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CLINICAL EFFICACY OF KSHAR SUTRA IN COMPLEX SCROTO ANAL FISTULA – A SINGLE CASE STUDY

Prakash Vishwambhar Failwad[1*], Jyoti Shinde[2]

*[1]PG Scholar, Department of Shalyatantra, Shri Ayurved Mahavidyalaya Nagpur, Maharashtra, India.

[2]Professor and HOD, Department of Shalyatantra, Shri Ayurved Mahavidyalaya Nagpur, Maharashtra, India.

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***Corresponding Author**

Prakash Vishwambhar Failwad

PG Scholar, Department of Shalyatantra, Shri Ayurved Mahavidyalaya Nagpur, Maharashtra, India.

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ABSTRACT

Fistula-in-ano is an inflammatory track which has an external opening in the perianal skin and internal opening in the anal canal or rectum. The track is lined by unhealthy granulation tissue and fibrous tissue. As per Ayurvedic perspective the condition can be corelated with *Bhagandara*. Acharya Sushruta has categorised *Bhagandara* under the heading *Ashtomahagada* as it is difficult to cure. Acharya Sushruta mentioned *Chhedan Karma* i.e. excision of fistula tract as a general treatment for all types of fistula.[1] He has also stated use of *Ksharsutra* for the management of Bhagandara.[2] Keping this basic principals in mind, a single case study of 37 years old male patient, suffering from complicated Scroto- anal Fistula with multiple external openings in perineum has been treated successfully here. Patient had complaints of discharging boil in perianal region with intermittent pus discharge. On detail history and thorough examination and as per MRI findings, the patient was diagnosed as a case of complicated scrota-anal fistula. Partial fistulectomy with standard Apamarga Kshar sutra ligation was planned for this case under spinal anaesthesia with proper adjuvant medications. The patient was completely cured at the end of six months with no recurrence till date.

KEYWORDS: Scroto- Anal fistula, *Apamarg Ksharsutra*, Partial fistulectomy, *Bhagandara*.

INTRODUCTION

Ano rectal disorders are progressively increasing in the society precisely due to altered lifestyle and food habits. Fistula-in-ano is an inflammatory track which has an external opening in the perianal skin and an internal opening in the anal canal or rectum.[3] The track is lined by unhealthy granulation tissue and fibrous tissue.[4] Anal Fistulae can have many secondary causes like: Ulcerative colitis, Tuberculosis, Crohn's disease etc. but the most common cause is anal gland infection with recurrent anorectal abscess. The symptoms include persistent seropurulent discharge that keeps the perianal region always wet, presence of external opening which can be single or multiple and may discharge blood.[5] Fistula-in-ano is classified into high or low depending whether the tract passes above or below the anorectal ring.[6] In high anal fistula the track rises to a higher level and is in relation to the upper parts of the anal sphincters, but does not extend above the anorectal ring.[6] The true prevalence of Fistula-in-ano is unknown. The incidence of Fistula-in-ano developing from an anal abscess range from 26% to 38%.[7] Acharya Sushruta has classified *Bhagandara* (fistula-in-ano) into five types.[8] As per text, the etiological factors of *Bhagandara* are vitiated *doshas*, engulfing of bony foreign body etc. The symptoms are different types of pain like: pricking, burning etc. around the anus, itching at anal region, mucous discharge from the wound.[9] In Ayurveda, all the five types of *Bhagandara* are *sashtra sadhya*[10] i.e., require surgical and parasurgical interventions like *Ksharkarma*, *Ksharsutra* ligation and *Agnikarma* etc.

In the present case study, 37 years male patient attended Shalyatantra (Surgery) OPD of the institute with chief complaints of boils at perianal region with mild pain and intermittent pus discharg since last 6 months. MRI Fistulogram report dated 16/10/2024 showed evidence of small submucosal / intersphincteric abscess along midline posterior anal canal wall extending from 5 O' clock to 7 O'clock position with trans-sphincteric extension into midline posterior perianal space with further extension into bilateral perianal space a causing complete encirclement of anal canal. It showed probable internal anal opening at 6 O' clock position just above the anal verge and probable external opening in right posterior perianal region at around 8 O' clock position. It showed mild left anterior extension upto the root of penis on left side. Moderate edema / inflammation was seen surrounding the external openings. There was no e/o supralevator extension.

The patient was farmer by occupation. He had history of Pulmonary Koch's 20 years ago for which he had taken anti tubercular treatment for the duration of 6 months. There was no family history of bhagandar and no surgical history. The personal history of patient revealed mixed diet, good appetite, normal sleep pattern and unsatisfactory bowel habits. Patient is addicted to alcohol since last 8 years.

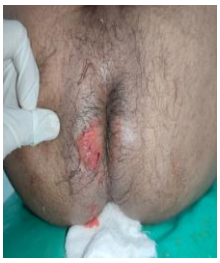
CLINICAL FINDINGS: The patient was hemodynamically stable having Pulse 78/min, Respiratory rate 20/min, Blood pressure 110/80 mm of Hg. In general examination Pallor, Icterus, Clubbing, Cyanosis, Oedema and Lymphadenopathy were absent.

