

STUDY OF HEALING EFFECT OF PANCHATIKTA GHRITA GUGGULU IN FISTULA IN ANO WITH PARTIAL FISTULOTOMY AND KSHARSUTRA APPLICATION

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ABSTRACT

Fistula in ano has been a notorious disorder on account of difficulties in the management as well as fair chances of recurrence. It is a chronic discharging wound in the vicinity of anus and it has two openings – one inside the anal canal and other in perianal region, the outer opening. Ayurvedic texts refer the disease as Bhagandar and it has been vividly discussed in Sushruta Samhita. Fistulotomy and Fistulectomy are the treatment of choice in the fistula in ano. Ksharsutra is a specialized modality of treatment in the anal fistula and it is duly approved by the Indian Council of Medical Research. In the present study, ksharsutra application with partial fistulotomy has been performed and the evaluation of wound healing effect of Panchatikta ghritha guggulu has also been evaluated. Regarding the surgical intervention, the fistula track was excised up to sphincteric complex and ksharsutra was placed in sphincteric complex. The study was

carried out on 40 patients. The dose of the Panchatikta Ghrit guggulu was 500 mg twice a day for a duration of 30 days starting one day prior to surgical intervention. The results were assessed based on parameters such as pain, pus discharge from fistula opening, induration and wound healing criteria of Sushruta. Good results were obtained after treatment with Panchatikta ghritha guggulu in almost all parameters of assessment.

KEYWORDS: Fistula in ano, Ksharsutra, Partial fistulotomy with Ksharsutra, Panchatikta ghritha guggulu.

INTRODUCTION

Fistula in ano is a chronic granulation tissue in anus communicated to skin outside. It is primarily caused by crypto-glandular infection in the anal canal. It may also occur on account of some diseases such as carcinoma, tuberculosis, osteomyelitis, inflammatory bowel diseases among others. It starts as a boil in vicinity of anal canal and after bursting, a communication is established from anal canal to the perianal skin and it is termed as fistula in ano.^[1] Improper food habits and altered lifestyle are the main causes of illness. The altered bowel habit is noticed in majority of patients. Acharya Sushruta and Vagbhata have mentioned the disease Bhagandar which is equivalent to fistula in ano. The literary meaning of Bhagandar is causing 'darana' in bhaga region.^[2] It starts as a boil within two angula radius of anus and after bursting it gives rise to development of bhagandar.^[3] As per the treatment is concerned, both surgical and non-surgical treatments are mentioned in Ayurveda.^[4] Various incisions have been described by Sushruta in the surgical treatment of bhagandar; these are similar to the fistulotomy procedure.^[5]

Fistula in ano has been a difficult disease to tackle and cure on account of its recurrence after the surgical procedure. Various modalities of surgical interventions have been carried out to treat the disease but recurrence has been a challenge to the allopathic system of medicine.^[6] Deshpande et al, in year 1963 started working on the use of Ksharsutra in the management of fistula in ano with encouraging results. Ksharsutra therapy has been standardized by Indian Council of Medical Research after the efforts of the above work.^[7] Ksharsutra therapy has now been in practice all around India with great success rate.

Panchatikta Ghrit guggulu is a classical Ayurvedic formulation mentioned in the treatment of severe dermatosis and fistula in ano in various treatise like *Ashtanga Hridaya*, *Chakradutta* and *bhaishjyarnavali*. It is an age-old formulation being used a treatment modality in various dermatosis.^[8] Being a formulation to assist in healing of Bhagandar, it is decided to use this formulation in promoting the healing of Fistula in ano.

MATERIALS AND METHODS

Selection of patients

40 patients were selected for the study from the Indoor patient department of shalya tantra, All India Institute of Ayurveda, Sarita vihar and A & U Tibbia College and Hospital, Karol bagh having Fistula in Ano. The selection was based upon simple control randomized irrespective of gender, religion and occupation.

