



COMPARATIVE STUDY OF LAY OPEN TECHNIQUE VS KSHARASUTRA IN TREATMENT OF FISTULA IN ANO

Ayurveda

Vinshipriya Sura BAMS

Kiran Uske MS

ABSTRACT

Aim: of the study is to compare ksharasutra with surgical lay open technique in the treatment of fistula in ano focusing mainly on operative time, post operative wound discharge, post operative pain, duration of hospital stay, duration of wound healing and recurrence of fistula.

BACKGROUND : Surgical "lay open" technique, which is most widely practiced, has the problems of extensive surgery in-and-round the anal canal, prolonged hospitalization, high rate of recurrence and anal incontinence. Moreover, the initial recovery period is a bit discomfort to patients and patient usually loses few days work activities. Alternatively, application of chemical Seton named Ksharasutra is mentioned in the ancient Indian literature and is still practiced in some centers in India.

PATIENTS AND METHODS : patients diagnosed with fistula in ano are randomly operated into ksharasutra and lay open group and results compared.

RESULTS: Conducted on 46 randomized patients. Analysis showed that Avg Operative time in ksharasutra group is 20.3 min and Avg Operative time in lay open group is around 32.6 min. Post operative wound discharge mild in both groups and observed in 4 out of 22 patients (18.18%) in ksharasutra group and 4 out of 24 patients (16.66%) in lay open group. Avg duration of hospital stay in ksharasutra group is 33.2 hrs and in lay open group is around 47.4 hrs. Post operative wound pain in ksharasutra group was mild in 10 out of 22, was moderate in 11 out of 22, severe in 1 out of 22 patients. Post operative wound pain in lay open group was mild in 6 out of 24, was moderate in 16 out of 24, severe in 2 out of 24 patients. Avg duration of wound healing in ksharasutra group is 56.4 days and avg duration of wound healing in lay open group is around 28.3 days. 2 out of 22 patients in ksharasutra group presented with recurrence of fistula and 2 out of 24 patients in lay open group presented with recurrence.

CONCLUSION : Treatment of fistula in ano with ksharasutra is relatively simple, easy, and safe with lesser operative time and lesser duration of stay in hospital, less post operative pain with early resume to normal work when compared with lay open group. duration of treatment in the Ksharasutra group was significantly longer than fistulotomy group with no significant difference in recurrence rates in both groups.

KEYWORDS

I. INTRODUCTION

Anal fistula or fistula-in-ano, is a chronic abnormal granulating track that communicates between the epithelialised surface of the anal canal and (usually) the perianal skin and is associated with considerable discomfort and morbidity to the patient. Various modalities used in the treatment of anal fistula include fistulectomy or fistulotomy, Seton treatment (chemical or cutting), chemical destruction of the tract by corrosives, application of fibrin glue or fistula plug¹. Surgical "lay open" technique, which is most widely practiced, has the problems of extensive surgery in-and-round the anal canal, prolonged hospitalization, high rate of recurrence and anal incontinence². Moreover, the initial recovery period is a bit discomfort to patients and patient usually loses few days work activities. Alternatively, application of chemical Seton named "Ksharasutra" (a medicated cotton thread coated with Ayurvedic medicines) is mentioned in the ancient Indian literature and is still practiced in some centers in India³. Hence, in our study, we compared the treatment and outcome of fistula-in-ano between classical "lay open" technique and using Ksharasutra (chemical Seton).

II. AIMS AND OBJECTIVES

Aim of the study is to compare ksharasutra with surgical lay open technique in the treatment of fistula in ano focusing mainly on operative time, post operative wound discharge, post operative pain, duration of hospital stay, duration of wound healing and recurrence of fistula.

III. PATIENTS AND METHODS

Design : Randomized, controlled, prospective study on 46 patients from Osmania general hospital and anantha laxmi ayurvedic hospital.

Duration : Patients treated from May 2013 to October 2015 are included in this study and are followed up for a minimum period of 2 yrs.

Inclusion criteria:

- 1) Patients undergoing surgery for fistula in ano (after exclusion criteria),
- 2) Informed consent about the study,
- 3) Age in between 18-60 yrs,
- 4) Life expectancy more than two years.

Exclusion criteria:

- 1) Patients with severely compromised cardiopulmonary status,
- 2) Patients having history of tuberculosis,
- 3) Patients having history of Crohn's disease,
- 4) Patients who are immunocompromised,
- 5) patients having evidence of HIV infection, diabetes, and cancer therapies,
- 6) In patients with multiple external openings,
- 7) patients with coagulopathy,
- 8) patients with disorders that preclude study participation (dementia, language problems).

