KSHARASUTRA THERAPY - A MINIMAL INVASIVE PARASURGICAL METHOD IN THE TREATMENT OF SACROCOCCYGEAL PILONIDAL SINUS (NADI VRANA): RESULT OF A PILOT STUDY

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ABSTRACT

Many treatment methods have been applied in the treatment of Sacrococcygeal Pilonidal Sinus (Nadi vrana) disease (PSD). Our observations demonstrated Efficacy of Ksharasutra therapy – A minimal invasive Para surgical method in Sacrococcygeal Pilonidal Sinus (Nadi vrana) Disease (Nadi vrana). 20 patients were treated (3 women, 17 men) with PSD by Ksharasutra therapy. All patients were treated on an outpatient basis in the minor Ksharasutra operation theater in ACRI, New Delhi. The mean age was 27 years (18–60). The median length of symptoms was seven months. In the 1 year of mean follow-up period, the disease recurred in 2 patients. This treatment procedure was well-tolerated by all the patients. Time off work was on average one day with an MSD1.75 and SD 0.766485. No patient had skin necrosis or any other complications during the therapy. Recurrence of the disease in two patients was found. Mean Time required for wound healing in week was 10.8 with SD 2.501999. (1%) patient had wound infection. It is possible to treat patients in a shorter time with a considerably smaller loss of working time, since the destruction of peripilonidal adipose tissue and skin is less and reoccurrence of the disease is also less, therefore, the use of Ksharasutra therapy in Sacrococcygeal Pilonidal Sinus (Nadi vrana) is an option to be considered in the treatment of PSD.

Keywords: Sacrococcygeal Pilonidal Sinus, Shalya Tantra, Shalyaja Nadi Vrana chikitsa, Kshar Sutra.

INTRODUCTION

Sacrococcygeal Pilonidal Sinus (Nadi vrana) disease (PSD) is a common problem especially in young hirsute men. Herbert Mayo is reported to have published the first case of PSD in 1833 and many surgical techniques have been described and performed since the 1880s as treatment for chronic PSD. Surgical methods generally emphasized on excision of the sinus tracts followed by primary midline and off-midline closure or leaving the wound open to heal by secondary intention. After the onset of puberty, sex hormones affect the pilosebaceous glands, and subsequently, the hair follicle becomes distended with keratin. As a result, a folliculitis develops that produces edema and follicle occlusion. The infection tracks away from the surface in the trajectory of the occluded follicle. This usually places the tracking follicle approximately 5-8 cm from the anus. The laterally communicating sinus overlying the sacrum is created as the Pilonidal abscess spontaneously drains to the skin surface. The original sinus tract from the natal cleft becomes an epithelialized tube. The laterally draining tract becomes a granulating sinus tract opening. This disease clinically simulate with Shalyaj Nadi Vrana described by Sushruta in Sushruta Samhita. Sushruta has mentioned a minimally invasive Para-surgical treatment, viz., Kshar Sutra procedure, for nadi vrana.

Sushruta in Chikitsasthana chapter 17, verse 29 to 33 described about the indication of Ksharasutra in Nadivrana. The objective of this study was to establish the effectiveness of Ksharasutra therapy in the management of Sacrococcygeal Pilonidal disease (Nadivrana).

PATIENTS AND METHODS

Study Design: Pilot study
Study Type: Interventional
Intervention Model: Single Group Assignment
Masking: Open Label
Study Duration: Six months
Sampling Technique: Non-probable Purposive/Judgmental sampling

Inclusion criteria
- Pilonidal sinus disease of the intergluteal region
- Primary disease.
- Ages between 18 and 60, both gender.
- No evidence of Malignancy

Exclusion Criteria
- Recurrent Sacrococcygeal Pilonidal Sinus (Nadi vrana) disease
- Denial to sign informed consent.
- Associated with Malignancy.

Data Collection Procedure
All the data like age, sex, operative time, hospital stay, time of wound healing and recurrence were recorded on proforma. Results were recorded with regards to operating time, hospital stay, time of wound healing, time off work and recurrence. The average unit cutting time was calculated in the following manner.

