



Research Article

ROLE OF *KSHARSUTRA* IN THE TREATMENT OF RECURRENT PILONIDAL SINUSES

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ABSTRACT

Pilonidal sinus is a disease that most commonly arises in the hair follicles of the natal cleft of the sacrococcygeal area. Incidence is reportedly 26 per 1000 population, affecting males twice as often as females and predominantly young adults of working age. Pilonidal sinus usually presents as an abscess or a chronically discharging, painful sinus tract. Irrespective of the mode of presentation the painful nature of the condition causes significant morbidity, often with a protracted loss of normal activity. The ideal therapy would be a quick cure that allowed patients to return rapidly to normal activity, with minimal morbidity and a low risk of complications. As recurrence rate after surgery is very high almost 50 % and 30 % after surgery, this needs to see another treatment modalities. *Ksharasutra* has proved its efficacy in the treatment of fistula-in-ano since many decades. So here we have considered *Ksharasutra* for the treatment of recurrent pilonidal sinus especially in the recurrence after surgery. In this study very good results were found with post treatment follow up. In this study of 34 patients, all had achieved complete healing within 4 weeks to 8 weeks, mean is 6 weeks of operation. Follow-up of 30 patients was available for 12-24 months in which no patients had recurrence.

KEYWORDS: Pilonidal sinus, Recurrent pilonidal sinus, *Ksharasutra*.

INTRODUCTION

Pilonidal sinus is a disease that most commonly arises in the hair follicles of the natal cleft of the sacrococcygeal area. Incidence is reportedly 26 per 1000 population, affecting males twice as often as females and predominantly young adults of working age.

Pilonidal sinus usually presents as an abscess or a chronically discharging, painful sinus tract. Irrespective of the mode of presentation the painful nature of the condition causes significant morbidity, often with a protracted loss of normal activity. The ideal therapy would be a quick cure that allowed patients to return rapidly to normal activity, with minimal morbidity and a low risk of complications.

The management of chronic pilonidal disease is variable, contentious, and problematic. Principles of treatment require eradication of the sinus tract, complete healing of the overlying skin, and prevention of recurrence. Sacrococcygeal pilonidal sinus disease (SPSD) is a worldwide problem affecting, usually, young men and women with a propensity for recurrence that causes significant problems if not dealt appropriately in the primary setting. The higher incidence of the disease is noted among males and army recruits^[1,2,3,4]. As recurrence rate after surgery is very high almost 50 % and 30 % after surgery^[5], this needs to see another treatment modalities. Here we have considered *Ksharasutra* for the treatment of pilonidal sinus in the recurrence after surgery.

Aim and Objectives

Study the efficacy of *Ksharasutra* in recurrent pilonidal sinus and study the rate of recurrence.

MATERIAL AND METHODS

Ksharasutra preparation

Ksharasutra is prepared according to the guidelines of CCRAS, New Delhi. *Ksharasutra* is a medicated santon prepared by *Snuhikshira* (*Euphorbia neriifolia*) and *Haridra* (*Curcuma longa*). For the preparation of thread, surgical linen thread number 20 was taken. Thread tied to the hanger and coated manually. After completely drying of every coat of latex of *Euphorbia*, the procedure is repeated eleven times. This was followed by seven coatings of the latex and the *Apamarga kshara* (alkaline powder of *Acharanthus aspera*) and dried. In the final phase, three coatings of latex and powder of *Haridra* (*Curcuma longa*) were given alternatively. The thread thus prepared was sterilized by ultra violet radiation and placed in a polythene bag, which was transferred to a glass tube containing silica gel as a desiccant, before sealing the tube.^[6]

In this present study we have selected the recurrent cases of pilonidal sinuses. This study is continues for many days but here we will see the results in 34 cases. All the cases were conducted in private hospital.

Selection of patient

Inclusion Criteria

Age above 15 years and both sex.

Patient with recurrence of pilonidal sinus (Patient with pilonidal sinus).

Patients advised for another surgery.

Exclusion criteria

Patients with uncontrolled diabetes and systemic diseases TB.

HIV patients

Assessment Criteria

Subjective

Pain: Pain is assessed on the basis of visual analog scale.

Objective

1. Discharge (*Strava*):

- 0 - The gauze is slightly moist (*Alpa*)
- 1 - Sanguineous/Bloody (*Rakta*)
- 2- Sero-sanguineous (*Sarakta-Salil*)
- 3- Serous (*Salil*)
- 4- Seropurulent (*Puya*)

2. Length of Tract: It is calculated by the length of thread on scale.

The thread is changed weekly and measured.

Difference between thread was measured and the unit cutting time was decided after completion of treatment

3. Recurrence:

0- No recurrence

- 1- > three Month
- 2- 2 to 3 month
- 3- 1 to 2 month
- 4- < one month

Follow up of patients were taken up to one year after completion of treatment.

