



Research Article

To Study The Effect Of Apamarga Kshara, Snuhi Ksheera And Haridra Churna Varti As A Dressing Material With In Management Of Post Operative Wound Of Pilonidal Sinus.

Dr. Kanchan A. Shekokar^{1*}, Dr. Anantkumar V. Shekokar², Dr. Krishna Kause³, Dr. Ajay Chaware⁴, Dr. Nitin Badade⁵

^{1*}Associate professor, Dept. of Shalyatantra, S.V.N.H.T. Ayurved Mahavidyalaya and Chikitsalaya, Rahuri, Ahmednagar, Maharashtra, India- 413706, Mobile- 7028329708, drkanchanborkar@gmail.com

²Professor & HOD, Dept. of Shalyatantra, S.V.N.H.T. Ayurved Mahavidyalaya and Chikitsalaya, Rahuri, Ahmednagar, Maharashtra, India – 413706, Mobile-9860376534, email ID- dranantkumarshekokar@gmail.com

³Final year Post graduate scholar, department of Shalyatantra, S.V.N.H.T. Ayurved Mahavidyalaya and Chikitsalaya, Rahuri, Ahmednagar, Maharashtra, India- 413706, Mobile- 8308335613, Email ID kausekrishna@gmail.com

⁴Final year Post graduate scholar, department of Shalyatantra, S.V.N.H.T. Ayurved Mahavidyalaya and Chikitsalaya, Rahuri, Ahmednagar, Maharashtra, India- 413706, Mobile-9370804116. dr.ajaychaware@gmail.com

⁵Final year Post graduate scholar, department of Shalyatantra, S.V.N.H.T. Ayurved Mahavidyalaya and Chikitsalaya, Rahuri, Ahmednagar, Maharashtra, India- 413706, Mobile-9702184885. badadenitin9702@gmail.com

ABSTRACT

Pilonidal sinus occurs in the cleavage between the buttocks (natal cleft) and can cause discomfort, embarrassment and absence from work. it is more common in men (as they have more hair) than in women. the most commonly used surgical techniques for this disorder include excision and primary closure and excision with reconstructive flap. However, the risk of recurrence or of developing an infection of the wound after the operation is high. Also the patient requires longer hospitalization, and the procedure is expensive. There is similarity between *Shalyaja Nadi Vrana* described in *Sushruta Samhita* and pilonidal sinus. *Sushruta* has advocated a minimally invasive para-surgical treatment *Kshara Varti* procedure for *Nadi Vrana*. para-surgical procedure planned with ultimately fulfils all the lacunas or pitfalls encountered in the present-day management. Hence this therapy was tried in Pilonidal sinus, and is described in this case report. The efficacy of an *Ayurvedic* treatment protocol using *Apamarga Kshara* (*Achyranthes aspera*), *Snuhi Ksheera* (*Euphorbia nerifolia latex*), and *Haridra Churna* (Turmeric) is evaluated. The combination of these agents aims to promote wound healing, prevent infection, and reduce the chances of recurrence. *Kshara Varti* treatment not only minimizes complications and recurrence but also enables the patient to resume work quicker and with less discomfort, impact upon body image and self -esteem as well as reduced cost. High recurrence and complication rates in Pilonidal Sinus: Even after successful surgery, pilonidal sinus is associated with a high risk of recurrence and infection, necessitating improved postoperative care strategies. Limitations of Conventional Postoperative Care: Despite the use of antibiotics and modern wound care techniques, issues such as delayed healing, infection, and recurrence are common, indicating a need for alternative or complementary interventions. *Ayurvedic* Treatments as Potential Alternatives: *Ayurvedic* therapies, including *Apamarga Kshara*, *Snuhi Ksheera*, and *Haridra Churna*, are known for their potent wound-healing, antimicrobial, and anti-inflammatory effects, which may offer an effective postoperative management approach. Lack of Rigorous Clinical Evidence: While these *Ayurvedic* treatments are used in practice, there is limited scientific research evaluating their efficacy in postoperative care. A randomized controlled trial will provide objective evidence on their effectiveness in managing pilonidal sinus. Potential to Improve Patient Outcomes: If found effective, these treatments could lead to faster recovery, fewer complications, reduced recurrence rates, and improved quality of life for patients undergoing surgery for pilonidal sinus. This study could have the way for integrating *Ayurvedic* practices into modern postoperative care protocols. Conducting this study will not only provide evidence-based insights into the efficacy of these *Ayurvedic* treatments but may also contribute to reducing the burden of complications associated with pilonidal sinus surgery.

