



## **Effect of *Murivenna* Ointment in the Management of *Parikarthika* (Acute Fissure in Ano) – A Pilot Study**

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### **Authors' contributions**

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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### **ABSTRACT**

*Parikarthika* (Fissure in ano) is one of the most painful condition which is occurring in the ano rectal region. Due to irregular food habits and modern life styles of peoples in the present era has also added to the increase in the rate of incidence of fissure in ano. The aim of the present pilot study was to assess the effectiveness of *Murivenna* ointment in the management of *Parikarthika*. This study was conducted in 22 patients diagnosed as acute fissure in ano. Patients *Murivenna* ointment was applied locally with digitally in fissure bed (*Parikartika*) of all 22 patients. All patients were advised to follow this twice daily after sitz bath for 4 weeks or till healing of fissure bed whichever is earlier. Adjuvant drug *Triphalachurnam* 5 gm orally at bedtime with lukewarm water was prescribed daily to all patients with constipation. There was significant relief in symptoms like pain in ano and bleeding per rectum in all patients after 30 days of treatment. The anal sphincter tonicity became normal in 21 patients (95.45%) after 30 days of treatment. Ulcer in ano was completely healed in 19 patients (86.36%) after 30 days of treatment. There was no reoccurrence in all patients after 30 days of follow up. The irritable symptoms like pain and bleeding per rectum were effectively relieved within 14 days of treatment in all patients. It is one of the effective treatments in the management of fissure in ano as it relieved the cardinal symptoms of fissure in ano such as cutting pain and burning pain.

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**Keywords:** *Parikarthika; fissure in ano; Murivenna; ointment.*

## 1. INTRODUCTION

Fissure in ano is one of the most common painful disease which is occurring in the ano rectal region. It affects a great majority of population and occurs at any age irrespective of gender. The term fissure itself denotes a split or crack. It has been described as an acute superficial break in the continuity of the anal canal [1]. The cutting pain and burning pain are the cardinal symptoms of fissure in ano. In Ayurvedic science it is known as *Parikartika* which refers to a condition in which patient experiences a sensation of pain as if the anal canal is being cut around with scissors [1].

The causative factors of *Parikarthika* is described in different context of Ayurvedic classics as a Upadrava(complication). This includes complications due to various procedures such as *Vamana-Virechana-Vyapad* [2], *Basti Vyapad* [3] and *Basti Netra Vyapad* [4] and also due to various complications which arise from the diseases such as *Vataja Athisara* [5]. Kashyapa also mentioned about this disease that it is most prevalently affected in *Garbhini* (gravid women) [6]. *Apana Vayu* which is one type of *Vata Dosha* is concerned with the expulsion of *Sakrit* (faeces) and *Mutra* (urine). The vitiation of *Apana Vayu* cause to occur abnormal functions like passage of hard and loose stools etc. The *Vrana (wound)* which is developed in *Parikartika* is mostly due to *Nija* (Self causative factors) in origin like hard stool passage, intermittent passing of loose stool etc. So *Apana Vayu* vitiation can be considered as a chief causative factor for the manifestation of *Parikarthika*.

Due to the similarity in the classical signs and symptoms *Parikarthika* can be correlated as fissure in ano in modern science. A fresh cut linear ulcer is developed either at anterior or posterior part of anal canal. Its management is more difficult due to its recurrence nature. Fissure in ano has been classified into acute and chronic on the basis of clinical symptoms. Whether it acute or chronic it makes the patient suffer from excruciating pain and bleeding during and after defecation. The patho-physiology is based on high anal sphincter pressure. Management is generally aimed towards the healing of ulcer along with reduction of anal sphincter pressure. There are many management protocols for fissure-in-ano in modern science as well as in Ayurvedic science. Modern management includes medical

manipulation of the internal sphincter and softening of stool in case associated with constipation. Ointments containing Diltiazem Hydrochloride 2% Gel, glyceryl trinitrate (GTN), 2% lignocaine ointment or 2% hydrocortisone cream are commonly used in the management of fissure in ano. Ayurvedic management includes *Avagaha Swedana*(medicated luke warm water sitz bath), *Snehavasthi* (Oil enema therapy) and *Lepanam*(medicated ointments).In *Parikarthika* a fresh cut linear ulcer is developed either at anterior or posterior part of anal canal and patients demand urgent relief from burning pain. So that *Parikarthika* can be considered as *Sadya Vrana* [7]. The cutting pain and burning pain are the cardinal symptoms of *Parikarthika*. Hence, we can understand that there is involvement of *Vata* and *Pitta Dosha*. Hence the drugs which are either *Vata or Pitta Dosha Shamaka*and *Vranaropana* properties are found to be very effective in the management of *Parikarthika*. *Jatyadi Ghruta, Yastimadhu Ghruta, Kasisadi Taila, Vranaropaka Taila* are used which are proven effective in healing of fissure in ano [8].

