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MANAGEMENT OF PILONIDAL SINUS (*Shalyaja Nadi Vrana*) WITH *Nimbapatradi Varti* : A CASE REPORT

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ABSTRACT

Nadi Vrana is a chronic sinus tract described in Sushruta Samhita under Dushta Vrana and is known for its recurrent nature and delayed healing. It usually develops due to improper management of suppurative conditions like Vidradhi and is characterized by a narrow opening, persistent discharge, pain and chronic infection. Clinically, it can be correlated with Pilonidal sinus described in modern surgery. Acharya Sushruta has explained various treatment modalities for Nadi Vrana, among which Varti application is considered an important parasurgical procedure. Despite advancement in surgical management, recurrence and prolonged healing remain major concerns. Ayurveda emphasizes Shodhana and Ropana therapies for effective management.

Nimbapatradi Varti possesses Shodhana (cleansing), Krimighna (antimicrobial) and Ropana (healing) properties. In this case study, Nimbapatradi Varti application along with Jatyadi Taila dressing on every 3rd day and internal administration of Gandhaka Rasayana and Triphala Guggulu was carried out. Varti was changed weekly for four sittings. Progressive improvement was observed with reduction in pain, discharge and tenderness along with development of healthy granulation tissue. Complete healing of the sinus tract was achieved without complications or recurrence. This case demonstrates that Nimbapatradi Varti with supportive Ayurvedic management is a simple, safe, cost-effective and minimally invasive treatment modality for Nadi Vrana (Pilonidal sinus).

KEYWORDS: *Nadi Vrana, Pilonidal sinus, Nimbapatradi Varti, Jatyadi Taila, Gandhaka Rasayana, Triphala Guggulu.*

INTRODUCTION

Pilonidal sinus is a chronic inflammatory condition characterized by a sinus tract containing hair, most commonly located in the sacrococcygeal region. The term pilonidal (pilus – hair, nidus – nest) was introduced by Hodges in 1880. It commonly affects young adults between 20–30 years of age with male predominance and it presents with pain, swelling, recurrent abscess and persistent pus discharge[1]. Predisposing factors include prolonged sitting, obesity, friction, local trauma, infection, and poor hygiene.

In *Ayurveda*, Pilonidal sinus can be correlated with *Shalyaja Nadi Vrana*. *Acharya Sushruta* described *Nadi Vrana* as a sinus formed due to improperly treated abscess (*Vidradhi*) or due to the presence of foreign bodies (*Shalya*)[2]. *Acharya Vagbhatta*, classified *Nadi Vrana* into five types[3] ; while *Acharya Sushruta* described eight types[4]. Among these, *Vataja*, *Pittaja*, *Kaphaja* and *Shalyaja* types are considered *Sadhya*, where as *Sannipataja* type is considered *Asadhya*. It is characterized by a narrow opening, deep tract and persistent discharge.

Modern surgical management involves surgical excision with primary closure, flap procedures, 'Z' plasty, etc but recurrence and delayed wound healing remain major concerns[5]. *Acharya Sushruta* describes various treatment modalities like *shastra karma*, *Kshara Karma*, *Kshara Sutra* and *Varti* application. *Varti* Application is a parasurgical procedure which helps in *Shodhana* (cleansing) and *Ropana* (healing) of wounds. *Nimbapatradi Varti* possesses *Krimighna*, *Shodhana* and *Vrana* Ropana properties which help in controlling infection and promote wound healing[6] and internal medicines like *Gandhaka Rasayana* and *Triphala Guggulu* help in reducing infection and inflammation and support faster recovery.

Hence, this case study was undertaken to evaluate the efficacy of *Nimbapatradi Varti* along with *Jatyadi Taila* dressing and internal administration of Gandhaka Rasayana

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and Triphala Guggulu in the management of *Shalyaja Nadi Vrana* (Pilonidal sinus).

CASE REPORT

Patient Name : XYZ
Age : 29 Years
Gender : Male
Occupation : Engineer

Chief Complaints

A 29-year-old male patient, Engineer by occupation, came to the Shalya Tantra O.P.D at Sri Siddharudha Charitable Hospital, Bidar with complaints of pain and pus discharge from the natal cleft region since 4 months.

History of Present Illness

The patient was apparently normal before 4 months, after which he gradually developed boil, associated with swelling followed by pus discharge. He also complained of mild pain and discomfort while sitting and continuos pus discharge. He had taken conservative treatment but did not get complete relief. Therefore, for further treatment he came to *Shalyatantra* O.P.D, Sri Siddharudha Hospital, Bidar.

History of Past Illness

No history of Diabetes Mellitus, Tuberculosis, Hypertension or any other major systemic illness.

