

AN INTEGRATIVE APPROACH IN THE MANAGEMENT OF SHALYAJA NADIVRANA WITH SPECIAL REFERENCE TO PILONIDAL SINUS- A CASE SERIES

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ABSTRACT

Pilonidal Sinus is an epithelial tract which is often hair filled and located in the skin of the natal cleft just beyond the anus is mostly seen in second decade with an incidence of 26 per 1,00,000 populations. The disease is more common in males than in females in the ratio of approximately 4:1. According to Acharya Sushruta, hair is one of the contributory factors in the development of sinus. Present day management of Pilonidal sinus is based on removal of causative factors which include radical excision of the tract. Patients complain of severe pain, discomfort and need long stay in hospital until the wound gets healed. Recurrence is about 20% with adequate excision of the tract and proper post surgical wound management. Ayurvedic line of treatment includes para surgical management like *Kshara sutra* ligation, *Taila daha* and *Varti prayoga*. These procedures are simple, effective, economical and safe which can be performed on OPD basis. Therefore, an effort is made to develop a holistic treatment that ultimately enhances the quality of life. The present case series portrays the management of Pilonidal sinus with *Apamarga ksharasutra* ligation, *Yashtimadhu tailadaha* under local Anesthesia with 2% Lignocaine Hydrochloride Injection, Sitz bath in *Panchavalkala kwatha*, Yoga therapy with *Vajrasana* and *malasana* along with appropriate dietetics.

KEYWORDS: *Shalyaja Nadivrana*, Pilonidal sinus, *Apamarga Ksharasutra*, *Yashtimadhu tailadaha*, Sitz bath, *Vajrasana*, *Malasana*.

INTRODUCTION

In Latin: *Pilus*- hair, *Nodus*-nest: Hodges, 1880. Pilonodal sinus is an epithelium lined tract situated short distance behind the anus, containing hair and unhealthy granulation tissue. It is also termed as Jeep's disease and Bottom's disease.^[1]

Basically, pilonidal sinus is a subcutaneous tract lined by skin and there are no hair growing within it. But the hair in the sinus are short and broken pieces of hair that either get sucked in to the pre-existing dimple in the skin or actually pierces the normal skin in the gluteal cleft, which act as foreign body to develop the sinus and also causes its persistence by chronic infection.

Shabdakalpadruma describes Nadivrana as a Vrana which discharges pus at all time and as an ulcer having a tract inside it.

Ayurveda classics describe various modes of management of Shalyaja nadi vrana among which *Kshara sutra* ligation is widely accepted and practiced².

The present study is equipped with *Apamarga Kshara sutra* ligation followed by *Yashtimadhu tailadaha*, Sitz bath in *Panchavalkala kashaya*, *Yogasana* and appropriate dietetics to enhance the efficiency of the treatment protocol, minimize the treatment duration and prevents recurrence.

Case Description

• Case 1

A 21 year old female who works as a lab technician in a private hospital came to opd with complaints of pain and pus discharge from natal cleft since 15 days associated with fever. She was diagnosed with Pilonidal sinus and had undergone *Apamarga Ksharasutra* ligation for the same a year ago. She has come to OPD, Department of Shalya tantra, GAMC, Bengaluru for management.

Local examination

• On Inspection

Site- Natal cleft

Discharge- pus along with blood

Opening: Number- 2

- On Palpation
Induration- around the opening
Local temperature- warmth present over the area of induration

- **Probing**
Length of the tract- 3.5cm
Investigations: Routine blood investigations were carried out

- **Case 2**
A 23 year old male who is an IT Professional came to opd with complaints of painful swelling and pus discharge from natal cleft since 2 months. He was earlier diagnosed with Pilonidal sinus and had undergone Apamarga Ksharasutra ligation for the same. He has come to OPD, Shalya tantra, GAMC, Bengaluru for further management.

