

AYURVEDIC REVIEW ON NADI VRANA W.S.R TO PILONIDAL SINUS

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ABSTRACT

A natal cleft in the sacrococcygeal region, Pilonidal sinus can be acute or chronic and causes weak hair accumulation in the hair follicles. The Patient report experiencing painful swelling, redness, an elevated local temperature or nasal discharge as a result of inflammation. The risk of disease can be increased by prolonged sitting, having a deep birth cleft, being obese, causing irritation to the hair and having a family history of the condition. It is associated with *Shalyaja nadi vrana* (Pilonidal sinus), which is an ayurvedic variant of *nadi vrana*. Its etiology is described in *Nidana sthana* and treatment is described in *Chikitsa sthana* by Maharshi Sushruta in *Sushruta Samhita*. Acharya Sushruta mentioned treating *Nadi vrana* with *kshara* (caustic alkali), *kshara varti* and *ksharasutra* (seton). Studies indicate that although *Nadi vana* is said to be *krichhra sadhya* (difficult to cure), Ayurvedic therapy may help to reduce the recurrence rate. Therefore, understanding the

etiology, patient presentation and therapy facets is essential for the effective management of this illness. This article aimed at focusing a light into the disease and the various treatment procedures from as both ayurvedic and modern aspect.

KEYWORDS: Pilonidal sinus, *Nadivrana*, *Ksharavarti*, *Ksharasutra*, *Krichhicasadhya*.

INTRODUCTION

The most relevant and common disorder known as pilonidal sinus typically affects the hair follicles located in the sacrococcygeal natal cleft. Young persons of working age are

disproportionately affected with males having a two-fold higher risk of being harmed than females.

Typically, a painful and constantly draining sinus tube or an abscess are generally manifested in a pilonidal sinus.^[1] Regardless of how the condition manifests, its painful nature results in substantial morbidity, often including a protracted loss of usual activities. A quick recovery that allowed patients to resume their normal activities as soon as possible, with little to no morbidity and little a small risk of consequences, would be the ideal course of treatment.^[2] Treatment options for Chronic Pilonidal sinus are varied, contentious and challenging. Principles of treatment include clearing the sinus, completely treating the surrounding skin to heal and preventing recurrences.^[3] A worldwide ailment, Sacrococcygeal Pilonidal Sinus disease (SPSD) mainly affects young men and women. It can cause significant problems and has a high recurrence rate, if the initial situation is not appropriately managed. More Men and incoming army recruits are most likely to develop this illness.^[4] Additional treatments are necessary since the recurrence rate following surgery is approximately 50% and 30% respectively.^[5] It is referenced to as *Nadi vrana* in Ayurveda. An ulcer is referred to as "*vrana*" and a tract as "*Nadi*".^[6] Thus "*Nadi Vrana*" is a term used to describe tract ulcer. *Acharya Sushruta* discussed about treating *Nadi vrana* (Pilonidal sinus) with a less intrusive method. *Acharya Sushruta* has offered a variety treatment approach in addition to suggesting that hair may be the primary cause of sinus growth.

MATERIALS AND METHODS

The Pilonidal sinus (*Nadi vrana*) data was collected from *Bruhatrayi*, *Laghutraye* and its commentaries & other Ayurvedic texts. The pertinent data was gathered using an index of peer-reviewed medical journals and textbook on contemporary medications.

Ayurvedic Concept

The Pilonidal sinus as referred in Ayurvedic Scriptures as *Nadivrana* (*Shalya nimittaja*), which is created by *Shalya* (Foreign material). *Shalyaja Nadi vrana* is so named for a variety of reasons including presence of pus unhealthy granulation tissue and hairs. That's why this type of *Nadi vrana* has remained unknown.^[7]

Nidana (Aetiology)

Ayurveda states that a "*Nadivrana*" develops when a patient practices *Ahita Aahara* and *Vihara* (Unwholesome diet and regimen), when the patient has *shalya* (Foreign body) or

when the surgeon drains an immature abscess (*Apakwa vrana shopha*) rather than a mature one (*Pakwa vrana shopha*).^[8]

