

Effect of *Hamsapadadi taila varti* in Pilonidal sinus after *Chedana* – A Case Study

Sneha Haridas¹, Dr. Smitha Mohan P.V., M.S. (Ay), Ph.D², Dr. Shaji K., M.S.(Ay)³,
Dr. Verghese A.F., M.S.(Ay)⁴, Dr. Najma Mansoor A.P., M.S.(Ay)⁵.

¹1st year P.G. Scholar, Department of *Shalyatantra*, P.N.N.M. Ayurveda Medical College & Hospital, Cheruthuruthy.

²Professor and Head of the Department, Department of *Shalyatantra*, P.N.N.M. Ayurveda Medical College & Hospital, Cheruthuruthy.

³Associate Professor, Department of *Shalyatantra*, P.N.N.M. Ayurveda Medical College & Hospital, Cheruthuruthy.

⁴Assistant Professor, Department of *Shalyatantra*, P.N.N.M. Ayurveda Medical College & Hospital, Cheruthuruthy.

⁵ Assistant Professor, Department of *Shalyatantra*, P.N.N.M. Ayurveda Medical College & Hospital, Cheruthuruthy.

Email address: snehahvarier@gmail.com

Abstract—Pilonidal sinus is an inflammation of one or more sinuses in the midline of the natal cleft that contain hair and debris. The tract which is lined with unhealthy granulation tissues as a result of chronic infection. The superficial part of tract is lined by squamous epithelium. In Ayurveda, pilonidal sinus can be correlated with *nadivrana*, more specifically as *shalyaja nadivrana*. According to Acharya Susruta and other Acharyas, the general treatment principles of *nadivrana* are mentioned as *chedana*, *sodhana* and *vrana ropana*. The purpose of this study was to investigate the effect of *hamsapadadi taila varti* in the treatment of pilonidal sinus after *chedana*. *Hamsapadadi taila* is mentioned by Acharya Chakrapani. In this case study, the patient with pilonidal sinus was treated with *hamsapadadi taila varti* after *chedana* on the first day. After 30 days of observation, the symptoms of *nadivrana* reduced remarkably. The assessment of wound healing was assessed using PUSH Tool 3.0, the reduction in pain by VAS Scale.

Keywords— *Chedana*, *Hamsapadadi taila*, *Nadivrana*, *Nadivrana viropana*, *Pilonidal sinus*, *PUSH Tool 3.0*, *Sodhana*, *VAS Scale*.

I. INTRODUCTION

Pilonidal disease was originally described by Herbert Mayo in 1833 as a congenital condition. Pilonidal Disease was first described by Richard Hodges in 1880¹. ‘Pilonidal’ is a Latin word, means ‘nest of hairs’ or tuft of hairs. Pilonidal sinus is a hair containing sinus or abscess, in inter gluteal area, typically in tail bone area or crease of buttocks. The skin condition is characterised by abnormal sac like structure, filled with hairs, granulation tissues, epithelial scales and debris. This disease shows an incidence of 26 per 10,000 population². It was common among jeep drivers. So, it is also called as ‘Jeep-bottom’³. It can cause discomfort, embarrassment and absence from work for thousands of young people. The pilonidal sinus is more common in young adults, especially men. The average age for reference is 21 years for men and 19 years for women. The male-to-female ratio is 6:1⁴, indicating that men are significantly more affected than women.

Moving on to the treatment, most used procedures for managing pilonidal sinus are incision and drainage, excision and healing by secondary intention, excision and primary closure, excision with reconstructive flap techniques⁵. Various complications of pilonidal sinus are surgical wound infection and recurrence of sinus even after surgery, which is the most relevant drawback faced by these techniques and also need prolonged healing time, longer hospital stays which expensive as compared to Ayurvedic treatment. Repeated infection of pilonidal ‘cysts’ or ‘sinus’ in untreated patients may lead to squamous cell carcinoma.