Local examination

- On Inspection
Site- Natal cleft
Discharge- pus along with blood
Opening: Number- 2

- **On Palpation**
Induration- around the opening
Local temperature- warmth present over the area of induration

- **Probing**
Length of the tract- 2cm
Investigations: Routine blood investigations were carried out

- **Case 3**
A 34 year old male who works as a clerk came to opd with complaints of pain and pus discharge from natal cleft since 3 years. He did consult an allopathic hospital and he was diagnosed with Pilonidal sinus. He was advised surgical management but he was not willing to undergo surgery. He did consume oral antibiotics then and now for temporary relief.

One of his relative was earlier diagnosed with Pilonodal sinus and undergone Apamarga Kshara sutra ligation in GAMC, Bengaluru few years ago. He suggested the patient to consult our OPD for further management.

Local examination

- On Inspection:
Site- Natal cleft
Discharge- pus along with blood
Opening: Number- 2

- On Palpation
Induration- around the opening
Local temperature- warmth present over the area of induration

- Probing
Length of the tract- 4 cm
Investigations: Routine blood investigations were carried out

- **Case 4**
A 25 year old male who is a student came to opd with complaints of pain and pus discharge from natal cleft since 10 days. He was earlier diagnosed with Pilonidal sinus two years ago and had undergone surgical excision of the tract. He has come to OPD, Shalya tantra, GAMC, Bengaluru for further management.

Local examination

- **On Inspection**
Site- Natal cleft
Discharge- pus along with blood
Opening: Number- 2

- **On Palpation**
Induration- around the opening
Local temperature- warmth present over the area of induration

- **Probing**
Length of the tract- 1cm
Investigations: Routine blood investigations carried out.

- **Case 5**
A 28 year old male who works as a driver came to opd with complaints of pain and pus discharge from natal cleft since 2 months. He did consult an allopathic clinic where in he was advised with oral antibiotics and analgesics. He did find temporary relief but was not satisfied. He has come to OPD, Shalya tantra, GAMC, Bengaluru for further management.

Local examination

- On Inspection
Site- Natal cleft
Discharge- pus along with blood
Opening: Number- 2

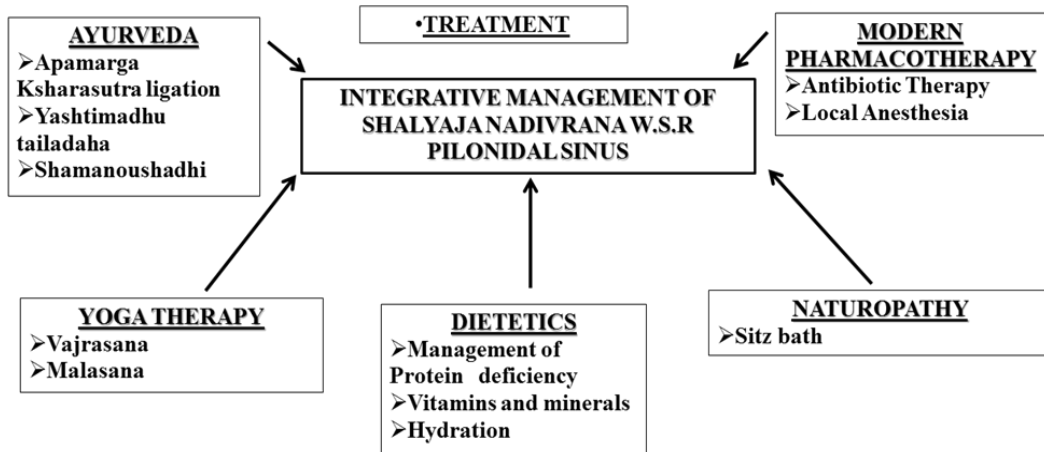
- On Palpation
Induration- around the opening
Local temperature- warmth present over the area of induration

- Probing
Length of the tract- 3 cm
Investigations: Routine blood investigations carried out