Unit cutting time (UCT) = Total number of days of Ksharasutra Treatment / Initial length of the tract (Ksharasutra)
Procure of Drugs and Kshara sutra

It is prepared by 11 coats of Snuhi Latex (Latex of Euphorbia nerifolia), 7 coats of Apamarga Kshara (Caustic obtained from Achiranthus aspara), 3 coats of Guggulu (Commiphora mukul) and Haridra (Curcuma longa) at ACRI, New Delhi. Panchbalkal Kashaya, Shigru guggulu and Jatyadi tail was procured from Indian Medicines Pharmaceutical Corporation Ltd., India.

Preoperative preparation

Patients were usually taken up as day care on the day of surgery. Natal cleft skin was shaved and disinfected with full-strength povidone-iodine solution 10 minute before the Para surgical procedure. Routine Hematological examination like TLC, DLC, Hb, ESR, Blood sugar, Hbs Ag, HIV1, and HIV2 were done prior to Para surgical procedure. Routine Hematological examination like TLC, DLC

Operation

Procedure was performed by the first author under local infiltration of 10ml of 2% Xylocaine. Protocscopy was performed in search of an abnormality of the anal canal like pus coming out of the internal opening or hypertrophied anal papilla. The external opening was probed gently and the 2nd opening was recognized by probing the sinus tract. And at the same time its handle is pushed upwards in order to make the tip of probe to protrude outside the sinus tract in sacrococcygeal region. The probe is pulled downward and the handle is pushed upwards till the tip of the probe protrudes out. Then the eye of the probe was threaded with Kshara sutra. The probe is now gently withdrawn so that the entire tract of the Sinus is threaded by Kshara sutra. Then two ends of the thread are now snugly tied outside. Then local dressing with Betadine solution followed by instillation of Jatyadi Tail was done and the patient surgical portion was bandaged with cotton pad.

Postoperative management

All the patients were given Shigru Guggulu in a dose of 500mg twice in a day with warm water. Washing with Panchbalkal kasaya daily followed by Jatyadi Tail local application was advised. Patients were allowed to go home just after Para surgical procedure. Ksharasutra was changed weekly by rail road technique and length was measured and recorded.

RESULTS

A total of 20 patients were included in the study, out of which 17 (85%) were males and 3 (15%) were females. Mean age of patients was 27 years (ranging 18-60 years). The operative time calculated from the start of skin incision to the application of dressing, which was shorter in treated group (15 min) with MSD 12.45 and SD 2.710627. No Hospital stay was required. Mean Time required for wound healing in week was 10.8 with SD 2.501999. Time off work was also shorter. On average it was one day with MSD 1.75 and SD 0.766485. During this study we also observed that there was very minimal wound complication like infection and abscess. Out of 20 patients 1 (5%) patient had wound infection. All the patients were advised to follow up for 18 months. First visit at 6th week than 3, 6, 12 months. Two patients did not turn up for follow up and 1 (5%) patient had recurrence of the disease.

DISCUSSION

Pilonidal sinus is a surgical condition occurring in young adults having high postoperative reoccurrence rate. Ideal therapy for the Sacrococcygeal Pilonidal Sinus (Nadi vrana) should be associated with minimum complication and minimal disease recurrence but this is difficult to achieve. During this study a total of 20 cases were operated by Ksharasutra technique for Sacrococcygeal Pilonidal Sinus (Nadi vrana) disease. Regarding

Table 1: Statistical Analysis

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<th></th>
<th>Mean</th>
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<th>Std. Deviation</th>
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<th>p-value</th>
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Table 2: Outcome Result

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<td>Operative Time in Minute</td>
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<td>2.710627</td>
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Figure 1: Probing of the sinus tract  
Figure 2: Ksharasutra Ligation  
Figure 3: Healed tract after Treatment
Sacrococcygeal Pilonidal Sinus (Nadi vrana) is a complex problem requiring multidisciplinary approach. Ksharasutra therapy in Sacrococcygeal Pilonidal Sinus (Nadi vrana) is a simple, safe, and sure treatment with very negligible reoccurrence rate. Ksharasutra causes chemical excision rather than surgical excision. Proper preoperative evaluation, light local anesthesia, gentle probing in all cases is a key to success.

CONCLUSION AND RECOMMENDATIONS