Surgical History

No H/O any surgery.

Personal History

Diet : Mixed
Appetite : Moderate
Habits : Tea- 4-5 times/Day.
Micturition: 4-5 times/day, Normal flow.
Bowel : Mild Constipated.
Sleep : Normal; Sometimes Disturbed.

Family History

No history of similar complaints was found among family members.

General Examination

Blood Pressure - 130/90 mmHg
Pulse Rate - 76/min
Weight - 65 kg
Temperature - 97°F
Respiratory Rate - 18/min

Asthavidha Pariksha

Nadi (Pulse) - 76/Min.
Mutra (Urine) - 4-5 times/day
Mala (Stool) - 1-2 times/day
Jihva (Tounge) - *Alipta*
Shabda (Speech) - *Prakruta*
Sparsha - *Anushana Shita*
Druka (Eyes) - *Prakruta*
Akruti - *Madhyama*

Systemic Examination

Cardiovascular System (CVS): S1 S2 heard normally. No added sounds or cardiac murmurs.
Respiratory System (RS) : Chest clear bilaterally. Normal vesicular breath sounds heard.
Per Abdomen (P/A) : Abdomen soft and non-tender, No organomegaly, Normal bowel sound heard.
Umbilicus centrally placed and inverted.

Local examination

Inspection:

On Local examination, a single sinus opening was observed in the midline of the sacro-coccygeal region. The opening showed profuse sero-purulent discharge. Blackish Discoloration of skin of surrounding area.

Palpation

On palpation, local tenderness and raised temperature were present. Induration was also noted around the sinus opening.

Probing

On Probing the tract was found to be approximately 3 cm in length and directed towards the anal region. No secondary opening was found.

Considering the history, signs, symptoms, and local examination, the disease was diagnosed as Pilonidal sinus and correlated with *Nadi Vrana* as described in *Sushruta Samhita*.

Investigations

Routine hematological investigations were done prior to the procedure. Hemoglobin was 13.3 gm%, Total WBC count was 6300cellls/cu.mm and differential count showed N-58%, L-33%, M-06%, E-03%, B-00%. Bleeding time was 3 min 00 sec and clotting time was 6 min 30 sec. Random blood sugar was 122.8 mg/dl. HIV I & II and HBsAg were non-reactive. Urine routine examination was within normal limits. These findings indicated that the patient was fit for the procedure.

Diagnosis

Considering the history, signs, symptoms, and local examination, the disease was diagnosed as Pilonidal sinus and correlated with *Nadi Vrana* as described in *Sushruta Samhita*.

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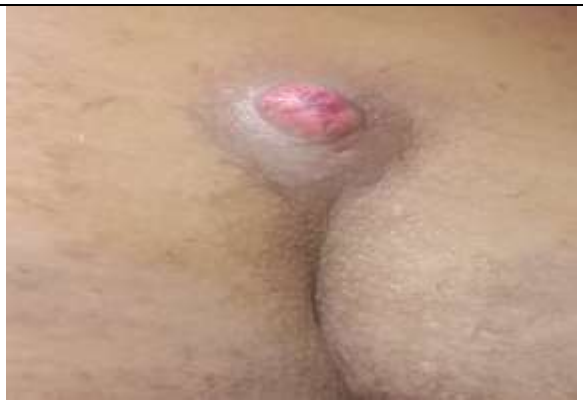