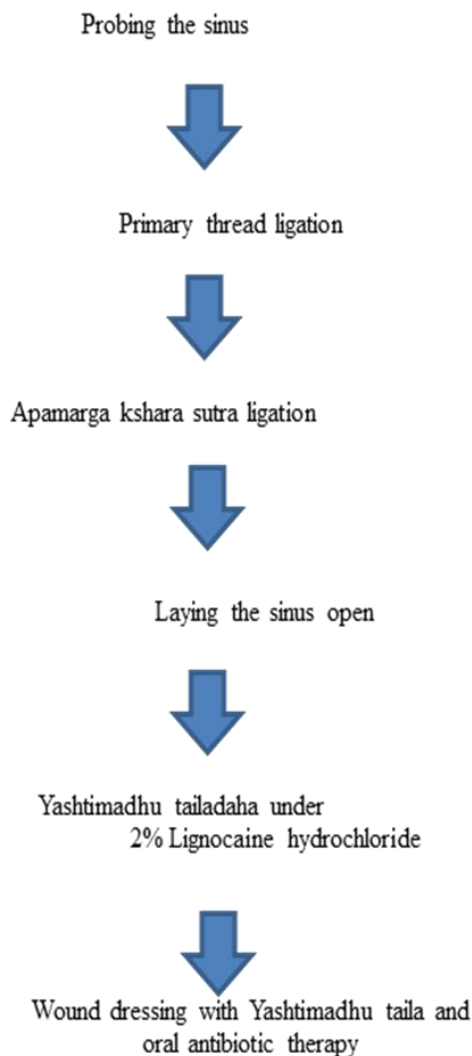
Table 1: indicating the complaints of the patients.

Subject	Pain	Swelling	Discharge	Fever
A	+	-	+	+
B	+	+	+	-
C	+	+	+	-
D	+	+	+	-
E	+	+	+	-

MATERIAL AND METHOD



Treatment Protocol

**Apamarga Kshara sutra Ligation**

Apamarga Kshara sutra is a thread that is coated with 7 coatings of latex of Snuhi (*Euphorbia nerifolia* Linn.), 11 coatings of Apamarga (*Achyranthes aspera*) Kshara and Snuhi and 3 coatings of Haridra (*Curcuma longa* Linn) and Snuhi. The primary thread is changed with

Apamarga Kshara sutra after 3 days of primary thread ligation. LOT (length of the tract) is noted.

Yashtimadhu tailadaha

Yashtimadhu tailadaha is done immediately after laying the sinus tract open under Local anaesthesia. 'Taila daha' is a technical term coined by Charaka in Shvayathu Chikitsa Adhyaya.

Yashtimadhu has Kashaya rasa. It has properties of Shonita sthapana, Vrana ropana and Daha prashamana which encourages haemostasis and faster healing of the wound.

Hence, Yashtimadhu taila is the choice of drug for tailadaha.

Purva karma (Pre operative procedure)

1. Informed written consent is taken by the patient
2. Vitals checked
3. Part preparation is done
4. Test dose Inj Xylocaine 2% 0.5ml ID is given
5. Inj TT 0.5 ml IM is given
6. Yashtimadhu taila is heated upto 160⁰ C (boiling point)^[3]

Pradhana karma (Operative procedure)

1. Patient has to be in prone position
2. The sinus tract is laid open by inserting a probe through the openings and the tract is incised using surgical blade 15
3. When the tract is exposed, hair might be present in it which is extracted
4. Local Anesthesia Inj Xylocaine 2% is infiltrated around the tract
5. Yashtimadhu taila which is heated until its boiling point is applied over the tract using a glass pipette or glass syringe. (Pippete is preferred in tract < 2cm and syringe is preferred in tract > 2cm)
6. Observe Samyak Mamsa Dagda Laxana
7. Mop the taila with a gauze piece and the wound is dressed with Yashtimadhu taila



Subject C: Images 1, 2, 3 and 4 show Probing, infiltration of LA, taila daha and mopping taila respectively.

