

ORIGINAL RESEARCH ARTICLE

A Clinical Comparative Study of *Apamarga Kshara Sutra* and *Kadali Kshara Sutra* in the Management of *Arsha*

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ABSTRACT

Background: *Arshas* is the most common condition among the ano-rectal diseases in our day-to-day practice in terms of incidence. The disease *arshas* troubles the patient like an enemy. Because of adoption of western life style, lack of physical exercise, excessive travelling lead to disease *arshas*. *Arshas* is of two types-*Bahya* and *Abhyantara*. *Bhesaja chikitsa* is recommended as the primary line of treatment, *apamarga kshara sutra* and *kadali kshara* on *Arshas*.

Aim: Present study is aimed to clinically compare the effect of *Apamarga kshara sutra* and *kadali kshara* on *arshas*.

Result and Conclusion: The application of *Apamarga kshara sutra* causes cutting by its alkaline characteristics and tension of tying and there is continuous cutting and healing tissue, formation of healthy granulation tissue, thus causes healing. *Apamarga* and *haridra* encourage the healing by new granulation tissue formation with base as well as maintain continuous aseptic condition after *kshara sutra* ligation.

1. INTRODUCTION

Haemorrhoid is a disease which is very specific to human race only due to its erect posture. In this era of fast running life, the chance of occurrence of hemorrhoid is very high and is found more in persons who are prone to the usage of incompatible foods and low roughage diet, suppression of natural urges, sedentary life-style, alcoholism, worry, tension, and in table-top professionals. Other contributing factors include pregnancy, ageing, chronic constipation or diarrhea, and some other ano-rectal diseases.

In *Ayurveda*, the disease *Arshas* comes under the heading of *Mahagadas* as it is *Deerghakalanubandhi*, *Dushchikitsya* in nature, a *Tridoshaja Vyadhi* and involves the *marma*. *Acharyas* have regarded this disease as a local manifestation of systemic derangements of *doshas*, vitiation of *dosha* adversely affects the *agni* resulting in *agnimandya*, which in turn leads to constipation, which is the main cause for the development of *arshas*. The fact that *arshas*^[1] is difficult to cure is everywhere emphasized in *Ayurveda*, enumeration of a vast number of etiological factors including dietic ingredients, habits, acts, and indulgences, its systemic description of its pathogenesis are in itself indicative of their

keen perception, deep insight, and scientific knowledge of the disease. The modern modalities^[2] of treatment for hemorrhoids are sclerotherapy, rubber band ligation, cryosurgery, infrared photocoagulation, staple techniques, and hemorrhoidectomy^[3] have their own limitations. An effort has been made in the present study to compare the therapeutic effect of *Apamarga kshara sutra* and *kadali kshara sutra* in *Arshas*.

2. MATERIALS AND METHODS

2.1. Aim

Present study is aimed to clinically compare the effect of *Apamarga kshara sutra* and *kadali kshara* on *arshas*.

2.2. Objectives of the Study

The objectives of the present study are as follows:

- To study the disease *Aarshas* in detail
- To assess the effect of *Apamarga kshara sutra* *Arshas*
- To assess the effect of *kadali kshara sutra* *Arshas*
- To compare the effect of these therapies.

2.3. Source of Data

Patients of *Arshas* are taken from IP and OP Departments of RGES Ayurveda Medical college and Hospital, RON.

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2.4. Method of Collection of Data

Two groups containing 20 diagnosed cases of *Arsha* in each group selected randomly are taken for the study.

2.5. Inclusive Criteria: Patients with *Arsha*

The following criteria were included in the study:

1. Aged between 20–60 years
2. *Apamarga Kshara Sutra* and *Kadali Kshara Sutra*.

2.6. Exclusive Criteria

The following criteria were excluded from the study:

1. Having Bowel incontinence, Malignancy.
2. Systemic disorders such as diabetes, anemia, bleeding disorders.
3. Suspected HIV, Tuberculosis, Fistula-in-Ano, Anorectal Abscess, Rectal Prolapse.

