

Effect of Taila Dahana in Pilonidal Sinus After De-Roofing and Debridement - A Case Study

Stefi C F¹, Dr. T. Sreekumar², Dr. Smitha Mohan P. V.³

¹Final Year PG Scholar, Department of Shalyatantra, P.N.N.M Ayurveda Medical College, Cheruthuruthy P.O, Thrissur

²Professor and HOD, Department of Shalyatantra, P.N.N.M Ayurveda Medical College, Cheruthuruthy

³Professor, P.N.N.M Ayurveda Medical College, Cheruthuruthy

Email address: ¹steficfigi36@gmail.com

Abstract—Pilonidal sinus is a disease arising in the hair follicles of gluteal cleft. The blocked hair follicle leads to enlargement and rupture of the pilosebaceous glands leading to formation of abscess and chronically discharging sinus. There are several methods for the management of this disease, but nothing gained a universal acceptance. It is a chronic acquired condition leading to morbidity, associated health care costs and has a great chance for recurrence. In Ayurveda, it can be correlated to *nadivrana*. According to Acharya Charaka, the treatment includes *eshana*, *patana*, *taila dahana* and *ksharasutra* application followed by *vrana chikitsa*. The management of a case of pilonidal sinus treated with *patana* and *taila dahana* is presented here, who had a recurrent sepsis at the natal cleft.

Keywords— Pilonidal sinus, *nadivrana*, *patana*, *taila dahan*.

I. INTRODUCTION

Pilonidal disease was initially described by Herbert Mayo in 1883 as a congenital condition with the term 'pilonidal', derived from the Latin word '*pilonidal*', meaning 'nest of hair'. The word was coined by Richard Hodges in 1880. It was common among the jeep drivers during the 2nd World War; hence the disease was called the 'Jeep disease'. The mean age of presentation of this disease among men is 21 years, in women is 19 years. Prevalence amongst men is 2.2 times greater than in women.¹ Several interventional techniques are practised for the management of pilonidal sinus. Most procedures can be classified into 4 categories: 1) incision and drainage, 2) excision and healing by secondary intention, 3) excision and primary closure, 4) excision with reconstructive flap techniques. The various reconstructive flap techniques include Rhomboid flap, Karydak's, VY Advancement flap, Limberg flap and Z-plasty. Other surgical management include Endoscopic Pilonidal Sinus Treatment (EPSiT) and Video Assisted Ablation of Pilonidal Sinus (VAAPS)³. The complications of pilonidal sinus are abscess formation, recurrent inflammation and recurrent sinus formation, which is the main drawback of these procedures⁴. Even if several management techniques are available, pilonidal sinus still remains notorious due to its high recurrence rate. The main drawback of modern surgery includes a high recurrence rate, expense, prolonged healing time, lengthier hospital stays, blood loss and sophisticated procedures when compared to Ayurveda procedure. The treatment principles of *bhagandara* by Acharya Charaka like *eshana*, *patana*, *taila dahan* and *ksarasutra* is also applicable for *nadivrana*.⁶ Ayurveda highlights the importance of *apunarbhavatwa* of '*Agnikarma*'. *Agnikarma* is of two types *Snigdha* and *Ruksha*. Hence, *taila dahan* a type of *snigdha agnikarma* was used to manage this condition.

II. CASE DESCRIPTION

A 19-year-old hairy obese female patient who is a student preparing for the entrance exam came to our OPD on August 2022 with complaints of on and off eruption of abscess at the site of coccyx (gluteal cleft) in the last 6 months. She experienced pain in the coccyx region. She had difficulty in sitting for long hours. She consulted allopathic hospital and was diagnosed as pilonidal sinus. Even though they advised surgery, she preferred internal medicines. But the symptoms worsened day by day and it started affecting her daily works and studies. So, she consulted in our OPD for ayurvedic management.

