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CLINICAL STUDY IN THE MANAGEMENT OF FISSURE-IN-ANO WITH DURVADITAILA GUDAVARTHI

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ABSTRACT

Fissure in ano is a longitudinal tear in the anoderm of the distal anal canal extending from the anal verge proximally towards the dentate line. As a treatment, surgery, which has got drawback, remains the preferred option for the 40% of patients due to reoccurrence or therapeutic failure with prior pharmacological treatment. In this study, 21 patients suffering from fissure in ano were selected at random from SDM Ayurveda Hospital, Udupi. Patients who were satisfied all the inclusion criteria and exclusion criteria were included in the study. These patients were treated *with durvaditailagudavarthi*, twice daily for 14 day and the observations were recorded. The study revealed that *Yasthimadhugudavarti* helps in relieving pain, control bleeding, and heals the ulcer. The study had a positive outcome and can be recommended as a therapeutic procedure in fissure in ano.

Keywords: Fissure-In-Ano, *parikartika*, *DurvadiTaila*

INTRODUCTION

Dietary habits and lifestyle of human being are changing in an undesired pattern. Altered life style and food habits cause various ailments pertaining to gastrointestinal tract. Constipation is one of the root causes for many anorectal diseases. Fissure in ano is a common anal disease afflicting the Indian population in the recent few decades. An anal fissure is a longitudinal split in the anoderm of the distal anal canal which extends from the anal verge proximally towards, but not beyond, the dentate line[1]. Fissure-in-Ano is one such Ano rectal diseases where the incidence is increasing day by day. The incidence of Fissure in Ano is around 1 in 350 adults and this disease is ranked 3rd after constipation and Hemorrhoids. They occur commonly both in males and females and most often occur in adults aged 15 to 40 [2]. The commonest site of fissure in ano is posterior midline or 6 O'clock position. Anterior fissures are more common in women than in men and are often observed in the post parturition period. The relative frequency of the anterior fissures in the females may be explained by the trauma caused by the fetal head on the anterior wall of the anal canal during the delivery. Fissures are nearly always single but two or more fissures may rarely coexist. Here the characteristic symptoms include tearing pain with defecation and hematochezia (usually described as blood on the toilet paper)[3]. Pain may be at times so severe as to cause defecation phobia due to intense spasm of

anal sphincter lasting for several hours after passing bowel. The disease is often seen in people with sedentary life style or is continuously travelling.

Parikartika, is a disease condition described in *AyurvedicGranthas* which is characterized by an excruciating, cutting pain in the anus. In *Brihattrayee, Parikartika* has been described as a *vyapath* of *Virechana* and *Bastikarma*. According to *Acharya Susrutha*, the pathognomonic feature of *Parikartika* is*kshanana*[4]/injury of *Guda* causing the typical cutting pain. Similar injury occurs in the anoderm in fissure in ano causing excruciating pain on defecation.

The treatment options for fissure in ano include conservative management or Surgery. Conservative treatment options include use of topical local anesthetic agents, sitz bath, usage of anal dilators, nitric oxide which is a neurotransmitter which induces relaxation of internal sphincter, glyceryl trinitrate which is a nitric acid donor and is applied as an ointment to the anal Canal to produce the relaxation of the internal sphincter etc.[5]

As a treatment, surgery remains the preferred option for the 40% of patients. Surgery should be offered when there is intense pain, therapeutic failure or recurrence with prior conservative treatments. Surgeons prefer the technique of Fissuretomy &/ Sphincterotomy as the treatment of Fissure in Ano. The drawback to sphincterotomy is bleeding, wound infection, and impaired control of bowel movements / gas, which to up to 14 % have been reported. Moreover hematoma formation and abscess formation has also been reported in 10% to 12% of patients. So an alternative treatment which is least invasive, cost effective, easy to administer, having a healing effect on the wound of fissure and associated sphincter spasm needs to be devised.

The primary pathology in Fissure in ano is a wound (*vrana)*. *Doorvaditaila*[6] is a formulation explained in *Sahasrayoga* having healing effects on *Vrana*. *Varthi* is one of the therapeutic procedures explained under the treatment of *vrana*. Hence an attempt is made to use *Durvaditailagudavarthi* to treat Fissure in ano.