INCLUSION CRITERIA

1. Patients of Primary fistula in ano (Cryptoglandular infection) of either gender
2. Age between 18 to 60 years

EXCLUSION CRITERIA

1. Fistula in ano secondary to other diseases
2. Aged below 16 years and above 60 years
3. Severe anaemia (level of haemoglobin below 10gm/dl)
4. Ano rectal carcinoma
5. Pregnancy
6. Osteomyelitis (pelvic bones and coccyx)
7. Inflammatory Bowel diseases such as Ulcerative colitis and Crohn's diseases)
8. Diabetes mellitus (Fasting blood sugar more than 120mg/dl)
9. Hypertension (diastolic blood pressure more than 90 mm/Hg and systolic blood pressure more than 140 mm/Hg)
10. Tuberculosis
11. HIV positive individuals
12. Hepatitis B and Hepatitis C positive patients
13. Patients who are not willing to be part of study

Procedure adopted

Fistulotomy with ksharsutra application and oral administration of Panchatikta ghrita guggulu.

Dose and duration of administration of Panchatikta Ghrita guggulu

Panchatikta ghrita guggulu was given orally in the dose of 500 mg twice a day after meals, with water, starting a day before the application of Ksharsutra. The total duration of the therapy was one month. The results were recorded on 7th, 15th and 30th day.

Assessment criteria

The results were assessed on the basis of criteria mentioned below

1. Pain
2. Discharge of pus (Sterile pads of equal size and weight of cotton and gauze were provided to the patients)
3. Induration at external opening (Hardness and size of induration shall be measured)

4. Healing of the wound

The symptoms and signs were assessed on the scoring system designed by Paul, Madson and Peter

No symptoms and sign: 0

Mild symptoms and signs: 1

Moderate symptoms and signs: 2

Severe symptoms and signs: 3

Wound Healing (Criteria of Sushruta)

Shuddha Vrana

1. Tribhirdoshai anakranta (Non infected)
2. Shyava aushtha (Epithelization)
3. Pidakisama (having healthy granulation tissue)
4. Avedana (Painless)
5. Nirasrava (No discharge)

Complete healing (presence of all symptoms)	0
Moderate healing (presence of 4 symptoms)	1
Mild healing (presence of 2 or three symptoms)	2
No Healing (one or none symptoms)	3

RESULTS AND DISCUSSION

Demographic data

Table 1: Distribution of patients according to Age.

Age	18-30	7	17.5%
	31-40	22	55.0%
	41-50	7	17.5%
	51-60	4	10.0%
Total		40	100.0%

Table 2: Distribution of patients according to Gender.

Gender	Male	37	92.5%
	Female	3	7.5%
Total		40	100.0%

Table 3: Distribution of patients according to Marital Status.

Marital status	Married	35	87.5%
	Unmarried	5	12.5%
Total		40	100.0%

Table 4: Distribution of patients according to Occupation.

		N	%
Occupation	Student	4	10.0%
	Self-employed	19	47.5%
	Govt. service	5	12.5%
	Private service	9	22.5%
	House wife	3	7.5%
	Labour	0	0.0%
Total		40	100.0%

Table 5: Distribution of patients according to Diet.

		N	%
Diet	Vegetarian	21	52.5%
	Mixed	19	47.5%
Total		40	100.0%

Table 6: Distribution of patients according to Bowel habits.

		N	%
Bowel habit	Hard stool	32	80.0%
	Loose stool	4	10.0%
	Altered	4	10.0%
Total		40	100.0%

Table 7: Distribution of patients according to Recurrent/Non Recurrent.

		N	%
Recurrent/non recurrent	Yes	11	27.5%
	No	29	72.5%
Total		40	100.0%

Table 8: Distribution of patients according to Types of fistula in ano.

		N	%
Types of fistula in ano	Intersphincteric	12	30.0%
	Transsphincteric	27	67.5%
	Suprasphincteric	1	2.5%
Total		40	100.0%

Table 9: Analysis of patients according to Pain over 7th day, 15th day, 30th day.

