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# EFFECT OF SIGRU PRATISARANEEYA KSHARAKARMA IN ARSHAS (HAEMORRHOIDS)

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#### **ABSTRACT**

Arshas is one of the prime ano-rectal diseases and is a Mamsa Dhusti Gata Vikara. It mainly presents with bleeding and protrusion of mass. Numerous factors contribute to haemorrhoidal diseases such as constipation, prolonged squatting, pregnancy, aging, hereditary, portal hypertension, abdominal tumour, and defectation habits. Arshas is Dirghakalanubandhi, Dushchikitsya Roga. The fourfold treatment modalities in Ayurveda for Arshas are Bheshaja, Shastra, Kshara, and Agnikarma. Kshara i.e., caustic alkali is considered superior among Shastra and Anushastra because, it does the functions like excision, cutting, and scraping. The objective of the study is to evaluate the Effect of Sigru Pratisaraneeya Ksharakarma in Arshas (Haemorrhoids).

30 patients satisfying inclusion criteria were selected for the procedure. Treatment was commenced with the application of *Kshara* in *Arshas*. The signs and symptoms were recorded on the proforma designed for the study and assessments were done on subjective and objective criteria. Results were collected and the outcome variables were statistically analysed using Wilcoxon signed rank test and conclusions were drawn. Bleeding per rectum, pain on defecation, and prolapse of pile mass were effectively managed by *Sigru Pratisaraneeya Ksharakarma*.

**Keywords:** Haemorrhoids, Arshas, Pratisaraneeya Kshara, Sigru Kshara, Kshara, Ksharakarma

#### INTRODUCTION

Hemorrhoids and the symptoms they produce have plagued mankind throughout recorded history. 1 Arshas have been described as 'Durnama' in Atharva Veda. 'Arshas' is one among the 'Ashtamahagadas' is a 'Mamsakeelaka' which obstructs the 'Gudamarga' and tortures the patient like an enemy. Hemorrhoids means blood flowing (Greek: Haema=blood and Rhoos=flowing). The latin word 'pila' from which the word 'pile' is derived, actually means a ball and they characteristically lie at 3, 7, 110' clock positions. 4 In India approximately 40,723,288 people are reported annually, at the rate of 47 per 1000, and this rate increases with age.<sup>5</sup> Intake of Virudha Ahara, a posture which creates pressure on Guda like sitting on hard subjects, riding on vehicles for a long duration, suppression of normal urge for micturition and defecation. Mandagni contribute etiopathogenesis of Arshas. The primary etiology is believed to be excessive straining due to either chronic constipation or diarrhea. Repetitive or prolonged straining, causes downward stress on the vascular hemorrhoidal cushions, leading to the disruption of the elements supporting tissue with subsequent elongation, dilation, and engorgement of the hemorrhoidal tissues. 6,7 Symptoms associated with the hemorrhoidal disease include mucosal protrusion, pain, bleeding, a sensation of incomplete evacuation, mucous discharge, difficulties with perianal hygiene, and cosmetic deformity. Except when thrombosis or edema occurs, hemorrhoids are painless. Painless bleeding occurs from internal hemorrhoids, is usually bright red, and is associated with bowel movements.8, Tridoshas are vitiated due to indulgence in etiological factors along with Rakta, which further vitiates Twak, Mamsa, and Medas; travels along the Pradhahana Dhamani and affects Mamsadharakala of Gudavali forming Arshas. Acharya Sushruta mentions four measures, for the treatment of Arshas. They are Bheshaja (medicinal), Kshara (chemical cautery), Agni (thermal cauterization), and Shastra (surgery), to combat this condition. Ksharakarma is mentioned mainly for Arshas, those which are soft (Mrudu), broad (Prasrutha), deep (Avagadha), and bulged

(*Ucchritha*). 9,10 *Ksharakarma* is useful as a substitute for surgical instruments because it can be used safely on the participants with minimal post-operative complications. It has *Chedana*, *Bhedana*, *Lekhana*, and *Tridoshahara* action. 11 On the basis of the application, *Sigru* (*Moringa oleifera*) is included in *the Kshara Dashaka* of *Raja Nighantu*. 12 *Sigru* is an easily available drug with qualities of *Katu Tiktha Rasa*, *Ushna Virya* and *Kapha Vatahara*, and *Shothahara* actions. 14 *Pratisaraneeya Ksharakarma* using *Sigru Kshara* would be a simple, safe, cost-effective, ambulatory procedure with minimal post-procedural complications and recurrence rate.

