

EFFICACY OF APAMARGKSHARAPRATISARAN (LOCAL APPLICATION) AT CHRONIC FISSURE BED FOLLOWED BY ANAL DILATION IN PARIKARTIKA WITH SPECIAL REFERENCE TO CHRONIC FISSURE IN ANO

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ABSTRACT

Ayurveda deals with healthy status of human to be kept healthy as well as diseased person should be made healthy. Today's life style is responsible for ano rectal disease and a number of individuals are sufferer from these disorders. Fissure in ano can occur at any stage of life i.e. even children and infants can have fissure. The cause of fissure in ano is primarily constipation with passing of hard stool and secondary due to many diseases like chronic amoebic dysentery, diverticulitis, IBS, ulcerative colitis etc. and even post haemorrhoidectomy or fistulectomy. The disease has been classified into two varieties viz. acute fissure in ano and chronic fissure in ano. Acute fissure in ano is a condition in which duration of symptoms The 80 cases of chronic fissure in ano age group between 14 to 40 years of both sexes complaints with painful defecation, bleeding PR, constipation with chronic linear ulcer at fissure bed who advised for antibiotic, analgesic, anti-inflammatory as conservative treatment and finally diagnosed for application of *ApamargaKshara* followed by anal dilation or only anal dilatation. Taking all pre-operative measures, operative procedure was carried out under appropriate anesthesia. Patient was observed postoperative 1st, 3rd, 5th, 7th, 14th, 30th, 60th days. All observations were recorded and critically analyzed. The healing rate of application of *Kshara* was fast as compared to only anal dilatation. No untoward effect was observed in any patient after cure.

Key word: chronic fissure in ano, *Parikartika*, *Apamarga*, *Kshara*, Anal dilatation.

INTRODUCTION

Ayurveda is holistic science of life dealing with a lot of doctrines rendering a unique contribution to human being for physical, mental, social and spiritual sound health. *Shalyatantra* is one of the most important branches of Ayurveda science in which surgical as well as pa surgical techniques are highlighted.

Kshastrakarmas and Para-surgical procedures i.e. *Sharkarma*, *Agnikarma* and *Raktamokshana* as per deemed fit to the disease. Among para surgical measures *Ksharkarma* is the most important and effective therapy in *Shalyatantra*. Fissure in ano can occur at any stage of life i.e. even children and infants can have fissure. *Parikartika* (Chronic fissure in ano) is

having the prevalence rate in India, approximately 6 to 15 %. [1] The cause of fissure in ano is primarily constipation with passing of hard stool and secondary due to many diseases like chronic amoebic dysentery, diverticulitis, IBS, ulcerative colitis etc and even post haemorrhoidectomy or fistulectomy. The common site of fissure in ano is 6 o'clock i.e. midline posterior, lower half of anal which is commonly found in young adults and after delivery in females. The disease has been classified into two varieties viz. acute fissure in ano and chronic fissure in ano. [2] Acute fissure in ano is a condition in which duration of symptoms are less than 6 months and inflammation of anal mucosa. In chronic causes the duration of symptoms are usually more than 6 months and there is recurrence of acute pain which is subsided by conservative treatment. In *Ayurvedic* classics, the nomenclature which is similar to that of fissure in ano is 'Parikartika'. *Sushruta* has also described the term *Parikartika* as a condition of Guda in which there is cutting and burning pain. The factors responsible for causation of *Parikartika* are found as *Vamana* and *Virechanavyapada* (complication of *Vaman* and *Virechana* procedures), *Bastikarmavyapada* (complication of *Basti* procedure). [3] *Charaka* has mentioned that people living in *JangalaPradesha* are dry and if they take more dry food that vitiates *Vatadosha* which leads to *Vibhanadha* (Constipation) one of the important causative factor of *Parikartika*. [4,5] At present modern surgical treatment like anal dilation (lord's dilation), partial lateral sphincterotomy, fissurectomy are available but they have their own limitation like recurrence, incontinence etc. [6] and may not acceptable to all categories of people.

AIM: To, study the efficacy of local application of *ApamargKshara* at Chronic Fissure bed followed by anal dilatation.

OBJECTIVES

- 1) To promote the use of Ancient Indian therapies in Fissure-in-Ano.
- 2) To reassess the ancient modality of treatment as per scientific norms.