Based on the sign and symptoms of pilonidal sinus, it can be correlated as *nadivrana*, more specifically as *shalyaja nadivrana*. As per *shalya* definition Acharya Susruta mentioned that hair can be a root cause for *nadivrana*⁶. Acharya also mentioned that *nadivrana* occurs when a physician neglects a *pakvasopha*, thinking that it is *apakwa* or he neglects a wound with full of pus and if the patient continues unhealthy food and activities, then the pus goes deep inside, destroying *twak* and *mamsa* and forms *gati (nadivrana)*⁷. According to Acharya Vagbhata, the foreign body

remaining inside the body if not removed leads to *nadi* or *gati* (sinus / ulcer). It exudes thin, warm, frothy blood and pus every day⁸. *Nadivrana* is said to be *yatnasadya* or *krichrasadya* according to all Acharyas. That is *sastra sadhya*. According to Acharya Susruta, *nadivrana* is considered as *chedya*, *bhedya*, *eshya roga*⁹. *Chedana*, *sodhana* and *vrana ropana* are the general line of treatment advised by Susruta Acharya. So, after *chedana hamsapadadi taila varti*¹⁰ was used for *vrana ropana*. *Hamsapadadi taila* is mentioned in *Chakraduttam Nadivranadikara*. And the *taila* is directly indicated for *nadivrana* with *viropana* property. Pilonidal syndrome represents a high burden of disease, affecting people at an early age with high socio-economic consequences. In its most severe form, pilonidal syndrome can be very debilitating, disrupting daily life and limiting activities. Through this study we are trying to find out safe effective and economical treatment which can give curative outcome to patients.

II. CASE REPORT

23-year-old male patient came to OPD with history of pain and oozing from the natal cleft for 2 days. Patient reported history of similar symptoms one year ago. At that time physician who diagnosed a pus point above buttocks crease in mid line of the sacro-coccygeal region, which subsequently erupted on its own. The condition recurred recently prompting the patient to visit the outpatient department (OPD). On local examination, an indurated mass was palpated in the natal cleft with a visible opening in the midline. Probing revealed a primary tract measuring approximately 1.5 inches extending superolaterally towards right from the natal cleft. A secondary tract measuring about 1 inch extending left laterally from the main tract. These findings confirmed the diagnosis as pilonidal sinus.

III. TREATMENT

Materials required:

- Butterfly Probe
- Sterile Gloves
- Sterile cotton swabs
- Mosquito forceps
- Kidney tray
- Sterile cotton
- Gauze
- Surgical blade no. 23 or 24
- *Hamsapadadi taila*
- Sponge holder

Day 1

Pre-operative procedure:

- Pre-operative check-up was done.

- The procedure was explained to the participants and Consent taken.
- The part prepared.

Operative procedure:

- The participant made to lie in prone position on the surgical table.
- Area of application made aseptic.
- A lubricated butterfly probe inserted into the tract.
- De-roofing the tract done using surgical blade no. 23 or 24.
- Blunt debridement of the track lining was done.
- Haemostasis was attained.
- Packing done with *hamsapadadi taila varti*.

Post-operative procedure:

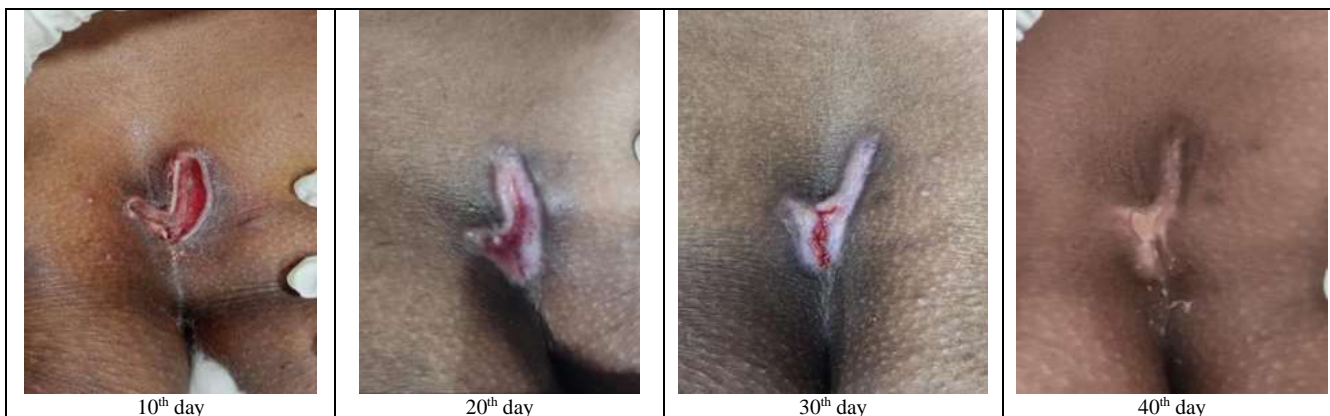
- Vitals rechecked and recorded.