Paschat karma (Post operative procedure)

1. Oral Antibiotics- Tab Amoxyclav 625 BD was prescribed for 5 days
2. Shamanoushadhi- Triphala Guggulu, Sarivadi vati and Gandhaka vati BD were prescribed for a week
3. Cleaning and dressing done until the tract is healed
4. Panchavalkala sitz bath for 15 minutes, twice a day was advised
5. Yoga therapy- Vajrasana and Malasana postures were advised to be practiced

Table 2: Showing Subjective changes after taila dala w.r.t different Time periods.

Subjects	After 30s	After 30 min	After 6 hr	After 1 day
A	Nothing specific	Nothing specific	Nothing specific	Nothing specific
B	Warmth over the wound	Warmth over the wound	Nothing specific	Nothing specific
C	Warmth over the wound	Warmth over the wound	Nothing specific	Pain over the wound
D	Burning sensation over the wound	Warmth over the wound	Nothing specific	Nothing specific
E	Warmth over the wound	Nothing specific	Nothing specific	Nothing specific

Table 3: Showing Early and Late changes after taila dala w.r.t Mamsa dagda laxana.

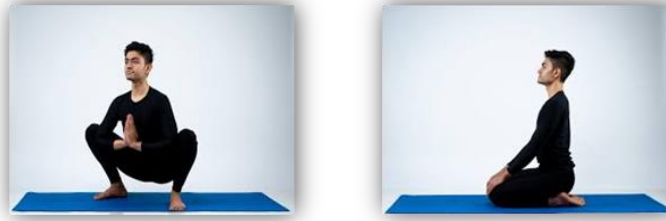
Subjects	Mamsa Dagda Laxana	
	Early (1 min)	Late (6hr)
A	Kapota varna Shushka sankuchita vrana	Alpa Shvayathu
B	Kapota varna Shushka sankuchita vrana	Alpa Shvayathu
C	Kapota varna Shushka sankuchita vrana	Alpa Shvayathu
D	Kapota varna Alpa vedana Shushka sankuchita vrana	Alpa Shvayathu
E	Kapota varna Shushka sankuchita vrana	Alpa Shvayathu

Yoga therapy

Vajrasana and Malasana are the two yoga postures

advised to patients. The postures have to be practiced for 30 seconds while taking deep breaths with 5 repetitions

in the morning and evening.



(Images 5 and 6 showing Vajrasana and Malasana respectively).

Dietetics

Patient’s diet and eating habits were analyzed and they were advised to include appropriate quantity of protein in their diet. W.H.O sets the safe level of Protein intake at 0.83 g per kg per day. Vegetarian sources of protein are lentils, beans, nuts and dairy products while most of the non vegetarian food comprises protein in it. Patient is advised to be hydrated by consuming sufficient quantity of water

RESULTS

Table 4: Showing time taken for wound healing after taila daha w.r.t different lengths of tract.

Subject	Length of the tract	Time taken for wound healing
A	3.5cm	10 days
B	2cm	7 days
C	4cm	12 days
D	1cm	4 days
E	3cm	8 days

- After laying the tract open, if any hair is found, it is extracted
- Tailadaha was performed in tract starting from 1cm, then the length was gradually increased to observe results
- While performing Tailadaha over the wound, patients felt the warmth of hot Yashtimadhu taila
- When the tract is laid open, Haemostasis was achieved with Yashtimadhu tailadaha in four subjects, electric cautery was used in one of the cases
- Time taken for wound healing was comparatively less to that of wounds managed without Tailadaha
- Recurrence was not noted in the follow up period of 3 months



Image 7 and 8: Before and after treatment images of the tract: Subject A.



Image 9 and 10: Before and after treatment images of the tract: Subject B.