*Murivenna* is a medicated oil which is prepared with eight medicinal plants - *Karanja, Kumari, Tamboola, Sigru, Paribhadra, Palandu, Vasuka* and *Satavari* [9]. It is widely used in the conditions like contusions, fresh wounds, ano-rectal diseases and even for fractures [9]. Due to its *Vata Dosha Shamaka* and *Vranaropana* properties, *Murivenna* will be very effective in the management of *Parikarthika*. Oil enema and Pichu with *Murivenna* are widely practicing by Ayurvedic practitioners in *Parikarthika*. Even though these procedures are widely performing there are some practical difficulties which are experienced by the patients during and after the application. Oil enema in less than 15 ml quantity should follow for more than 2 to 3 weeks up to the healing of fissure-in-ano wound. So, most of the practitioners train the patients to carry out the procedure themselves at home. However, the patients experience difficulty in administration of oil enema by themselves. Pain aggravation was also one of the problem due to improper insertion of enema nostril towards anal canal. Moreover, lot of patients hesitate to follow this due to fear. Due to this most of the patients are withholding the treatment during its course period. So, there is need to find out alternative form of this *Murivenna* oil which should be easily applicable and equally effective and should be acceptable by the patients to overcome above said practical

difficulties. Thus, the idea behind the preparation of ointment form of *Murivenna* was formulated. Application of Ointment is quite easy than oil and it can be applied in any time even during working hours. It is also being a cost-effective therapy.

## 2. MATERIALS AND METHODS

### 2.1 Source of Data

- Literary Source: All the available Ayurvedic, modern literature and contemporary texts and also includes the journals and internet sources about the disease and drug was reviewed and documented.
- Pharmaceutical Source: The *Murivenna* ointment was selected for the present research work was prepared from the Triveni Pharmaceuticals, Thiruvananthapuram which is having G.M.P certification.
- Clinical Source: Diagnosed patients were selected randomly from *Shalya tantra* OPD and IPD of hospital Triveni Nursing Home, Thiruvananthapuram.

### 2.2 Method of Collection of Data

For the present Pilot study 22 patients of either sex were selected randomly from OPD and IPD of hospital Triveni Nursing Home, Thiruvananthapuram. The selected patients were treated with *Murivenna* ointment. All points of history taking, physical examination and lab investigation were noted in a special case proforma. Selected patients were noted before, during and after the proposed treatment and the changes in the parameters were documented in Case Proforma. Clinical study was conducted on diagnosed cases after obtaining voluntary informed consent.

### 2.3 Study Design

An observational non comparative pilot study.

### 2.4 Inclusion Criteria

- Parikarthika* (Acute fissure-in-Ano) diagnosed patients
- Patients between 18 and 65 years of age group.

- Systemic diseases patients like Diabetes and Hypertension who were in well controlled included in the study

### 2.5 Exclusion Criteria

- Patients having *Parikarthika* having more than 6 weeks duration were excluded.
- Patients below 18 & above 65 years of age were excluded in the study.
- Patients having multiple fissure in ano were excluded.
- Fissure-in-ano associated with fistula and haemorrhoids.
- Uncontrolled Diabetes mellitus and Hypertension
- Patients suffering from HIV, Hepatitis-B, Tuberculosis were excluded.

### 2.6 Methods of Treatment

All selected patients were treated as out patients. Patients were treated with *Murivenna* Ointment. *Murivenna* ointment was applied locally in fissure bed (*Parikarthika*) with digital was followed twice daily after sitz bath for 4 weeks or till healing of fissure bed whichever is earlier. Adjuvant drug *Triphala Churnam* 5 gm orally at bedtime with lukewarm water was prescribed daily to all patients with constipation.

### 2.7 Drug Preparation

*Murivenna* Ointment is a modified preparation without any direct classical references. Ointment form of *Murivenna* was prepared by adding melted *Madhuchishta*(bees wax) into oil *Murivenna*. The procedures were according to the rules of *Malahara*(Ointment) *Kalpana* [10]. 1:6 was the ratio followed for the preparation of the ointment. Small pieces form of *Madhuchishta*(Bees wax)was added slowly in the oil *Murivenna* which was boiled under mild intensity of fire. After complete dissolution of wax into oil, it was filtered properly by a clean cloth. The ointment was filled into the tubes [11].

### 2.8 Assessment Criteria

The signs and symptoms of *Parikartika*(Acute fissure-in-ano) are pain in ano, bleeding per rectum and constipation which were noted in the proforma during history taking. Assessment of the result was done on different criteria like Pain, bleeding per rectum, anal sphincter tonicity and ulcer in Ano.

