Partial Fistulotomy followed by Kshara application and Ksharasutra Ligation in Fistula-in-ano - Multiple approaches in a Single Case

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ABSTRACT

Bhagandhara is one of the common ailments pertaining to Guda and it is mentioned under the heading of Ashtomahagada (eight major diseases). According to Acharya Susrutra, 'Bhagandhara' starts as deep-seated pidika (boil) surrounding Guda (anus) within two Angulas, producing fever and pain. In contemporary science it is compared to fistula-in-ano. Fistula-in-ano is a track lined by granulation tissue and communicating two epithelial lined surfaces which opens deeply in the anal canal or rectum and superficially on the skin around the anus. In modern medical science various treatment modalities has been explained but they are having its own merits and demerits. Ksharasutra is a medicated thread, indicated in ano-rectal disorders particularly in the management of Bhagandhara. In plane Kshrasutra the required time for cut through and healing of wound is more, so patients are mentally disturbed with this disease. Hence to minimize the required time, multiple interventions along with Ksharasutra is opted. In this case report, a patient of fistula-in-ano having 9cm at posterior aspect of anal canal was treated with multiple approaches which are partial fistulotomy, Kshara application and Ksharasutra ligation for remaining part of tract. Regular dressing was done with Jatyadi Ghrita for the partial fistulotomy wound and old Ksharasutra was changed with a new one by rail-road method on every week for the remaining part of fistulous tract. The unit cutting time (UCT) was measured and noted at every week. This case was cured completely within 7 weeks. Hence study concluded that the long fistula cases can be treated with multiple interventions along with Ksharasutra.

Key words: Bhagandhara, Fistula in ano, Partial fistulotomy, Apamarga Kshara, Apamaraga Kshara Sutra.

INTRODUCTION

Bhagandhara (Fistula in ano) is a condition which does Darana (splitting or discontinuity with severe pain) in Bhaga (Vagina), Guda (Rectum or Anal canal), and Basti (Urinary bladder). Those without opening are called Bhagandhara Pidaka and those with opening are called Bhagandhara. Acharya Sushruta mentioned Bhagan-
dhara in Ashtomahagada (eight major diseases) because it is difficult to treat by their very nature.[1] In contemporary science it is compared to fistula-in-ano. It is an abnormal tube-like communication between two cavities or a cavity with the external surface for a cavity with other organ. It can occur in any part of the body, if fistula occurring in ano rectal region is called fistula-in-ano. Fistula-in-ano is a common ano-rectal condition prevalent in the population worldwide and its prevalence is second after Hemorrhoids. The incidence of a Fistula-in-ano, developing from an anal abscess ranges from 26-38%.[3] Sainio P. showed that the prevalence rate of Fistula-in-ano is 8.6 cases per 100,000 population. The prevalence in men is 12.3 cases per 100,000 population and in women 5.6 cases per 100,000 population. The male-to-female ratio is 1.8:1. The mean age of patients is 38.3 years.[6] Anal fistulas causes various symptoms including pain, swelling, discharge, itching and social embarrassment.[6] In modern surgery fistulectomy,
Partially fistulotomy, fibrin glue, fistula plug, video-assisted anal fistula treatment (VAAFT) and Ligation of intersphincteric fistula tract (LIFT) are treatment modalities with their own merits and demerits.[7] In Ayurveda, it is clearly mentioned that Bhagandhara can be treated with Chedhana (Excision), Ksharakarma (application of alkali), or Ksharasuta (medicated thread).

In this study, a case of posterior fistula having external opening at 8 o’clock position 9 cm away from the anal verge was treated with partial fistulotomy followed by Apamarga Kshara application and Apamarga Ksharasutra ligation in the remaining part of the fistulous tract.

**Patient Information**

**Chief Complaints:**

Patient complaints of pus discharge and pain in the perianal region since 5 years.

**History of Present Illness:**

Patient aged 40 years not a K/C/O DM and HTN was apparently normal 5 years back, then he gradually developed a small swelling in the perianal region which was little painful. Initially he neglected the condition. Later as the days passed the swelling changed into a boil and ruptured spontaneously resulting in purulent discharge. He also had associated complaints of pain which is moderate in nature and of throbbing type and itching in the perianal region. Pain used to aggravate on sitting position. For these Patient took allopathic treatment from private clinic but didn’t find relief. Hence he visited SJGAUH Hospital, Bangalore for further management.

**Past History:**

Not a K/C/O HTN, DM, TB, Thyroid disorder.

**Personal History:**

Patient is a non-vegetarian with reduced appetite, disturbed sleep, and having frequency of micturition 5-6 per day and having history of constipation.

**Surgical History:**

Not underwent any surgery.

