

A COMPARATIVE STUDY OF EFFECT OF YASHTIMADHU GHRITA AND SHATADHAUTA GHRITA LOCALLY IN THE MANAGEMENT OF PARIKARTIKA W.S.R. TO ACUTE FISSURE-IN-ANO

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ABSTRACT

Fissure in Ano is most common pathology found in proctology practice. The symptom of fissure resembles with *parikartika* mentioned in *Ayurvedic* classics. According to modern science, treatment of acute fissure-in-ano is analgesics, antibiotics, laxatives and ointment (separately or in combination) containing anaesthetic agent, vasodilator and steroids for topical use, but it has definite side effects after prolong use. Further surgical techniques like Lord's anal dilatation, Lateral Sphincterotomy, Fissurectomy are having due risk such as incontinence and abscess formation etc. So, there was definite need to establish *Ayurvedic* remedy or treatment modality which proves effective and complication free. *Sushruta* has described *parikartika* having clinical features such as cutting or burning pain in perianal region extending upto pelvic and groin. After referring the *Ayurvedic* texts we observed that *Yashtimadhu Ghrita* and *Shatadhauta ghrita* has *Vrana Ropana*, *Dahashamana*, *Vata Pitta shaman*, *Vedanashamana* properties which can help the fissure (*Vrana*) to heal rapidly. *Yashtimadhu* is considered as best drug for *Vrana Ropan* (wound) and it has analgesic property also. In both products base is *Ghrita* which itself has *Samskara Anuvarti*, analgesic and healing properties. The present study was conducted to evaluate and compare local effect of *Yashtimadhu Ghrita* and *Shatadhauta Ghrita* in management of *Parikartika* w.s.r. to Acute Fissure-In-Ano. The symptoms which were assessed during study are Pain, Bleeding, Itching and Size of Ulcer. The Results revealed that Statistically *Yashtimadhu Ghrita* and *Shatadhauta Ghrita* both are effective in conservative management of *parikartika* but *Yashtimadhu ghrita* per rectal local application is more effective remedy for management of pain, bleeding, itching and for healing of ulcer when compared to *Shatadhauta Ghrita*.

Keywords: *Sushrut Samhita*, *Parikartika Chikitsa*, *Yashtimadhu Ghrita*, *Shatadhauta Ghrita*

INTRODUCTION

The condition fissure-in-ano, commonly encountered in ano-rectal practice has similar location, pathology and predominant features of *parikartika* like excruciating pain, constipation, stools

streaked with blood etc.^[1] Thus it is evident that *parikartika* can be correlated with fissure-in-ano mentioned in modern science. Acute or Chronic, pain and bleeding are two main symptoms of this condition

pain is sometimes intolerable.^[2]

Fissure-in-ano occurs most commonly in midline posteriorly. In males, usually occur in midline posteriorly – 90%, and less common anteriorly – 10%. In females in midline posteriorly - 60% and anteriorly – 40%.^[3] According to modern treatment of acute fissure-in-ano is painkiller, stool softener and soothing ointment & surgical treatment is anal dilatation, Sphincterotomy, Fissurectomy are there but there are many complication of these procedures like recurrence, incontinence and pruritus.^[4]

An alarming rise in the incidence of the disease fissure-in-ano and no known satisfactory remedies evolved so far to find out a suitable solution with better effects from amongst the treatments advocated by the classics. Hence the present study was conducted to evaluate and establish a potent, practically workable, safe and effective ayurvedic treatment for *parikartika* w.s.r. to fissure in ano.

AIMS OF STUDY:

AIM : To study the effect of *Yashtimadhu Ghrita* and *Shatadhauta Ghrita* locally in management of *Parikartika* w.s.r. to Acute Fissure-In-Ano”

OBJECTIVES:

- To evaluate the efficacy of *Yashtimadhu Ghrita* in patients of *Parikartika* (Fissure-in-ano)
- To evaluate the efficacy of *Shatadhauta Ghrita* in patients of *Parikartika* (Fissure-in-ano)
- Comparative study to see the therapeutic effect between *Yashtimadhu Ghrita* and *Shatadhauta Ghrita*.