KEYWORDS: Pilonidal Sinus, Nadi Vrana Chikitsa, Vrana, Ksharavarti, Infected wound.

*Author for correspondence: Email: drkanchanborkar@gmail.com

Received: 05/11/2024 Accepted: 25/11/2024

DOI: <https://doi.org/10.53555/AJBR.v27i3.4447>

© 2024 The Author(s).

This article has been published under the terms of Creative Commons Attribution-Noncommercial 4.0 International License (CC BY-NC 4.0), which permits noncommercial unrestricted use, distribution, and reproduction in any medium, provided that the following statement is provided. "This article has been published in the African Journal of Biomedical Research"

INTRODUCTION

The Pilonidal Sinus is a common chronic disorder mainly seen in the sacrococcygeal region. A blind track which commonly contains hair is occur under the skin between the buttocks in sacrococcygeal region a short distance above the back passage of anus. The Pilonidal Sinus is often referred to as a Jeep bottom disease because this condition is more often seen in jeep drivers. It commonly found in hairy males. This condition can cause discomfort, embarrassment and absence from work. Sinus is a blind track leading from the surface down to the tissue.

There is a cavity in the tissue, which is connected to the surface through a sinus. The sinus is lined by granulation tissue which may be epithelialized. It is epithelium lined tract, situated short distance behind the anus, containing hairs and unhealthy diseased granulation tissue. This is due to penetration of hairs through the skin into the sub-acute tissues. It forms granuloma on unhealthy granulation tissue in the deeper plane. It is of infective origin and occurs in sacral region between the buttocks.

Pathology - Hair penetrates the skin ⇒ Dermatitis-infection ⇒ pustule formation ⇒ sinus formation ⇒ hairs gets sucked into the sinus by negative pressure in the area ⇒ further irritation and granulation tissue formation ⇒ pus forms ⇒ multiple discharging sinus ⇒ occurs in the midline.

Factors causing pilonidal sinus-

Cut hairs from above descend into cleft and stay there to get buried deep into pilonidal sinus. Depth, narrowness, friction movement in natal cleft, soft lacerated skin with erosion splits, wide skin pores, wound, presence of moisture and sweat are other factors, obese and overweight patient, prolonged sitting. The incidence of disease is highest in males (3:1) male to female ratio between ages 15 to 40 with peak incidence. It rarely occurs in patient more than 50-year old. Acharya *Sushruta* has given much importance to hair as foreign body in the definition of *Shalya tantra* so the *Shalyaja Nadi Vrana* can be compared with pilonidal sinus. The classical sign and symptoms of *Shalyaja nadi Vrana* are *phenila* (frothy), *Asrikvimisra* (blood mixed) and *Ushnasrava* with *Ruja* (pain).

Different surgical methods have been described for this disease such as excision and primary closure and excision with reconstructive flap however the risk of reoccurrence of developing on infection of the wound after operative procedure is high. *Sushruta* has advocated a minimal invasive para-surgical treatment viz *Ksharavarti*.