**General Examination:**

Patient is having blood pressure - 130/80 mmhg, Pulse rate - 75bpm, Respiratory rate - 16 cpm, Pallor and icterus said to be absent.

**Local Examination: In Lithotomy Position**

**Inspection:**

Small external opening found at 8 o’clock position in perianal region approximately 9 cm away from the anal verge with pus discharge from external opening.

**Palpation:**

Tenderness on touch with indurations was felt around external opening.

**Investigations:**

Laboratory investigations were as follows.

- Haemoglobin - 12.8%
- ESR - 10mm/hr
- CT - 4 mins 40 sec
- BT - 2 mins 5 sec.
- RBS 110 gm/dl.

And serological investigations like HIV and HBsAG were negative.

**TRUS Report:**

External opening at 8 0’ clock position, internal opening / tract merging with anal echoes at 9 0’ clock position at a depth of about 23.0mm from the anal opening.

Length of the tract is 9 cm

Width of the tract is 7.0mm

And the fistulous tract is trans-sphincteric type (Figure no. 1 and 2).

**Methodology**

**Pre-operative:**

Patient was advised nil by mouth from 10:30 pm in the previous day of surgery. Written informed consent was taken. The local part of the patient was prepared.
Proctolysis enema was given in early morning before procedure. Inj T.T. 0.5cc IM and sensitivity test for inj. Xylocaine 2% ID was done.

**Operative:**

In O.T., Patient was kept in lithotomy position. Perianal area was painted with betadine solution and sterile cut sheet was draped. Inj xylocaine was infiltrated around the anus and fistulous tract. Four fingers anal dilatation was performed by Lord’s procedure. Betadine solution was passed through external opening to know whether the tract was patent or not. After confirming the tract was patent, the probe was passed from external opening and forwarded to internal opening and removed from anal canal. After that fistulous tract was cut opened up to 4cm from external opening followed by *Kshara* application was done (Figure -3). After one minute the tract was cleaned with *Nimbu Swarasa* then primary threading was done for rest of the fistulous tract. Hemostasis was achieved and patient shifted to ward with stable vitals.
Post-operative:

Cleaning and dressing the wound was done. Oral antibiotics and analgesics were given twice a day for 5 days. Along with this adjuvant medications like **Triphala Guggulu** 500mg twice a day and **Triphala Choorna** 1 tsp with warm water at bed time was prescribed. Sitzbath/Azagaha Sweda (Warm water + Panchavalkala decoction) was advised for two times a day. Diets like green vegetables, milk, fruits, and plenty of water advised to avoid constipation. Non vegetarian, spicy and oily food, junk foods, alcohol was restricted. Long sitting and travelling avoided till complete healing of tract.

**Result and Discussion**

On 2nd post-operative day the primary thread was in situ, wound was healthy, mild pus discharge was present. Cleaning and dressing the wound with Jatyadi Ghrita was done daily. On 7th post-operative day the wound was healthy, no discharge was present and the primary thread was changed with Apamarga Kshara Sutra after applying 2% xylocaine jelly by rail road method. On 14th post-operative day the partial fistulotomy wound was completely healed which improves the quality of life of patient. Kshara Sutra was changed on weekly interval with new Ksharasutra after applying 2% xylocaine jelly by railroad technique till complete cut through and healing of fistulous tract. The length of Ksharasutra thread was recorded to assess progress of cutting and healing on every change. Total 7 weeks were required for complete cutting and healing of fistulous tract. There was healed scar of partial fistulotomy wound and Ksharasutra applied tract (Figure - 4). The unit cutting time (UCT) of fistulous tract was 10 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.\[8\] 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 Ksharasutra 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.\[9\] Ksharasutra 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.\textsuperscript{[10,11]} The contents of Jatyadi Ghrita has cleaning, healing, antimicrobial, anti-inflammatory properties which helps in healing of wound.\textsuperscript{[12]} Triphala Choorna helped in regular bowel movement.

Follow Up:

Follow up was done at a regular interval of 15 days till two months, there was no recurrence noted. After the 11 months patient visited the OPD with the complaint’s frequent loose stools with mucus discharge since 15 days. Colonoscopy was done which shows no evidence of internal opening (Figure - 5).

CONCLUSION

The chances of recurrence are very high in the case of conventional fistulectomy. In plane Ksharasutra the required time for cut through and healing of wound is more, so patients are mentally disturbed with this disease. Hence, to minimize the required time multiple interventions like partial fistulotomy followed by application of Kshara along with Ksharasutra threading is said to be the best option observed in this case report. This single case study of fistula in ano can be managed by partial fistulotomy followed by application of Kshara along with Ksharasutra threading, which revealed that the quality of life during treatment has improved in short time period. As it is a single case study so it requires more number of cases for concrete conclusion.

REFERENCES