#### **Aim & Objectives**

To study the effect of Sigru Pratisaraneeya Ksharakarma in the management of Arshas and to provide a cost-effective treatment for Arshas

#### Materials and methods

#### **Selection criteria:**

#### a) Subject inclusion criteria:

- 1. Second-degree pile mass
- 2. Participants between the age group of 20-60 years of age.
- 3. Participants of either sex taken
- 4. Participants with the written consent

# b) Subject exclusion criteria:

- 1. Participants with diagnosed cases of uncontrolled Diabetes mellitus (HbA1c greater than 7.0%), Hypertension(more than 180/100 mmHg)
- Participants with diagnosed cases of TB, HIV, cardiac diseases, autoimmune disorders, bleeding disorders
- 3. Thrombosed haemorrhoids
- 4. Pregnant, lactating women
- 5. First, Third- and fourth-degree internal pile mass
- Participants with diagnosed cases of CA rectum, rectal prolapse, fissure-in-ano, anorectal abscess, fistula-in-ano, condylomata, ulcerative colitis, Crohn's disease, and other malignant conditions
- 7. Participants with congenital defects of the anal canal

# Preparation of Kshara

#### **Procedure:**

37 kg of dried *Shigru Twak* was collected and burnt along with limestone and made into ash on an iron sheet of 4 sq. ft. The ash of plants and limestone is collected separately. 2.5 kg of plant ash was obtained. Out of this 1 kg of ash was mixed with 6 times of water i.e.,6 litres. The solution was mixed well and filtered 21 times through a clean cloth. After filtering 21 times kept for boiling on low flame. 100 g of *Shukti* was made to red hot in another iron vessel. When the boiling solution was reduced, it appeared as a reddish slimy solution which was half of its original quantity. Some quantity of it was taken out and mixed with *Shukti*. This mixture was stirred well and added to the boiling *Kshara*.10g of *Citrakakalka* was added & boiled in low flame till semi-solid consistency.

pH value of obtained Shigru Kshara-14

#### Intervention

Participants were diagnosed based on clinical signs and symptoms of haemorrhoids, detailed history taking, and anorectal examination, which included inspection, digital rectal examination, and proctoscopy were done. Grading of haemorrhoids was documented and classified according to Goligher's classification. Laboratory investigations were carried out and the data were recorded, and participants were posted for the procedure.

#### **Investigations:**

### Blood

CT, BT, Blood R/E, HbA1C, HCV, HIV, VDRL, HBSAg, Urine R/E

#### **Materials required:**

• Normal and slit proctoscope • Cotton swab • Artery forceps • Gauze piece • Babcock's forceps • Normal saline/distilled water • Torch • Sigru Ksharam • Lignocaine 2% gel/ Injection • Nimbu Swarasam • Betadine/antiseptic lotion • Surgical spirit

#### **Pre-operative procedure:**

Participants were not allowed to take food at least 3 hours prior to the procedure. Later peri-anal and perineal regions were prepared. Soap water enema was given 2 hours before the procedure. TT. Inj IM and test dose for lignocaine 2% were taken.

#### **Operative procedure:**

The participant was made to lie in the lithotomy position. The anal and perineal regions were cleaned with antiseptic lotion and draping was done. Under local anesthesia, manual anal dilatation was done to admit 4 fingers. A lubricated proctoscope was then introduced into the anus. Proctoscope was removed after the assessment of the position of the pile mass. Then slit proctoscope was introduced and the pile mass was cleansed with a cotton swab. The pile mass was isolated using cotton swabs to protect the surrounding mucous membrane. Then Sigru Kshara was applied with the help of a spatula over the pile mass, and the opening of the proctoscope was closed for 100 Matrakala. Kshara application was observed till the colour of the pile mass changed into Pakwajambu Phalavarna (i.e., the color of ripened Jambul fruit). If not, then the procedure of the *Kshara* application was repeated. The pile mass was then cleaned with Nimbu Swarasa to neutralise the effect of Kshara and then washed with distilled water. Rectal packing with Madhu Ghritham was applied and bandaged.

 In the case of multiple pile masses, all pile masses were treated in a single sitting itself.

#### **Post-operative procedure:**

- Participants were advised to take a semi-solid diet.
- Rectal packing was removed after 4 hours, and the dressing was done.
- Participants were given a sitz bath with *Triphala Kashayam* twice daily for 15-20 minutes from the next day onwards.