Study objective

To evaluate the effect of *durvaditailagudavarthi* in the management of Fissure in ano.

Methodology

In this clinical study, 21 patients suffering from fissure in ano were selected at random from S.D.M. Ayurveda Hospital, Udupi. A detailed history was obtained and recorded in a proforma designed specifically for this study. Only those patients who satisfied all the inclusion criteria and exclusion criteria were included in the study. The selected 21 patients were assessed as per the criteria listed in the specific proforma and all findings were recorded. The patients were then demonstrated the method of preparing a *varti* (wick) approx. 3cm of cotton and impregnating it with the given *durvaditailam* and the method of inserting it into the anus. They were provided with *durvaditaila* and cotton and were instructed to repeat the procedure twice daily for 14 days - once in the morning after passing stools and at bedtime. Patients were instructed to maintain the *varti* in place till they can retain. Patients will be observed once in a week. Follow up of the patient will be done once in a week for 2 weeks.

STATISTICAL ANALYSIS

Collected data was statistically analyzed using GraphpadInstat software. And the statistical tests used were Chi square test and paired t test.

INCLUSION CRITERIA:

- Patients with clinical signs and symptoms of Fissure in ano
- Selection of patients is done irrespective of gender and religion.
- Patients were selected in the age group between 15-60 years.

EXCLUSION CRITERIA:

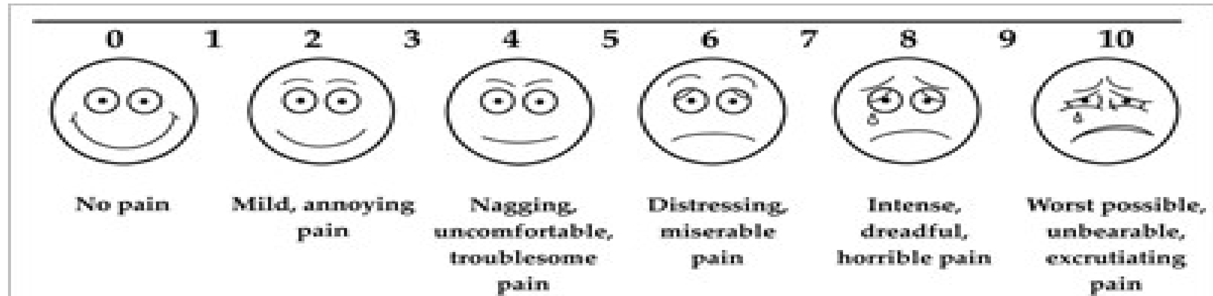
- Patients suffering from systemic diseases – Hepatitis, Diabetic Mellitus, Tuberculosis, HIV.
- Patient with associated Anorectal disease – Fistula in Ano, Hemorrhoids, Polyp, Malignancy.

ASSESSMENT CRITERIA

SUBJECTIVE CRITERIA

1. **Pain**

Fig.1 Visual analogue scale



2. **Bleeding**

Present – 1

Absent- 0

3. **Constipation**

Symptoms	Grading
Daily	0
3rd day	1
4th day	2
5th day or >	3

4. **Pruritus**

Symptoms	Grading
Absent	0
Mild	1
Moderate	2
Severe	3

OBJECTIVE CRITERIA

1. **Size of the ulcer**

INVESTIGATIONS

- Hb%
- TC
- DC
- FBS
- Any other investigation if required.
- Only those patients with normal reading would be selected for the study.

RESULTS

Results of the study were analyzed using GraphpadInstat software. And the statistical tests used were Chi square test and paired t test.

Effect of the Treatment on pain- The mean score of pain before treatment was 3.80, after treatment the mean score was 1.04, mean score during 1st follow up which was on 21st day was 0.47, mean score after 2nd follow up which was on 28th day was 0.38, with improvement of 73%, 99% and 90% respectively. Result on pain showed an extremely significant result with P Value <0.0001. [Table 1]

Effect of Treatment on bleeding- In Group mean score observed before the treatment was 0.66. After Treatment value reduced to 0.62, the effect of treatment showed 93% improvement in bleeding score with statistically extremely- significant (p=0.0002).

