

Comparative Clinical Study of Nirgundi Taila and Jatyadi Taila Pratisarana in Parikartika W.S.R. to Fissure in Ano

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ABSTRACT

Background: The *Parikartika* is a condition, in which there will be excruciating cutting type of pain all around *Guda, Bastishiras, and Nabhi*. It mainly involves *Vata Dosh* vitiation. It can be correlated with Fissure in ano which is a longitudinal split in the anoderm of the distal anal canal which extends from anal verge proximally toward, but not beyond, the dentate line. Both *Nirgundi Taila* and *Jatyadi Taila* have *Vatashamak* property. **Materials and Methods:** In this study, total 40 patients fulfilling inclusion criteria were included and were randomly divided into two groups, 20 patients in each group. Group A was advised to use *Nirgundi Taila* for *Pratisarana* and Group B was advised to use *Jatyadi Taila* for *Pratisarana*. **Results:** The result shows statistically significant improvement in both groups suggesting both *Nirgundi Taila* and *Jatyadi Taila* which are effective in *Parikartika*. However, overall statistical analysis shows that percentage of improvement in Group A (*Nirgundi Taila*) was more than Group B (*Jatyadi Taila*); hence, we can say that Group A (*Nirgundi Taila*) is more effective as compared to Group B (*Jatyadi Taila*) in *Parikartika*. **Conclusion:** The present study reveals that there is significant effect of *Nirgundi Taila Pratisarana* in *Parikartika* (Fissure in Ano) cases.

Keywords: Fissure in ano, *Jatyadi Taila, Nirgundi Taila, Parikartika, Pratisarana*
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INTRODUCTION

The *Parikartika* is a condition, in which there will be excruciating cutting type of pain all around *Guda, Bastishiras, and Nabhi*.^[1]

Parikartika involves *Purishvaha Srotas, Mamsavaha Srotas, and Annavaha Srotas*. *Parikartika* has been mentioned by *Bruhatrayees* but not as an independent disease. It is mentioned in the context of *Bastinetra Vyapat* and *Virechana Vyapat*.^[2] Only *Acharya Kashyapa* has mentioned about its types based on the *Doshik* predominance.^[3]

Parikartika is a condition, where there will be excruciating pain (cutting type of pain) in *Guda, Basti Pradesh, and surrounding area* along with burning sensation (*Sadaha*), flatus retention (*Anilasangha*), anorexia (*Aruchi*), and slimy discharge (*Picchhasrava*).^[4] Main predisposing factor is irregular food habits and lifestyle which lead to constipation which leads to this condition.

This can be correlated with fissure in ano. Fissure in ano is a longitudinal split in the anoderm of the distal anal canal which extends from anal verge proximally toward, but not beyond, the dentate line. This is characterized by severe anal pain associated with defecation, bright-red bleeding, mucus discharge, and constipation. Although most of the sufferers are young adults, the condition can affect any age, from infants to the elderly.^[5]

In this study, we have taken *Nirgundi Taila* and *Jatyadi Taila*. *Nirgundi* acts on *Vata* and *Kapha*. It is *Shulahara* (relieves pain), *Kandughna*, and *Vranashodhaka*.^[6] *Nirgundi Taila* is indicated in all types of *Vrana*.^[7] Hence, to check its *shulahara, vrana ropana* action in *Parikartika* this topic was selected. *Jatyadi Taila* is proven in *Parikartika* and is taken for comparison.^[8]

MATERIALS AND METHODS

It is open randomized and comparative study. The study was approved by the Institutional Ethical Committee. Raw drug was purchased local market, drug authentication was done. *Nirgundi Taila* and *Jatyadi Taila* were prepared as per classical reference, and

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then, standardization was done. Written informed consent was obtained from each participant before recruitment explaining the details about the treatment and the study. Trial was registered with Central Trial Registry of India (CTRI/2021/02/031247).

