

Study on Effectiveness of *Chakramarda (Cassia tora) Ghrít* and *Go-Ghrít* in the Management of *Parikartika (Fissure in Ano)*

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Abstract

The term *Parikartika* is used for the condition of *Guda* (anus) where cutting and burning pain occurs, also along with this pain occurs in anus, penis, umbilical region and neck of urinary bladder with cessation of flatus. In modern medicine trend of the management depends on the type of the disease, e.g. in cases of acute variety with short history of the problem can be treated on the conservative lines, which results in healing of almost all acute and majority of chronic fissures. Priority must be placed normalization of bowel habits such that the passage of stool causes less trauma to anoderm. The addition of fiber to the diet to bulk up the stool, stool softener and adequate water intake are the simple and helpful measures. In the present study, an effort was made to derive a standard and easily accessible treatment for fissure-in-ano. *Chakramarda* is having *vraṇa shodhana* and *ropaṇa* properties which can help the *Vraṇa* (ulcer) to heal rapidly. Its base is *Ghrít* which itself is having *Samskaranuvarti* (i.e. it enhances the properties of drug) and healing properties. *Chakramarda Ghrít* is economically beneficial by virtue of easily available ingredients and a time tested classical formulation. Hence, it was selected for the clinical evaluation in the present study. It proved to be significant in managing Fissure in ano, it reduced pain, itching, bleeding and promoted healing. Properties of its chemical constituent's probable mode of action can be derived that *Chakramarda* is efficient in healing any ulcer like anal fissure.

Keywords: *Parikartika, Fissure-in-ano, Chakramarda, Ghrít, Samskaranuvarti*

Introduction

In the age of fast food, there is a shift in the habit of taking food and its timings as well as in the lifestyle that has become sedentary. Both of these causes produce disturbance in the digestive system that leads to many diseases including anorectal disorders such as piles, fissure, fistula, prolapsed etc. constitute a significant category.

Anal Fissure is one of the major causes for pain at anal region. The fissure-in-ano is categorized into two types depending on the clinical symptoms & durations of

the disease; viz. Acute and Chronic⁽¹⁾. The two primary signs of this disorder are, bleeding and pain; pain is often unbearable. In long-standing instances, sentinel tag and haemorrhoids can be associated with this. Pruritus ani can be another symptom of this disorder⁽²⁾. In males anal fissure typically occurs in the midline posterior-90 percent and 10 percent much less frequently. Subsequently, female fissures on the anterior midline are somewhat more common than before. (60:40)⁽³⁾.

In contemporary sciences *Parikartika* can be correlated with Fissure in Ano⁽⁴⁾. Sources on *Parikartika* are available from all *Bruhatrayi* and corresponding writers of Ayurveda. *Parikartika* (fissure in Ano) is a very common condition. The factors responsible for the causation of *Parikartika* can be found in various Ayurvedic texts such as *Vamana – Virecana Vypada, Basti Karma vypada and Upadrava of Atisara, Grahani, Arsa*. In this regard, *Acharya Sushruta* stated the

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aetiopathogenesis of disease that if anyone is impaired, with *Mrudukoshta* (mild digestive power), *Mandagni* (poor appetite) in these circumstances, more intake of food has the quality of *Rukshna* (dry), *Ushna* (hot), *Lavana* (salty) etc. Diet which is having such quality will vitiate *Vata & Kapha* & leads to *Parikartika*⁽⁵⁾. The word *Parikartika* signifies *Parikartanavatvedana* around *Guda* i.e. cutting type of pain. *Parikartika* also has symptoms such as pain in the, penis, anus, neck of the urinary bladder and umbilical region with flatus cessation⁽⁶⁾. In *Kashyap Samhita*, in the chapter *Garbhini Chikitsa*, we receive *doshik* classification, Aetiology, symptomatology and treatment of *Parikartika*⁽⁷⁾. Acharya Charaka further mentioned fissure in ano as a *Vataj Atisara* complication⁽⁸⁾. *Chakramarda* has Anti-inflammatory activity, Antibacterial, Antifungal Scavenging Activity, Antiulcer, Anti-proliferative activity, Antioxidant activity⁽⁹⁾. In *Ayurveda Chakramarda* is used for the treatment of *Pama, Jwara, Kasa, Kandu, Dadru. Rasapanchak* of *Chakramarda* is *Rasa-Katu, Guna-Laghu, Ushna, Virya-Ushan, Vipaka-Katu, Karma -Vata-Kaphasamak*⁽¹⁰⁾.

