

MANAGEMENT OF PILONIDAL SINUS WITH UDUMBARA KSHEERSUTRA- A CASE STUDY

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ABSTRACT

Introduction: Pilonidal Sinus is an infected tract under the skin between the buttocks (the natal cleft) which goes in vertical direction and commonly contains hairs. The most commonly used surgical technique include excision with primary closure and excision with reconstructive flap. However, the risk of recurrence or of developing an infection of the wound after the operation is high. Also, the patient requires longer hospitalization, and the procedure is expensive. There is similarity between *Shalyaj Nadi Vrana* described in *Sushrut Samhita* and Pilonidal sinus. *Sushruta* has advocated a minimally invasive para-surgical treatment, viz., *Ksheer Sutra* procedure, for *nadi vrana*. Hence, this therapy was applied in this case of Pilonidal Sinus, and is

described in the case report. **Aim & Objectives:** 1. To find a minimally invasive technique of treatment in Pilonidal Sinus in a male patient of 26yrs by a non-surgical method. 2. To study the effectiveness of *Udumbara Ksheersutra* in Pilonidal sinus. **Material & Methods:** *Ksheer sutra* threading was done on clinically diagnosed patient of Pilonidal sinus with 3 openings and was advised for changing *ksheerasutra* every 7th day by Railroad technique until “cut through” of the tract. **Results:** The patient recovered well with complete excision of tract within span of 15 weeks with no recurrence and irritation. **Conclusion:** The results obtained were found to be very encouraging as it minimizes the rate of complications and recurrence, and enables the patient to resume work and normal social activities very early. Hence, application of *udumbara ksheer sutra* can be effective intervention in the management of Pilonidal Sinus.

KEYWORDS: Pilonidal sinus, *nadi vrana*, *udumbar ksheer sutra*.

INTRODUCTION The term pilonidal sinus describes a condition found in the natal cleft overlying the coccyx, consisting of one or more, usually non infected, midline openings, which communicate with a fibrous track lined by granulation tissue and containing hair lying loosely within the lumen.

It is thought that the combination of buttock friction and shearing forces in that area allows shed hair or broken hairs which have collected there to drill through the midline skin, or that infection in relation to a hair follicle allows hair to enter the skin by the suction created by movement of the buttocks, so creating a subcutaneous, chronically infected, midline track. From this primary sinus, secondary tracks may spread laterally, which may emerge at the skin as granulation tissue-lined, discharging.

Openings. Usually, but not invariably (when diagnosis may be confused with anal fistula or hidradenitis suppurativa), the sinus runs cephalad. The hairs projecting from the sinus are dead hairs, with their pointed ends directed towards the blind end of the sinus. The disease mostly affects men, in particular hairy men.^[1]

Typically, the patient presents with a chronic sinus about the level of the first piece of coccyx. A tuft of hair projects from its mouth. The patient complains of blood-stained foul discharge from this sinus. There may be secondary openings on either side of the middle or little away from the main sinus. Pain and tenderness are often associated with due to recurrent infection. Complications include Abscess formation, Recurrent inflammation and recurrence of sinus formation which is due inadequate excision of the sinus or entry of hair to the scar of the skin.^[2]

Treatment includes DE roofing all sinuses and awaiting healing of the granulating wound is a long process. Excision and primary closure is another option when the disease is confined to the midline, but if the closure breaks down, a larger defect is left to granulate. With both techniques recurrence is common as hairs can later grow into the midline scars.^[3]

The '*Sushrut Samhita*', describes a condition '*Shalyaj Nadi Vran*' which is similar to 'Pilonidal sinus'. '*Shalyaj nadi vran*' is a track which is described to be due to presence of pus, fibrosed unhealthy tissue & hair etc. inside left unnoticed. *Sushruta* has advocated a very unique minimally invasive treatment i.e. '*Kshar Sutra*' procedure for management of *Nadi vran*

(PNS).^[4] *Udumbara Ksheerasutra* a modified version of well-established *Ksharasutra* (Ayurvedic Seton) was used in the present case study

MATERIAL AND METHODS

Method of Preparation of *Ksheerasutra*

In early morning, with the help of sharp knife, cuts were given to the tree of *Udumbara*, and the *Ksheera* (latex) which comes out from the branches were collected in a sterile vessel. To a surgical linen thread of no.20 size 11 coating of *Udumbara Ksheera* was applied. The prepared *Sutra* was placed in Cabinet to make it free from contamination and sterilization.^[5]

CASE REPORT

A 26year old male patient aged, came to the Surgery O.P.D at Vidarbha Ayurvedic Hospital, Amravati with complaints of recurrent discharge from a boil with pain and discomfort in February 2018.

The patient of selection criteria was a discharging sinus in and around natal cleft with only three openings (fig 1) giving history of repeated infections and clinically diagnosed as Pilonidal sinus and not treated by any surgical modalities in the past.



Fig. 1: Pilonidal sinus with 3 openings.