Hypothesis : After completing my present study it is concluded that *Yashtimadhu Ghrita* and *Shatadhauta Ghrita* both are effective in conservative management of *parikartika* but *Yashtimadhu ghrita* per

rectal local application is more effective and significant remedy for management of pain, bleeding, itching and for healing of ulcer when compared to *Shatadhauta Ghrita*.

Type of Study: Open comparative clinical study.

Source of data: 60 patients of acute fissure in ano were selected randomly according to selection criteria from Shalyatantra outpatient department of D.Y.Patil Ayurvedic hospital, Navi Mumbai.

MATERIAL & METHODS:

A) Materials: - 60 patients suffering from *Parikartika* in an age group of 18-60 yrs were selected randomly and were subjected to clinical trial. The selected patients were categorised in 2 groups of 30 in each. Raw materials like *Yashtimadhu bharad* (*Glycyrrhiza glabra* Linn.)^[5] And *Goghrita*^[6] (Clarified Butter) was collected from local market. Its Identification & Authentication was done from Dept of Botony, University of Pune, and Pune. Standardization was done from University of Pune, Pune. HPTLC of *Yashtimadhu ghrita* and *Shatadhauta ghrita* was done at Anchrom Laboratories, Mulund (east), and Mumbai.

Ethical Clearance for the study was taken from Institutional Ethical Committee DYP AYU. PG/Shalya/132030008/2013-14

Drug Profile:

Group A: *Yashtimadhu Ghrita*

Administration:- Per Rectal local application (once a day after defecation)

Duration – 10 days

Group B: *Shatadhauta Ghrita*

Administration:- Per Rectal local application (once a day after defecation)

Duration – 10 days

In both group adjuvant to *Yashtimadhu ghrita* and *Shatadhauta Ghrita*, orally

Gandharva Haritaki churna 3gm at night with luke warm water will be given for *vatanuloman* (laxative) purpose for 1 month.

B) METHODOLOGY-

Method of preparation:-

***Yashtimadhu ghrita* –**

Yashtimadhu Ghrita was prepared by *snehapak vidhi* according to *sushrut samhita chikitsa sthan* chp 31 *Snehopayogik chikitsa adhyay*.^[7]

Proportions used were {1:4:16}

1 part = *Yashtimadhu Bharad*; 4 part = *Goghrita*; 16 parts = Water

Yashtimadhu kwatha is prepared with the moola of *yashtimadhu*. 1 part of *Yashtimadhu Bharad* and 16 parts of water taken in a vessel and boiled together till it reduced to *Chaturamsha* i.e. ¼ of the quantity. This is subjected to filtration. To this then 4 parts of *Goghrita* was added to the *Yashtimadhu kwath* & cooked over *mandagni* till only *ghrita* part remains. Afterwards *Yashtimadhu ghrita* was collected and measured. Then *Yashtimadhu ghrita* 10gm was filled into aluminium tubes with nozzle from the back side of the tube (open side) after filling the *ghrita* into tubes crimping was done in crimping machine and tube was sealed and labelled as *Yashtimadhu Ghrita*.

***Shatadhauta ghrita* –**

Shatadhauta Ghrita was prepared according to *Abhinav Bhaishajya Kalpana Vidnyan*

Chp. *Vividh Kalpana*. Pg no. 302^[8]

Method of preparation:

Goghrita (Clarified Butter) was taken in shallow vessel, water added in vessel containing *ghrita* & kneading action was performed. After performing kneading action for 2-3 mins the mixture was allowed to settle down & then above water was drained. This procedure was repeated for

100 times. After repeating the procedure for 100 times *Shatadhauta Ghrita* was obtained. Afterwards *Shatadhauta ghrita* was collected and measured. Then *Shatadhauta ghrita* 10gm was filled into aluminium tubes with nozzle from the back side of the tube (open side) after filling the *ghrita* into tubes crimping was done in crimping machine and tube was sealed and labelled as *Shatadhauta Ghrita*.