Past History- Chicken pox- 2008, Covid 19- June 2020

General examination

BP- 120/80mmHg	Built - Obese
PR- 17/min	Weight - 90 kg
RR- 14/min	Height - 164cm
Hygiene - Moderate	Prakriti - Kapha

Local examination of Sacrococcygeal region

Inspection

- Site - Natal cleft in midline position
- Colour of discharge - Blood tinted yellowish discharge
- Number of openings - One
- Previously operated scar - Absent

Palpation

- Area of induration - felt throughout the length of the tract
- Local temperature - raised
- Tenderness - present Grade 2⁸

Probing

Length - 1.5 cm from midline laterally to 11 'o' clock position
Width - 1cm

Investigations (5/8/2023)

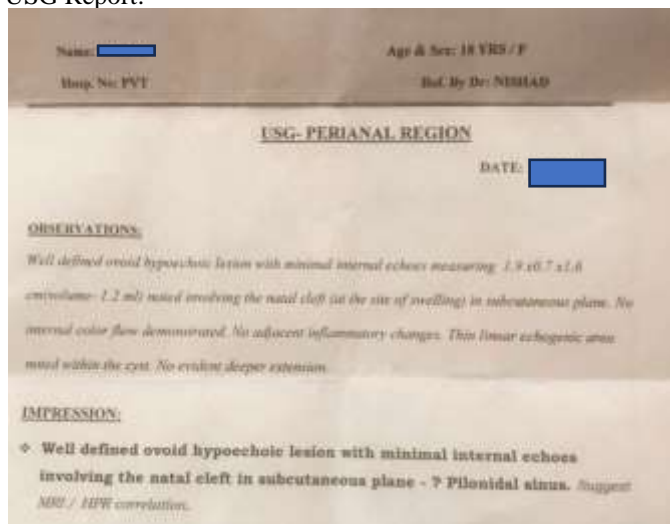
Blood test:

Hb-10.9%

ESR-25mm/hr

BT-2min
 CT-5min
 FBS-76mg/dl
 HIV- Negative
 HBsAg-Negative

USG Report:



Treatment Plan:

Probing → De-roofing → Debridement → *Taila dahana*
 → *Vrana chikitsa*

Pre-operative procedure

Informed consent was obtained. Part preparation was done. All vitals were checked. The subject was laid in prone position and asked to take deep breath. The area was cleaned and sanitized by *triphala kashaya*. The length, width and direction of the tract, which were previously assessed on screening examination, were reassessed with the help of a probe with director.

Operative procedure

A lubricated butterfly probe was inserted into the sinus. Incision of the tract was done using a surgical blade no.24 and the sinus was de-roofed. The bleeding was stopped and debridement of the lining of the track was done with cotton ball. *Tila Taila* which was heated till boiling point was spread throughout the tract using a silicon brush in *vilekha* mode. Then the wound was smeared with *Manjishtha Sariba lepa*.

TABLE No.1

Days	Procedure	Internal medication
1 st day	De-roofing Debridement <i>Taila dahana</i>	Internal administration of 6g of <i>Guggulupanchapala choornam</i> with lukewarm water twice daily A/F
1 st -7 th day	Dressed with <i>Manjishtha sariba lepa varti</i>	
8 th -42 nd day	Dressed with <i>Jatyadi kera taila varti</i>	

Taila dahana was done with *Tila taila* in the pilonidal sinus tract after complete de-roofing, as a single sitting procedure. Packing was done with *Manjishtha sariba lepa varti* for first 7 days and later with *Jathyadi kera taila varti*. The

healing was assessed with the PUSH Tool 3.0⁹ and VAS Scale.

Post-operative procedure

All the vitals were rechecked, recorded and the wound was packed. The assessment period was for 42 days and the assessment was done on 0th, 14th, 28th and 42nd day. The wound was managed with *Manjishtha sariba lepa* for 1st to 7th day followed by *Jathyadi kera taila* till 42nd day. Internally patient was administered *Guggulupanchapala choornam* 6g twice daily with luke warm water after food.



Figure No 1: Materials required



1. Eshana 2. Patana



3. Agnikarma

Figure No 2: Operative procedure



Before procedure
Figure No. 3



After procedure (day 0)
Figure No. 4



Day 14
Figure No. 5

Day 28
Figure No. 6



Day 42
Figure No. 7

III. RESULT

The patient had an uneventful recovery, pain completely subsided and she could concentrate well in her studies.