After follow up 1 value reduced to 0.62, the effect of treatment showed 93% improvement in BLEEDING score with statistically extremely- significant (p=0.0002). After follow up 2 value reduced to 0.62, the effect of treatment showed 93% improvement in BLEEDING score with statistically extremely- significant (p=0.0002).[Table 3]

Effect of treatment in pruritus - In Group, mean score observed before the treatment was 0.33. After Treatment value reduced to 0.00, the effect of treatment showed 100% improvement in prurutus score. After follow up 1 value reduced to 0.00, the effect of treatment showed 100% improvement in prurutus score. After follow up 1 value reduced to 0.00, the effect of treatment showed 100% improvement in pruritus score. This is statistically non interpretable but clinically significant. This is due to very small sample size suffering from this condition.

Effect of treatment in constipation - In Group mean score observed before the treatment was 0.04. After Treatment value reduced to 0.00, the effect of treatment showed 100% improvement in constipation score. After follow up 1 value reduced to 0.00, the effect of treatment showed 100% improvement in constipation score. After follow up 1 value reduced to 0.00, the effect of treatment showed 100% improvement in constipation score. This is statistically non interpretable but clinicallysignificant. This is due to very small sample size suffering from this condition.

Effect of treatment in size of the ulcer - In Group mean score observed before the treatment was 3.85. After Treatment value reduced to 1.23the effect of treatment showed 68% improvement in size of ulcer score with statistically extremely- significant (P=0.0003). After follow up 1 value reduced to 0.37, the effect of treatment showed 90% improvement in size of ulcer score with statistically extremely- significant (P<0.0001). After follow up 2 value reduced to 0.28, the effect of treatment showed 92 % improvement in size of ulcer score with statistically extremely- significant (P<0.0001).[Table 2]

Table 1: Effect of treatment in pain

Group	N	BT Mean			Diff D	%	Paired t test			
							SD	SEM	P	Significant
	21	3.80	D 15	1.04	2.76	72.6	1.02	0.22	<0.0001	ES
			FP 1	0.47	3.75	98.6	0.87	0.19	<0.0001	ES
			FP2	0.38	3.42	90	0.38	0.22	<0.0001	ES

Table 2: Effect of treatment in size of the ulcer

Group	N	BT Mean			Diff D	%	Paired t test			
							SD	SEM	P	Significant
	21	3.85	D 15	1.23	2.62	68	2.07	0.45	0.0003	ES
			FP 1	0.38	3.47	90	0.80	0.17	<0.0001	ES
			FP2	0.28	3.57	92	0.71	0.15	<0.0001	ES

Table 3: Effect of treatment on Bleeding

Group		D1	D15	FP1	FP 15
	P	14	1	1	1
	A	7	20	20	20
	P VALUES	<0.0001			
	Significant	ES			

DISCUSSION

When the literature is reviewed thoroughly, two terms come across, *Parikartika* and *Parikartana*.

Parikartika is being described as a disease condition and *Parikartana,* a similar nomenclature is considered to be a *Lakshana*, which is present in few diseases related to the *Annavaha, Pureeshavaha* and *MootravahaSrotas.*

PARIKARTIKA

It is a condition specially related to the *GudaPradesha* with *Vedana*, while *Parikartana* is a *Vedana* which may be *TeevraVedana* present elsewhere. *Parikartika* is a disease condition restricted only to the *Gudapradesha* as it is explained as a *Vyapath of Virechana Karma* or *Basti Karma*, caused due to injury. As there is *KanthaKshana* due to *Athiyoga of Vamana, Parikartika* occurs due to *kshanana* of *Guda* as a result of *Atiyoga* of *Virechana*[4]. The word *Kshanana* refers to injury. Pain is the main symptom

in *Parikartika*, which is an excruciating, cutting type of pain in the anal and perineal region.

FISSURE-IN-ANO - As the name suggests, the disease is confined to anal region or the anal canal. There is an injury i.e., an ulcer or a tear present in the anal canal. It is characterized by sharp, excruciating, cutting type of pain during and after defecation. Pain is the chief symptom.

It is also observed that patients present with fissure in ano after episodes of acute diarrhea, antibiotic intake and anorectal surgeries especially hemorrhoidectomy.