Changes in the Pain, Bleeding, Itching and size of ulcer was observed on 0th day, 1st day, 3rd day, 5th day and 10th day.

ASSESSMENT CRITERIA

Inclusion criteria:-

- Clinically diagnosed cases of *Parikartika* were taken for the study.
- Patients irrespective of sex, religion, occupation & economic status.
- Patients of both the sexes in between the age group of 18 to 60 years.

Exclusion criteria:-

- Patients having *Parikartika* (Fissure-in-ano) secondary to Ulcerative colitis, Shyphilis, Crohn's disease, Tuberculosis and malignancy of rectum and anal canal.
- Patients with infectious diseases like HIV & HbsAg.
- Patient with Diabetes, Hypertension and skin disease.
- Patients with chronic sentinel pile and associated with conditions like Hemorrhoids and Fistula-in-ano.

Gradation Score –

The improvement in the patients was assessed mainly on the basis of relief in the cardinal sign & symptoms of the disease. To assess the effect of therapy, all the signs and symptoms were given scoring depending upon their severity as below.

Table 1: Showing the gradations of parameters for assessment.

	Parameters	Gradations
1.	Goodagata Shoola (Pain)	Grade
	No Pain	0
	Mild Pain	1
	Moderate Pain	2
	Severe Pain	3
	Worst Pain	4
	VAS Scale used for pain gradations- 0=0, 1-3 =1, 4-6=2, 7-9=3, 10=4	
	Parameters	Gradations
2.	Gudagata Rakta Srava (Bleeding)	Grade
	No Srava	0
	Mild (<5 drops)	1
	Moderate (5 – 10 drops)	2
	Severe (>10 drops)	3
3.	Kandu (Itching)	Grade
	No Kandu	0
	Mild (less than 5 min)	1
	Moderate (for 5 – 10mins)	2
	Severe (more than 10 mins)	3
4.	Size of Ulcer (Fissure)	Grade
	No Ulcer	0
	0.1cm-0.5cm	1
	0.6cm-1cm	2
	1.1cm-2cm	3

Assessment criteria-Relief-

- Cured - 100 % relief (100% Improvement)
- Markedly Improved - 51 – 75 % relief (Marked Improvement)
- Improved - 26 – 50% relief (Moderate Improvement)
- No Change - Below 25% relief (No Improvement)

DIAGNOSTIC CRITERIA

Signs & Symptoms:

1. Pain in anal region during & after defecation.
2. Bleeding per anum i.e. stools streaked with blood
3. Burning sensation in anal region.

4. Itching in anal region

LABORATICAL INVESTIGATION

1. CBC with ESR
2. Blood Sugar
3. Urine test- Routine and microscopic

OBSERVATION & RESULT- Both study groups are statistically significant, as the ‘p’ value <0.001. But *Yashtimadhu ghrita* has more efficacy than *Shatadhauta ghrita* for all cardinal symptoms.

For obtaining observations and results following tests were used- Wilcoxon signed rank test, Mann-Whitney U test, Paired t test and Independent t-test.

Table 2- Showing P values of both groups for all parameters

Parameters	'p' value	
	<i>Yashtimadhu Ghrita</i>	<i>Shatadhauta Ghrita</i>
Goodagata shoola (Pain)	0.001	0.002
Goodagata Raktastrav (Bleeding)	0.001	0.003
Kandu (Itching)	0.001	0.002
Size of Ulcer (Fissure)	0.001	0.004

Observation table shows that, both study groups are statistically significant, as the 'p' value <0.001. But *Yashtimadhu ghrita*

has more efficacies for the symptom *Gudagata Shoola, Goodagata Raktastrav, Kandu,* and Size of Ulcer.

Table 3: Showing Overall Result of *Yashtimadhu ghrita* and *Shatadhauta ghrita* local (per rectal) application on 60 Patients.