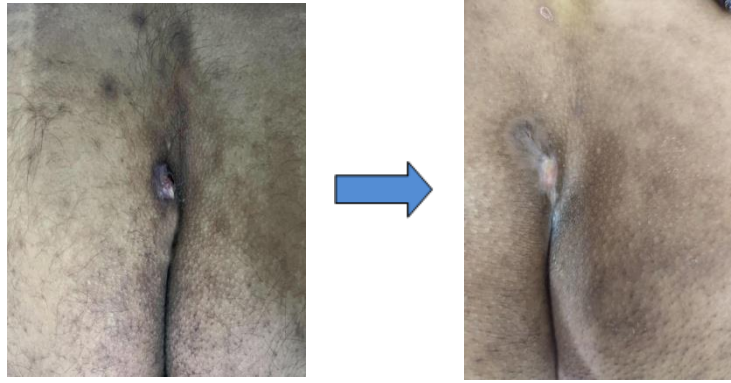


Image 11 and 12: Before and after treatment images of the tract: Subject C.



Image 13 and 14: Before and after treatment images of the tract: Subject D.

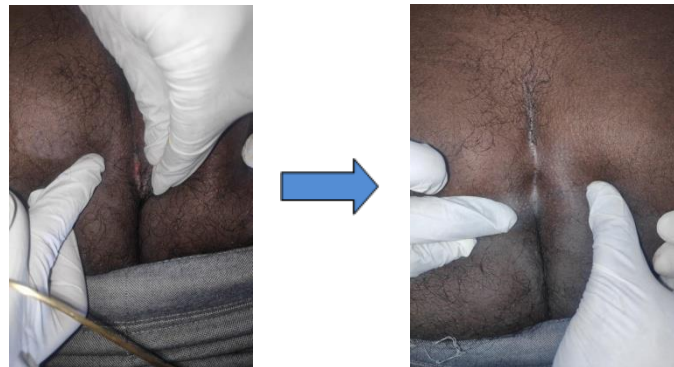


Image 15 and 16: Before and after treatment images of the tract: Subject E.

DISCUSSION

Apamarga Kshara sutra acts with the dual action of mechanical and chemical cautery providing adequate drainage of the pus. The thread also has anti-inflammatory and anti-microbial action which does cutting and healing of the sinus tract simultaneously. It is the go-to mode of management in the cases of Bhagandara and Nadi Vrana and is practiced widely. However, few recurrences are noted as shown in the current study.

Taila daha is basically a type of Snigdha Agnikarma applied on vrana which can be understood as the application of topical radiant heat in wound healing which acts by enhancing the rate of local blood flow and CD3 cells, in turn increasing the local innate immunity within the environment of the healing wound. According to Van't Hoff's law, at chemical level, there is positive

effect of heat on wound healing. Hyperthermia increases polymorph chemotaxis and phagocytosis, fibroblast proliferation and increased oxygen delivery to the areas of wound healing.^[4] By adopting Tailadaha, the above mentioned drawbacks can be avoided and the treatment protocol becomes more patient friendly. Administration of oral antibiotics takes care of the fresh surgical wound. Practicing sitz bath in Panchavalka kashaya and Yoga postures enhance better wound healing.

CONCLUSION

Shalyaja Nadivrana is a disease manifestation well known for its high recurrence rate and complications. Even though, there has been some advancement in the recent past, conventional surgical managements fail to overcome these issues. Kshara sutra ligation on the other hand does well to counter these issues and becomes the better option in the management of PNS.

However, the therapy demands frequent visits to OPD for thread change. Sometimes, changing the Kshara sutra becomes a painful procedure as it is difficult to tolerate by sensitive patients and the procedure also demands weekly visit to OPD until the tract is completely cut. A single Apamarga Kshara sutra does cost Rs 250 – Rs 350 in an Ayurvedic retail medical store. Hence the present treatment protocol overcomes this issue, minimizes the number of OPD visits and also takes care economically by cost cutting the price of Kshara sutra. Patients who are part of this study were pretty much satisfied with the results and approach.

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