Supportive therapy

• *Triphala Choornam* 5g H.S with lukewarm water.

**For pain management:** NSAIDs were provided if needed.

# Treatment period, including the follow-up period

• The treatment period is a single day. The assessment was done on, the 0<sup>th</sup>, 2<sup>nd</sup>, 7<sup>th</sup>, 14<sup>th</sup>, and 28th day.

#### **Outcome measurements**

Assessment of efficacy Subjective parameters

significant

RESULTS

for WINDOWS

The level of significance to be used

p-value < 0.05 was considered to be statistically

The collected data were subjected to statistical

analysis using appropriate statistical techniques.

Frequency, percentage, mean, and SD were used as

descriptive statistics to summarize the data. Since data

distribution does not obey the normality assumption

(Kolmogorov-Smirnov test), Wilcoxon's signed rank

test was used to investigate. A calculated P value less

than 0.05 is considered statistically significant. All

analyses were carried out with the help of SPSS v.23

- Bleeding per rectum
- Pain associated with defecation.

# Objective parameters

Prolapse

Participants were assessed before and after the treatment

# Follow-up for participants who withdrawn and those who have adverse drug reactions:

 Withdrawn participants were managed for the symptoms and followed up till he/she regained normalcy.

### Statistical method employed

Wilcoxon signed-rank test

# **Descriptive Statistics**

#### Effect of treatment on Bleeding per rectum

Table 1: Effect of treatment on Bleeding (Wilcoxon signed rank test)

Table 1. Effect of treatment on bleeding (wheoson signed rank test)							
Variable	Stage		0(Nil)	1(Mild)	P value		
	0 <sup>th</sup> day	11(36.7%)	19(63.3%)				
	2 <sup>nd</sup> day	1(3.3%)	29(96.7%)		0.004**		
Bleeding	7 <sup>th</sup> day	7(23.3%)	23(76.7%)		0.014*		
	14 <sup>th</sup> day	28(93.3%)	2((6.7%)		0.000**		
	28th day	30(100%)	0(0.0%)		0.157NS		

<sup>\*:</sup> Significant at 5 %( P<0.05), \*\*: Significant at 1 %( P<0.01), NS: Not Significant (P>0.05)

#### Effect of treatment on Pain on defecation

Table 2: Effect of treatment on Pain on Defecation (Wilcoxon signed rank test)

Variable	Stage	0(Nil)	1(Mild)	2(Moderate)	3(Severe)	P value
	0 <sup>th</sup> day	25(83.3%)	3(10.0%)	2(6.7%)	0(0.0%)	
	2 <sup>nd</sup> day	0(0.0%)	14(46.7%)	14(46.7%)	2(6.6%)	0.000**
Pain on defecation	7 <sup>th</sup> day	3(10.0%)	24(80.0%)	3(10.0%)	0(0.0%)	0.000**
	14 <sup>th</sup> day	18(60.0%)	12(40.0%)	0(0.0%)	0(0.0%)	0.000**
	28 <sup>th</sup> day	25(83.3%)	5(16.7%)	0(0.0%)	0(0.0%)	0.008**

<sup>\*\*:</sup> Significant at 1 %( P<0.01)

# **Effect of treatment on Prolapse**

Table 3: Effect of treatment on Prolapse (Wilcoxon signed rank test)

Variable	Stage	0(Nil)	1(2 <sup>nd</sup> Degree)	2(3 <sup>rd</sup> Degree)	P value
	0 <sup>th</sup> day	0(0.0%)	30(100%)	0(0.0%)	
	2 <sup>nd</sup> day	0(0.0%)	30(100%)	0(0.0%)	1.000NS
Prolapse	7 <sup>th</sup> day	4(13.3%)	26(86.7%)	0(0.0%)	0.046*

#### DISCUSSION

# Effect of treatment on Bleeding per rectum

While assessing the bleeding parameter, it was observed that participants (63.3%) had mild bleeding before treatment i.e., on the  $0^{th}$  day. After the treatment, on  $2^{nd}$  day there was an increase in bleeding from (63.3%) to (96.7%). From the  $2^{nd}$  to  $7^{th}$  day, bleeding reduced to (76.7%), and further reduction towards the  $7^{th}$  to  $14^{th}$  day (6.7%) was noted. On the  $28^{th}$  day, complete recovery from bleeding was observed.