Day 1 to Day 30

Packing was done with *hamsapadadi taila varti*.

IV. OBSERVATION AND RESULTS

Day	Pain	Size of the wound	Exudate	Tissue type	No. of days (healing)
1 st	9	9	3	3	40 days
10 th	6	5	1	2	
20 th	2	3	0	2	
30 th	0	1	0	1	
40 th	0	0	0	0	



V. ANALYSIS

The assessment of wound healing was assessed using PUSH Tool 3.0¹¹ and reduction in pain by VAS Scale¹².

Pain Over Time: Pain levels decreased steadily from 9 on the 1st day to 0 by the 30th day, remaining at 0 on the 40th day.

Size of Wound Over Time: The size of the wound also reduced consistently, from 9 on the 1st day to 0 by the 40th day.

Exudate Over Time: Exudate levels decreased from 3 on the 1st day to 0 by the 30th day stayed at 0 through the 40th day.

Tissue Type Over Time: Tissue type improved progressively, moving from 3 on the 1st day to 0 by the 40th day.

VI. RESULT

The patient's condition showed significant improvement over the 40-days period. Pain, wound size, exudate and tissue type metrics all indicated steady healing, with all parameters reaching zero by the 40th day. This suggests that the treatment or observation strategy was effective in promoting healing of pilonidal sinus.

VII. DISCUSSION

In *Ayurveda*, "Vrana" refers to a wound, ulcer, or sore. "Nadi" mean a tubular structure, often referring to veins, arteries or channels within the body. Therefore, "Nadi Vrana" be interpreted as a wound or ulcer that is associated with or occurring within a tubular structure in the body such as a blood vessel or duct.

In *Ayurvedic* practice, the classification and understanding of different types of wounds are essential for determining the appropriate treatment. *Nadivrana* specifically would require treatments and interventions that address the unique challenges presented by wounds in tubular structures, which might include issues with blood flow, infection risk and healing. One of the main causes of its non-healing nature is the presence of hair, is taken as *sannikrishta nidana* and another one is its tubular structure, can take as *viprakrishta nidana*. The treatment of *nadivrana* in *Ayurveda* might involve a combination of herbal remedies, dietary adjustments and specific therapeutic procedures aimed at promoting healing, reducing inflammation and preventing infection. The holistic approach of *Ayurveda* emphasizes the balance of bodily *doshas* (*Vata*, *Pitta*, *Kapha*) and often incorporates lifestyle and environmental factors into the treatment plan.

Vataja, *Pittaja*, *Kaphaja*, *Vata-Pittaja*, *Pitta-Kaphja*, *Vata-Kaphja*, *Sannipataja* and *Shalyajanya* (*Agantuja nadivrana*) these are the eight types of *nadivrana* according to *Susrutha*. The father of surgery, Acharya Sushruta, said that what causes pain in the body is "shalya". According to classes, foreign substances can also cause sinus infections. Defined by Shalya, Acharya Susruta pointed out that hair becomes the primary cause of Nadyurana. Therefore, the pilonidal sinus is the ideal model for Nadiurana. It is well known fact that pilonidal sinus is a significant disease burden, affecting people in the most productive years. In its most severe form, pilonidal syndrome can be very debilitating, disrupting daily life and limiting activities. So, it is very important to find out safe, effective and

economical treatment which gives curative as well as preventive outcome to patients.

The management comprised of after de-roofing (*chedana*) and debridement (*lekhana*), we used *hamsapadadi taila varti* for *vrana ropana*. *Varti* is mainly indicated in *antha shalyaja vrana* with minute external opening. *Sushruta* and *Vagbhata* mentioned *varti gunas* and *karmas* along with its adverse effects. The efficacy of the *varti* is according to how meticulous the preparation and placement, if not done properly lead to so much complications. *Varti* should not be very *snigdha* (unctuous), not too *ruksha* neither it should be very thick nor thin and it should not cause any problem to the patient. If it is very unctuous it causes excess exudation; if it is dry it causes abrasion, bleeding and pain, if thick or thin or not inserted properly causes friction to the edges of the sinus. If correctly prepared and placed it, then it will drain the pus and removes the unhealthy tissues and purifies the tract. These *vartis* should be prepared with *sodhana* and *ropana dravyas*, which does debridement of the slough, unhealthy tissue, alleviates all the vitiated *doshas* and facilitate healing process.