MATERIAL AND METHODS The preparation of *Apamarg Kshara* was done according to procedure described in *Sushruta Samhita*. [7]

All patient gives consent for clinical trial. The consent form was prepared in bilingual format. All clinical work was done under ethical committee surveillance and recorded under ethical committee survey no. as GAC/IEC-No./174/2014 at Government Ayurved College and Hospital.

Number of Subject: 40 patients in each group were randomly allocated.

Criteria for Selection:

Inclusion Criteria:

- All patients having chronic Fissure-in-Ano.
- Male and Female patients of age group 14 to 40 years.

Exclusion Criteria:

- Patient having chronic Fissure-in-Ano secondary to other disorders.
- Pregnant women.
- Patients having other serious disorders.
- HIV and HBsAg positive patients.

Withdrawal Criteria: Patients which have adverse effect of *Apamarg Kshara* application.

Material:

- Slit Proctoscop -
Apamarg Kshara
- Lignocain gel -Lemon juice
- Pads - Sterile water
- Betadine -*Yashtimadhu Siddha Ghruta*

- Towel clips -WoodenScale.

Method:

Study Place: OPD and IPD Government Ayurved College, Nanded.

Group A:

Pre-Operative Procedure: All the patients was elaborated with all necessary investigations. Surgical fitness was taken. Inform consent was taken part preparation and bowel preparation was done.

Operative Procedure:

Under appropriate anesthesia with all aseptic precautions patients were taken in lithotomy position.

- Anal dilation carried out (Lord's procedure)
- Slit proctoscope inserted into anus & length of Fissure Bed measured.
- Application of *ApamargKshara* at fissure bed
- After 5 minutes,
- Wash it by lemon juice.
- Application of *YashtimadhuGhruta* at fissure
- Anal pack kept

Post-Operative Procedures:

- NBM for 6 hours
- Antibiotics
- Analgesic
- Antacid will be given.
- Remove anal pack after 6 hours.

Group B: Same procedure done except application of *Apamarg Kshara* and *Yashtimadhu Ghruta*. Patients will discharge at 7th day. Follow up study on post operative day 1st, 3rd, 5th, 7th, 14th, 30th, & 60th days.

Drug review

COLLECTION OF HERBS: In this *Apamarga* as whole plant has been used for the preparation of *Kshara* so details of *Apamarga* are given as follows.

Apamarga:

Latin Name : *Achyranthus Aspera* Linn

Family : *Amaranthace*

Classical names: *Adhashalya, Kharamanjari, Mayuraka, Marketi, Durgraha, Pratyak Pushpa, Shikhari, Kinihi.*

English: Prickly –chaff flower, rough chaff tree.

Hindi: *Chirchira, Chirchitta, Latjira, Chirachiri*

Rasapanchaka of Apamarga: [8]

Rasa: Katu, Tikta

Guna: Laghu, Ruksha

Virya: Ushana

Vipaka: Katu

Karma: Kaphavatahara, Sirovirechana, Deepana-pachana, Medohara

Part used: *Panchanga* (whole plant)

Pharmacological action: Diuretic, Antifungal, Hypoglycemic etc.

Preparation of Apamarga Kshara: The *Apamarga* as a whole collected in the season and are dried in shadow then all parts along with their branches, fruit, and root are taken and heap in clean place for burning. After complete burn the cool ash has been collected and filtered for remove waste particles. Then six portion of water has to be added to the ash and mixed thoroughly. Later on it has to be filtered 21 times with the help of a clean cloth. The filtrate should be collected separately from rest other portion. Lastly that filtered liquid has to be heated with the help of slow flame; when the liquid attain the property of semisolid, red in color and *picchila*, it has to be taken out. After drying up it is found in the form of while granule which is *Kshara*. It was then stored in air tight container and used for *Kshara*.

CRITERIA FOR ASSESSMENT AND RESULTS

Assessment Criteria:

Criteria for assessment of the parameter are...

Pain Intensity: - Pain will be grades as per VAS Scale.

Pain absent - 0 Pain present - 1

Bleeding per rectum

Absent - 0

Present - 1

Bowel Habits

Easy evacuation - 0

Hard stool - 1

Anal sphincter spasm by digital

Absent - 0

Present - 1

Pruritus Ani

Absent - 0

Present - 1

LENGTH OF FISSURE - In mm.

