

(CASE REPORT)



Application of *Snuhi-apamarga ksharsutra* in the management of *Nadi vrana* (pilonidal sinus): A case study

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Abstract

Pilonidal sinus (PNS) is a inflamed fibrous-granulated tract between the buttocks (natal cleft) that can cause pain, embarrassment, and employment disruption. Men are more prone than women (because of the fact that men have more hair). Due to friction between clothes and body, hairs break off and collect in cleft and further it penetrates the soft and moistened skin at that region or enters the opening of mouth of sudoriferous glands. After initial entry dermatitis and inflammation start around the loose hairs and sinus will be formed after. In modern medical science numerous surgical procedures have been described, but rate of treatment failure is high and recurrence of disease is frequent all over the world which makes it more difficult for treatment. Also, the patient requires longer hospitalization, and the procedures are expensive. *Acharya Sushruta* has been explained the concept of *kshar sutra* in the context of *Nadi vrana* (sinus). *Kshar Sutra* treatment not only minimizes complications and recurrence but also enables the patient to resume work quicker and with less discomfort, impact upon body image and self-esteem as well as reduced cost. In present study the case presenting with complaints of Pain and foul smelling discharge from low back which was diagnosed as pilonidal sinus, not willing to undergo surgery and opted for the *kshar sutra*.

Keywords: *Nadi Vrana Chikitsa; Kshar Sutra; Pilonidal sinus; Sudoriferous glands; Hairs*

1. Introduction

The term "Pilonidal" is derived from Latin word "Pilus" and "Nidus". "Pilus" means hair and "Nidus" means nest. Thus, pilonidal literally means nest of hair⁽¹⁾. Pilonidal is epithelium lined tract, situated short distance behind the anus in natal cleft or intragluteal cleft at the top of the buttocks near the tail bone, containing hair and unhealthy diseased granulation tissue. It is due to penetration of hair through the skin into subcutaneous tissue. It is infective in origin. It is common in hair dresser, jeep driver etc. Most cases occur in young male age group especially between 15-30 years, with a 3:1 male to female ratio. Usually it is seen in puberty, as sex hormones are known to affect the pilosebaceous gland and alter the healthy body hairs growth⁽²⁾.

Pilonidal sinus is characterized by discharge (either sero-sanguinus or purulent), pain (thrombing and persistent type), tender and swelling seen just above the coccyx in the mid line (primary sinus); and on either side of the midline (secondary sinus), tuft of hairs may be seen in the opening of the sinus etc.

In modern science, different treatment modalities are available such as excision and skin grafting, excision with Z-plasty, Karydakis excision, excision with closure using Rhomboidlimberg flap, Bascom technique of excision etc. The most typical treatment is surgery, which includes a wide excision and secondary healing. However, post-surgery recurrence

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is common, requiring regular and time-consuming wound care. As a result, In order to reduce recurrence, cut expenses, boost acceptability, and reduce hospitalization, it is important to assess the role of various alternative/ creative strategies in the care of this complex condition^{(3) (4)}.

According to *Acharya Sushruta*, condition known as '*Shalyaj Nadi Vrana*,' which is identical to 'Pilonidal sinus. '*Shalyaj Nadi Vrana*' is a track that is said to be caused by the fibrosed diseased tissue, presence of pus and hair, among many other things, inside that has gone untreated. *Acharya Sushruta* has been explained the '*Kshar Sutra*' approach For the treatment of *Nadi Vrana* as a very unique minimally invasive treatment (PNS)⁽⁵⁾.

2. Case report

In June 2023, a 32-year-old male patient presented to the Shalya O.P.D at Govt. Ayurved college hospital, Bikaner complaining of Pain and foul smelling discharge from low back region between the buttocks since 3 years.

2.1. Place of study

Department of Shalya Tantra, Govt. Ayurved college hospital, Bikaner.

2.2. History of Past Illness

No previous H/O any other severe illness.

2.3. Treatment history

No previous H/O any treatment.

2.4. Surgical History

No H/O any surgery.

2.5. Family History

All family members are healthy and have no H/O any other severe illness.

2.6. Personal history

- Appetite-average
- Food-mixed (spicy)
- Bowel-mild constipated
- Addiction-no addiction
- Micturation- frequently 6-8 times, normal flow
- Sleep-proper

2.7. General examination

- General condition-
- Average Bp- 114/76 mmhg
- Pulse - 78 / min
- Height- 170 cm
- Weight- 62 kg
- Temp.- 97.4 F
- Respiratory rate-14/min
- Tongue - Uncoated

2.8. Asthavidha pariksha

- Nadi (Pulse) = 78/Min.
- Mala (Stool) = 1-2 times/Day
- Mutra (Urine) = 6-8 Times/day
- Jihva (Tounge) = Alipta
- Shabda (Speech) = Normal.

- Sparsha- Anushana Shit
- Druka (Eyes) = Normal.
- Akruiti = Madhyama.

2.9. Local Examination

- Number of sinus- 1 Sinus
- Position of sinus: -1 opening just above the natal cleft on the left buttock. 2 opening just on the natal cleft.
- Opening of the sinus -Presence of tuft of hairs seen -Margin – normal.
- Discharge- Pus discharge present
- Surrounding Skin- -Inflammation - present. -Scars – Absent
- Smell- Foul smelling discharge

On the basis of clinical presentation, the patient was diagnosed as a case of non-healing ulcer with pilonidal sinus.

