



Research Article

STUDY THE EFFECT OF *CHANDANBALALAKSHADI TAILA PICHU* IN *PARIKARTIKA* WITH SPECIAL REFERENCE TO FISSURE-IN-ANO: A PILOT STUDY

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KEYWORDS: *Parikartika*, Fissure-in-ano, Pain, Wound, Bleeding per rectum, *Chandanbalalakshadi Taila*.

ABSTRACT

Parikartika i.e. Fissure-in-ano is the most common disease amongst anorectal disorders. In this condition, there is severe cutting type of pain at anal region with a longitudinal ulcer at anal margin. Modern treatment includes local application of soothing ointments, oral analgesics and stool softeners in initial condition. Surgical management includes Lord's dilation, fissurectomy and sphincterotomy. But these treatments are with the fear of some complications like recurrence, incontinence. It is a need to find an alternative and better treatment to treat the diseases like *Parikartika*. To treat Fissure-in-ano, two important things are important, in which one is to reduce burning pain at anal region and another is to heal the longitudinal ulcer. Keeping these aspects in mind, a pilot study was conducted using local application of *Chandanbalalakshadi Taila Pichu* in the treatment of *Parikartika* w.s.r. to fissure-in-ano. **Methodology:** A total 15 patients of *Parikartika* (Fissure-in-ano) were selected for local application of *Chandanbalalakshadi Taila Pichu* in fissure bed twice a day after sitz bath for 21 days. **Result:** Very encouraging effects of local application of *Chandanbalalakshadi Taila Pichu* were noted. Pain at anal region, wound at anal region, spasm and bleeding per rectum were significantly reduced. Considering overall effect out of 15 patients 8 patients of Fissure-in-ano were completely cure i.e., 53.3% and 7 patients were markedly improved i.e. 46.7%. **Conclusion:** Considering all above properties of individuals drugs, observations and results it can be said that *Chandanbalalakshadi Taila* is useful in reducing pain, inflammation, spasm and bleeding per rectum and healing of wound at anal region. Hence, it can be concluded that this oil is useful in the treatment of *Parikartika* (fissure-in-ano).

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INTRODUCTION

Ayurveda mentioned various ano-rectal diseases like *Parikartika* (fissure-in-ano), *Bhagandara* (fistula-in-ano), *Gudvidhradhi* (ano-rectal abscess), *Arsh* (Haemorrhoid) etc in detail. *Parikartika* is one of them. Word *Parikartika* can be explained as *Pari* means the circumference of anus and *Kartika* means *Kartanvat Pida* or cutting type of pain. In ancient literature especially in *Bruhatrayi*, *Parikartika* is explained as symptom or complication. *Parikartika* was explained by Charaka as a complication of *Vataj Atisara*. It was explained as a complication of *Basti* in which one cause is due to trauma by *Basti netra* and another is due to

administration of *Ruksha Basti* which containing of *Teekshna* and *lavandravyas* in heavy doses, these are known as *Bastivyapad*^[2]. In *Sushrut Samhita* and *Ashtanga Sangraha Parikartika* is mentioned as *Purvarupa* of *Arsha*^[3]. *Kashyapa* has mentioned *Parikartika* as separate disease by in the context of *Garbhini Vyapada*. He also explained three types according to *Dosha* predominance i.e., *Vataj*, *Pittaj* and *Kaphaj*^[4]. Still in acute condition the prevalent *Dosha* is *Vata* and *Dushya* are *Twak*, *Rakta* and *Mamsa* in the area of anal canal,^[5] which gets involved gradually according to the progress of disease.

Pathogenesis can be explained as follows, when *Vata* localizes in *Twak* or skin at anal region, because of its *Ruksa* property it shows tendency to crack. As the disease progresses, this vitiated *Vayu* when localizes in *Raktadhatu* formation of ulcer inside the anus takes place. Further when it involves *Mansadhatu* pain along with sphincter spasm and knotty swelling occurs which can be said as sentinel tag^[6]. In modern science, *Parikartika* can be co-related with fissure-in-ano which is characterized by severe cutting/ burning type of pain, bleeding per rectum in acute stage and sentinel tag in chronicity. It is defined as an elongated ulcer in the long axis of the lower anal canal^[7].