Table showing the effect of treatment on pain

D A Y	TRIAL GROUP	CONTROL GROUP	CHI-2 VALUE	P-VALUE
1	4 0 (1 0 0 %)	4 0 (1 0 0 %)	-	-
3	2 6 (6 5 %)	2 3 (5 7 . 5 0 %)	0 . 4 7 4 0	> 0 . 0 5
5	5 (1 2 . 5 %)	1 5 (3 7 . 5 %)	6 . 6 6 7	< 0 . 0 5
7	2 (5 %)	1 3 (3 2 . 5 %)	9 . 9 2 8	< 0 . 0 5
1 4	0	2 (5 %)	2 . 0 5 2	> 0 . 0 5
3 0	0	0	-	-
6 0	0	0	-	-

According to above chart, the pain was relived found in trial group on 14th day and control group on 30th day of trial period.

Table showing the effect of treatment on spasm.

D A Y	TRIAL GROUP	CONTROL GROUP	CHI-2 VALUE	P - V A L U E
1	4 0 (1 0 0 %)	4 0 (1 0 0 %)	-	-
3	7 (1 7 . 5 %)	2 4 (6 0 %)		> 0 . 0 5
5	5 (1 2 . 5 %)	1 4 (3 5 %)	5 . 5 9 1	< 0 . 0 5
7	1 (2 . 5 %)	1 0 (2 5 %)	8 . 5 3 8	< 0 . 0 5
1 4	0	2 (5 %)	2 . 0 0 5	> 0 . 0 5
3 0	0	0	-	-
6 0	0	0	-	-

According to above chart, the spasm was relived found in trial group on 14th day and control group on 30th day of trial period.

Table showing the effect of treatment on bleeding pr.

D A Y	TRIAL GROUP	CONTROL GROUP	CHI-2 VALUE	P - V A L U E
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OVERALL ASSESSMENT OF DISEASE

Cured - Fissure bed healed and no anal Sphincter spasm.

Relieved:

1) Fissure bed healed and sphincter spasm present.

2) Sphincter spasm absent fissure bed not healed.

3) Fissure partially healed & sphincter spasm present.

Not cured – No change in length of fissure and spasm.

OBSERVATION AND RESULTS

The study was a randomized controlled clinical trial. Total 80 patients were selected randomly and divided in two groups irrespective of age, sex and occupation.

1	4 0 (1 0 0 %)	4 0 (1 0 0 %)	-	-
3	2 (5 %)	8 (2 0 %)	4 . 1 1 4	< 0 . 0 5
5	1 (2 . 5 %)	4 (1 0 %)	1 . 9 2 0	> 0 . 0 5
7	0	0	-	-
1 4	0	0	-	-
3 0	0	0	-	-
6 0	0	0	-	-

According to above chart, the bleeding PR was relived found in both trial and control group on 7th day of trial period.

Table showing the effect of treatment on bowel habit.

D A Y	TRIAL GROUP	CONTROL GROUP	CHI-2 VALUE	P - V A L U E
1	4 0 (1 0 0 %)	4 0 (1 0 0 %)	-	-
3	4 (1 0 %)	6 (1 5 %)	0 . 4 5 7 1	> 0 . 0 5
5	2 (5 %)	3 (7 . 5 %)	0 . 2 1 3 3	> 0 . 0 5
7	0	0	-	-
1 4	0	0	-	-
3 0	0	0	-	-
6 0	0	0	-	-

According to above chart, the constipation was relived found in both trial and control group on 7th day of trial period.

Table showing the effect of treatment on purities ani.

D A Y	TRIAL GROUP	CONTROL GROUP	CHI-2 VALUE	P - V A L U E
1	0	0	-	-
3	0	0	-	-
5	0	0	-	-
7	0	0	-	-
1 4	0	0	-	-
3 0	0	0	-	-
6 0	0	0	-	-

Prurities ani was not clinically found in any patients of both groups. The data of 80 patients was observed an analyzed statistically to assist the efficacy of therapy appropriate significance test was applied. The level of significance is set at 5%.

p= 0.05

FOLLOW UP DAY	G R O U P A				G R O U P B			
	X		S D		X		S D	
0	1 0 . 3 9	1 . 3 6 6	1 0 . 4 0	1 . 2 4 7				
3	6 . 8 8 8	1 . 2 9 3	8 . 5 7 5	1 . 0 1 0				
5	5 . 7 7 5	1 . 1 6 0	6 . 5 6 3	1 . 1 1 6				
7	1 . 7 3 8	1 . 5 4 8	4 . 4 3 8	1 . 3 0 7				
1 4	0 . 2 0 0	0 . 7 2 3 2	1 . 9 7 5	1 . 4 7 6				
3 0	0 . 1 0 0 0	0 . 3 0 3 8	0 . 5 2 5 0	0 . 7 5 0 6				
6 0	0	0	0	0				

Above table suggest that mean of length of fissure in both groups depicts that healing of fissure in ano is fast in group A is faster than B. Fissure is completely healed in both groups.