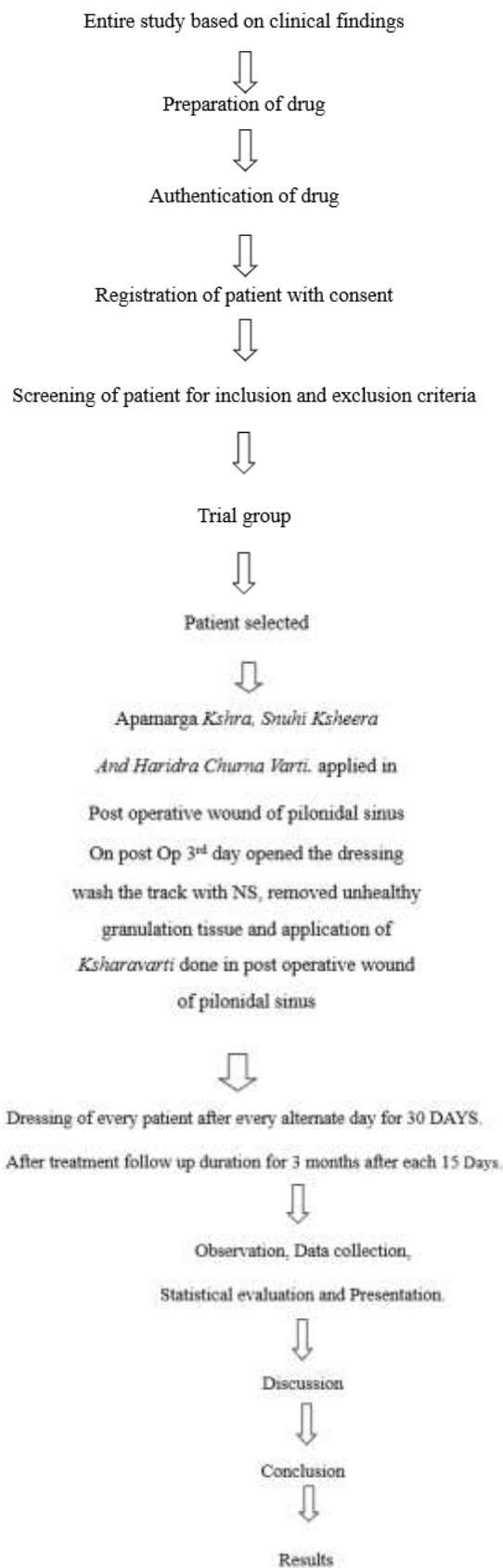
AIMS AND OBJECTIVES

To evaluate the efficacy of Apamarga Kshara, Snuhi ksheera and Haridra Churna Varti in post-operative management of pilonidal sinus.

To evaluate the efficacy Apamarga Kshara, Snuhi Ksheera and Haridra Churna Varti in post-operative management of pilonidal sinus.

To Study The Effect Of Apamarga Kshara, Snuhi Ksheera And Haridra Churna Varti As A Dressing Material With In Management Of Post Operative Wound Of Pilonidal Sinus.

MATERIAL METHOD –



1) Preparation of Apamarga Ksharaa.

Whole Apamarga plant was to be collected and cut in pieces, after drying the plant in shade. It should be buried in light fire. Ash was collected and dissolved in water, where by water quantity is 6 times to that of ash. The solution, so formed was filtered with the help of percolator. Residual ash was gained dissolved in 4 times of water and the same procedure was repeated at list twice in order to take away all the alkaline materials from ash. Ultimately, the ash remains as a neutral residue, which should be thrown, the fluid was filtered several times (filtrating once in a day) and finally, the *Apamarga Kshara* was obtained by evaporating the filtered solution.

2) Collection of Snuhi Ksheera (at morning).

It was collected by incising the stem of Snuhi plant. The secretary milk so obtained from incision should be stored in a pot. As a Snuhi Ksheera has tendency to coagulate early, hence requires fresh *Snuhi Ksheera* every time.

3) Collection of Haridra churn.

Dry rhizomes of *Haridra* plant were cut into pieces and powdered which was then sieved through a fine cloth. the fine powdered thus obtained should be kept in jar for use.