Need of Study

Anal fissure is a medico-surgical condition. In general line of treatment in Ayurveda includes *Vatanulomana*, *Agnideepana*, local application of oils etc.^[8] In medical treatment it includes analgesics like NSAIDS, bulk laxative, local application of anesthetic and soothing ointments etc. Operative procedure has its own stigma. The complications of surgery may occur includes anal incontinence which occurs inability to control gas, recurrent ulcer formation and persistent mucus discharge etc. It is the need of time to find out some drug for local application which can help for wound healing and also reduce burning sensation so *Chandanbalalakshadi Taila* is selected for local application. It is *Vranaropan*, *Vatapittaghna* and *Dahashamak* in action.

MATERIALS AND METHODS

Criteria for Inclusion of patient

1. Clinically diagnosed patient of acute Fissure-in-ano i.e. *Parikartika*.
2. Patient irrespective gender and socio-economic status.

Criteria for Exclusion of patient

1. Patient having Chronic fissure-in-ano i.e., *Parikartika*, secondary to ulcerative colitis, Crohn’s disease, Koch’s.
2. Patient with uncontrolled systemic disease as like as diabetes and hypertension.
3. Carcinoma of rectum.
4. Immuno-compromised patient.
5. Bleeding disorders.
6. Chronic fissure-in-ano.

Research Methodology

15 patients were selected randomly in this pilot study. Drug was applied locally with internal medication of Tablet *Trifala Guggulu* 2 BD and *Gandharva Haritaki* tab 2 HS with warm water as Laxative.

Method of Drug Application

Application of *Pichu*: Initially per rectum examination was done while the patient in lithotomy position, to confirm position of fissure. The sphincter tone assessed with the digital examination. Procedure of *Chandanbalalakshadi Taila Pichu* application in anus was explained to the patient. *Pichu* was applied after warm water sitz bath for a period of 15minutes. A small sterile cotton swab soak in 5ml *Chandanbalalakshadi Taila* kept at anal verge for 3 hours. *Pichu* was applied two times in a day for 15 days. Follow up was taken at the interval of 5 days during treatment.

Criteria for assessment: Patients were assessed on following criteria.

Table 1: Assessment Criteria

| Sr. No. | Assessment Parameters | Assessment Criteria | Grade |
|---------|------------------------------|---|-------|
| 1 | Wound Healing ^[9] | Completely healed fissure wound with healthy scar | 0 |
| | | Partially healed wound with granulation tissue | 1 |
| | | Cleaned wound without slough/discharge | 2 |
| | | Wound with discharge | 3 |
| 2 | Spasm | Normal (1 finger can pass) | 0 |
| | | Finger can be passed with severe pain | 1 |
| | | No finger can be passed | 2 |
| 3 | Per Rectal Bleeding | No bleeding | 0 |
| | | Bleeding during defecation up to 10 drops | 1 |
| | | Bleeding during defecation 10 to 20 drops | 2 |
| | | Splash in a pan | 3 |
| 4 | Pain (as per Vas scale) | No pain | 0 |
| | | Mild (1-3) | 1 |
| | | Moderate (4-6) | 2 |
| | | Sever (7-10) | 3 |

RESULT AND OBSERVATION**Statistical analysis**

Data analysis was done with the help of Statistician. Data was coded and entered in MS- Excel worksheet and analyzed by appropriate statistical software. Data was collected from the analytical data it was initiated that, the incidence rate of Fissure-in-ano was more in 21-40 years of age group (66.67), and also male were more prone to this disease (56%). In the present study, interval of every 5 days assessment was done to find out the efficacy of local application of *Chandanbalalakshadi Taila Pichu* by relief in wound healing, pain, Sphincter Spasm, P/R bleeding. Statistically highly test and analyzed statistically by one-way repeated measure ANOVA test.

