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MANAGEMENT OF PILONIDAL SINUS WITH *APAMARGAKSHARA* SUTRA – A CASE STUDY

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ABSTRACT

Pilonidal sinus refers as nest of hairs and also known as Jeep-bottom because it was very common in jeep drivers. It is a condition commonly found in hairy persons.There is similarity between Pilonidal sinus and Shalyaja Nadi Vrana as described in Sushruta Samhita Differentmethods have been described for this disease such as excision and primary closure and excision with reconstructive flap, etc. However, the chances recurrence after surgery is very significant.. AcharyaSushruta has described Para surgical procedure a minimally invasive technique viz. Kshara Sutra for Nadi Vrana (Pilonidal sinus). The patient attended Shalya Tantra OPD of Gopabandhu Ayurveda Mahavidyalaya was treated with the Apamarga Kshara Sutra. The patient recovered completely with excision of the tract in seven weeks.This treatment not only minimizing the complications and recurrence but it also helps the patient to resume work quickly with less discomfort.

KEYWORDS: *Pilonidal sinus, Nadi Vrana, Apamarga Kshara Sutra*

INTRODUCTION

Pilonidal sinus is an acquired condition commonly found in dark-hairy persons and in drivers with its first description in the mid-19th century. The term is derived from a set of Latin words "pilus" meaning hair, and "nidus", meaning nest. It is popularly known as "Jeep Riders Disease".[1]Hirsutism,obesity and prolonged sitting are the riskfactors for this disease. It is an epithelium lined tract, situated short distance behind the anus, containing hairs and unhealthy diseased granulation tissue. It develops due to penetration of hairs through the skin into the open mouth of sudoriferous glands. It leads to dermatitis,infection,pustule and sinus formation.[2] The most important predisposing factor for the development of Pilonidal sinus are the existence of deep natal cleft and the presence of hair within the cleft. A deep natal cleft is a favourable atmosphere for maceration, sweating, bacterial contamination and penetration of hairs. Thus, for treatment and prevention, these risk factors must be eliminated..

Nadivrana: Improper management or negligence of management will lead the *Vrana* into further chronic stages, which leads to formation of*Nadi Vrana*. Improper incision and drainage of a ripened abscess results in entering the pus into the deeper tissues leading to*Nadi Vrana*. In *Sushruta Samhita, Nidana sthana*,it is deascribed that if a physician who neglects a *Pakva Sopha* or neglects a *Vrana* full of pus and advices for continuation of unhealthy food and activities, then the pus goes deep inside and destroy the tissues. Because of its moving inside greatly it is known as *Gati* and since the spread is through a tube it is called as *Nadi* (sinus).[3]

Treatments in Ayurveda

1. *Chedana* (Incision)
2. *Shalya Nirharana* (Removal of foreign body- hairs, pus)
3. *Shodhana* (Cleaning the tract)
4. *Ropana* (Wound healing)

Preparation of ApamargaKshara Sutra

*ApamargaKshara Sutra*Coatings- 1. *Snuhi Ksheera*-11
2. SnuhiKsheera + ApamargaKshara-07
3. SnuhiKsheera + Haridra Churna-03
4. Total-21

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Assessment Criteria

1. Unit cutting time (UCT)
2. Pain
3. Discharge
4. Size of wound

Time taken (in days) to cut one centimetre of the track with simultaneous healing is known as unit cutting time (UCT).

Description	Grading
No Complain of pain	0
Negligible or tolerable pain. No need of any medicine	1 + (+1)
Localized tolerable pain, completely relieved by warm fomentation	1++ (+2)
Intolerable pain, not relieved by fomentation, relieved by oral analgesic. No disturbance in sleep	1+++ (+3)
Continuous and intolerable pain with sleep disturbance. Patient seek medical help as early as possible	1++++ (+4)

Case Study

A male patient of 37 years old visited Shalya Tantra OPD of Gopabandhu Ayurveda Mahavidyalaya &Hospital with the OPD number of 46334/8238with the complaints of pain, swelling, discharge from natal cleft since2 months. Patient had a history of same complaints 9 months ago and he had visited a nearby hospital and was diagnosed with pilonidal sinus. There he had under gone surgery. Gradually after 7 months a small opening was felt by the patient near gluteal cleft with complaint of pain and discharge. Patient had no history of bleeding per rectum or painful defecation or any kind of discharge through anus. There was no history of immunocompromised patient like HIV,HbAg,Diabetes mellitus, Hypertension, Tuberculosis, etc. Patient had good appetite, bowel habit, sleep, not any kind of addiction. Blood pressure, pulse rate, respiratory rate was in normal limits.