Result	<i>Yashtimadhu ghrita</i>		<i>Shatadhauta ghrita</i>	
	No. of Patients	Percent	No. of Patients	Percent
Cured	17	56.7%	13	43.3%
Markedly Improved	8	26.7%	8	26.7%
Improved	3	10.0%	4	13.3%
No Change	2	6.7%	5	16.7%
Total	30	100%	30	100%

RESULTS –

In this present work on *Parikartika* 60 patients were selected according to the criteria and divided into two groups i.e. Group A *Yashtimadhu Ghrita* per rectal local application and Group B *Shatadhauta Ghrita* per rectal local application.

This study was based on clinical features like *Goodagata Shoola, Goodagata Raktastrav, Kandu* and Size of Ulcer. Demographic analysis on Independent variables like Age, Gender, Marital status, Economic status, Education, Religion, Occupation, Diet, Nature of sleep, Addiction, Exercise, Prakruti and Weight were assessed but not considered in drawing conclusion.

Following results were observed -

Gudagata shoola: In Group A-*Yashtimadhu ghrita*-Out of 30 patients- 22 patients (73.3%) were Cured, 6 patients (20%) were Markedly Improved and 2 patients (6.7%) got No Improvement. In Group B *Shatadhauta ghrita* - Out of 30 patients- 18 patients (60%) were cured, 8 patients (26.7%) were Markedly Improved

and 4 patients (13.3%) got No Improvement.

Gudagata raktashrava: In Group A- *Yashtimadhu ghrita*- Out of 30 patients-24 patients (80%) were cured, 4 patients (13.3%) were Markedly Improved and 2 patients (6.7) got No Improvement. In Group B *Shatadhauta ghrita* – Group B- Out of 30 patients- 20 patients (66.7%) were Cured, 9 (30%) patients were Markedly Improved and 1 patient (3.3%) was Improved.

Kandu: In Group A-*Yashtimadhu ghrita*- Out of 30 patients - 21 patients (70%) were Cured, 7 patients (23.3%) were Markedly Improved and 2 patients (6.7%) got No Improvement. In Group B- *Shatadhauta ghrita*- Out of 30 patients-13 patients (43.3%) were cured, 13 patients (43.3%) were Markedly Improved and 4 patients (13.3) were improved.

Size of ulcer: In Group A- *Yashtimadhu ghrita* - After treatment P Value is 0.001- 86% patients were cured, 6.7% were Markedly Improved and 6.7% patients had

No Improvement. In Group B - Shatadhauta ghrita - After treatment P Value is 0.004.76% patients were cured, 13.3% were Markedly Improved and 10% patients had No Improvement.

Over all Effects of Therapies-Relief - In Group A- *Yashtimadhu ghrita* - 56.7% patients were Cured, 26.7% patients were Markedly Improved, 10% patients were Improved, 6.7% patients had No Change and In Group B- *Shatadhauta ghrita* - 43.3% patients were Cured, 26.7% patients were Markedly Improved, 13.3 % patients were Improved, 16.7% patients had No Change.

DISCUSSION

In fissure-in-ano there is preponderance of mainly two *Doshas* viz. *Vata* and *Pitta*. Due to this *Doshic* predomence the two major symptoms of pain and burning sensation are present.

For the relief of these symptoms a drug which is *Vata shamak* and *Pitta Shamaka* is always suitable. In the treatment of all types of wounds and inflammations *Yashtimadhu* is considered the drug of choice.

The factors responsible for causation of *Parikartika* as found in various texts are *Vamana-Virechana-Vyapat*, *Bastikarma Vyapat*, *Atisara*, *Grahani*, *Arsha*, *Udavar-ta* etc.

Sushruta while describing the symptoms of the disease speaks of the features such as cutting or burning pain in perianal region extending upto pelvic and groin.

The present study was carried out to establish potent *Ayurvedic* treatment for fissure in ano.

PROBABLE MODE OF ACTION:

Yashtimadhu contains *Glycyrrhizine* and *asparagine* as active ingredients. *Glycyrrhizine* is a *saponin* widely used as an anti-inflammatory agent.

Asparagine is a type of amino acid and act as analgesic (natural painkiller) and anti-inflammatory.