Pain			
	Mean	S.D	S.E
7th day	1.35	0.62	2.65
15th day	0.98	0.28	2.26
30th days	0.10	0.30	1.09

7th vs15th vs 30th day*	$\chi^2 = 67.792, p < 0.001$
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On the 7th day post-operatively identical mean pain levels of 1.35 (SD = 0.62) means the pain management strategy was effective at this early stage of recovery. By the 15th day mean pain score of 0.98 (SD = 0.28) showed ongoing improvement in their pain conditions. On the 30th day mean score of 0.10 (SD = 0.30) showed full recovery, showcasing the effectiveness of the treatment.

Table 10: Analysis of patients according to Pus Discharge over 7th day, 15th day, 30th day.

Pus Discharge			
	Mean	S.D	Mean rank
7th day	1.90	0.50	2.84
15th day	1.23	0.53	2.08
30th days	0.30	0.52	1.09
7th vs15th vs 30th day*	$\chi^2 = 70.386, p < 0.001$		

On the 7th day post-operatively, reported identical mean pus discharge levels of 1.90 (SD = 0.50) suggest that the treatment strategies were effective at this early stage of recovery. By the 15th day, a mean score of 1.23 (SD = 0.53) showed adequate recovery in pus discharge. On the 30th day, mean score of 0.30 (SD = 0.52) indicated cessation of pus discharge showcasing the effectiveness of the treatment.

Table 11: Analysis of patients according to Induration over 7th day, 15th day, 30th day.

Induration			
	Mean	S.D	Mean rank
7th day	0.10	0.30	2.09
15th day	0.03	0.16	1.98
30th days	0.00	0.00	1.94
7th vs15th vs 30th day*	$\chi^2 = 6.500, p = 0.039$		

On the 7th day post-operatively, a mean of 0.10 (SD = 0.30) revealed that the management strategies for induration were effective at this early stage of recovery. By the 15th day, a slightly lower mean score of 0.03 (SD = 0.16) suggested good recovery and on the 30th day a mean induration score of 0.00 (SD = 0.00) reflects a complete resolution of induration.

Table 12: Analysis of patients according to Wound healing over 7th day, 15th day, 30th day.

Wound healing	Group B		
	Mean	S.D	Mean rank
7th day	1.90	0.50	2.90
15th day	1.08	0.42	2.01
30th days	0.20	0.41	1.09
7th vs 15th vs 30th day*	$\chi^2 = 72.510, p < 0.001$		

On the 7th day post-operatively mean wound healing scores of 1.90 (SD = 0.50) suggested good recovery at this early stage of treatment. By the 15th day mean score of 1.08 (SD = 0.42) indicated good wound healing continued as recovery progressed. On the 30th day mean score of 0.20 (SD = 0.41) indicated better wound healing.

Overall, the results of Panchatikta ghrita guggulu showed promising results in the wound healing after fistulotomy and ksharsutra application.



Fig. 1: Partial Fistulotomy with application of Ksharsutra.



Fig. 2: Healing status after 7th Day.

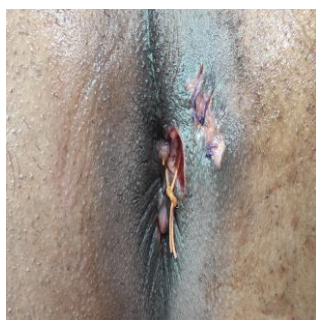


Fig. 3: Partial fistulotomy with Ksharsutra.



Fig. 4: Fistulotomy wound after 7 days.



Fig. 5: Complete healing on 30th day.

CONCLUSION

The present study was carried out to evaluate the wound healing efficacy of Panchatikta ghrita guggulu in the patients of fistula in ano. The drug is used in the management of wound and dermatosis in Ayurveda for quite long time. The chances of contamination of wound of fistulotomy are fair in the region of anal canal. To augment the healing process of wound and to minimize the factors related to slowing of wound healing, Panchatikta Ghrita guggulu was used. The pain, discharge from the fistulotomy wound, induration etc. reduced in the early sittings of ksharsutra application. The healing was also very good as suggested by the results showed above. It is concluded that Panchatikta Ghrita guggulu is a potent drug to help in the healing process of fistulotomy wound after ksharsutra application.

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