Local Examination

Local examination was done in prone position of patient.Upon examinationit was observed that patient was hairy and had a small opening at mid gluteal cleft with good amount of hair nearby. During palpation, a cord like indurated structure was felt at the opening of the sinus. Mild tenderness and watery discharge were present at the time of palpation. There was no any other opening or any lump near gluteal cleft. Probing was done from the opening to accessed branching and extension of the tract. About 5 cm tract was found during probing in mid gluteal cleft.By complete thorough examination the diagnosis was confirmed as pilonidal sinus. All routine blood investigations were ruled out. All situations about disease and its management were explained to the patient and finally were planned for *Kshara Sutra* therapy under local anesthesia as day care procedure with patient's consent.

Essential Steps for *Kshara Sutra* Application

After taking all aseptic precautions, patient was taken in prone position to perform the application of *Kshara Sutra*. *Kshara Sutra* procedure was performed under local anesthesia. The malleablesilverprobe was inserted gently into the tract and was assessed by means of probe. The probe was pushed inside the tract till the tip of the probe was felt by the finger. Then tip of the probe was taken out through an artificial opening at the other end of Pilonidal sinus. Then *Kshara Sutra* was threaded in the eye of the probe. The probe was gently taken out in such a manner that the entire sinus tract was threaded by *Kshara Sutra.* During this procedure, tuft of hair was seen to come out of the pilonidal sinus tract along with foul purulant discharge. After that, the two terminuses of the *Kshara Sutra* were ligated. Then operated area was washed with NS and bandaged with sterilized cotton pad. There was no complication during the procedure. Vitals of patient were within normal limits.

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Before treatment



Probing of tract



During treatment



After Complete Healing

Post-Operative Care: Patient was advised to mobilize immediately after surgery. Patient was instructed to do warm fomentation twice a day and to keep the operated area clean and dry. The *Kshara Sutra* was changed weekly by rail road technique and length were measured. The thread was changed weekly because the thread act as an ideal media for drug delivery in the minute channel. The presence of *Apamarga Ksharasutra*in the tract kept it patent for 7 days enabling the infected material to drained out, promoting healing of Pilonidal sinus.

Observations and Results

Symptom	1st day	7th day	14th day	21st day	28th day	35th day	42nd day	49th day
Pain	+2	+2	+1	+1	0	0	0	0
Discharge	+2	+3	+1	+1	0	0	0	0
Length of a track	5cm	4cm	3cm	2cm	1cm	Cut through	0	0
Size of the wound	0	0	0	0	0	+1	0	0

Unit Cutting Time (UCT) = 35/5 = 7days/cm

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The patient had followed instructions strictly. From 14th day onwards there was remarkable subside in pain, wherweas pus discharge was slightly increased from14th to 21st day. After 35th day there was no discharge of pus. Initial tract length was 5 cm and cut through of the tract was occurred on 35th day. After 'cut through' there was a small wound and it was completely healed within 42nd day. Complete relief from all symptoms was achieved within 2 months of treatment.

Discussion

Acharya Sushruta has described *Baala*(hair) as one of the *Shalya* and it is the main reason for the formation of Pilonidal sinus. In this case, patient was obese with deep natal cleft and had the habit of riding the bike regularly. Because of overweight, there is a chance of friction of hairs between gluteal regions. Improper cleaning of anal region post defaecation and excessive sweating of this particular area might be the key factors for this condition.

There are so many modalities are available in the management of Pilonidal sinus. Nowadays *Kshara Sutra* is becoming more potential to treat Pilonidal sinus. The *Kshanana* and *Ksharana* properties of *Kshara Sutra* cuts pilonidal sinus tract from inside gradually and initiate simultaneous healing. This is because of the wound healing (*Vrana Ropana*), Analgesic (*Vedanahara*), Anti- inflammatory (*Shothahara*), *Krimihara*properties of *Apamarga,Snuhi* and*Haridra*.[4]

ApamargaKshara Sutra has analgesic property, this is probably due to *Vata Shamaka* and *Shoolapohara Karmas*, *Apamarga* effectively pacifies *Kapha* and *Pitta Dosha* and chemical constituents like Ecdysteroids, Saponins, Flavonoids, Phenolic Compounsand Curcumin of *Haridra* possesses Anti-bacterial action. Hence it alleviates the pus discharge, inflammation and which aids wound healing.

Conclusion

The modern surgical treatment of Pilonidal sinus is often unsatisfactory with Significantrecurrences rate. *Kshara Sutra* is safe, cost effective and minimally invasive procedure, promotes healthy healing with negligible recurrence rate. Management of pilonidal sinus with *ApamargaKshara Sutra* is found to be very effective, and can be successfully used as a curative measure in cases of Pilonidal sinus.

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