In this study, subjective parameters were wound healing and pain. Objective parameters were per rectal bleeding and sphincter spasm. In this study wound at anal region was healed completely after treatment within 21 days which was statistically highly significant ($P < 0.0001$) as shown in table no 2. Pain was significantly relieved in fissure-in-ano ($P < 0.0001$) with in due course of treatment as shown in table no 2. In per rectal bleeding was completely stopped after intervention of treatment which was statistically significant (P value < 0.0001) results were obtained and spasm was relieved significantly which was statistically highly significant ($P < 0.0001$) as shown in table no 3.



Before Treatment Application of Pichu after Treatment

Table 2: Results of Subjective parameters

| Sr.No. | Parameters | Time | Mean | SD | Median | Range | F value | P value |
|--------|---------------|----------------------|------|------|--------|-------|---------|------------|
| 1. | Wound Healing | Before treatment | 2.73 | 0.59 | 3 | 1-3 | 99.21 | <0.0001,HS |
| | | 5 th day | 2.13 | 0.64 | 5 | 1-2 | | |
| | | 10 th day | 1.33 | 0.72 | 1 | 0-2 | | |
| | | 15 th day | 0.53 | 0.51 | 1 | 0-1 | | |
| | | 21 st day | 0.20 | 0.41 | 0 | 0-1 | | |
| 2. | Pain | Before treatment | 7.13 | 1.24 | 8 | 4-8 | 114.44 | <0.0001,HS |
| | | 5 th day | 4.53 | 1.18 | 4 | 2-6 | | |
| | | 10 th day | 2.67 | 0.97 | 2 | 2-4 | | |
| | | 15 th day | 1.20 | 0.41 | 1 | 1-2 | | |
| | | 21 st day | 0.20 | 0.41 | 0 | 0-1 | | |

Table 3: Results of Objective Parameters

| Sr. No. | Parameters | Time | Mean | SD | Median | Range | F value | P value |
|---------|---------------------|----------------------|------|------|--------|-------|---------|------------|
| 3 | Per rectal bleeding | Before treatment | 1.46 | 0.91 | 1 | 0-3 | 29.12 | |
| | | 5 th day | 0.80 | 0.77 | 1 | 0-2 | | |
| | | 10 th day | 0.13 | 0.35 | 0 | 0-1 | | |
| | | 15 th day | 0 | 0 | 0 | 0 | | |
| | | 21 st day | 0 | 0 | 0 | 0 | | |
| 4. | Spasm | Before treatment | 1.93 | 0.70 | 2 | 0-3 | 72.36 | <0.0001,HS |
| | | 5 th day | 1.66 | 0.61 | 2 | 0-2 | | |
| | | 10 th day | 0.67 | 0.48 | 1 | 0-1 | | |
| | | 15 th day | 0 | 0 | 0 | 0 | | |
| | | 21 st day | 0.13 | 0.35 | 0 | 0-1 | | |

Significant (p<0.0001) results were seen in the interval of 5 days. In this study, before treatment wound healing score was 2.23 and on 21st day it was 0.20. Before treatment score for pain was 7.13 and on 21st day it was 0.20, P/R bleeding at before treatment 1.46 and on 21st day it was 0, Spasm at it's before treatment was 1.93 and on 21st day it was 0.13. One-way repeated measure ANOVA test for Post follow-up comparison of wound healing, Pain, PR bleeding, spasm at different time point as described in Table no. 4

Table 4: Comparison Before and After Treatment

| Comparison | Wound healing | | Pain | | PR Bleeding | | Spasm | |
|-------------------------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|
| | Mean difference | p-value | Mean difference | p-value | Mean difference | p-value | Mean difference | p-value |
| BT | 99.21 | <0.001,HS | 114.44 | <0.001,HS | 29.12 | <0.001,HS | 72.36 | <0.001,HS |
| AT- 5 th day | 0.60 | <0.001,HS | 2.60 | <0.001,HS | 0.67 | <0.001,HS | 0.26 | 0.041 |
| AT-10 th day | 1.40 | <0.001,HS | 4.46 | <0.001,HS | 1.33 | <0.001,HS | 1.26 | <0.001,HS |
| AT-15 th day | 2.20 | <0.001,HS | 5.93 | <0.001,HS | 1.46 | <0.001,HS | 1.93 | <0.001,HS |
| AT-21 st day | 2.53 | <0.001,HS | 6.93 | <0.001,HS | 1.46 | <0.001,HS | 1.80 | <0.001,HS |