Subject

To assess the therapeutic effect of *Nirgundi Taila Pratisarana* in comparison with *Jatyadi Taila Pratisarana* in *Parikartika*, 40 patients 20 in each group with symptom of *Parikartika* were selected from department of Shalya Tantra OPD and IPD Bharati Vidyapeeth (Deemed to Be University) College of Ayurved and Hospital, Pune.

Method of Selection of Patients

Inclusion criteria

The following criteria were included in the study:

- Patients having *Parikartika* symptoms such as *Gudagata Shoola* (pain), *Gudagata Raktasrava* (bleeding), and *Daha* (burning)
- Age-18–60 years

- Selection of patients was irrespective of sex, religion, socio-economical class
- Acute Fissure in Ano cases were taken for study.

Exclusion criteria

The following criteria were excluded from the study:

- Chronic Fissure in Ano, patient with sentinel tag
- Known case of ulcerative colitis, Crohn's disease
- HIV, HbsAg Positive patients
- Uncontrolled diabetes
- Carcinoma of Rectum
- Pregnancy.

Screening method

All patients included in study were thoroughly examined and data were recorded systematically. Laboratory investigations required to rule out exclusion criteria were done.

Drug administration

- *Nirgundi Taila* and *Jatyadi Taila* are applied at fissure site and anal verge with cotton at night before sleep for Group A (*Nirgundi taila*) and Group B (*Jatyadi taila*), respectively, after making it lukewarm
- As per requirement *Gandharva Haritaki* 1 gm given with lukewarm water at bed time for both groups
- If bleeding persist *Nagakesar Choorna* 500 mg and *Navayasa Lauha* 250 mg was given for both groups
- Sitz's Bath was advised twice a day for both groups
- Subject was advised about *ahara* to be followed
 - *Apathya-Ati Tikshna, Ushna, Ruksha, Kashaya-Tikta Rasa Sevana*
 - *Pathya-Laghu ahara, fiber rich diet*
- This was done for 15 days in *Parikartika* (fissure in ano) cases.

Research design

The study was open randomized, comparative clinical study. Computer generated random numbers were used for study.

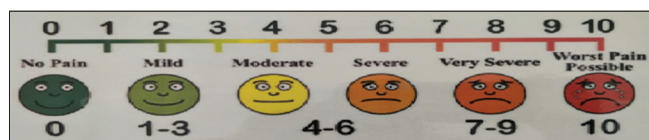
Intervention

Total 40 patients were enrolled for the study and randomly divided into two groups: Group A and Group B. Group A were given *Nirgundi taila* and Group B were given *Jatyadi taila* for *Pratisarana*. Study duration was 15 days and follow-up were on 5th, 10th, and 15th day. During study, patients were asked to follow the instructions and advised to report any adverse event to the investigator immediately.

Parameters of Assessment

Subjective parameter

1. Pain (*Gudagata shoola*)
 - Pain was calculated with visual analogue scale



2. Burning Sensation (*Gudagata Daha*)
Grading was done as:
 - 0 – no burning sensation
 - 1 – burning sensation present soon after defecation
 - 2 – burning sensation present for more than 15 min after defecation
3. Streak of blood (*Raktasrava*)
 - 0 – Absent
 - 1 – Present.
4. Itching (*Kandu*)
 - 0 – Absent
 - 1 – Present.

Objective parameters

1. Assessment of sphincter spasm
Gradation of sphincter spasm was done as
 - Per rectal examination can be done easily-0
 - Large size anal dilator (number 5) can easily introduce in anal canal-1
 - Medium size anal dilator (number 4) can easily introduce in anal canal-2
 - Small size anal dilator (number 3) can easily introduce in anal canal-3
2. Healing of ulcer
 - Completely healed-0
 - Healing-1.

Statistical Methods

Wilcoxon test and Mann –Whitney test was used to compare groups for outcome.

RESULTS

Demographic Data

Out of 40 patients enrolled in study, 19 were female and 21 were male and maximum number of patients from age group of 18–32 years in both groups. Maximum number of patients were involved in heavy work, and maximum were accustomed to mixed diet. Maximum patients were of *Vata Pittaja Prakruti* and were having *Krura Koshta*.