Randomization of surgical technique :

Patients were put in lithotomy position and site of external opening located. proctoscope examination done to identify the internal opening (using methylene blue dye in some cases) and other associated lesion like hemorrhoids if present. All cases were operated under local/regional anesthesia

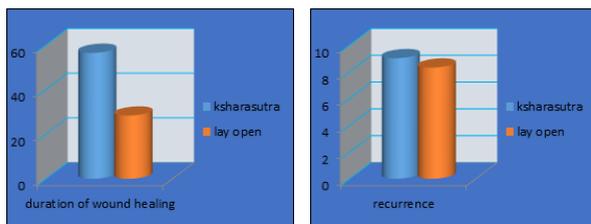
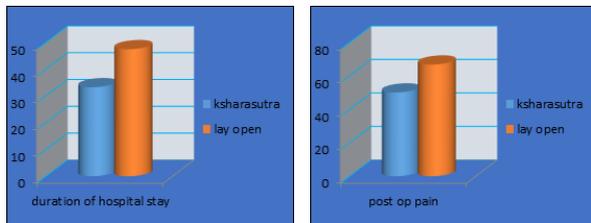
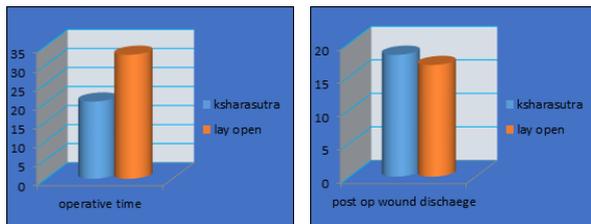
Application of Ksharasutra : A long metallic malleable probe with an eye was introduced through the external opening and attempted to pass the tip of probe through the internal opening. The eye of the probe was threaded with Ksharasutra. Probe was gently withdrawn, so the entire tract was threaded with medicated Ksharasutra. Following which the two ends of the thread were snugly tied using two knots outside the anal canal⁴.

Open fistulotomy : A long metallic malleable probe with an eye was used to probe the whole fistulous tract. The whole fistulous tract was then laid open. In cases of high fistula, track above the anorectal ring was curetted. Few patients bleed significantly during the procedure and needed suturing with absorbable suture⁵.

Postprocedural care : In Ksharasutra-treated group, the thread was changed at 2 weeks interval and gradually tightened. A new Ksharasutra was applied by rail-road technique and the conditions of wound, discharge, pain, etc., were evaluated. Number of dressings changed per day gave an estimate of wound discharge and postoperative pain was evaluated by visual analog scale. The length of old thread was measured to know the length of cutting of fistulous tract. Gradually, the thread cuts out of the tract with a healed wound⁶.

IV. OBSERVATION AND RESULTS

- 1) Maximum and minimum operative time in ksharasutra group are 36 min and 8 min respectively and in lay open group are 48 min and 12 min respectively. Avg Operative time in ksharasutra group is 20.3 min and Avg Operative time in lay open group is around 32.6 min. p value between these two groups is less than 0.05.so there is statistically significant lesser operative time in ksharasutra group.
- 2) Post operative wound discharge mild in both groups and observed in 4 out of 22 patients (18.18%) in kharasutra group and 4 out of 24 patients (16.66%) in lay open group. p value between these two groups is greater than 0.10. so there is no statistically significant difference in post operative wound discharge in both groups.
- 3) Avg duration of hospital stay in ksharasutra group is 33.2 hrs and in lay open group is around 47.4 hrs. p value between these two groups is less than 0.05.so there is statistically significant lesser duration of hospital stay in ksharasutra group.
- 4) Post operative wound pain in kharasutra group was mild in 10 out of 22, was moderate in 11 out of 22, severe in 1 out of 22 patients. Post operative wound pain in lay open group was mild in 6 out of 24, was moderate in 16 out of 24, severe in 2 out of 24 patients . p value between these two groups in moderate postoperative pain less than 0.05. so there is statistically significant less post operative pain in ksharasutra group.
- 5) Avg duration of wound healing in ksharasutra group is 56.4 days and avg duration of wound healing in lay open group is around 28.3 days. p value between these two groups is less than 0.01.so there is statistically significant lesser duration of wound healing in lay open group.
- 6) 2 out of 22 patients in kharasutra group presented with recurrence of fistula and 2 out of 24 patients in lay open group presented with recurrence, p value between these groups is greater than 0.10.so there is no statistical difference in recurrence between these two groups.



ksharasutra ksharasutra placement lay open technique

to normal work when compared with lay open group . however as Ksharasutra is a multistaged procedure, patients need to come hospital every week, hence, the duration of treatment in the Ksharasutra group was significantly longer than fistulotomy group. overall there is no significant difference in recurrence rates in both groups.

References :

1. Multicentric randomized controlled clinical trial of Kshaarasootra (Ayurvedic medicated thread) in the management of fistulain-ano. Indian Council of Medical Research. Indian J Med Res. 1991;94:177-85.
2. Classic articles in colonic and rectal surgery. John Arderne 1307-1380(?). Treatises of fistula in ano. Dis Colon Rectum. 1983;26:197-210.
3. Gewali MB, Pilapitiya U, Hattori M, Namba T. Analysis of a thread used in the Kshara Sutra treatment in the Ayurvedic medicinal system. J Ethnopharmacol. 1990;29:199-206.
4. Shrivastava P, Sahu M. Efficacy of Kshar Sutra (medical seton) therapy in the management of fistula-in-ano. World J Colorectal Surg. 2010;2:1-8.
5. Misra MC, Kapur BM. A new non-operative approach to fistula in ano. Br J Surg. 1988;75:1093-4.
6. Kenji T, Takuji F, Shigeru T, Mituyoshi S, Shiqemi K, Takakazu K, et al. Treatment of fistula in ano by a medicated thread (Kshara sutra) of chemical curette-review and follow-up study of 182 cases. Drug Deliv Syst. 1992;7:209-15.

V. CONCLUSIONS : Treatment of fistula in ano with ksharasutra is relatively simple , easy , and safe with lesser operative time and lesser duration of stay in hospital , less post operative pain with early resume