Table 5: Overall Effect Of Therapy

| Assessment Criteria | No. of patients | Percentage |
|---------------------------|-----------------|------------|
| 100% Complete cure | 8 | 53.3 |
| 75-100 Markedly improved | 7 | 46.7 |
| 50-75 Moderately improved | 0 | - |
| 25-50 | 0 | - |
| <25 Unchanged | 0 | - |

Considering the overall effect 7 patients were markedly improved while 8 patients were completely cured. Overall assessment criteria- Presented by graphical method as 100% complete cure 53.3%, 50-75% Moderately cure 46.7%.

Chart No. 1- Overall Effect of Chandanbalalakshadi Tail in Fissure-in-Ano

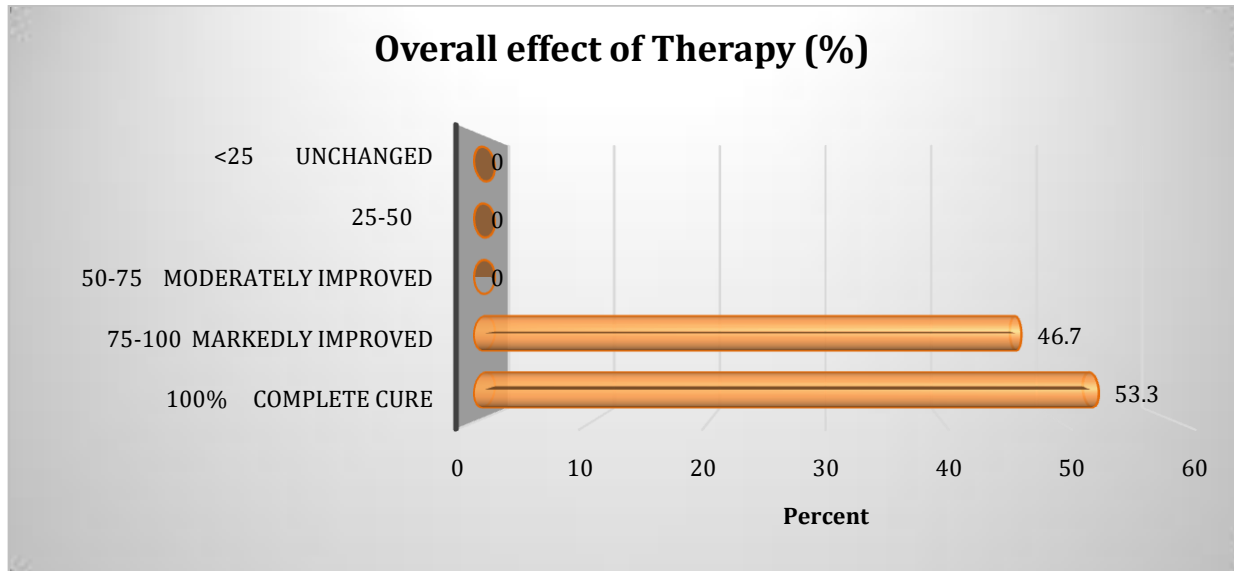
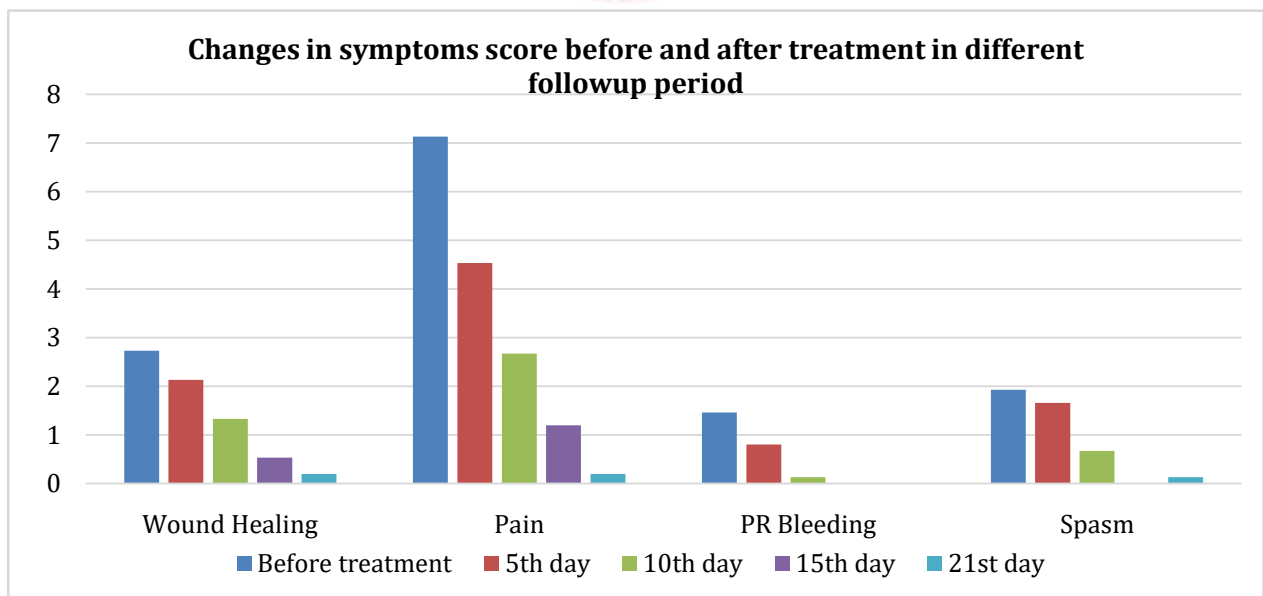


