 8.67 cm and treated group B is 9.35cm. Pain felt by the patients at the time of changing thread and subsequent change of *Madhu-Kshara Sutra* was very less in compared to *Apamarga Kshara Sutra*, 31.8% patients complained less degree of pain in Group B compared to 20.50% patients in Group A. Assessment of granulation tissue was proper in Group B compared with Control group A. Status of discharge in

comparison with Group A and B, there was no much Mean difference in both the groups hence both are having significant on discharge. Status of wound healing in both groups after 7 days of cut through is 33% of cases in Group B as compared to 12% of cases in Group A. The total average U.C.T. was more in control group A than treated group B.

**Conclusion**

The aim of present study is to find out the efficacy and applicability of

*Madhu-Kshara Sutra* in the management of *Bhagandara*. Based on the clinical statistical data, it may be concluded as follows:

- There was a marked reduction of symptoms like burning pain, irritation, inflammation, and local reaction in treated group as compared to control group.
- Availability and preservatory problems have been trespassed by the present method.
- It has minimized the problems of preparation and application of *Kshara Sutra* therapy.
- Wound healing after cut through was faster in treated group (1-2 weeks) as compared to (2-3 weeks) in control group.
- *Madhu* used to take 16 hours for drying in the *Kshara Sutra* cabinet.
- No recurrences of cases were reported during the six months of follow up study.

So, *Madhu-Kshara Sutra* can be considered as a better alternative in place of *Apamarga Kshara Sutra* because it has more acceptability, easily available, preservable, less burning pain while changing of the *Kshara Sutra*, irritation and better wound healing property after cut through.

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