Samprapti (pathogenesis)

According to *Ayurveda*, if a foreign Body or *shalya* stays inside the body for a long time, it forms a tract called a *Gati* that tends to break upon the skin. From this tract, frothy (*phenayukta*) pus discharge mixed with blood is visible. Discomfort is always associated with discharge, which gets worse when the part is moved. This is referred to as *Shalyajanya* form of *Nadi Vrana*.^[9]

Types of Nadi Vana

According to *Maharishi Sushruta*, *Nadi vrana* is of eight types.^[10] Those are *vataja*, *Pittaja*, *Kaphaja*, *Vata-pittaja*, *Pitta-kaphaja*, *Vata-kaphaja*, *Sannipataja* and *Shalyajanya* (*Agantuja*) *Nadi vrana*. According to *Acharya Vagbhata*, it is of 5 types^[11] i.e., *Vataja*, *Pittaja*, *Kaphaja*, *Sannipataja* and *Shalyaja*.

Treatment

The *Samanya Chikitsa* (General treatment) of *Nadi vrana* is as follows.

- *Maharshi Sushruta* has elucidated distinct therapies for every variety of *Nadi vrana*.
- When reviewing the indications of *pratisaraneeya kshara* (Caustic alkali), the use of *pratisaraneeya kshara* as a general therapy in all types of *Nadi vranas* was advised.^[12]
- The use of *pratisaraneeya kshara* in the form of *kshara varti* can be applied in *Nadi vrana*.
- Carrying out *Bhedana Karma* (Incision) all *Nadi vrana* forms that are mentioned when discussing the symptoms of *Bhedya vyadhis*.^[13]
- *Kshara* can be applied in *Nadi vrana* in the form of *ksharasutra* (alkali thread) which induces the excision of the tract & healing simultaneously.
- In case of *Shalya* (foreign body) embedded in *mansa* (flesh), *Chhedana* (excision) is suggested in *chhedya vyadhis*.^[14]

As stated above, the *Nadi vrana* treatment concept can be summed up as follows.

1. Surgical - Patana Karma

Patana karma means that a knowledgeable doctor should ascertain the precise Orientation of the track after probing the *Nadi vrana's Gati* (tract). After opening it all the way, general *Shodhana* and *Ropanadi* (cleaning and healing) *Karma* (procedures) should be performed. In

Nadi vrana and *Antah shalya* (Foreign body inside body) *Patana* is denoted by Maharishi Charak.^[15]

2. Parasurgical technique

Kshara karma (Kshara lepa) - This is a procedure where *kshara lepa* (Caustic alkali), a particularly compounded yoga is used for *Bhedana* (incision), *Chhedana* (excision) and *Lekhana* (scrapping). The patient is forced to lie down in prone position. Next the tract is probed to measure its length. Using a knife, an elliptical incision is made around the pilonidal sinus. The whole sinus system, including the presacral fascia will be resected. The use of *pratisaraneeya kshara* will follow the previously described *Chhedana karma*. After applying the *Kshara* wait for 100 *matrakala* (one minute) and use *jambeera swarasa* (lemon juice) to clean the operation wound. Daily dressing will be done to the incision until it heals fully throughout the post-operative phase.^[16]

Kshara Sutra - It is a special kind of excision that doesn't involve the use of a knife, but rather mechanical pressure and chemical activity. *Ksharasutra* in *Nadi vrana* is recommended by Maharishi Sushruta for patients who are malnourished, shy and in the *marma sthana* (vital sections). The tract is trailed until its blind end, when an aperture forms and probing is done through the hole. The probe was successfully ligated after the *ksharasutra* had been fed and it was then retrieved through the orifice that had been created. Weekly *ksharasutra* alterations will continue until the tract has been severed.

Kshara Varti - The sinus having narrow opening and where *ksharasutra* ligation can't be done, *kshara varti* is applied. After proper cleaning of tract, *kshara varti* is introduced inside the tract. Everyday dressing is done and new *varti* is used.

