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## EFFECT OF PARTIAL FISTULECTOMY WITH KSHARASOOTRA APPLICATION IN THE MANAGEMENT OF BHAGANDARA (FISTULA-IN-ANO) - A CASE REPORT

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**ABSTRACT:** Management of fistula-in-ano by fistulectomy is a surgical challenge due to its high re-occurrence rate. Application of Ksharasootra has been indicated in ano-rectal disorders particularly in the management of *Bhagandara* (Fistula-in-ano) in Indian system of medicine. *Ksharasootra*, a medicated thread, was prepared with *Apamarga Kshara* (Ash of *Achyranthus aspera* Linn.), latex of *Snuhi* (*Euphorbia nerifolia*) and *Haridra* (*Curcuma longa* Linn.) powder as per the standard guidelines of Ayurvedic Pharmacopeia of India (API). A case of 40 year male was diagnosed as *Bhagandara* (Fistula in ano) present anterior side at 11 O'clock site of anal canal which extend to base of scrotum, was treated with partial fistulectomy with Ksharasootra application in remaining part of the tract. In post-operative management, the old Ksharasootra was changed with a new one by rail-road technique on weekly interval. Decrease in the length of Ksharasootra was measured weekly and noted to assess the unit cutting time (UCT). The fistulectomy wound dressing was done daily with *Shatadhaut Ghrita* (medicated clarified butter). After two months (Ksharasootra changed for 8 times) tract was cut through with Ksharasootra and fistulectomy wound was healed completely with normal scar without any complication. Thus, ksharasutra is very effective with minimum invasive surgical modality for management of *Bhagandara* (fistula-in-ano). This is sphincter saving procedure as well as easy to perform.

**INTRODUCTION:** Ksharasutra Therapy is an Ayurvedic Parasurgical Technique. Great Indian Surgeon Sushruta narrated in his teachings the use of Kshara for cure of fistula in ano and other anorectal diseases<sup>1</sup>. Fistula defined as a chronic granulating tubular track consisting of fibrous tissues with two openings communicating between two different epithelium.

Fistula-in-ano is generally develops after an ano-rectal abscess and cryptoglandular infection. Common symptoms are Pain, discharge, itching and social embarrassment<sup>2</sup>.

According to Sushruta *Bhagandaras* can be sorted out under 5 sub-groups based upon the criteria *i.e.* involvement of dosas, Shape and type of external openings (*Bhagandaripidika*), shape of the tract and nature of discharge. Whereas Parks *et al.*, classification says Low intersphincteric, Trans-sphincteric, Extrasphincteric and Supralelevator Fistula<sup>3</sup>. Inspection, Palpation Local examination, digital rectal examination (DRE), Probing, and Radiological imaging is primary methods of diagnosis.

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The TRUS (Trans rectal ultrasonography) is a perfect technique with is being used to diagnosis of fistula-in-ano now a day <sup>4</sup>. It rarely cured by medical treatment and operative results of high anal fistula is notorious. About 50% cases of fistulae are low anal types which are cured by surgery. The recurrence and impairment of anal continence is the main complications of surgery. An average recurrence rate of anal fistula after operation is 50% as reported from different centres of world (Goligher J.C., Despande P. J.). Our great surgeon sushruta also describe that fistula can be treated with Ksharasutra in case of debilitated, weak, child or female patients as well as with Chedana karma (fistulectomy- Excision of the fistulous tract) <sup>5</sup>.

**Case Report:** A 40 years old male patient visited in outpatient department of Shalya Tantra, IPGT and RA Hospital, Jamnagar, with complaints of, pus discharge and itching since 15 days with perianal pain since last one month. He is a vegetarian diet and was working as a manager in private company. Patient had no any history of addiction. On inspection in lithotomy position one external opening was observed at 11 O' clock about 5 cm away from the anal verge anteriorly with normal periphenal skin (P/R findings).

According to patient he was apparently well 1 month back after that he got pain in ano. Before 15 days back he got pus discharge and itching in ano so he came to OPD and he was admitted in male surgical ward for further treatment. All regular investigation done for pre-operative assessment.

No any past history of hypertension, diabetic mellitus, tuberculosis and any drug reaction. He was operated for same fistula in Mumbai 6 years back.

The laboratory investigation for blood, urine, and stool were conducted and found within normal limits. Patient was obese with Blood pressure (B.P.) 150/90 but no history any medication for blood pressure.

On local Examination there was a painful pus discharge at 11 o' clock position. On Digital Rectal Examination there was normal sphincter tonicity. On Proctoscopy – no abnormality was detected. The classical Lakshanas of Bhagandarapidaka in Gudaregion, like goodamoola, ruk, jwara were

observed. As Susrutha described Kshara sutra is indicated in Bhagandara <sup>6</sup>.

He was investigated for Trans Rectal Ultrasound (TRUS) and 60 mm long fistula was noted in right perianal region with one external openings at 11 O'clock position in skin extended to nearby scrotum and one internal opening at 11 O'clock at level of dentate line too Chest X-ray and USG of whole abdomen were done and no abnormal signs were detected. Lastly patient was treated as grade-1 risk with three dimensional approaches under spinal anaesthesia.

#### METHODOLOGY:

**Pre-operative:** Patient was advised nil by mouth from 6hr. before surgery. Written inform consent was taken. The local part of patient was prepared. Proctolysis enema was given in early morning before procedure. Inj. T.T. 0.5cc IM and sensitivity test for inj. Xylocaine 0.1% ID was done.