Method of preparation of Ksharavarti

Apamarga Kshara , Snuhi Ksheera and Haridra Churna Varti -

Under all aseptic precautions, take roller bandage of 12cm long x4" size piece. The bandage is evenly coated with *Snuhi Ksheera* on day 1st 10 ml was applied with the help of small cotton swab over the bandage on its whole circumference. It is dried for a day. Hand should be gloved before smearing. On 2nd day dried bandage is again smeared with *Snuhi Ksheera* 10 ml fallowed by 2 gram *Apamarga Kshara* with cotton swab then dried for a day On 3rd day dried bandage was smeared with *Snuhi Ksheera* 10 ml fallowed by 2 gm *Haridra* powder then dried for a day

one coating of *Snuhi Ksheera* required 10 ml quantity, so total quantity of Snuhi Ksheera in *Ksharavarti* is 30 ml, *Apamarga Kshara* is 2 gm, *Haridra* powder is 2 gm In this way single coating of each *Snuhi Ksheera*, *Apamarga Kshara* and *Haridra Churna* was applied to piece of bandage of 12 cmx4" size Varti. This prepared Varti placed in sterilized container.

1) Dravya- Snuhi

Part used- Latex

Rasa- Katu

Virya- Ushna

Vipak- Katu

Guna- Laghu, Tikshna.

Karma- Lekhana, Shothahara, Kaphavataghna.

Application- applied *Snuhi Ksheera* over Vranaropaka, Shothahara, Vedanasthapaka, Vranaropaka, Vedanasthapaka, Krimighna.

Ksharavarti acts to further debride and cleanse the Krimighna.

area, break down unhealthy tissue, and facilitate Application-applied *Apamarga Kshara* over *Ksharavarti* acts to reducing infection and granulation tissue formation. Its corrosive *Ksharavarti* acts to debride necrotic tissue, inflammation, providing a protective layer to the properties help dissolve any residual sinus tract clean the sinus tract, and promote healthy wound and accelerating the healing process with its material.

2) Dravya- Apamarga

Part used- Kshara

Rasa- Katu, Tikta,

Virya- Ushna.

Vipak- Katu.

Guna- laghu, Rukshna, Tikshna

Karma- Lekhana, Vranashodhana, Karma- Lekhana, Shothahara, Vranashodhana,

Application-applied *Haridra Churna* over

tissue formation. Anti- Inflammatory and Anti-Bacterial properties.

3) Dravya -Haridra

Part used- Rhizome

Rasa-Tikta, Katu.

Virya- Ushna.

Vipak- Katu.

Guna- Laghu Rukshna.

Karma- Lekhana, Shothahara, Vranashodhana,

Application-applied *Haridra Churna* over

Anti- Inflammatory and Anti-Bacterial properties.

OBSERVATION AND RESULT-

Wound Healing-The patient demonstrated significant improvement within the first week of treatment. By day second week, there was noticeable reduction in wound size, inflammation, and drainage. Granulation tissue formation was evident, and by the end of 3rdweek, the wound had closed without signs of infection.

Infection Control-The use of *Haridra Churna* was effective in controlling local infection. The anti-microbial properties of turmeric, combined with its ability to reduce inflammation, prevented bacterial growth and accelerated the wound-healing process.

Recurrence Prevention-No recurrence of the pilonidal sinus was observed in the 3-month follow-up period. The debridement properties of *Apamarga Kshara* and the tissue regenerative abilities of *Snuhi Ksheera* played a critical role in preventing the formation of new sinus tracts.

Patient got total relief from Pain, Itching, Tenderness, Inflammation, Discharge, Foul smell within 3 weeks

Ksharavarti is a medicated Varti coated with herbal alkaline drugs like-*Apamarga Kshara*, *Snuhi Ksheera* and *Haridra Churna*. This combination of medicine on gauze Varti helps in debridement and lysis of tissues. Exerts anti-fungal, anti-bacterial and ant-inflammatory. Another mechanism proposed for the *Ksharavarti* is that it destroyed the residual glands in the epithelium.