TABLE No. 2 (Assessment of parameter)

CRITERIA	0 th	14 th	28 th	42 nd
Pain (VAS scale)	8	5	3	0
(PUSH TOOL 3.0)				
Exudate	3	2	0	0
Tissue type	4	2	1	0
Size of wound	9	8	6	0

IV. DISCUSSION

The healthy granulation tissue was found from 7th day and the wound completely healed by 42nd day. *Nadivrana* is described by Charaka Acharya and Susruta Acharya. The treatment for *Nadivrana* is described as *eshana*, *patana*, *tailadahana* and *vranachikitsa* by Acharya Charaka. De-roofing (lay-open) and debridement (blunt dissection) in pilonidal sinus promote healing by secondary intention. It's a simple procedure and quickest procedure to perform with minimum incision, minimal morbidity and scarring. It helps in easy visualization of the inside of the tract and helps in further destruction of diseased granulation tissue and removal of hair within tract. Excisional procedures lead to extensive incision, removal of large amount of skin, can cause bigger wounds and can increase morbidity.

The choice of the procedure *taila dahana* was selected with multidimensional aim. It can be considered as a measure to control bleeding immediately after de-roofing it is Acharya Susruta's idea of haemostasis. *Taila* has properties like *sukshma* (penetrating), *tikshna* (fast acting), *lekhana* (scraping), *vyavayi* (enters into minute pores), *vikasi* (spreading quality), *visada* (cleansing) *gunas*, facilitating its deep penetration and it spreads into unidentified ramifications of tract preventing its recurrence and *Agnikarma* also favours

disintegration of diseased granulation tissue and other remnants within the tract.

Manjishta saribha lepam is effective in wound healing. *Manjishta* have both *sodhana* and *ropana* properties. The aqueous extract of *Rubia cordifolia* show anti-inflammatory effect due to the presence of rubimallin. *Sariba* has *tikta madhura rasa*, *vata samana* property, *snigdha guna* and *madhura vipaka* can alleviates *Vatakopa*. It has antimicrobial, antibacterial, antifungal and antioxidant property and increases wound healing. *Ghrita* by its *Vatakaphahara karma*, *madura rasa*, *seeta virya* and *vranaropana* properties forms thin coating over the wound and can help for early epithelialization and protects against microbial invasion. *Jatyadi kera taila* has significant effect on the lesion by its *vrana sodhana* and *vrana ropana* properties.

Guggulu panchapala choornam is indicated in *Ashtanga Hridaya* in the context of anorectal diseases. It is a multiherbal preparation indicated in *Nadivrana*. It has *kaphavatahara karma*, *lekhana*, *srotosodhana*, *deepana*, *pachana*, *shoolahara*, *vranasodhana*, *ropana* and *sophahara* properties. The secondary metabolites present in the *choorna* confers antibacterial and antioxidant potential activity. Thus, *taila dahana* after de-roofing the tract along with external application of *manjishta sariba lepa* and *jatyadi kera taila* along with internal administration of *guggulupanchapala choorna* is found to be effective in healing of pilonidal sinus.

In experimental research on the role of topical radiant heating (TRH) in wound healing, they discovered that wounded skin responds to TRH by increasing dermal microvascular blood flow, which in turn gives rise to lymphocyte CD3 antigen positivity and improve the likelihood of wound healing. The theory of pro-inflammation cause induction of acute inflammation and this may accelerate healing. *Tailadaha* also aids in tissue organization, epithelialization, wound contraction and inflammatory cell infiltration, wound debridement and stimulation of granulation tissue. There was also no recurrence of the disease during 1 year of follow up time. It can be taken as a treatment with less invasive procedure.

V. CONCLUSION

Compilation of cases are needed to standardize the treatment protocol and to record the outcome. Hence comprehensive procedures can be done to prevent the recurrence on a long-term basis. Conventional ayurvedic para-surgical techniques are simpler, safer and *taila dahana* can be a newer edition to this category of outstanding modalities of treatments.