Pain is reduced due to *vedanashamak* effect of *Yashtimadhu ghrita* local application without using any antibiotic or painkiller.

It doesn't only controls the pain but also act as *vatahara*, *pitta Shamak*, *ropaka*, *dahamak*, *stambhak* in *Vrana*.

Ghrita also reduces the *Rukshata* of *Vayu* and maintain the normal tone of muscles. Smoothing effect is achieved due to *Ghrita*.

Goghrita, which itself is having *samskaraanuvarti*, analgesic and healing properties.

Samskaraanuvarti property is poentiated by *goghrita* which create good medium for absorbtion, transport and delivers of the *ayurvedic* formulation to the proper area of the body.

Goghrita also contains vit. A, D, E and K. Vit A and K are antioxidant and are helpful in preventing oxidation injury to the body. Vit. K keeps epithelial tissue of the body intant which is very useful of wound healing. Liolenic acid helps in granulation.

CONCLUSION

In this present work on *Parikartika* 60 patients were selected according to the criteria and divided into two groups i.e. Group A *Yashtimadhu Ghrita* per rectal local application and Group B *Shatadhauta Ghrita* per rectal local application. The site of *Parikartika* is *Guda*, which is similar to the site of fissure-in-ano.

- The age wise distributions of 60 patients showed that maximum number of patients i.e. 63.3% belonged to age group of 18-28 years, followed by 30% patients to 29 - 39 years and 3.3% patients to 40 – 50 years. Lastly 3.3% pa-

tients belonged to age Group of 51 - 60 years.

- According to Gender - Among 30 patients, in Group A 46.7 % were male, 53.3 % were female. In Group B 70 % were male, 30 % were female.
- According to Occupation - Among 30 patients, in Group A 20% patients were Housewife, 6.7% patients were in business, 70% patients were Employee; 3.3% were Driver. In Group B 26.7% patients were Housewife, 6.7% patients were Mechanic and 3.3% patients were Plumber, 6.7% patients were in Business, 56.7% patients were Employee.
- While observing the Nature of diet, in Group A - it was found that mixed diet patients were majority in number i.e. 90% and 10% were of vegetarian diet. In Group B 70% patients were of mixed diet and 30% patients were of vegetarian diet.
- While observing Addiction - In Group A - 13.3% patients were addicted to Smoking, 10% patients were addicted to Tea, 76.7% patients were not addicted to anything and In Group B - 3.3% patients were addicted to Coffee, 16.7% patients were addicted to Smoking, 13.3% patients were addicted to Tea, 66.7% patients were not addicted to anything.
- According to Prakruti - In Group A 66.7% patients were of Vata-Pitta, 23.3% patients were of Pitta-Kapha, 10% patients were of Vata-Kapha and In Group B 63.3% patients were of Vata-Pitta, 26.7% patients were of Pitta-Kapha, 10% patients were of Vata-Kapha.
- According to Position - In Group A- 26.7% patients were having Anterior Position of Fissure, 73.3% patients were having Posterior Position of Fissure and

In Group B- 26.7% patients were having Anterior Position of Fissure, 73.3% patients were having Posterior Position of Fissure.

- While observing Result - In Group A- 56.7% patients were cured, 26.7% patients were Markedly Improved, 10% patients were improved, 6.7% patients had No Change and In Group B- 43.3% patients were cured, 26.7% patients were Markedly Improved, 13.3 % patients were improved, 16.7% patients had No Change.

From statistical analysis it is concluded that both groups are effective in conservative management of *parikartika* when compared before and after treatment. This is observed that the most evident symptoms present i.e. pain and bleeding, burning sensation, itching can be relieved much earlier and fissure can heal much rapidly by the application of *Yashtimadhu Ghrita* rather than *Shatadhauta Ghrita*.

FUTURE SCOPE AND LIMITATIONS:

- Further study can be done on Acute as well as Chronic Fissure in ano irrespective of size of ulcer.
- Multicentre trials can be carried out with large sample size.
- In future it can be used as an alternative option to Modern topical ointments.

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