The pain in fissure in ano is so severe that the patient will be having phobia to pass the bowel (defecation phobia). This pain is primarily due to spasm of the internal sphincter. Pain is always caused due to *vataprakopa*[7] and *taila* is basically *vatashamaka* particularly *Tila taila*[8]. When the patient passes hard stools, it mostly rubs upon the ulcer present in the anus causing *raktasravasa* which may further cause *vataprakopa* due *to dhatukshaya. Rakta* is named as the 4th *dosha* and its protection is very essential. In chronic fissures often the patients suffer from anemia. In the formulation *Durvaditaila*, *Durva* is having *sheetaveerya*, *Kashaya rasa*, acting as *rakta stambhaka*[9]and*vranaropaka*. Further, *tilataila* is a potent *vatashamaka*. Most patients complain that the first part of the stool is hard to pass and that initiates all the discomfort in fissure in ano. *Taila* used in this formula by its very nature acts as a lubricant and soothing agent which helps in easy passage of stools in patients with fissure in ano. Further, when we go through the *phalashruthi* of *Durvadidaila,* it is said that "*vrinehitam*" ideal in ulcers. All these properties of *Durvaditaila* have helped to reduce the symptoms of the disease and healing of fissure in ano.

CONCLUSION

Anal fissure is a longitudinal split in the anoderm of the distal anal canal which extends from the anal verge proximally towards, but not beyond, the dentate line. The disease can be compared with the clinical condition *Parikartika*. In the study it is observed that the bleeding stops within 3 – 4 days of intervention. Use of *Durvaditailagudavarti* substantially reduces the symptoms of Fissure in anoand eventually helps to heal the ulcer.

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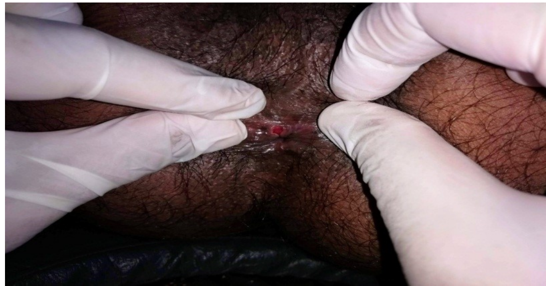
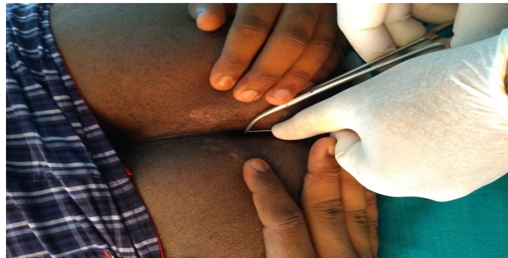
Before and after treatment

Case 1

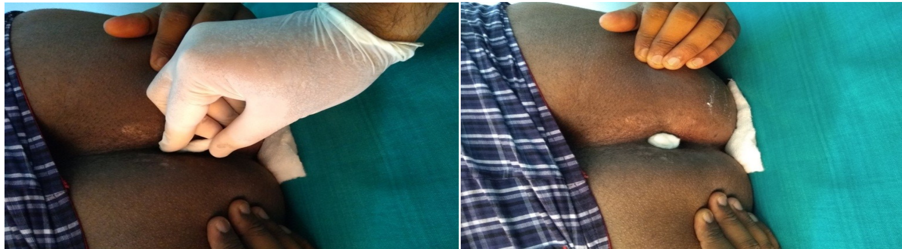
Before treatment



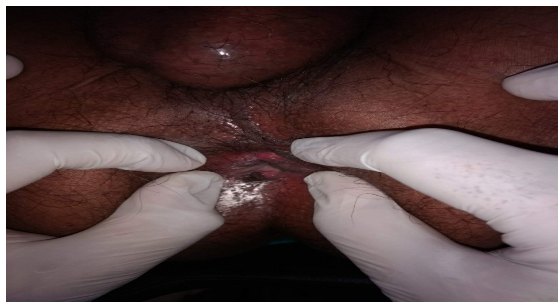
Mesuring the size of the ulcer



Insertion of Gudavarthi



After treatment



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