Informed consent:

Written informed consent was obtained from the patient for the publication of this case report

Author Contribution:

Prof. T Sreekumar consulted the case. Dr Stefi C F assisted, took follow-up and written the article. All the authors reviewed and edited the article.

Limitation of the study:

This is a single case study. Hence a greater number of cases needs to be subjected for validation.

ACKNOWLEDGEMENT

I am extremely thankful to Dr Smitha Mohan P.V, Dr Shaji K, Dr Athulya A and Dr Varghese A. F for their valuable support and guidance. I also extend my gratitude to my colleagues for their support

REFERENCE

1. Fahad Mahmood, Hussain A, Akingboye A. Pilonidal sinus disease: Review of current practices and prospects for endoscopic treatment- Review article. *Ann Med Surg (Lond)*. 2020 Aug 1; 57:212-217.
2. Soman Das, Pilonidal sinus, A Concise Textbook of Surgery-Published by Dr S Das Kolkata 11th Edition 2020, page no.1102-1104.
3. Fahad Mahmood, Hussain A, Akingboye A. Pilonidal sinus disease: Review of current practices and prospects for endoscopic treatment- Review article. *Ann Med Surg (Lond)*. 2020 Aug 1; 57:212-217.
4. Soman Das, Pilonidal sinus, A Concise Textbook of Surgery-Published by Dr S Das Kolkata 11th Edition 2020, page no.1102-1104.
5. Professor K R.Sreekantha Murthy, *Susruta Samhitha, Nidanastana 10/9,10,14 Chawkamba Publications, Delhi*.
6. *Aginvesa*, revised by Charaka and Dridabala with commentary of Chakrapanidutta edited by Vaidya Yadavji Thrikamji Acharya, Charaka Samhita, Chikitsasthana Chawkamba Krishna Das academy Varanasi, Chikitsa sthana ch-12
7. Professor K R.Sreekantha Murthy, *Susruta Samhitha, Sutrastana 12/ Chawkamba Publications, Delhi*.
8. Dr Shilpa S, Dr Parvathy C R, Dr. Rajeshwari P. N, Dr. Rabinarayan Tripathy, Taila Dahan-Therapeutic Cauterization with Hot Oil-A promising method to stimulate granulation tissue in pilonidal sinus-A case study, *Journal of Applied Research: Volume-12| Issue-8|August-2022*.
9. Black J, Baharestani M, Cuddigan J, Dorner B, Edsberg L, Langemo D, Posthauer ME, Ratliff C, Taler G, National Pressure Ulcer Advisory Panel. National Pressure Ulcer Advisory Panels updated pressure ulcer staging system. *Dermatol Nurs*. 2007 Aug;19(4):343-9; quiz 350. PMID:17874603
10. Pravin Jawanjal, Taila taila a review – Review Article, *World Journal of Pharmaceutical and Medical Research* 2018,4(10), 76-78.
11. *Aginvesa*, revised by Charaka and Dridabala with commentary of Chakrapanidutta edited by Vaidya Yadavji Thrikamji Acharya, Charaka Samhita, Chikitsasthana chapter 12 Chawkamba Krishna Das academy Varanasi, Chikitsa sthana.
12. Professor K R.Sreekantha Murthy, *Susruta Samhitha, Nidana stana 10/9,10,14 Chawkamba Publications, Delhi*.
13. Professor K R.Sreekantha Murthy, *Susruta Samhitha, Sutrastana 12/5,6,11 Chawkamba Publications, Delhi*.
14. Professor K R.Sreekantha Murthy, *Susruta Samhitha, Sutra stana 12/10 Chawkamba Publications, Delhi*.
15. Professor K R.Sreekantha Murthy, *Ashtanga Hridayam, Sutrastana Chapter 30/42 Chawkamba Krishnadas Academy*.
16. Fahad Mahmood, 'Review of current practices and prospects for endoscopic treatment' Review article, 2020 Aug.