Day	Trial	Control	Z - Value	P - Value
5	3.55 ± 1.04	1.76 ± 0.53	7.383	<0.001, HS
7	4.71 ± 0.98	3.82 ± 0.63	4.261	<0.001, HS
14	7.97 ± 2.95	5.92 ± 0.78	4.333	<0.001, HS
30	10.43 ± 1.31	9.91 ± 0.96	1.684	0.0921, NS
60	10.46 ± 1.37	10.38 ± 1.24	0.035	0.9724, NS

After applying z test, the result of the given treatment is highly significant at 5th, 7th and 14th day and non-significant up to 30th and 60th day.

DISCUSSION

The study was planned for to study the efficacy of application of *ApamargKshara* at chronic fissure bed. To promote Ancient Indian therapies in fissure in ano as well as to reassess the ancient modality of treatment as per scientific norms. The selected patients of *Parikartika* (chronic fissure in ano) were randomly divided into two groups; in Group-A application of *ApamargKshara* followed by anal dilation done and Group-B anal dilation was done. The Application of *Apamargkshara* followed by anal dilatation with excision of sentinel tag and anal dilation was performed under general or low spinal anaesthesia. After that patients were assessed post-operative day 1st, 3rd, 5th, 7th, 30 and 60 days. The total 80 patients were registered and all of them completed treatment as well as follow up. All observation and result were presented in tabular and graphical form. For subjective parameter –pain intensity, bleeding per rectum, bowel habits, anal sphincter spasm by digital and purities ani, Chi square test and Objective parameter – Length of fissure in mm Z test were applied to draw the scientific conclusion.

Pain(Vedana) relief in both Groups: In Group A only only 5 patients had pain on post of fifth day while in Group B 15 patients had pain on post of fifth day. In

both group complete pain relieved on post-operative seventh day.

Relief in Raktastrava (PR bleeding): *Raktastrava* was stopped on post-operative third day in both group due to relived anal sphincter spasm. The PR bleeding in form of streak on stool is due to anal spasm during defecation.

Sphincter tone: Anal spasm relived on post-operative third day due to anal dilation in both groups.

Wound Healing: In Group A only 1 patients had taken more than 30 days and in 39 patients fissure bed completely healed due to application of *Apamarg kshara* at chronic fissure bed.

In group B 15 patients had taken more than 30 days and only 25 patients fissure healed completely.

Mode of action of *Kshara*:

The *Apamarg kshara* having properties of *Chhedana* (Excision), *Bhedana* (Incision), *Stambhana* (Haemostasis), *Ksharana* (Debridgement), *Shodhana* (Purification) and *Ropan* (Healing). *Chhedan* and debridgement properties of *Kshara* are helpful to excised the fibrotic tissue by action of *Ksharana* and removes unhealthy fibrous tissue and debris and make the wound *Shudha*(healthy) by *Shodhana* properties.

CONCLUSIONS

1. After classical review, two parts of *Guda* i.e. *Uttar Guda* and *Adhar Guda* describes by *Acharya Chakrapani* correlates with rectum and anal canal respectively on the basis of their similar functions.
2. The description of *Parikartika* found in classic is in scattered manner and not a separate disease condition. On the basis of describe causes site of disease and predominant symptoms, *Parikartika* resembles with that of fissure in ano.
3. As per above discussion, completely relieved from sign and symptoms achieved up to 60 days of trial period.
4. In trial group application of *Apamargakshara* (followed by anal dilatation) patients cured early as compared to patients of Control Group (Anal stretching). So it can be concluded that application of *Apamarga Kshara* had definite role for *Lekhana Ropana* and *Shodhana* in chronic fissure bed.
5. During follow up period of 2 month, no adverse effect of any drug was noticed.
6. Finally it can be concluded that *Apamarga Kshara* application is cost effective, ambulatory and very successful treatment for *Parikartika* (chronic fissure in ano).

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Source of support: Nil

Conflict of interest: None Declared