DISCUSSION

In both the groups the results obtained (within the group) using test Variables on ordinal scale (gradations) were analysed using Wilcoxon Signed Rank Test. Comparison between two groups is performed using Mann Whitney U Test. For all the parameters. In groups A the drugs showed marked significant results in parameters such as Pain, Itching, Tenderness, Burning sensation, Inflammation, Edges margines, Induration, Wound floor, Length of wound, Breadth of wound, Depth of wound, Discharge, Colour of wound. In group B the drugs showed moderate significant results in parameters such as Pain, Itching,

Tenderness, Burning sensation, Inflammation, Edges margins, Induration, Wound floor, Length of wound, Breadth of wound, Depth of wound, Discharge, Colour of wound. On comparing for the observed differences in values obtained for the respective parameters between both the groups A and B (using Wilcoxon Signed Rank Test and Mann Whitney U Test) the result showed insignificance for all the parameters. From the above results it is proved that both the drugs are quite effective in relieving all the parameters. But Group A medicine i.e. Apamarga Kshara, Snuhi Ksheera and Haridra Churna Varti is effective in management of post operative wound of pilonidal sinus. Further it is recommended to conduct clinical trial on large sample size may be with some acceptable modifications in drug, dose and durations which may give more beneficial result.

CONCLUSION

In the postoperative wound management of pilonidal sinus, using *Apamarga Kshara*, *Snuhi Ksheera*, and *Haridra Churna Varti* as dressing materials shows promising results. These *Ayurvedic* preparations are valued for their antibacterial, anti-inflammatory, and wound-healing properties, making them suitable alternatives for standard care.

Apamarga Kshara is an alkaline substance that aids in wound debridement and promotes healing by removing necrotic tissue. *Snuhi Ksheera*, a latex with antiseptic and anti-inflammatory properties, helps in reducing infection and local inflammation. *Haridra Churna*, or turmeric powder, is widely recognized for its antimicrobial and anti-inflammatory effects, enhancing wound healing and reducing pain and discomfort.

Together, these ingredients in Varti form are effective in managing postoperative pilonidal sinus wounds by minimizing infection, reducing inflammation, and promoting quicker healing with fewer complications and minimizing recurrence rate. Overall, the use of these *Ayurvedic* preparations can be a valuable approach in holistic wound care management for pilonidal sinus surgery, potentially reducing recovery time and enhancing patient comfort. However, further clinical studies are recommended to establish standardized protocols and optimize outcomes.

Tissue Irritation and Damage: The caustic nature of *Apamarga Kshara* can cause severe tissue irritation, leading to burning, erythema, and delayed

wound healing. **Allergic Reactions and Sensitivity:** *Snuhi Ksheera* (latex) can cause allergic reactions such as skin rashes, swelling, or inflammation, and its application may worsen wound conditions if not properly managed. **Excessive Dryness and Crusting:** *Haridra Churna* drying properties can lead to crust formation, which may hinder proper healing and complicate the wound assessment. **Secondary Infections:** If not applied appropriately, these substances can predispose the wound to infections, particularly due to tissue damage or incorrect dosage. While these Ksharavarti as a dressing material may support healing, their use as dressing materials in pilonidal sinus management should be approached with caution, ensuring correct technique, adequate monitoring, and potential adjustments to avoid complications.