Gudagatashoola/burning sensation

The mean grade of *Gudagatashoola*/burning sensation on 0th day was 1.55 which was decreased to 1.1 at 5th day. The mean improvement in score was 29.03% which is significant as observed by Wilcoxon test (as $P < 0.05$); thus, it can be said that there is significant improvement on *Gudagatashoola*/burning sensation in *Parikartika*. Furthermore, here 48.39% improvement found at 10th day of treatment which is increased to 80.65% at 15th day on *Gudagatashoola*/burning sensation in *Parikartika*, that is, Group A (*Nirgundi taila*) was effective on *Gudagatashoola*/burning sensation in *Parikartika* [Table 1].

The mean grade of *Gudagatashoola*/burning sensation on 0th day was 1.55 which was decreased to 1 at 5th day. The mean improvement in score was 35.48% which is significant as observed by Wilcoxon test (as $P < 0.05$); thus, it can be said that there is significant improvement on *Gudagatashoola*/burning sensation

Table 1: Details of mean of parameters of each group

Parameter	Group A						Group B											
	Mean		% of improvement				Mean		% of improvement									
	D0-D5		D0-D10		D0-D15		D0-D5		D0-D10		D0-D15							
	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT						
Gudagata Shoola/burning sensation	1.55	1.1	1.55	0.8	1.55	0.3	29.03	48.39	80.65	1.55	1	1.55	0.55	1.55	0.15	35.48	64.52	90.32
Gudagata Raktasrava	0.55	0.2	0.55	0	0.55	0	63.64	100	100	0.4	0.1	0.4	0.05	0.4	0	75	87.50	100
Kandu	0.6	0.2	0.6	0	0.6	0	66.67	100	100	0.8	0.4	0.8	0.05	0.8	0.1	50	93.75	87.50
Sphincter spasm	1.95	1.75	1.95	1.2	1.95	0.758	10.26	38.46	61.54	2.05	1.65	2.05	1.25	2.05	1.05	19.51	39.02	48.78
Healing of ulcer	1	1	1	1	1	0.6	0.00	0.00	40	1	1	1	0.95	1	0.6	0.00	5.00	40

D: Day, BT: Before treatment, AT: After treatment

in Parikartika. Furthermore, here 64.52% improvement found at 10th day of treatment which is increased to 90.32% at 15th day on Gudagatashoola/burning sensation in Parikartika, that is, Group B (Jatyadi taila) was effective on Gudagatashoola/burning sensation in Parikartika [Table 1].

As $P > 0.05$, we found that there was no statistical significant difference between Group A (Nirgundi taila) and Group B (Jatyadi taila) on gudagata shoola/burning sensation in Parikartika. However, percentage of improvement in Group B (Jatyadi taila) was more than Group A (Nirgundi taila). Hence, Group B (Jatyadi taila) is more effective as compared to Group A (Nirgundi taila) on gudagata shoola/burning sensation in Parikartika [Table 2].

Gudagata raktasrava

The mean grade of Gudagata raktasrava on 0th day was 0.55 which was decreased to 0.2 at 5th day. The mean improvement in score was 63.64% which is significant as observed by Wilcoxon test (as $P < 0.05$); thus, it can be said that there is significant improvement on Gudagata raktasrava in Parikartika. Furthermore, here 100% improvement found at 10th day of treatment which is stable at 15th day on Gudagata raktasrava in Parikartika, that is, Group A (Nirgundi taila) was effective on Gudagata raktasrava in Parikartika [Table 1].

The mean grade of Gudagata raktasrava on 0th day was 0.4 which was decreased to 0.1 at 5th day. The mean improvement in score was 75% which is significant as observed by Wilcoxon test (as $P < 0.05$); thus, it can be said that there is significant improvement on Gudagata raktasrava in Parikartika. Furthermore, here 87.50% improvement found at 10th day of treatment which is increased to 100% at 15th day on Gudagata rakta srava in Parikartika, that is, Group B (Jatyadi taila) was effective on Gudagata rakta srava in Parikartika [Table 1].