Table No.6- Changes in Mean Score of Assessment Criteria

| Changes in mean score of assessment criteria | | | | |
|--|---------------|------|-------------|-------|
| Score on days of Follow-up | Wound Healing | Pain | PR Bleeding | Spasm |
| Before treatment | 2.73 | 7.13 | 1.46 | 1.93 |
| 5 th day | 2.13 | 4.53 | 0.8 | 1.66 |
| 10 th day | 1.33 | 2.67 | 0.13 | 0.67 |
| 15 th day | 0.53 | 1.2 | 0 | 0 |
| 21 st day | 0.2 | 0.2 | 0 | 0.13 |

Chart No 2 - Changes in Mean Score of Assessment Criteria



DISCUSSION

Maximum patients were from age groups between 20 to 40 yrs. In this age, the person is more active and usually, they have altered *Ahara* and *Vihara* which leads to *Agni Dushti*, resulting in

constipation which is prime responsible factor for *Parikartika*. Local application of *Chandanbalalakshadi Taila pichu* is based on cellular absorption of medicine, acts as *Snehan*, *Vranaropan*, *Daha-*

prashaman and *Raktaprasadan Karma* which enhances wound healing in fissure bed. Due to its coolant properties it is useful to pacify the burning sensation. Ingredients in *Chandanbalalakshadi Taila* has astringent, anti-inflammatory and analgesics properties which promotes wound healing in *Parikartika*. Elaboration of action of each contain is as follows. According to Ayurveda, astringent property of *Chandan* helps for wound healing as *Kashayarasa* is useful for *Sandhana* i.e., healing, *Raktastambhan* in *Parikartika* was due to its *Kashayarasa* which have inherited property of *Stambhana*. *Chandan* is very well known as to mediate its anti-inflammatory properties in vitro through multiple mechanisms. It possess Antioxidant property which works against the oxidative enzyme 5-lipoxygenase and its radical scavenging activity reduces tenderness in fissure-in-ano^[10]. *Chandan (Santalum album)* oil has been found antimicrobial activity against many gram-positive strains of bacteria and some gram-negative bacteria^[11]. *Yasthimadhu (Glycyrrhiza glabra)* containing phenolic component in ethanolic extract is culpable for its antioxidant activity by means of hydrogen-donating and significant freeradical scavenging properties^[12]. *Yasthimadhu* root extract has potent antibacterial activity due to its saponins, alkaloid and flavonoid contents^[13]. *Nagkeshar (Mesua ferrea)* is astringent in nature which acts as *Vrana Ropaka* and *Raktastambhaka*. It is also included in *Vedanasthapak Gana* by *Sushruta* so acts as *Vednastapan*^[14]. According to modern view, *Mesua ferrea* contains xanthenes which is useful for anti-inflammatory activity so pain may get suppressed^[15]. *Laksha (Laccifer lacca)* heals the ulcer and stops bleeding from fissure bed due to its astringent, anti-inflammatory and Antiulcerogenic properties^[16]. *Nisha (Curcuma longa)* and *Ashwaganda (Withania Somnifera)* having *Shothther* property and *Nisha* having a strong anti-inflammatory property^[17]. The active constituents of turmeric are flavonoid, curcumin and various volatile oils including tumerone and zingiberone which plays major role in producing antioxidant and anti-inflammatory action.