2.7. Study Design

- GROUP A
 1. Purvakarma-Examination of Patient, consent, and patient preparation.
 2. Pradhan Karma-Infiltration of local Anesthesia and Ligation of *Apamarga Kshara Sutra*.
 3. Paschata karma-Switz bath and *Triphala choorna*.
 4. *Apamarga -Once Kshara Sutra* ligation.
- GROUP B
 1. Purvakarma-Examination of patient, consent, and patient preparation.
 2. Pradhan Karma-Infiltration of local anesthesia and ligation of *Apamarga Kshara Sutra*.
 3. Paschata karma-Switz bath and *Triphala choorna*.
 4. Once *Kadali Sutra* ligation

2.8. Diet-Regimen

All patients were advised to take complete rest during the course of treatment. Restrictions regarding diet and regime were designed as supportive to the treatment to get maximum result throughout the days of treatment and equal number of days during follow-up period. The patients were advised to avoid spicy, oily, fried and constipating foods, curd, milk, meat, and egg and encouraged to take roughage diet including leafy vegetables. It was essential that the patient should give up physical exercise, mental tension, strenuous work, sexual intercourse, day sleeping, travelling, and continuous sitting in same position for a long period.

2.9. Assessment Criteria

Assessment was made on the patient's response to the subjective and objective parameters.

2.10. Grading pattern in *bahyarshas*

Subjective criteria are shown in Table 1.

Objective criteria are shown in Table 2.

Assessment of total effect of therapy is shown in Table 3.

3. OBSERVATIONS AND RESULTS

The efficacy of *Apamarga kshara sutra* and *Kadali kshara sutra* has been studied in 40 cases, attended in *Arsha* of Shalya department, RGSAMC and H, RON, divided into two groups, both trial Group-1

Apamarga kshara sutra was applied, while in Group-2 *Kadali- kshara sutra* was applied after establishing the diagnosis of *Arsha*.

All 40 patients of *Arsha* have been analyzed for age, sex, habitat, socio- economic status, doshic prakriti, type of *arsha*, and chronicity of disease.

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 week in treated groups in complete closure of the wound, whereas 1 week was taken for healing completely in control group.

3.1. Age Incidence

The distributions of 40 patients were divided into two groups: Youngest patient was 22 years and eldest patient was 62 years. The incidence of *Arsha* is maximum in age group of 31–40 years and is minimum in age group of 61–80. The details are shown in Table 4.

3.2. Sex Incidence

Out of 40 cases there were 36 male patients and 4 were female patients. The ratio of male and female 9:1. This analysis shows males are more prone to *Arsha* than females. The details are shown in Table 5.

3.3. Habitat

Cases were analyzed in view of their habitat. Out of 40 cases of *Arsha* 23 patients (57.5%) were reported from rural area, while 17 (42.5%) were reported belonging to urban area. The details are shown in Table 6.

3.4. Religion

Cases were analyzed in view of their religion, out of 40 cases 37 cases (92.5%) were Hindus, 2 Cases (5%) were Christians and 1 case (2.5%) was Muslim. No. 4). The details are shown in Table 7.

4. OTHER SPECIFIC CLINICAL OBSERVATIONS

Along with unit cutting time, we had taken other specific clinical observations such as pain, Burning sensation, itching, and pile mass.

4.1. Assessment of Pain in comparison to Group A and B

It was observed that degrees of pain felt by the patients at the time of ligation thread and subsequent change of *Apamarga kshara sutra* was very less in compared to *Kadali Kshara sutra*.

Comparison of the pain in groups showing Effects of Apamarga kshara sutra and kadali kshara sutra

Comparison the effect obtained in both the groups showed that internal and external provided significantly better relief in *Guda Shoola*, bleeding rectum, size of pile mass, and reducing in no of cotton pad soaked with discharge mentioned in Tables 8 and 9.

4.2. Assessment of Itching in comparison to Group A and B

Based on mean it was observed that Itching was proper in tested group as compared with control group, where there was Itching. Significant in both group.

Itching

Group A: The initial mean score of the symptom Itching 2.0. This was reduced to 0.80 at the end of 7th day. It was statistically highly significant result at <0.001 level.

Group B: The initial mean score of the symptom Itching 2.05. This was reduced to 1.4 at the end of 7th day. It was statistically highly significant result at <0.001 level, mentioned in Tables 10 and 11.

4.3. Assessment of Burning sensation in comparison with Group A and B

There is no much Mean difference in both the groups hence both are having significant on burning sensation.

Burning sensation

Group A: The initial mean score of the symptom Burning sensation 2.5. This was reduced to 0.4 at the end of 7th day. It was statistically highly significant result at <0.001 level.