As $P > 0.05$, we found that there was no statistical significant difference between Group A (Nirgundi taila) and Group B (Jatyadi taila) on Gudagata raktasrava in Parikartika. Furthermore, percentage of improvement was same, that is, effect of Group A (Nirgundi taila) was same as Group B (Jatyadi taila) on Gudagata raktasrava in Parikartika [Table 2].

Kandu

The mean grade of Kandu on 0th day was 0.6 which was decreased to 0.2 at 5th day. The mean improvement in score was 66.67%

Table 2: Details of mean of parameters between two groups

Parameter	Comparison	
	% of improvement	
	Group A	Group B
Gudagata Shoola/burning sensation	80.65	90.32
Gudagata Raktasrava	100	100
Kandu	100	87.50
Sphincter spasm	61.54	48.78
Healing of ulcer	40	40

which is significant as observed by Wilcoxon test (as $P < 0.05$); thus, it can be said that there is significant improvement on Kandu in Parikartika. Furthermore, 100% improvement found at 10th day of treatment which is same at 15th day on Kandu in Parikartika, that is, Group A (Nirgundi taila) was effective on Kandu in Parikartika [Table 1].

The mean grade of Kandu on 0th day was 0.8 which was decreased to 0.4 at 5th day. The mean increment in score was 50% which is significant as observed by Wilcoxon test (as $P < 0.05$); thus, it can be said that there is significant increment on Kandu in Parikartika. Furthermore, here 93.75% improvement found at 10th day of treatment which is increased to 87.50% at 15th day on Kandu in Parikartika, that is, Group B (Jatyadi taila) was effective on Kandu in Parikartika [Table 1].

As $P > 0.05$, we found that there was no statistical significant difference between Group A (Nirgundi taila) and Group B (Jatyadi taila) on Kandu in Parikartika, that is, effect of both group was same on Kandu in Parikartika. However, percentage of improvement in Group A (Nirgundi taila) was more than Group B (Jatyadi taila). Hence, we can say that Group A (Nirgundi taila) is more effective as compared to Group B (Jatyadi taila) on Kandu in Parikartika [Table 2].

Sphincter spasm

The mean grade of sphincter spasm on 0th day was 1.95 which was decreased to 1.75 at 5th day. The mean improvement in score was 10.26% which is significant as observed by Wilcoxon test (as $P < 0.05$); thus, it can be said that there is significant improvement on sphincter spasm in Parikartika. Furthermore, here 38.46% improvement found at 10th day of treatment which is increased to 61.54% at 15th day on sphincter spasm in Parikartika, that is, Group A (Nirgundi taila) was effective on sphincter spasm in Parikartika [Table 1].

The mean grade of sphincter spasm on 0th day was 2.05 which was decreased to 1.65 at 5th day. The mean improvement in score was 19.51% which is significant as observed by Wilcoxon test (as $P < 0.05$); thus, it can be said that there is significant improvement on sphincter spasm in *Parikartika*. Furthermore, here 39.02% improvement found at 10th day of treatment which is increased to 48.78% at 15th day on sphincter spasm in *Parikartika*, that is, Group B (*Jatyadi taila*) was effective on sphincter spasm in *Parikartika* [Table 1].

As $P > 0.05$, we found that there was no statistically significant difference between both group on Sphincter Spasm in *Parikartika*, that is, effect of Group A (*Nirgundi taila*) was same as Group B (*Jatyadi taila*) on Sphincter Spasm in *Parikartika*. However, percentage of improvement in Group A (*Nirgundi taila*) was more than Group B (*Jatyadi taila*). Hence, we can say that Group A (*Nirgundi taila*) is more effective as compared to Group B (*Jatyadi taila*) on Sphincter Spasm in *Parikartika* [Table 2].

Healing of ulcer

The mean grade of healing of ulcer on 0th day was 1 which was decreased to 0.6 at 15th day. The mean improvement in score was 40% which is significant as observed by Wilcoxon test (as $P < 0.05$) thus it can be said that there is significant improvement on healing of ulcer in *Parikartika*. i.e. Group A (*Nirgundi taila*) was effective on healing of ulcer in *Parikartika* [Table 1].