^[18] *Devdaru* oil possess anti-inflammatory and anti-microbial activities as well as wound healing properties so it is significantly effective in the treatment of infected wounds^[19]. *Devdaru* has spasmolytic activity due to serotonin, nicotine, acetylcholine^[20] which gave significant results to relieve spasm on present study. Antioxidant property of *Shunthi* which is useful for wound healing due to gingerols, shogaols, and some related phenolic ketone derivatives^[21] may help in this study. *Shunthi (Zingiber officinale)*

possess *Shulaprashamana* (analgesic) property as explained in Ayurvedic texts^[22]. *Bala (Sida cordifolia)* reduces local pain and useful for wound healing, due to its astringent value^[23]. Many Ayurvedic literatures has mentioned antispasmodic, antimicrobial and cooling property of *Usheer (Vetiveria zizanioides)*^[24]. For reducing pain, spasm and tenderness in *Parikartika*, *Rasna (Pluchea lanceolata)* is useful as it contains higher level of phenolic and ascorbic acid which acts against inflammation.^[25] The chemical extract of *Musta* contains flavonoids, tannins and polyphenols acts for healing of wound^[26]. *Musta* possess antiallergic activity which may reduce itching in perianal region^[27]. *Musta* has *Katu* (pungent), *Tikta* (bitter), *Kashaya* (astringent) and *Sheeta* (cold) potency which is useful against burning sensation at anal region in fissure-in-ano^[28]. *Katurohini (Picrorhiza kurra)* is antibacterial and anti-oxidant^[29]. Anti-inflammatory, anti-ulcer and spasmolytic activities of *Kusta (Saussurea lappa)* is useful in the treatment of fissure-in-ano. It contents costunolide and dehydrocostus lactone which is antimicrobial in nature^[30] helps keeping wound bacteria free. *Manjishta (Rubia cordifolia)* extracts were also evaluated for antioxidant property and it is also useful for wound healing In-Vivo research^[31]. According to Ayurvedic view, *Manjistha (Rubia cordifolia)* also having *Raktaprasadhak* and *Vranaropak* property. *Tila Taila* (Sesame oil) having *Snigdha* and *Guru Guna* which decreases *Rukshata* of *Vata* and antimicrobial property^[32,33]. Tannin presents in *Tila Taila* makes it antibacterial and astringent property helps in healing of *Vrana*. All above said properties in *Tila Taila* helps in healing of wound at anal region.

In conservative management of *Parikartika* by using local application *Chandanbalalakshadi Taila Pichu* patient had relief in pain at anal region. Local application of *Chandanbalalakshadi Taila Pichu* promotes the healing process in *Parikartika*. Spasm and itching were reduced quickly and healing of anal fissure occurred within 21 days.

CONCLUSION

Considering all above properties of individuals drugs, observations and results it can be said that *Chandanbalalakshadi Taila* is useful in reducing pain, inflammation, spasm and bleeding per rectum and healing of wound at anal region. Hence, it can be concluded that this oil is useful in the treatment in *Parikartika* (fissure-in-ano). There is no any complication or side effect seen with the application of *Chandanbalalakshadi Taila* in *Parikartika* (Fissure-in-ano).

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