On local examination of anal verge: Three discharging boils with peripheral indurations were seen at 7 o', 8 O' and 9 O' clock position 2-3 cm away from anal verge on right side and there was a huge perianal abscess extending from 1 to 5 O'clock position on left side of perianal region.

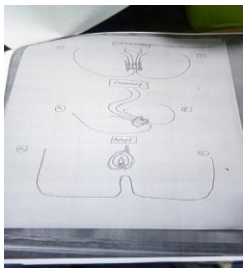
Per rectal digital examination: dimple felt at 6 O'clock internally no sphincter spasm and no tenderness.

Diagnostic Assessment

Patient was diagnosed as a case of fistula in ano (scrota anal fistula) as per clinical assessment and MRI fistulogram report.


Pre operative


Local examination


MRI Fistulogram


Post operative day 1

OPERATIVE DETAILS

a) *Purvakarma* (Pre-operative procedures): Soap water enema was given at bed time before the day of surgery, Part preparation was done. Patient Kept Nill by mouth for 6 hours before surgery. Injection. Teatanous toxiod 0.5 ml IM given and Bupivacaine sensitivity test was done.

b) *Pradhankarma* (Operative procedure): Under all aseptic precautions the patient was subjected to partial fistulectomy in the distal tracts with *Apamarga Ksharsutra* ligation in remaining proximal tracts. Total four fistulous tracts were traced out.

- Tract 1: This fistula tract was found extended from 5 o'clock position in perianal region to the root of scrotum at left side measuring 13 cm. in length. About 2 cm of the tract was excised performing partial fistulectomy and *Ksharsutra* was ligated in the remaining 11cm tract.
- Tract 2: This fistula tract was extended from 7 o'clock position in perianal region to the root of scrotum at right side measuring 12.5cm in length. Nearly 2cm of tract was excised performing partial fistulectomy and *ksharsutra* was ligated in the remaing 10.5 cm tract.
- Tract 3: This fistula tract was extended from 5 o' clock position externally in the perianal region to 6 o' clock position internally in anal verge measuring 4 cm in length, *ksharsutra* was inserted in this tract.
- Tract 4: This fistula tract was extended from 7 o'clock to 6 o' clock position internally in anal verge measuring 3.5 cm in length *ksharsutra* inserted in this tract

  Tract 3 and tract 4 had common internal opening at 6 o' clock position. External opening created at 11o' clock position for drainage purpose.

c) *Paschatkarma* (Post-operative procedure): Proper antibiotic, analgesic, and anti inflammatory drugs were administered as per need in post operative period along with Ayurvedic medication

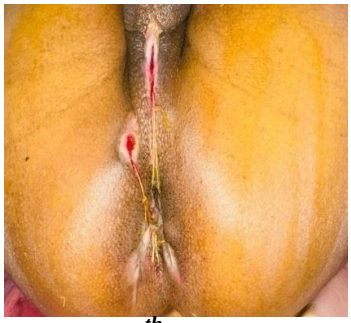
- Inj. Ceftriaxone 1gm IV in 100 ml NS twice a day X 3 days
- Inj Pantaprazole 40 mg IV once a day X 3 days.
- Inj Diclofenac Potasium 75 mg IV in 100 ml NS twice a day X 3 days.
- Tab Chymoral Forte before meal twice a day X 3 days.
- *Haridra kankshi avgahan* (sitz's bath) thrice a day.
- *Trifala guggul* 2 tab three times a day.
- Laxative *Gandharva haritaki churna* (contains *eranda taila*, *Bal haritaki*, *shunthi*, *saindhava* and *savarchal lavana*) 5 gm at bedtime with lukewarm water is given for *vata anuloman* and bowel clearance.[11]
- *Amlaki Churna* 5gm twice a day with normal water for wound healing.
- Daily *Vran dhavan* with *triphala kwath* and dressing under aseptic precaution till healing of partial fistulectomy wound.
- Change of *Apamarga ksharsutra* was done weekly till the healing of all tracts.

  Periodic assessment of prognosis with therapy was observed. For the therapeutic evaluation, parameters such as pain at perianal region, pus discharge from external

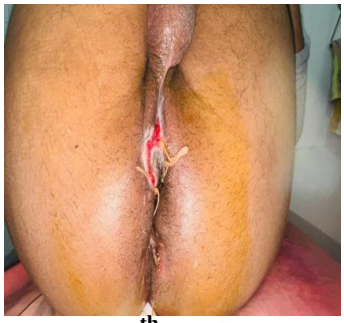
opening, length of fistula tract were assessed before, during and after completion of treatment with gradation criteria (0-3 scale) are mentioned in table no 1,2,3.