The mean grade of healing of ulcer on 0th day was 1 which was decreased to 0.6 at 15th day. The mean improvement in score was 40% which is significant as observed by Wilcoxon test (as $P < 0.05$); thus, it can be said that there is significant improvement on healing of ulcer in *Parikartika*. i.e. Group B (*Jatyadi taila*) was effective on healing of ulcer in *Parikartika* [Table 1].

As $P > 0.05$, we found that there was no statistical significant difference between both group on healing of ulcer in *Parikartika*, that is, effect of Group A (*Nirgundi taila*) was same as Group B (*Jatyadi taila*) on healing of ulcer in *Parikartika*. Furthermore, percentage of improvement in Group A (*Nirgundi taila*) was same as Group B (*Jatyadi taila*) on healing of ulcer in *Parikartika* [Table 2].

Grades

The mean of grade BT was 4.6 which was decreased to 1.65 AT. The mean improvement in score was 64.13% which is significant as observed by Wilcoxon test (as $P < 0.05$); thus, it can be said that there is significant improvement on Grades in *Parikartika*, that is, Group A (*Nirgundi taila*) was effective on Grades in *Parikartika* [Table 3].

The mean of Grades BT was 4.85 which was decreased to 1.9 after treatment. The mean improvement in score was 60.82% which is significant as observed by Wilcoxon test (as $P < 0.05$) thus it can be said that there is significant improvement on Grades in *Parikartika*, that is, Group B (*Jatyadi taila*) was effective on Grades in *Parikartika* [Table 3].

As $P > 0.05$, we found that there was no statistical significant difference between Group A (*Nirgundi taila*) and Group B (*Jatyadi taila*) on Grades in *Parikartika*. However, percentage of

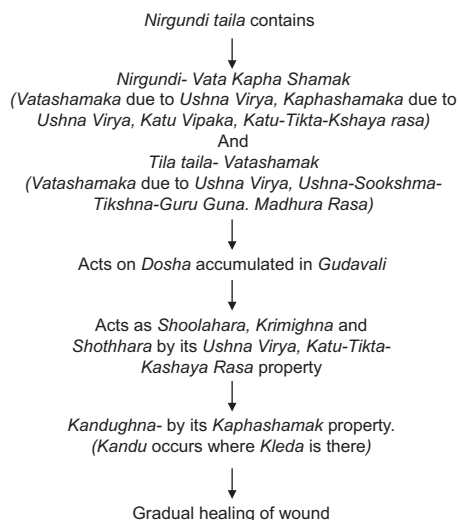
improvement in Group A (*Nirgundi taila*) was more than Group B (*Jatyadi taila*). Hence, we can say that Group A (*Nirgundi taila*) is more effective as compared to Group B (*Jatyadi taila*) on Grades in *Parikartika* [Table 3].

Overall Improvement

As percentage of improvement seen from above table, we get that percentage of improvement in Group A (*Nirgundi taila*) was more than Group B (*Jatyadi taila*); hence, we can say that Group A (*Nirgundi taila*) is more effective as compared to Group B (*Jatyadi taila*) in *Parikartika*.

DISCUSSION

Probable Mode of Action of Nirgundi Taila



Probable Mode of Action of Nirgundi Taila- (Modern Point of View)

- Chemical composition of leaf contains ethyl acetate extract which produces anti- inflammatory effect
- *Nirgundi* has flavonoids and nishidine which helps in reducing pain and tenderness due to their prostaglandin inhibitor property.