Group B: The initial mean score of the symptom Burning sensation 1.95. This was reduced to 0.35 at the end of 7th day. It was statistically highly significant result at <0.001 level mentioned in Tables 12 and 13.

Objective assessment of pile mass in comparison with Group A and B.

Status of pile mass in therapy groups after 7 days of cut through.

Group A: The initial mean score of the symptom pile mass 2.0. This was reduced to 0.9 at the end of 7th day. It was statistically highly significant result at <0.001 level.

Group B: The initial mean score of the symptom pile mass 2.0. This was reduced to 1.0 at the end of 7th day. It was statistically highly significant result at <0.001 level mentioned in Tables 14 and 15.

Effect of the therapy on subjective parameters after follow up Group A are mentioned in Table 16.

Effect of the therapy on subjective parameters after follow up Group B are mentioned in Table 17.

In overall effect of treatment in *Arsha*, out of 40 patients in this study in Group A.

2 patients (5%) were getting Moderate Improvement and 18 patients (95%) were getting Marked Improvement as shown in Graph 1.

Overall effect of the treatment is 96.16% in Group B.

4 patients (10 %) were getting Moderate Improvement and 16 patients (90%) were getting Marked Improvement. As shown in graph 2.

5. DISCUSSION

5.1. Comparison of the Effects of *Apamarga kshara sutra* and *kadali kshara sutra*

Comparison of the effect obtained in both the groups showed that internal and external provided significantly better relief in *Guda Shoola*, bleeding rectum, size of pile mass, and reducing in no of cotton pad soaked with discharge.

5.2. Probable Mode of Action

As mentioned earlier the healing and *Arsha* is different from the healing of any other diseases of anum because in the former there is constant contamination of the wound by feces^[4] and its frequent friction with the mucosa while there is continuous pus discharge of the sphincteric muscle. They are the important factors which keep *Arsha*^[5] away from normal healing. In such a situation, a drug which produces a soothing effect, *Vata-Pittahara*, *Vedna Sthapana*, *Vrana Ropana*,^[6] and influences

reduction of inflammation will be more suitable than drug which may act as the best healer of ulcer on other parts of the body. *Apamarga kshara sutra* and *kadali kshara sutra* has these properties. But as far as main symptoms are concerned pain (Burning and Cutting) may be relieved due to the action of *Vedna Sthapana*^[7], *Dahaprashamana*,^[8] and *Vata Pittahara*. It is well known fact that the *Vata* and *Pitta*^[9] *Doshas* are predominant in pain as well as in *Arsha*. According to modern pharmacological action of drugs patient as anti-inflammatory and steroidal activity. Other drugs also have been reported to have a similar type of property but our clinical experience suggests that its activity is less as compared to that of *Apamarga kshara sutra*. It is the amount of inflammation and pus discharge which is responsible for producing the agonizing pain in cases of *arsha*. *Kadali kshara sutra* is able to counteract these two factors more efficiently than the other drugs.

After the completion of treatment in Group A shows overall result of highly significant where as in Group B shows overall result of statistically significant. It shows that Group A is highly significant and Group B also have same result without oral medication.

6. CONCLUSION

The incidence of *Arsha* was observed in age group of 41–50 due to unhygienic maintenance.

- *Apamarga kshara sutra* has been found very effective in relieving symptoms, that is, reduces pain, swelling, itching, discharge, and local tenderness. In *Arsha* in shorter time.
- There was no complication like necrosis, stenosis, anal incontinence, after application of *Apamarga ksharasutra* is not noticed.
- Both varieties are cost effective can be easily prepared and can be easily applied with less recurrence after treatment.
- Management with *Apamarga ksharasutra* shows superiority than *Kadali ksharasutra*.
- The application of *Apamarga kshara sutra* causes cutting by its alkaline characteristics and tension of tying and there is continuous cutting and healing tissue, formation of healthy granulation tissue, thus causes healing. *Apamarga* and *haridra* encourage the healing by new granulation tissue formation with base as well as maintain continuous aseptic condition after *kshara sutra* ligation.

7. ACKNOWLEDGMENT

None.

8. AUTHORS' CONTRIBUTIONS

All the authors contributed equally in the design and execution of the article.

9. FUNDING

Nil.