The patient was advised for *Snuhi-Apamarga Ksharsutra* application in *Shalyaj Nadi Vrana* (pilonidal sinus).

2.10. Laboratory Investigations

- Hb – 15.3gm%
- Clotting time – 4min 45 sec.
- Bleeding time – 2min 05sec
- TLC – 9680 cells/cubic mm³
- HIV 1 & 2-- Non reactive
- HBsAG – Non reactive.
- Random blood sugar –104mg/dl.

3. Treatment

3.1. Preoperative Preparation

- Patient's consent was taken prior to operative procedure.
- Local part preparation was done. local anesthesia sensitivity test was done.
- Injection Tetanus Toxoid (TT) was administered Intramuscular for prophylaxis.

3.2. Operative Procedure

- The patient was placed in prone position.
- Painting and draping were done.

For *Shalyaj Nadi Vrana* (pilonidal sinus) - The external opening was excised under local anaesthesia (2% lignocaine) and the embedded hairs were removed with the help of artery forceps Then Probe was passed into the P1 opening; gradually extended to the other opening and before taking it out, a sterile *Snuhi-Apamarga Ksharsutra* threaded into the eye of probe, present at tail end and probe was taken out through P2. after that wound was clean with normal saline and anti-septic dressing was done. *Snuhi-Apamarga Kshar Sutra* tied in the entire underlying track for simultaneous cutting and healing.

3.3. Post-Operative Care

- Ras Manikya- 75 mg
- Sudh Gandhak-250 mg
- Praval Pisti-250 mg
- Amalaki Churn-2 gm Twice a day
- Saptavinshti Gugullu- 2 Tab BD
- Trifala Guguliu-2 Tab BD
- Panchsakar Churn-5 gm HS
- Daily Cleaning & Dressing by Jatayadi Tailum

3.4. Diet chart

Shali Chawal, Mudga Yusha , Jangal Mans Rasa (soup of wild animal meat) Potola Phala (pointed gourg), Sahijan Phala (drumstick), Mooli (radish), Til Tail (sesame oil), Sarshap Tail (mustard oil), Tikta Dravya (like -Nimb, Guduchi etc.), honey, Ghrit, etc.

3.5. At the interval of one weak the *Kshar Sutra* was changed by railroad technique till the complete removal of the pathological tract

3.5.1. *Kshar Sutra* Preparation

Kshar Sutra is a medicated thread (seton) coated with herbal Alkaline drugs like *Apamarga Kshar* (Ash of *Achyranthus Aspera*), *Snuhi* (*Euphorbia Nerifolia*) latex and *Haridra* (*Curcuma Longa*) powder in a specific order. For the preparation surgical linen Barbour thread(No.20) was manually eleven coating by the latex of *Snuhi* followed by seven coatings of the latex of *Snuhi* and the alkaline powder of *Achyranthes Aspera* alternatively and dried. In the final phase, three coatings of latex of *Snuhi* and Powder of *Curcuma Longa* was given alternatively. The thread thus prepared was sterilized by ultra violet radiation and placed in glass tube. The pH of the thread was ensured to be about 9.75, while the length was about 11- 14 cm⁽⁶⁾.

3.5.2. Function

This combination of medicines on the thread helps in debridement and lysis of unhealthy tissues exerts antifungal, antibacterial, and anti-inflammatory action. The *Kshar Sutra* is destroys the residual glands in the epithelium.

4. Observation

After application of *Kshar Sutra* in *Shalyaj Nadi Vrana* (pilonidal sinus), collected— material in pilonidal sinus drifted till the complete removal of the pathological tract. The length of pathological tract of PNS was gradually decreases (near about at the rate of 1.0 to 1.5 cm/weak) and condition of patient gradually improved. After debridement of fibrosed edge of *Dushta Varna* (non-healing chronic ulcer) along with *Jatyadi Tailum* and oral *Ayurvedic* medicine, the wound started to heal within a weak and was healed completely in nearly 28 days. During each follow-up, sign and symptom were assessed.

5. Discussion

Kshar Sutra is a good and minimally invasive procedure in the management of Pilonidal sinus. The rate of complication and recurrence is minimal and the patient is enables to resume work and normal social activities as early as possible. It is an low cost treatment for the patient. No systemic side effects are encountered with *Kshar Sutra* therapy, although transient infection, local burning sensation, mild pain, itching and slight indurations are observed, which rarely need medication. Post-operative tissue damage and scarring are minimal. The *Kshar Sutra* therapy, a unique method of drug delivery, most appropriate for healing the sinus track offers an effective, ambulatory and safe alternative treatment in patients with pilonidal sinus.

6. Conclusion

As a result, the study reported that the *Snuhi-Apamarga Kshar Sutra* is a safe, effective, and minimally invasive surgery with a lot of potential for treating Pilonidal Sinus .It can be concluded that *Shalyaj Nadi Vrana* (pilonidal sinus) can be well managed by application of *Kshar Sutra* because it minimizes the rate of complications and recurrence of the disease and is also cost- effective.

Compliance with ethical standards

Acknowledgment

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Disclosure of conflict of interest

The authors declare no conflict of interest.

Statement of informed consent

Informed consent was obtained from patient included in the study.

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