Probable Mode of Action of Jatyadi Taila

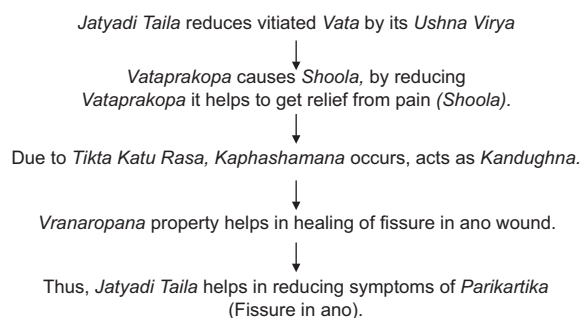
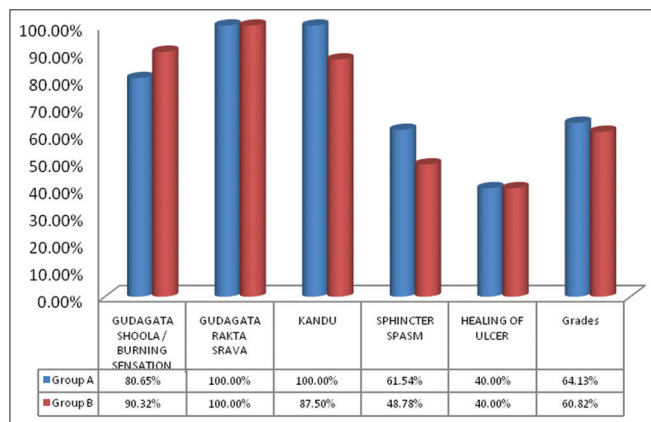


Table 3: Details of mean of grades of each group and between two groups

Parameter	Group A			Group B			Comparison		P-value
	Mean		% of improvement	Mean		% of improvement	% of improvement		
	BT	AT		BT	AT		Group A	Group B	
Grades	4.6	1.65	64.13	4.85	1.9	60.82	64.13	60.82	0.508



Graph 1: Overall improvement in parameters of both group

CONCLUSION

- The overall statistical analysis shows that percentage of improvement in Group A (*Nirgundi Taila*) was more than Group B (*Jatyadi Taila*); hence, we can say that Group A (*Nirgundi Taila*) is more effective as compared to Group B (*Jatyadi Taila*) in Parikartika [Graph 1]

- No adverse effect was observed during the course of study, hence being cost effective, it can be effectively utilized.

REFERENCES

- Acharya VJ, editor. Dalhana Nibandha Sangraha Commentary on Sushruta Samhita, Chikitsa Sthana. 9th ed. Varanasi: Chaukhamba Sanskrit Pratisthana; 2007. p. 524.
- Vaidya PG, Athawale. Drushtartha Sushruta Chintan, with Dalhana's Nibandha Sangraha, Nyayachikitsa of Gayadas and kruta Padmini Commentary. 2nd ed., Vol. 2. Nagpur: Shri Dhanwantari book Publishers; 2017. p. 223-9.
- Tewari PV, editor. Vrdha Jivaka Kashyapa Samhita Khila sthana. Varanasi: Chaukhamba Vishwabharati; 2008. p. 565.
- Vaidya PG, Athawale R. Drushtartha Sushruta Chintan, with Dalhana's Nibandha Sangraha, Nyayachikitsa of Gayadas and Kruta Padmini Commentary. 2nd ed., Vol. 2. Nagpur: Shri Dhanwantari Book Publishers; 2017. p. 228.
- Williams NS, Christopher JK, Bulstrode P, O'Connell R, editors. Bailey and Love's Short Practice of Surgery. 26th ed. Boca Raton, London, New York: CRC Press Taylor and Francis Group; 2013. p. 1248.
- Shastri JL. In: Chunekar KC, editor. Dravyaguna Vijnana. Vol. 2. Varanasi: Chaukhamba Orientalia; 2004. p. 411-7.
- Shastri SR, editor. Bhaishajyaratnavali of Shri Govind Das Edited and Enlarged by Bhashagratna Shri Brahmashankar Mishra "Vidhyotini" Hindi Commentary with Appendixes by Shri Kaviraja Ambikadatta Shastri Ayurvedacharya. 18th ed., Ch. 50. Varanasi: Chaukhamba Prakashan; 2019. p. 866.
- Samantaray S, Bishwal R, Singhai S. Clinical efficacy of Jatyadi Taila in Parikartika (Fissure in Ano). WJPMR 2017;3:250-4.