**Operative:** In O.T., patient was kept in lithotomy position on O.T. table after giving spinal anaesthesia. Peri-anal area was painted with Betadine solution and sterile cut sheet was draped. P/R rectal examination as well as Proctoscopic examination done to rule out other Pathological conditions. Patency test which was done by Betadine and hydrogen paroxide solution with 5 ml syringe from external opening was positive.

Probing was done from external opening and internal opening was revealed at anal canal. The excision of the fistulous tract by coring method was done from external opening to till external anal sphincter with help of blade no. 15 as well as electric cautery. After that Ksharasutra was applied in remaining part of the tract **Fig. 1**. After proper haemostasis wound was packed with betadine gauze and applied T-Bandage

**Post-operative:** During OT and post-operative period, IV fluid, suitable antibiotics and analgesics were given as per need. From next morning, patients were advised to Sitz bath with Panchavalkala decoction and then antiseptic dressing with Shatadhauta ghrita and Matra Basti with 10 ml Jatyadi Taila was given daily. 5 gm Eranda Bhrishta Haritaki (*Terminalia chebula*) powder with luke warm water at bed time was prescribed to relieve constipation. Ksharasutra was

changed with a new one by rail-road technique on weekly interval and the length of thread as well as the condition of wound was noted to assess the unit cutting time (UCT) and healing till the complete healing of fistulous tract.

**RESULT AND DISCUSSION:** On 1<sup>st</sup> post-operative day the Ksharsutra was in situ, wound was healthy, and no pus discharge and no oozing present **Fig. 1**. Sitz bath with Panchavalkala decoction was advised and dressing of wound with Jatyadighrita was done daily. On post-operative 3<sup>rd</sup> day the mild pus discharge was present from the tract, wound surface was healthy. There was no any swelling, pus discharge and gapping in the site that indicates the complete get rid of fistulous tract. Wound of partial fistulectomy was healed earlier with dressing by Jatyadi Ghrita which improves the quality of life of patient. Ksharsutra was changed on weekly interval with new Ksharsootra after applying 2% xylocaine jelly by railroad technique till complete cut through and healing of fistulous tract. The length of Ksharsutra thread was recorded to assess progress of cutting and healing on every change. On post-operative 5<sup>th</sup> week, the wound became cleaned and healing was promoted with healthy granulation tissue **Fig. 3**.

Sitz bath with Panchavalkala decoction and dressing with Jatyadi Ghrita was continued along with Ksharasutra change and there was healthy granulation, epithelisation and contraction of wound was observed. Total 10 weeks were required for complete cutting and healing of fistulous tract. The unit cutting time (UCT) of fistulous tract case was 6 days per cm. The applied Kshara on thread has anti-inflammatory and anti-microbial activity.

Alkaline nature of Kshara cauterizes dead tissue and facilitates cutting as well as healing <sup>7</sup>. Due to alkaline pH of Ksharasutra local infection was under control which helps to healing. The cutting is presumed by local action of Kshara, Snuhi and mechanical pressure of tight Ksharsutra knot during initial 1 - 2 days of its application which followed by healing in rest of the 5 - 6 days. The turmeric (*Curcuma longa*) powder minimizes reaction of caustics and helped for healing of wound <sup>8</sup>. Ksharsutra has combined effect of all three drugs (Apamarga Kshara, Snuhi Ksheera and Haridra) and said to be unique drug formulation for cutting

and healing of fistulous tract. Panchavalkala decoction has cleaning and wound healing properties respectively so it helped to kept wound clean and promoted healing of wound <sup>9</sup>.

The contents of Jatyadighrita has Shodhan, (cleaning) Ropana (Healing), Raktasodhaka (blood purifying), Krimighna (antimicrobial), Kandughna, Sothahara (anti-inflammatory) properties which are necessary for healing of wound so it also helped in healing of wound <sup>10</sup>. Eranda Bhrashta Haritaki Churna helped in regular bowel movement. The chances of recurrence are very high in the case of conventional fistulectomy. In plain Ksharsutra the required time for cut through and healing of wound is more, so patients are mentally disturbed with this disease. So, Ksharsutra has effect of simultaneously cutting and healing of muscles and should be established as sphincter saving treatment modality for fistula-in-ano.



**FIG. 1: STATUS OF WOUND AFTER 1<sup>st</sup> POST-OPERATIVE DAYS**



**FIG. 2: STATUS OF WOUND AFTER 3<sup>rd</sup> WEEK-OPERATIVE WEEK**



**FIG. 3: STATUS OF WOUND AFTER 5<sup>th</sup> WEEK- OPERATIVE WEEK**



**FIG. 4: STATUS OF WOUND AFTER 6<sup>th</sup> WEEK- OPERATIVE WEEK**



**FIG. 5: STATUS OF WOUND AFTER 7<sup>th</sup> WEEK- OPERATIVE WEEK**

Hence, to reduce chances of incontinence, to minimize the time requirement, to drain the pus or discharge from track, early return to routine workout, to minimize hospital stay, multi-purpose intervention like, partial fistulectomy with Ksharsutra application is said to be the best option observed in this case report.



**FIG. 6: HEALED SCAR AFTER TREATMENT AFTER 10<sup>th</sup> WEEK**

**CONCLUSION:** This case study demonstrated that early healing without anal incontinence by partial fistulectomy with Ksharsutra application in the management of Bhagandara (Fistula-in-ano). Hence Partial fistulectomy with Ksharsutra application is said to be the safe and best option observed in this case report. As it is a single case study so it requires more number of cases for concrete conclusion.

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