**Table 1. Ingredients of murivenna ointment [12]**

Sl. no	Ingredients	Quantity	Parts Used
1	Pongamia glabra	600 gm	Bark
2	Piper betle	600 gm	Leaf
3	Aloe vera	600 gm	Leaf
4	Erythrina indica	600 gm	Leaf
5	Allium cepa	600 gm	Bulb
6	Moringa oleifera	600 gm	Leaf
7	Spermacoce hispida	600 gm	Whole plant
8	Asparagus racemosus	120 gm	Rhizome
9	Coconut oil	100 ml	
10	Bees wax	15 gm	

**Table 2. Assessment criterias**

Gradation	Pain in Ano	Bleeding per rectum	Anal sphincter tonicity	Ulcer in Ano
0	Free from pain	Nil / spotless gauze	Normal tonicity	No ulcer
1	Pain at the time of defecation & subside within 30 mins	Few drops of blood on gauze (2" * 2")	Mild	Clean and healthy ulcer
2	Pain at the time of defecation & persist for more than 30 min to 1 hr	Half gauze wetted with blood discharge (2" * 2")	Moderate	Presence of ulcer with indurated margins
3	Continuous unbearable pain which persist more than 1 hr	Total gauze wetted with blood discharge (2" * 2")	Severe	Presence of ulcer with indurated margins and slough

### 3. RESULTS AND DISCUSSION

There was significant relief in symptom like pain in ano and bleeding per rectum in all patients after 30 days of treatment. The anal sphincter tonicity became normal in 21 patients (95.45%) after 30 days of treatment. Ulcer in ano was completely healed in 19 patients (86.36%) after 30 days of treatment. There was no reoccurrence in all patients after 30 days of follow up.

*Murivenna* is a traditional medicated oil which is prepared with eight medicinal plants - *Karanja*, *Kumari*, *Tamboola*, *Sigru*, *Paribhadra*, *Palandu*, *Vasuka* and *Satavari*. It is widely used in the conditions like contusions, fresh wounds, ano-rectal diseases and even for fractures [9]. Due to its *Tridosha Dosha Shamaka*, *Shoola Prashamana*, *sophakara* and *Vranaropana* properties, it is very effective in the management of *Parikarthika*. The base of oil *Murivenna* is coconut oil. This increases the permeability of skin and in turn increases the bioavailability of drugs [13]. Coconut oil is having *Seetha Veerya* (Cold in potency) which suddenly reduces inflammation [14]. Individual drugs of *Murivenna*

having anti-inflammatory properties. Anti-inflammatory activity decreases wound exudate promotes analgesic effect and supports the process of wound healing. One research study also reported that *Murivenna* shows healing properties [14].

*Madhuchishtha* (Beeswax) plays an important role in traditional Indian medicine. The qualities bees wax are *Mridu* (soft), *Snigdha* (unctuous) and having the properties like *Vrana Shodhana* (cleansing the wound) and *Vranaropana* (healing the wound) [15]. Beeswax is used for the care of wounds from abrasion or even from burns with topical application [16]. It has been shown to be particularly effective in the treatment of heel cracking [17]. One study was conducted with the mixture of natural honey, olive oil and beeswax to analyse its effectiveness in the management of anal fissure. The results of the study demonstrated that patients with anal fissure showed significant reduction in pain, bleeding and itching after the treatment. The study was concluded that improvement for the anal fissure was due to the anti-inflammatory, antioxidant and healing properties of Bees wax [18]. *Murivenna*

ointment was prepared by adding melted *Madhuchishta*(bees wax) into oil *Murivenna*. Both *Murivenna* and Bees Wax are having anti-inflammatory and wound healing properties. Due to this *Murivenna* Ointment is a better therapeutic combination in the management of acute fissure in Ano.

#### 4. CONCLUSION

*Murivenna* is a traditional medicated oil which is widely used in the conditions like contusions, fresh wounds, ano-rectal diseases and fractures. *Murivenna* ointment which was prepared with oil *Murivenna* and Bees wax are very effective medicine for the symptomatic relief in the management of acute fissure in ano. It is also having anti-inflammatory and wound healing properties. There is no need of hospital stay as this treatment is completely out patient-based system. The irritable symptoms like pain and bleeding per rectum were effectively relieved within 14 days of treatment in all patients. It is one of the effective treatment in the management of fissure in ano as it relieved the cardinal symptoms of fissure in ano such as cutting pain and burning pain. There was marked improvement noted in majority of patients in ulcer healing. Hence *Murivenna* ointment can be considered as better alternative for the symptomatic relief in the management of acute fissure in ano.

#### DISCLAIMER

The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

#### CONSENT

As per international standard or university standard, patients' written consent has been collected and preserved by the author(s).

#### ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

#### COMPETING INTERESTS

Authors have declared that no competing interests exist.

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