10. ETHICAL APPROVALS

Ethical clearance was obtained from the institutional ethical committee of Rajiv Gandhi Education Society Ayurvedic medical college and hospital Ron through order number-AMCH/IECC/2017-2018.

11. CONFLICTS OF INTEREST

Nil.

12. DATA AVAILABILITY

This is an original manuscript and all data are available for only research purposes from principal investigators.

13. PUBLISHERS NOTE

This journal remains neutral with regard to jurisdictional claims in published institutional affiliation

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Table 1: Subjective criteria assessment

Symptom	Severity	Grading
Pain	Absent	0
	Mild	1
	Moderate	2
	Severe	3
<i>Kandu</i> (Itching)	Absent	0
	Mild	1
	Moderate	2
	Severe	3
<i>Daha</i> (burning sensation)	Absent	0
	Mild	1
	Moderate	2
	Severe	3

Table 2: Assessment of objective criteria

Symptom	Severity	Grading
<i>Vaivarnya</i> (Discolouration)	Absent.(Pink color of the mucous membrane)	0
	Present. (Bluish-black, Red, or Pale)	1
<i>Picchasrava</i> (Mucosal discharge)	Absent (No discharge)	0
	Mild (Very minimal discharge)	1
	Moderate (Just soiling of the undergarments)	2
	Severe (Total soiling of the undergarments)	3
<i>Gatra</i> (Size of the pile mass)	Absent (Complete regression in size of pile mass or no pile mass)	0
	Mild (Up to 0.5 cm)	1
	Moderate (0.5 cm–1 cm)	2
	Severe (More than 1 cm)	3

Table 3: Assessment of total effect of therapy

Complete remission	100% relief in signs and symptoms
Marked improvement	61–99% relief in signs and symptoms
Moderate improvement	31–60% relief in signs and symptoms
Mild improvement	1–30% relief in signs and symptoms
Unchanged	0% relief in signs and symptoms

Table 4: Analysis of patients in relation to age groups

Age	Group A		Group B		Total	
	No.	%	No.	%	No.	%
21–30 years	6	30	5	25	11	27.5
31–40	7	35	9	45	16	40
41–50	4	20	1	5	5	12.5
51–60	2	10	4	20	6	15
Total	20	100	20	100	40	100

Table 5: Analysis of patients in relation to sex groups

Sex	Male		Female	
	No.	%	No.	%
21–30 Years	9	22.5	2	5
31–40	14	35	2	5
41–50	5	12.5	-	-
51–60	6	15	-	-
61–80	2	5	-	-
Total	36	90	4	10

Table 6: Incidence of habitat

Habitat	No of cases	Percentage
Rural	23	57.5
Urban	17	42.5
Total	40	100

Table 7: Incidence of cases in relation to Religion

Region	No. of patients		Percentage	
	Group A	Group B	Total	%
Hindu	18	19	37	92.5
Christian	1	1	2	5
Muslim	1	-	1	2.5
Total	20	20	40	100

Table 8: Showing the effect on Pain in therapy groups

Group	BT	AT	Mean	S.D.	S.E.	T	df	'p' Value	Inference
Group A	1.95	1.00	0.4	0.598	0.133	3.0	19	<0.001	Significant
Group B	2.2	1.5	0.7	0.656	0.146	4.7	19	<0.0001	Highly significant

Table 9: Status of Pain criteria in therapy groups

Treat- ment	Group A			Treat- ment	Group B		
	Mean	Mean difference	%		Mean	Mean difference	%
BT	1.95	0.4	20.50	BT	2.2	0.7	31.8

Table 10: Showing the effect of Itching in therapy groups

Group	BT	AT	Mean	S.D.	S.E.	t	df	'p' Value	Inference
Group A	2.0	0.80	0.80	0.52	0.11	6.83	0.1	<0.001	significant
Group B	2.05	1.4	0.65	0.80	0.12	5.12	19	< 0.05	Significant

Table 11: Showing status of Itching in therapy groups

Treat- ment	Group A			Treat- ment	Group B		
	Mean	Mean difference	%		Mean	Mean difference	%
BT	2.0	0.4	20.50	BT	2.05	0.65	31.8

Table 12: Status showing the effect on burning sensation in therapy groups

Groups	BT	AT	Mean	S.D.	S.E.	t	df	'p' Value	Inference
Group A	2.05	1.95	1.65	0.587	0.131	12.59	19	<0.0001	Highly Significant
Group B	0.4	0.35	1.62	0.88	0.197	8.12	19	<0.0001	Highly Significant