Aim and Objectives

The aim of the study was to evaluate the effectiveness of *Chakramarda (cassia tora) Ghrit* and *Go-Ghrit* in the management of *Parikartika* (Fissure in Ano). The defined objectives were to evaluate the efficacy of *Go-Ghrit* in the management of *Parikartika* as well as to the check and compare the efficacy of *Chakramarda Ghrit* and *Go-Ghrit* in the management of *Parikartika*.

Material and Methods

We have conducted a randomized single group blinded study with 30 patients in single group at outpatient and inpatient department of *Shalyatantra* department. The ethical approval was taken from Institutional ethics committee (Ref no.DMIMS(DU)/IEC/2017-18/7255 on 30/3/2017). We have included the patients from 18 years to 60 years with clinical features of Acute and Chronic Fissure in ano will be included after screening. The exclusion parameters were subject suffering with systemic disorders like Diabetes mellitus, Tuberculosis, HIV Positive, Hepatitis will be excluded as well as known cases of Malignancy, Crohn's disease, Ulcerative colitis. We have also excluded chronic patient with 4th grade anal spasm. The diagnostic criterion was presence of signs and symptoms *Parikartika* such as Pain during defecation, Bright-red bleeding and Sentinel tag.

Methodology

The *Ghrit* was made by taking one part of *kalka dravya* (paste of seeds), four parts of cow ghee and sixteen parts of *Drava* (water) Table no.1. All the contents were mixed and prepared as per *sneha pak vidhi*. Leaves were collected from Wardha and nearby area. *Ghrit* was prepared in *Rasa Shala* of MGACH&RC by taking direction of subject expert. the dosage was Quantity sufficient for local application of *Ghrit* after Hot Sitz Bath twice a day during the treatment period. The total study duration was 45 days and assessment period was done on 0, 15th, 30th day and follow up of the patient was taken on 45th day.

3.2. Composition of Formulation:

Table no. 1-Ingredients of *Chakramarda Ghrit*

SR. NO	Ingredient	Botanical Name	Part	Proportion
1.	<i>Chakramarda</i>	<i>Casia tora</i>	Seeds	1part
2.	<i>Ghrit</i>			4part
3.	Water			16part

Investigations: For the research purpose we did Complete Blood Count, Random Blood Sugar.

Subjective parameters: The subjective paramers was Pain, Bleeding per Rectum, Itching and Tenderness

Objective parameters: The objective parameter was Parikartika Healing

Observations and Results

Subjective and objective criteria were used to carry out the statistical analysis. Statistical analysis was done by using descriptive and inferential statistics using chi square test, Mann Whitney U test and Wilcoxon Signed Rank Test and software used in the analysis were SPSS 22.0 version and Graph Pad Prism 7.0 and $p < 0.05$ is considered as level of significance. Changes before and after treatment are shown in figure1, figure2 and table no.2



Figure1-Before treatment Figure2-After treatment

Table no2- Between the group comparison between baseline and after the treatment

Symptoms	Group		Mean	S.D.	SEM	z- value	p-value
Pain	Group A	BT	2.86	0.51	0.13	19.34	0.0001
		AT	0.06	0.25	0.06		
	Group B	BT	2.73	0.45	0.11	10.58	0.0001
		AT	1.40	0.63	0.16		
Bleeding	Group A	BT	0.93	0.25	0.06	19.34	0.0001
		AT	0.00	0.00	0.00		
	Group B	BT	1.00	0.00	0.00	14	0.0001
		AT	0.06	0.25	0.06		
Itching	Group A	BT	2.20	0.77	0.20	16.83	0.0001
		AT	0.40	0.50	0.13		
	Group B	BT	2.33	0.81	0.21	8.87	0.0001
		AT	0.86	0.74	0.19		
Tenderness	Group A	BT	2.80	0.56	0.14	16.73	0.0001
		AT	0.13	0.35	0.09		
	Group B	BT	3.00	0.00	0.00	11.29	0.0001
		AT	1.13	0.63	0.16		
Fissure healing	Group A	BT	2.80	0.41	0.10	19.85	0.0001
		AT	0.20	0.41	0.10		
	Group B	BT	3.00	0.00	0.00	10.31	0.0001
		AT	1.20	0.67	0.17		

1. Pain

Comparison of pain in both the groups

Mean pain before treatment in patients of group A was 2.86 ± 0.51 and in group B it was 2.73 ± 0.45 . By using Mann Whitney U Test statistically no significant difference was found in mean pain in patients of two groups ($u=0.70$, $p\text{-value}=0.48$).