REFERENCES:

- Anantkumar V Shekokar, Kanchan M Borkar; Innovation of Ksharaplota (Medicated gauze) in management of Vrana (ulcer); International Journal of Ayurveda Pharma Research; 2013;1(2);pg.no. 10-16
- Anantkumar V Shekokar, Kanchan M Borkar; Role of Agnikarma in management of chronic plantar fasciitis; International Journal of Ayurvedic Medicine;2013;4; pg.no. 421-5.
- Kanchan M Borkar, Anantkumar V Shekokar; Role of Agnikarma Therapy in the management of Kadara (corn): a case report; International Journal of Ayurveda Pharma Research; 2013/11;1(3); pg.no.67-72.
- Anantkumar Shekokar, Kanchan Shekokar; Principles and practices of Agnikarma; Pune: Shantanuprakashan;2007;2; pg.no.47.
- Anantkumar V Shekokar, K Borkar; Role of Ksharaplota in lacerated infected wound- a case study; International Journal of Ayurvedic Medicine;2014/1/1;5(1); pg.no. 120-124
- Anantkumar V Shekokar, Vijay P Ukhalkar; Expository aspect for action of Ksharaplota; Journal of Drug Delivery and therapeutics;2018/12/15;8(6-s); pg.no.420-423
- Anantkumar V Shekokar, Kanchan M Borkar, Pradeep O Pandao, Swapnil S Londe; A case study of Manjistadi Taila with Kadalipatra and Bacti-gauze for local application in management of burn; International Journal of Advanced Ayurveda, Yoga, Unani, Siddha Homeopathy ;2013/9/19;2; pg.no.112-118.
- Anantkumar V Shekokar, Vijay P Ukhalkar; A critical review on Ksharaplota and its therapeutic aspects; Journal of Drug Delivery and therapeutics;2019/2/15;9(1-s); pg.no. 510-515.
- Anantkumar V Shekokar, Kanchan M Borkar; A comparative study of Agnikarma and Ajmodadi vati in the management of Ghridhrasi wsr to sciatica; International Journal of Ayurvedic Medicine;2012;3(3) pg.no.162-169.
- Anantkumar V Shekokar, Kanchan M Borkar, Mayur A Patil; Vilasrao Jagatap; A Comaparative Study Yastimadhukadivarti and Diclofinac Sodium suppositories in the management of Parikartika wsr to fissure in ano; International Journal of Ayurvedic Medicine;2012;3(4);pg.no. 110-115
- Anantkumar Shekokar, Kanchan Borkar; Role Of Group Discussion In Teaching And Learning Process Wsr To Ayurveda Science; , International Journal of Ayurveda and Pharma Research; 2016/11/4; Pg.no.120-129.
- Anantkumar Shekokar, Kanchan Borkar; Removal of Tattoo with Electro thermal Cautery—A Case Study; International Journal of Ayurvedic Medicine;2015;6(1); Pg.No.166-168.
- Kanchan Borkar, Anantkumar Shekokar; Notable Modifications Of Sushrut Samhita By Dalhana On Ksharaapakavidhi Adhayaya; International Journal of Ayurveda and Pharma Research; 2013;1(3);pg.no.27-29.
- Anantkumar Shekokar, Kanchan Borkar, Ashish Kumar Singh; To Study The Efficacy Of Rasa Parpati With Jatyadi Ghrita Matra Basti In The Management Of Ulcerative Colitis; International Journal of Ayurveda and Pharma Research; 2013;1(1);pg.no.38-47.
- Anant Kumar V Shekokar, Kanchan M Borkar, Pradeep Badakh; A comparative study of Ksharasutra Ligation and

To Study The Effect Of Apamarga Kshara, Snuhi Ksheera And Haridra Churna Varti As A Dressing Material With In Management Of Post Operative Wound Of Pilonidal Sinus.

Electro-Thermal Cautery in the management of Arsha WSR To Sentinel Piles; International Journal of Ayurvedic Medicine; 2013; 4(3); pg. no. 110-130.

Kanchan M Borkar, Anant Kumar V Shekokar, Vinod Patange; clinical study of Kankayan vati in the management of arsha (piles); International Journal of Ayurvedic Medicine; 2012; 3(3);pg.no. 177-181.