The study focused on the use of *hamsapadadi taila*, which consists of:

- *Hamsapadi* (*Desmodium triflorum*)
- *Arishta patram* (*Azadirachta indica*)
- *Jathi patram* (*Jasminum grandiflorum*)

These herbs are known for their *vrana ropana* (wound healing) and *vrana sodhana* (wound cleansing) properties, as well as their anti-inflammatory, anti-microbial and analgesic effects. For the preparation of *hamsapadadi taila*, both the *swarasa* (juice) and *kalka* (paste) of these herbs are used. The study found that the application of *hamsapadadi taila* showed highly significant results in pain, discharge and healing. The tract healed within 40 days. From these results, it is evident that *hamsapadadi taila* is quite effective in addressing the parameters associated with *nadivrana* (pilonidal sinus). However, the study suggests that further clinical trials should be conducted on a larger sample size, potentially with modifications in drug composition, dosage, and duration to achieve even more beneficial results.

VIII. CONCLUSION

In modern medical science, *nadivrana* is quite similar to pilonidal sinus, a condition characterized by the presence of an indurated mass felt near the tailbone that contains hair and skin. The traditional *Ayurvedic* treatments for *nadivrana*, including *chedana* (incision and drainage), *sodhana* (cleansing), and *vrana ropana* (wound healing), align well with modern treatments for pilonidal sinus. The study concludes that the application of *hamsapadadi taila varti* after the *chedana* procedure offers an easy, affordable, and effective treatment for curing and preventing pilonidal sinus.

REFERENCES

1. Fahad Mahmood, Anwar Hussain et.al. Pilonidal sinus disease: Review of current practice and prospects for endoscopic treatment, *Annals of Medicine and Surgery*, 2020; 57; 212.
2. Syed Abdul Wahid, Arvind Gajbhiye. A comparative clinical study of 'chedana karma & ksarasutra karma' (guggulu based) in the management of *shalyaja nadi vrana* (sinus) w.s.r. to pilonidal sinus (associated with *ropan lepa*), *IAMJ*, February 2021.
3. Syyed Mohammed Jalaludheen. Outline of *Salyatantra*, Chaukhambha



- Sanskrit sansthan publications, Varanasi; 2013, volume 1&2, pg no. 255.
4. Arya Krishna S.K. A clinical study to evaluate the healing effect of *dahana* with *svarjikadi taila* after *patana* - complete incision in pilonidal sinus, GAC, Trivandrum, 2021.
 5. Fahad Mahmood, Anwar Hussain et.al. Pilonidal sinus disease: Review of current practice and prospects for endoscopic treatment, *Annals of Medicine and Surgery*, 2020; 57; 213.
 6. Professor K R.Sreekantha Murthy. *Susruta Samhitha, Sutrastana*, Chawkamba Publications, Delhi, 2014; volume 1, pg no. 4.
 7. Professor K.R. Srikantha Murthy. *Ashtanga Hridayam, Uttarastana*. Chowkhmba Krishnadas Academy Publications, Varanasi, 2016; pg no.279.
 8. Professor K.R. Srikantha Murthy. *Ashtanga Hridayam, Uttarastana*. Chowkhmba Krishnadas Academy Publications, Varanasi, 2016; pg no.280.
 9. Professor K R.Sreekantha Murthy. *Susruta Samhitha, Sutrastana*. Chawkamba Publications, Delhi, 2014; volume 1, pg no. 182-183.
 10. Cheppad K Achutha Warriar. *Chakraduttam Goodartha Deepika*, S.T.Reddiar and sons publishers, Kollam, 2014; pg no. 215.
 11. PUSH Tool Version 3.0: 9/15/98 ©National Pressure Ulcer Advisory Panel.
 12. Zana Q Omer. Prospective study of oral health, pain and discomfort and success rates following insertion of Orthodontic mini – implants, *Sulaimani Dent J*. August 2018; volume 5 (1).