Kshara cauterises over the pile mass by its Ksharana Guna. This disintegrates the pile mass and initiates the sloughing of the tissue. This may be the reason for increased bleeding post-procedure; the gradual reduction of bleeding in succeeding days may be due to, Stambana, Ropana Guna of Kshara; Vranahara action of Sigru which heals the wound.

#### Effect of treatment on Pain on defecation

Before treatment on the  $0^{th}$  day (0.0%) of participants had severe pain, (6.7%) had moderate pain, (10.0%) had mild pain, and (83.3%) had no pain. After treatment on 2<sup>nd</sup> day, it was observed that there was a remarkable rise in pain on defecation. (6.7%) participants had severe pain, (46.7%) had moderate pain, (46.7%) had mild pain, (and 0.0%) had no pain. From the 2<sup>nd</sup> -a 7th-day gradual reduction in pain was noted, (0.0%) of participants had severe pain, (10.0%) had moderate pain; (80.0%) had mild pain; (and 10.0%) had no pain. From the 7<sup>th</sup> – the 14<sup>th</sup> day, it was observed that there was a considerable reduction in pain felt by participants. (0.0%) participants had severe pain; (0.0%) had moderate pain; (40.0%) had mild pain, (and 60.0%) had no pain. From the 14<sup>th</sup> -the 28th-day pain reduction patterned was maintained, with (0.0%) of participants having severe pain, (0.0%)having moderate pain, (16.7%) having mild pain, and (83.3%) having no pain.

Pain can be felt intensively only when the pile mass gets prolapsed and inflamed. Most of the participants, who visited our OPD, had a mild intensity of pain. Post-Ksharakarma, pain intensity has markedly increased due to oedema and softening of hemorrhoidal tissue with the initiation of sloughing. This may be due to the corrosive nature of Kshara over the haemorrhoidal mass. The chemical cauterization effect of Kshara; Vatahara, and Sophaghna properties of Sigru may help to heal the wound gradually and thereby pain reducing the pain considerably after a few days of the procedure.

# **Effect of treatment on Prolapse**

Before treatment on the 0<sup>th</sup> day, all participants (100%) had prolapsed on straining. After treatment on the 2<sup>nd</sup> day (0.0%) of participants had 3<sup>rd</sup>-degree prolapse, (100%) had 2<sup>nd</sup>-degree prolapse, (and 0.0%) had no prolapse. From the 2<sup>nd</sup> -7<sup>th</sup> day (0.0%) of participants had 3<sup>rd</sup>-degree prolapse, (86.7%) had 2<sup>nd</sup>-degree prolapse, and (13.3%) had no prolapse. From the 7<sup>th</sup> day -the 14<sup>th</sup> day (0.0%) of participants had 3rd-degree prolapse, (53.3%) had 2<sup>nd</sup>-degree prolapse, and (46.7%) had no prolapse. From 14<sup>th</sup> day -the 28<sup>th</sup> day (0.0%) of participants had 3rd-degree prolapse, (6.7%) had 2nd-degree prolapse, and (93.3%) had no prolapse.

By analysing the prolapse of pile mass, it is observed that the size of pile mass has reduced gradually from the 2nd day after the treatment and the reduction sustained towards the 7<sup>th</sup>, 14<sup>th</sup>, and 28<sup>th</sup> day.

This may be due to the coagulation of protein in haemorrhoidal plexus by the disintegration of haemoglobin into haem and globin due to the *Ksharana* i.e., *Dustatwak, Mamsaadi Chalana, Shatana*, or *Dosha Chalana, Shodana, Vilayana Karma* of *Kshara*. Further necrosis of tissue occurs with the obliteration of haemorrhoidal radicles. This necrosed tissue will slough out the area. *Ropana Karma* of *Kshara and Vranahara Karma* of *Sigru* help to heal the wound; further fibrosis and scar are formed in the mucosal and sub-mucosal layer and get connected to the muscular coat, thus preventing the sliding of haemorrhoidal tissue.

#### CONCLUSION

Sigru Kshara is found to be effective in the management of 2nd-degree haemorrhoids with minimal pain and bleeding with no stricture formation and reoccurrence.

Overall, the *Sigru Pratisaraneeya Ksharakarma* was found to be safe, efficacious, and cost-effective.







Before Ksharakarma

**During Ksharakarma** 

After Ksharakarma

Figure 01: Effect of Sigru Pratisaraneeya Ksharakarma

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