Modern Concept

The Pilonidal sinus is a tiny skin hole or tunnel located where the buttocks split (the cleft). It doesn't always show symptoms and should only be taken care of if it gets infected.

Aetiology

Male sex hormone, hairy body greater perspiration and maceration are the reasons for the 74% male preponderance in the pilonidal sinus. Children are more likely to have it because of their active sebaceous glands, The stiff hair on dark people makes them less affected.^[18]

Pathogenesis

When seated, the weight of the body rests on the buttocks, which vibrates and creates Friction. It causes loss of hair, which leads to its accumulation in the gluteal cleft and its entry into the sweat glands. Once the hairs penetrate dermatitis and irritation appears in the area surrounding the loose hair. More loose hair may get trapped in the pit by the area's sporadic negative pressure once the sinus has formed.^[19] The aetiology of pilonidal sinus's foreign body reaction is supported by histological analysis. The condition is acquired due to hair implantation. This is the most popular theory.^[20]

Management

Surgery is not always necessary to treat pilonidal sinus; conservative measures might be used instead. Shaving any hair in the affected area (ideally with hair removal lotion) and maintaining cleanliness are the conservative treatment for the pilonidal sinus. If a pilonidal abscess develops, it needs to be treated the same as any other abscess, which includes cutting, draining, washing out and a packing later on if the patient still has symptoms, elective surgery for pilonidal sinus disease may be performed. One benefit of the various minimally invasive treatments for Pilonidal sinus disease is that they are typically atraumatic and permitting the patient to return to work almost right away. They are suitable for small lesions that haven't been surgically addressed in the past. Compared to excisional therapies, these methods have a higher rate of recurrence. It's uncertain if endoscopic or laser based minimally invasive techniques can reduce the chance of recurrence. OFF midline techniques such as Karydakos and Limberg procedures have been shown to accelerate wound healing in comparison to open wound treatment excision. As a result, patients with large lesions or those who have undergone prior surgery should choose for off-midline approaches.^[21]

DISCUSSION

Ksharasutra and *Ksharavarti* are minimally invasive therapies that show promise in treating pilonidal sinuses. It lessens the possibility of problems, and recurrence and enables the patient to resume regular social and occupational activities as soon as is practical. In terms of cost of treatment, the level of pain and the impact on the patient's body image, it is suitable therapy. A persistent, painful condition called pilonidal sinus can affect a person's relationship, body image and sense of self. According to numerous research, *Ksharasutra* & *Ksharavarti* therapy, lower the risk of both short and long-term illness recurrence and it ought to be looked into in every situation. The action of the *ksharasutra* is thought to stem from its

healing and purifying qualities. The *Ksharasutra* facilitated the drainage of wounds. *Ksharasutra* possesses desloughing qualities because of its alkaline PH. the entire *Ksharasutra* serves as a method of both cutting and healing at the same time. Since there was no accumulation at the site of wound, the healing was considered successful. Recurrence rate prevention is aided by the employment of *ksharasutra*, *Kshara Varti* and *Kshara lepa*. Both procedures can be carried out as outpatient procedures. The procedure is non-invasive. It performs *chhedana*, *bhedana* and *lekhana* properties among *Ashtavidha sastra karma*.

CONCLUSION

The Pilonidal sinus is challenging to treat. The evidence indicates that there is no discernible difference in the rate between open and closed operating procedures. Since all of the pits adjacent to sinus track have been eliminated, the recurrence rate of *ksharasutra*, *ksharavarti* and *kshara lepa* application is comparative low. Both *kshara* and antibacterial properties are present. The hot sitz bath and local hair removal are important factors in reducing the recurrence rate.