Mean pain after treatment in patients of group A was 0.06 ± 0.25 and in group B it was 1.40 ± 0.63 . By using Mann Whitney U Test statistically significant difference was found in mean pain in patients of two groups ($u=4.55$, $p\text{-value}=0.0001$). Percentage of relief in Pain of group A patients was 97.77% and in group B it was 49.99%.

2. Bleeding

Comparison of bleeding score in both the groups

Mean bleeding before treatment in patients of group A was 0.93 ± 0.25 and in group B it was 1.00 ± 0.00 . By using Mann Whitney U Test statistically no significant difference was found in mean bleeding in patients of two groups ($z=1.00$, $p\text{ value}=0.31$).

Mean bleeding after treatment in patients of group A was 0.00 ± 0.00 and in group B it was 0.06 ± 0.25 . By using Mann Whitney U Test statistically significant difference was found in mean bleeding in patients of two groups ($z=1.0055$, $p\text{ value}=0.31$). Percentage of relief in bleeding of group A patients was 100 % and in group B it was 80 %

3. Itching

Comparison of itching score in both the groups

Mean itching before treatment in patients of group A was 2.20 ± 0.77 and in group B it was 2.33 ± 0.81 . By using Mann Whitney U Test statistically no significant difference was found in mean itching in patients of two groups ($z=0.61$, $p\text{-value}=0.54$). Mean itching after treatment in patients of group A was 0.46 ± 0.50 and in group B it was 0.86 ± 0.74 By using Mann Whitney U Test statistically significant difference was found in mean itching in patients of two groups ($z=1.79$, $p\text{-value}=0.07$). Percentage of relief in itching of group A patients was 86.66 % and in group B it was 67.77%.

4. Tenderness

Comparison of Tenderness score in both the groups

Mean Tenderness before treatment in patients of group A was 2.80 ± 0.56 and in group B it was 3.00 ± 0.00 . By using Mann Whitney U Test statistically no significant difference was found in mean Tenderness in patients of two groups ($z=1.44$, $p\text{-value}=0.15$). Mean Tenderness after treatment in patients of group A was 0.13 ± 0.35 and in group B it was 1.13 ± 0.63 . By using Mann Whitney U Test statistically significant difference was found in mean Tenderness in patients of two groups ($z=3.95$, $p\text{-value}=0.001$). Percentage of relief in Tenderness of group A patients was 95.55% and in group B it was 62.21

5 Fissure Healing

Comparison of Fissure Healing score in both the groups

Mean Fissure Healing before treatment in patients of group A was 2.80 ± 0.41 and in group B it was 3.00 ± 0.00 . By using Mann Whitney U Test statistically no significant difference was found in mean Fissure Healing in patients of two groups ($z=1.79$, $p\text{-value}=0.07$). Mean Fissure Healing after treatment in patients of group A was 0.20 ± 0.41 and in group B it was 1.20 ± 0.67 . By using Mann Whitney U Test statistically significant difference was found in mean Fissure Healing in patients of two groups ($z=3.72$, $p\text{-value}=0.0001$). Percentage of relief in fissure healing of group A patients was 95.55 % and in group B it was 59.99 %.

Discussion

1. Pain

When effect of *Chakramarda Ghrit* and *Go- Ghrit* on Pain was analyzed statistically by using Wilcoxon signed rank test the results were found significant in the patients of both the groups (on 15th, 30th and 45th day). On clinical assessment also *Chakramarda Ghrit* and *Go- Ghrit*, both the groups showed analgesic activity. On comparing the mean Pain in both the groups, by Mann Whitney U test statistically significant difference was found. Percentage of relief in Pain of Group A patients was 97.77 % and in Group B it was 49.99 %. Therefore it is clear from the above analysis that *Chakramarda Ghrit* was more efficient than *Go -Ghrit* in reducing pain

because of its healing property.

2 Bleeding

When effect of *Chakramarda Ghrit* and *Go- Ghrit* on Bleeding was analyzed statistically by using Wilcoxon signed rank test the results were found significant in the patients of both the groups (on 15th, 30th and 45th day). On comparing the mean bleeding in both the groups, by Mann Whitney U test statistically significant difference was found (on 15th, 30th and 45th day). Percentage of relief in bleeding of group A patients was 100 % and in group B it was 80 %. Therefore it is clear from above discussion that *Chakramarda Ghrit* is more efficient than *Go -Ghrit* in stopping bleeding caused due to anal fissures which is also because of its wound healing property.