POST OPERATIVE

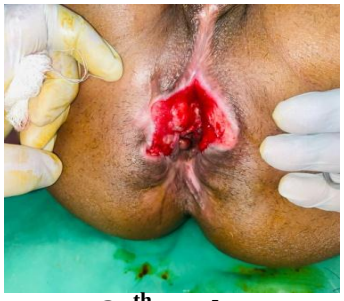
4th week



12th week

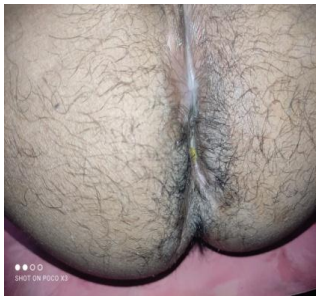


20th week



24th week

26th week



Healed wound

Parameters of assessment of fistulous tract

Table no. 1: Pain was assessed on VAS scale.

Pain	Score	Grade
No Pain	0	0
Mild Pain	1-3	1
Moderate Pain	4-6	2
Severe Pain	7-10	3

Table no. 2: Assessment of pus discharge (gauge piece size double layer 10 x 10 cm)

Pus discharge	*Grade*
No discharge	0
Mild discharge (one gauze piece in 24 hours)	1
Moderate discharge (if wound wet 2 gauze piece in 24 hours)	2
Severe discharge discharge (if wound wet more than 2 gauze piece in 24 hours)	3

Table no 3: Assessment of tract length In cm before, during and after the treatment

Tract	BT Track Length in cm	AT											
		Day 15	Day 30	Day 45	Day 60	Day 75	Day 90	Day 105	Day 120	Day 135	Day 150	Day 165	Day 180
Tract no 1	11	10.8	10.2	9.0	8.5	7.5	6	5.47	4.1	2.65	1.2	o.5	0
Tract no 2	10.5	10	9.8	7.5	6.2	5.6	4.3	3.1	1.5	0.7	0		
Tract no3	4	3.8	3.2	2.5	1.7	1	0.8	0.5	0				
Tract no 4	3.5	3.2	2.5	1.8	1	0.7	0.3	0					

Table no 4: Assessment of Pain and Pus discharge before, during and after treatment.

Parameters	2nd week	4th week	6th week	8th Week	10th week	12th week	14th week	16th week	18th week	20th week	22nd week	24th week
Pain	2	2	2	2	1	1	0	0	0	0	0	0
Pus discharge	3	3	3	3	3	2	2	2	1	1	0	0

DISCUSSION

As per Ayurvedic classics, this disease is called *Bhagandara* as they tear the region of perineum (*bhaga),* rectum (*guda*) and pelvis (*basti).*[9] It is caused when vitiated *vayu* vitiates *rakta* and *mamsa dhatus,* produce several boils (*pitikas*) around the anus. Most of them communicate with one another, penetrates deeper tissues with several sinuses and tracks lined by granulation tissue (*dushtamamsa*) and open ultimately into rectal wall.[10] All the types of *bhagandara* are *shastra sadhya*. Hence, *ksharsutra* ligation is used in treatment of *Bhagandara*.

It was observed that the unhealthy granulation tissue forming fistulous track sloughed out completely after 28 days during fourth sitting of *ksharsutra* ligation in the fistula connected to anal canal.

Probable mode of action of therapy

1. *Ksharsutra*

Ksharsutra is medicated thread prepared by repeated smearing of alkali of Achyiranthus aspera(*apamarg*) plant, latex of Euphorbia nerifolia (*snuhiksheer*) and Curcuma longa(*haridra*) powder on 20 number. Barber's surgical linen thread. This combination of medicines on thread helps in debridement and lysis of tissue, exerts antifungal, antibacterial and anti-inflammatory. Another mechanism proposed for the *Ksharsutra* is that it destroys the residual glands in the epithelium.[12]

3. Internal medications

Panchatiktagrita guggul is a herbal remedy containing purified *guggul* and is used as antiallergic, antibacterial and for blood purifier.[13] The *Guggul* with its unique properties clears off the obstruction in the path of *Rakhta* and Vataalleviation takes place.[14] *Trifala churna* contains *Haritaki, Bibhitaki, Amalaki.* It helps in *Vata Anuloman* and cures *Malavibandha*, helps in smooth action of defecation.[15]

CONCLUSION

The observations revealed that, this novel treatment approach which was a combination partial fistulectomy and medicated *Apamarga Ksha*rsutra ligation provided complete relief in the management of symptoms like pain at perianal region, pus discharge from external opening at peri-anal region and reduction in the size of fistulous tract. The time taken for complete relief in this scroto anal fistula due to this novel approach was 176 days. There was no recurrence or any abscess formation in perianal region till date. Hence it can be concluded that conventional Ksharsutra therapy comprising standard Apamarg ksharsutra proved an effective treatment in the management of complex scrota-anal fistula-in-ano with no bowel incontinence, no recurrence and minimal scarring.

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