Methodology

The selected patients were assessed for fitness for anesthesia and surgery. After giving spinal anesthesia prone or left lateral position was given. The debridement of the Pilonidal tract is done with scoop. Hairs and unhealthy granulation tissue was removed through the opening on skin. If opening was small it was incised as the scoop can go inside and tract was cleaned with normal saline. Probing done through opening and removed through another opening. If another opening was not present, tract traced till its blind end and another opening was made over the skin upto the tip of the probe and probe removed through another opening after feeding of *Ksharsutra* and *Ksharasuta* ligated appropriately. Patient was treated with proper oral antibiotics for five days. Patient was discharged from

hospital on next day after operative. *Ksharsutra* was changed on every 7th day by railroad method.

Results

The total number of recurrent pilonidal sinus patients was 34 (male 28, female 06; ratio 14:3; age range 17–53 years; mean, 29 years). All the cases were reported for recurrence of pilonidal sinus which were operated at different places by different surgeons. The recurrence period in all cases varies from 3 months to one and half years. Amongst these cases 6 patients were operated twice and 2 cases were operated thrice by various methods. 5 cases were operated by 'z' plasty and 15 were treated by primary and secondary suturing. Remaining 14 patients were treated by secondary healing. As worldwide recurrence is almost 22% all these above said treatments had failure so the recurrence.

In this study of 34 patients, all had achieved complete healing within 4 weeks to 8 weeks, mean 6 weeks of operation.

Follow-up of 30 patients was available for 12–38 months in which no patients had recurrence.

Pain: Average pain was significantly reduced up to 3rd week of treatment. The P-value<0.05 in 3rd week was reduced significantly. Pain was not so severe in any case and almost 30 patents were resumed their job on 4th day of operation.

Discharge: Seropurulent discharge through wound was present in 12 patients in first two weeks which were treated with proper antibiotics especially with amoxyclav. All these patients were obese and k/c/o diabetes. Statistically over all discharge was not reduced significantly as the P value>0.05.

Length of the tract: The average Length of tract was reduced significantly after treatment as P value<0.005 and the mean unit cutting time was 1.3cm/week.

DISCUSSION

All the patients were treated with *Ksharsutra* ligation. In those patients 3 patients had 3 tracts i.e. 3 different *Ksharsutras* were tide, while 2 patients had 2 tracts i.e. were treated by 2 *Ksharsutras*. Remaining had single tract. The maximum length of thread measured was 9 cm while minimum was 4 cm. All these tracts healed very well without recurrence. This indicates good efficacy of *Ksharsutra*. The *Ksharsutra* acted as good drainage for the wound. *Ksharsutra* have alkaline Ph so it posses desloughing property. Collectively *ksharsutra* act as simultaneous cutting and healing procedure. So the healing was good because no collection remain in the wound site.

The pain after ligation of *Ksharsutra* was bearable as the patients, who are working, had not taken a break for this reason. So this is ambulatory method and patient need not take a leave for long period.

In 12 patients; 35% had some purulent discharge during treatment, may be because all were

diabetic. As well as the soiling with faecal material was also the possible reason.

Probable mode of action

According to Ayurveda the action of *Ksharsutra* is thought to be due to its healing and cleansing effect in the local area where it is applied. The layers applied on *Ksharsutra* have its anti-microbial action and as a *Ksharasutra* allows the proper drainage of pus from the fistula that leads to a proper healing. On the other hand the cutting effect of thread incises the skin gradually without a surgical incision. Cutting and healing goes simultaneously so no gap or recess remains for collection of pus⁷. Clinician has to be careful for healing and has to adjust the tightness of *Ksharasutra* ligation according to healing. Many studies confirm that it is more effective in the way of reducing hospital stay and less infection than the conventional saton therapy. Researchers suggest that it is having the action of Excision, Scrapping, Draining, Penetrating, Debridement, Sclerosing, Healing, Bactericidal and Bacteriostatic.⁸

Euphorbia nerifolia facilitated the wound healing process as evidenced by increase in tensile strength, DNA content, epithelization and angiogenesis. *Acharanthus aspera* also have antibacterial, anti-inflammatory property which is helpful for wound healing. *Curcuma longa* have antibacterial, anti-inflammatory and wound healing property. All these properties of plant is helpful for wound healing⁹.

CONCLUSION

Ksharsutra is very efficient method for recurrence of pilonidal sinus. It is having benefit of

ambulation of patient so no loss of earnings. In this study no recurrence seen from period of 12 to 38 months after wound healing.

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Cite this article as:

Yogesh R. Badwe, Bharat Rokade, Amit Paliwal. Role of Ksharsutra in the Treatment of Recurrent Pilonidal Sinuses. International Journal of Ayurveda and Pharma Research. 2015;3(12):39-42.

Source of support: Nil, Conflict of interest: None Declared

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Day 0



Ksharasutra application



During Treatment after 4 weeks



After completion



03 months after completion of Ksharasutra