3 Itching

When effect of *Chakramarda Ghrit* and *Go- Ghrit* on Itching was analyzed statistically by using Wilcoxon signed rank test the results were found significant in the patients of both the groups (on 15th, 30th and 45th day). On comparing the mean Itching in both the groups, by Mann Whitney U test statistically significant difference was found (on 15th, 30th and 45th day). Percentage of relief in Itching of group A patients was 86.66% and in group B it was 67.77%. From this we can conclude that *Chakramarda Ghrit* is more efficient than *Go -Ghrit* in reducing itching because of its antipruritic property.

4 Tenderness

When effect of *Chakramarda Ghrit* and *Go- Ghrit* on tenderness was analyzed statistically by using Wilcoxon signed rank test the results were found significant in the patients of both the groups (on 15th, 30th and 45th day). On comparing the mean tenderness in both the groups, by Mann Whitney U test statistically significant difference was found (on 15th, 30th and 45th day). Percentage of relief in tenderness of group A patients was 95.55% and in group B it was 62.21%. From the above discussion it can be concluded that *Chakramarda Ghrit* is more efficient than *Go -Ghrit* in reducing tenderness because of its anti-inflammatory and wound healing property.

5 Healing

When effect of *Chakramarda Ghrit* and *Go- Ghrit*

on healing was analyzed statistically by using Wilcoxon signed rank test the results were found significant in the patients of both the groups (on 15th, 30th and 45th day). On comparing the mean healing in both the groups, by Mann Whitney U test statistically significant difference was found (on 15th, 30th and 45th day). Percentage of relief in healing of group A patients was 95.55% and in group B it was 59.99%. From the above discussion it can be concluded that *Chakramarda Ghrit* is more efficient than *Go -Ghrit* in healing anal fissure because of its wound healing property.

Taking into consideration all the observations, results, statistical analysis and its interpretation of the present study, Null hypothesis is rejected and Alternative hypothesis is accepted. *Chakramarda Ghrit* application in the management of *Parikartika* (Anal fissures) is found to be more effective as compared to *Go Ghrit*.

Conclusion

Chakramarda is a medicine used by people particularly for the management of skin disease and wound / ulcer. There have been numerous research works on the same where *Chakramarda* proved to be an effective medicine. Therefore using this comparison *Chakramarda Ghrit* was rendered and used for local application in the management of Anal fissure which is considered to be an ulcer, assessment parameters were Itching, pain, bleeding, tenderness and healing on the basis of which its efficacy was assessed. The final conclusions were drawn on the basis of the Study observations and results described as follows

- Incidence of Fissure in ano was more common in middle age group.
- Males were more prone to this disease as compare to Females.
- Maximum cases were belonging to middle socioeconomic group, literate, married and having normal built.
- Fissure in ano was also very common in people who were indulged in alcohol, takes mixed diet and having irregular bowel habit.
- Maximum cases in this study belonged to rural habitat.

· Majority of cases which reported were having acute fissure in ano following to that chronic fissure in ano with sentinel tag were common.

· In this present research work, evaluation of the efficacy of *Chakramarda Ghrít* in the management of *Parikartika* (anal fissures) was done by comparing its results with that of *Go- Ghrít*. In this study, group A (n=15) was subjected to application of *Chakramarda Ghrít* and in group B, *Go-Ghrít* was used for application over *Parikartika* (anal fissures).

By this intervention the targets achieved in Group A (n=15), were that pain, itching, bleeding, tenderness were significantly reduced and healing was significantly more as compared to Group B (n=15) patients, where the *Go-Ghrít* was applied.

7. Recommendations for further study

· The study can be conducted in a substantial sample size.

· Chemical properties of *Chakramarda Ghrít* should be studied in more details.

· Chemical action of *Chakramarda Ghrít* in healing anal fissure should be studied.

· *Chakramarda Ghrít* preparation needs to be more hygienic and should be done with the use of specially designed device or equipment, even more easy method or technique should be find out for its application in order to make patient more comfortable to the treatment.

· Further same study can be conducted in comparison with other *Ghrít* preparation as well as modern medicaments with additional advanced changes.

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