Before planning treatment other etiologies like Tuberculosis, Pelvic inflammation causing abscess, HIV, diabetes mellitus, foreign body or trauma were ruled out The study factor was introduction of *Udumbar Ksheer sutra* under spinal anaesthesia after thoroughly cleaning the tract by removing hair tufts (fig -2). By using a malleable metal probe, a simple linen thread was applied. After 7days *Udumbar Ksheer sutra* was introduced. (fig-3).



Fig. 2: Tuft of hairs expelled out during surgery.

Patient was asked to attend surgical clinic for dressing on alternate days. Seitz bath (hip) with lukewarm water was advocated before dressing. The *Udumbar Ksheer Sutra* was changed weekly for 15 weeks by “Railroad Technique”^[6] till cut through. To promote healing and reduce pain & inflammation Tablet Triphala Guggulu – 2BD (250mg) with honey (powdered and administered) for 7 days and Avipattikara Choorna – 5 g HS with honey for 7 days were also prescribed.



Fig. 3: Placing of *Udumbar Ksheer Sutra*.



Fig. 4: After 1month of thread change by “Railroad Technique”.

OBSERVATION AND RESULT

The sinus tract cut through and healed simultaneously by 15 weeks.(fig-5).

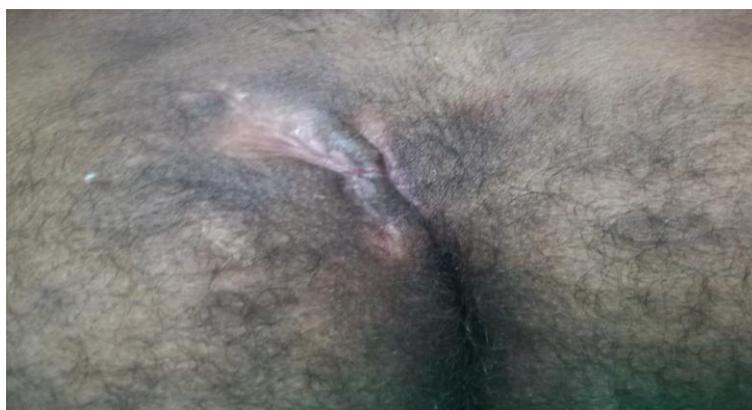


Fig. 5: After 15 weeks - complete healing.

DISCUSSION

In ancient time *Acharya Sushruta* encountered *Ksharsutra* therapy in *Nadivrana chikitsa*. In the present context *Udumbara Ksheera* was used to prepare *Sutra* which is said to be having properties like *Shothahara* (anti-inflammatory), *Vedana Sthapana*^[7] and a *Vrana Ropan* (wound healing). Even though *Ksheerasutra* is a non-alkaline Seton the cutting & healing of sinus tract which occurred simultaneously can be attributed to the medicinal property possessed by the *Udumbara Ksheera* and mechanical pressure exerted by the *Sutra*. The *Udumbar ksheersutra* acted as good drainage for the wound. Collectively *udumbar ksheer sutra* acts as simultaneous cutting and healing procedure.

The length of thread was measured every week and recorded to assess the cutting.

The Cutting rate per week (CRW) was measured as follows,

$$\text{CRW} = \text{Total length of the sinus tract} / \text{total treating days} \times 7$$

The CRW was 0.67cms per week in the present study. Pus discharge and itching decreased by the end of 1 week, there was no signs of inflammation or irritation experienced after placing the Seton.

The unit cutting time (UCT) of the tract was calculated as follows,

$$\text{UCT} = \text{Total No. of days taken for cut through} = \text{days/cm}$$

Initial length of track in cm

The UCT was 10.44 days/cm in the present study.

So the healing was good because no collection remained in the wound site. The pain after ligation of *udumbar ksheersutra* was bearable as the patient, who is working had not taken a break for this reason. So this is ambulatory method and patient need not take a leave for long period. No side effects or complications were noted during the study. After cut through of the tract, healing of the wound site is done properly & recurrence is not noted.

CONCLUSION

In this case study Minimum tissue loss is seen in comparison to the other surgery. Minimal bleeding occurs & there is no need to put huge dressings and it's also seen that *Ksheersutra* is very efficient method for Pilonidal sinus. There was no post-operative complication and there is no recurrence and any other complaints. The surgical treatment of Pilonidal sinus has many drawbacks including pain in sitting and recurrence but use of *Udumbar ksheerasutra* has good potential in the management of Pilonidal sinus. *Udumbar ksheerasutra* helps in the debridement and lysis of tissues, and also exerts antibacterial and antifungal activities (it causes both cutting and healing actions). So we can conclude that in the management of Pilonidal sinus the use of *udumbar ksheerasutra* minimizes the rate of complications and recurrence, and enables the patient to resume work and normal social activities very early. It is an acceptable treatment to the patient in terms of cost of treatment, extent of discomfort, impact upon body image and self-esteem.

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