Table 13: Status of burning sensation criteria in therapy groups

Treat- ment	Group A			Treat- ment	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 14: Showing the effect on pile mass in therapy groups of 7 days

Group	BT	AT	Mean	S.D.	S.E.	t	'p' Value	Inference
Group A	2.00	2.0	4.12	0.55	0.08	22.5	<0.001	significant
Group B	0.9	1.00	1.0	0.36	0.124	7.28	<0.001	Significant

Table 15: Showing status on pile mass in therapy groups of 7 days

Treat- ment	Group A			Treat- ment	Group B		
	Mean	Mean difference	%		Mean	Mean difference	%
BT	2.00	4.12	55	BT	2.0	1.0	50
AT	0.9			AT	1.00		

Table 16: Effect of the therapy on subjective parameters after follow up Group A

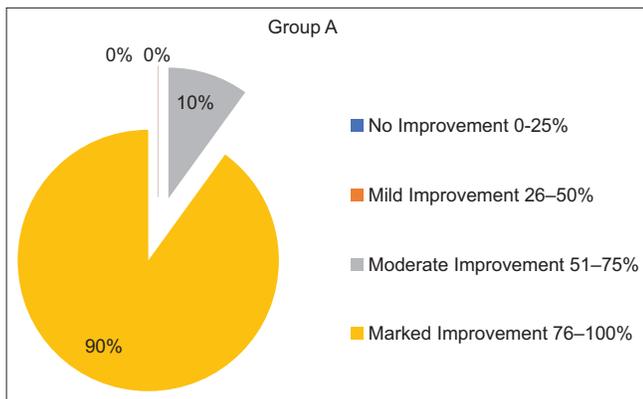
Parameters	MEAN		Net Mean	Impr. %	SD	SE	T-Value	P- Value	Remarks
	BT	AF							
Pain	2.05	0.62	1.42	69.26	0.98	0.15	9.15	< 0.001	HS
Itching	1.95	0.47	1.47	75.38	0.81	0.12	11.43	< 0.001	HS
Burning Sensation	0.65	0.07	0.57	87.69	0.50	0.07	7.26	< 0.001	HS
Pile Mass	0.575	0.025	0.55	95.65	0.503	0.08	6.90	< 0.01	HS

Table 17: Effect of the Therapy On Subjective Parameters After Treatment GROUP B

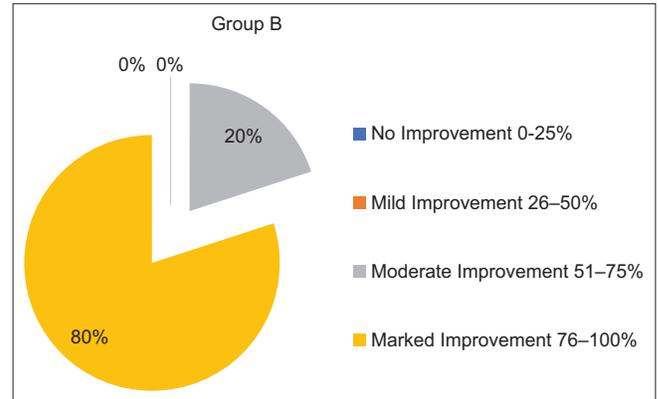
Parameters	MEAN		Net Mean	Impr. %	SD	SE	T-Value	P- Value	Remarks
	BT	AF							
Pain	2.05	1.4	0.65	31.7	0.80	0.12	5.12	< 0.05	S
Itching	1.95	1.12	0.82	42.05	0.67	0.10	7.72	< 0.01	HS
Burning Sensation	0.65	0.27	0.37	56.92	0.49	0.07	4.83	< 0.05	S
Pile Mass	0.575	0.025	0.55	95.65	0.503	0.08	6.90	< 0.01	HS

Table 18: Overall effect of treatment

Overall Effect Of Treatment			
Grading	Relief in Percentage	Group A	Group B
No Improvement	0-25%	0	0
Mild Improvement	26-50%	0	0
Moderate Improvement	51 – 75%	2	4
Marked Improvement	76 – 100%	18	16



Graph 1: Overall effect of treatment group A



Graph 2: Overall effect of treatment Group B