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REFERENCES

1. Goligher J. Pilonidal Sinus. Editor: Goligher J. Surgery of the anus, Colon and Rectum. London: Balliere Tindall, 1984; P - 221-36.
2. Buie LA. Jeep Disease (Pilonidal Disease of Mechanized Warfare). Dis Colon Rectum, 1982; 25: 384-90.
3. Sodenaa K, Andersen E, Nesvik I, Soreide JA. Patient Characteristics And Symptoms In Chronic Pilonidal Sinus Disease. Int J Colorectal Dis, 1995; 10: 39-42.
4. Bendewald FP, Cima RR. Pilonidal Disease. Clin Colon Rectal Surg, 2007; 20: 86-95.
5. Scott R. Steele: Anorectal Disease, Surgical Clinics In North America, 2010; 90: 113-121.
6. <https://www.easyayurveda.com/2017/03/06/nadivranasinus-ayurvedic-treatment/>
7. https://www.researchgate.net/publication/346942301_An_Unusual_Case_Of_Nadivranas_Multiple_Sinus
8. <https://www.easyayurveda.com/2017/03/06/nadivranasinus-ayurvedic-treatment/>
9. Shinde P, Toshikhane H. Pilonidal Sinus (Nadi Vrana): A Case Study. Int J Ayurveda Res, 2010 Jul; 1(3): 181-2. Doi: 10.4103/0974-7788.72492. PMID: 21170212; PMCID: PMC2996578.
10. Kunjalal B, Susrutha, Susrutha Samhita, Vol.11, 2nd Ed. Nidanasthana, Chapter10, Visarpa Nadi Sthana Roga Nidanam, Varanasi: Chowkhambha Sanskrit Series Office, 2002; Pp 80.
11. Murthy S, Vagbhata, Ashtanga Hrdayam, Volume 111, Uttara Sthana, Chapter 29, Granthi Arbuda Slipada Apaci Nadi Vijnaniya Chowkhamba Krishnadas Academy, Varanasi, 2006; P.279.
12. Kunjalal B, Susrutha, Susrutha Samhita, Vol.1, 2nd Ed. Sutrasthana, Chapter11, Ksharapakavidhi Adhyaya, Varanasi: Chowkhambha Sanskrit Series Office, 2002; P.76.
13. Kunjalal B, Susrutha, Susrutha Samhita, Vol.1, 2nd Ed. Sutrasthana, Chapter 25, Ashtavidhasastrakarma adhyaya, Varanasi: Chowkhambha Sanskrit Series Office, 2002; P.223.
14. Kunjalal B, Susrutha, Susrutha Samhita, Vol.1, 2nd Ed. Sutrasthana, Chapter 25, Ashtavidhasastrakarm aadhyaya, Varanasi: Chowkhambha Sanskrit Series Office, 2002; P.224.
15. Sharma R. K, Agnivesa, Caraka Samhitha, Vol. IV, Chikitsa Sthana, Chapter 25, Dwivraneeeya Chikitsa Varanasi, Chowkhamba Sanskrit Series Office, 2014; P.452.

16. Acharya YT, Susrutha, Dalhana, Susrutha Samhita Nibandha Sangraha Commentary Chikitsa Sthana, Chapter 25, Dwivraneeeya Chikitsa Varanasi: Chowkhamba Krishnadas Academy, 2008; P.468.
17. Acharya YT, Susrutha, Dalhana, Susrutha Samhita Nibandha Sangraha Commentary, Chikitsasthana, Chapter 17, Visarpanadisthana Rogachiktsa Adhyaya Varanasi: Chowkhamba Krishnadas Academy, 2008; P.468.
18. <https://Patient.Info/Skin-Conditions/Pilonidal-SinusLeaflet>.
19. S. Das, A Concise Textbook Of Surgery, 3rd Ed. Calcutta, Dr.S.Das, 2001, Chapter54, The Rectum And Anal Canal, P.1075.
20. Sriram Bhat S, SRB's Manual of Surgery, 5th Ed. Chapter 25, Rectum and Anal Canal Jaypee Brothers Medical Publishers (P) Ltd, New Delhi, 2009; P.967.
21. Iesalnieks I, Ommer A. The Management of Pilonidal Sinus. Dtsch Arztebl Int, 2019 Jan 7; 116(1-2): 12-21. Doi: 10.3238/Arztebl.2019.0012. PMID: 30782310; PMCID: PMC6384517.