Fig. 01: Before Treatment

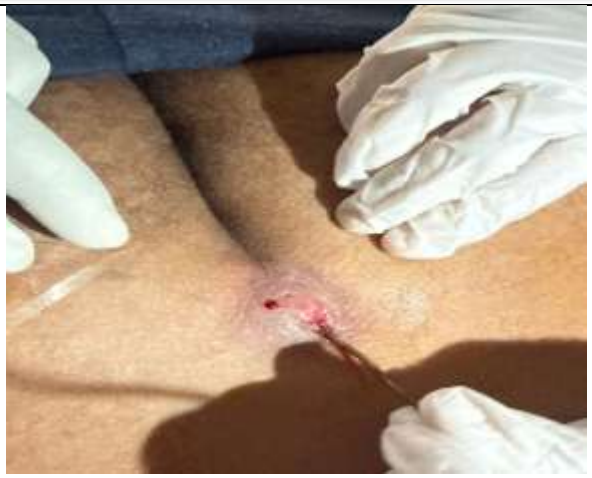

Fig.02: Probing to assess length of Tract

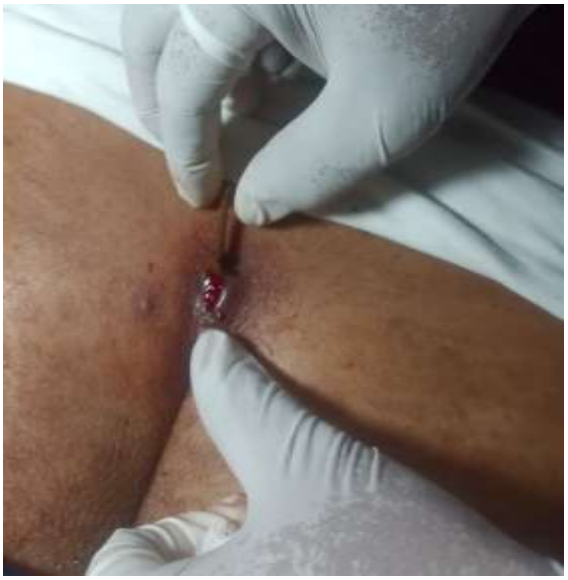

Fig.03: Application of *Nimbapatradi Varti*

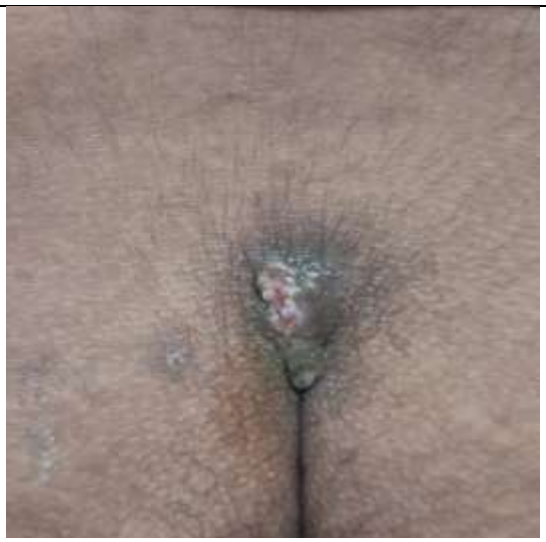

Fig.04: During Treatment

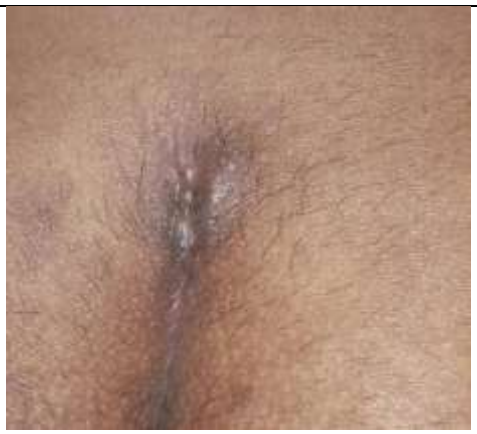

Fig.05: After Healing of Pilonidal Sinus

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Treatment:

***Poorva Karma*: (Pre-operative Procedure)**

Written informed consent was obtained from the patient.

The minor operation theatre and required instruments were prepared under aseptic precautions.

The patient was placed in prone position and the sacrococcygeal region was cleaned with with antiseptic solution.

***Pradhana Karma*: (Main Procedure):**

Under local anaesthesia with Inj. Lignocaine 2%**,** unhealthy granulation tissue was gently removed using artery forceps. A lubricated copper probe was gently introduced into the sinus tract to assess the length and direction of the sinus tract. Tufts of hair present inside the tract were removed with the help of sinus forceps. Then, *Nimbapatradi Varti* of appropriate size was inserted into the tract and Sterile dressing was applied over the wound.

The Varti was replaced on every 3rd day after removing the previous *Varti* through the opposite opening for proper drainage and debridement of the tract. Before each application, the tract was irrigated with sterile water to maintain cleanliness. The procedure was continued for a period of 28 days.

After completion of treatment, no further intervention was done. The patient was kept under follow-up for 3 months to assess healthy granulation tissue formation and complete healing of the sinus tract.

***Paschat Karma*: (Post-operative procedure)**

All Vitals were recorded after the procedure.

The patient was advised hot sitz bath *(Ushnodaka Avagaha Sweda)*.

Dressing with *Jatyadi Taila* was done on the 3rd day.

Maintenance of local hygiene, and regular follow-up. *Varti* was changed at scheduled intervals till complete healing of the tract.

Observation

On the 3rd day, Varti was found dissolved with absence of pus discharge, pain and tenderness. Dressing with Jatyadi Taila was continued on every 3rd day.

On the 7th and 14th day, reduction in discharge and healthy granulation tissue was observed. On the 21st day, contraction of the sinus tract was noted. By the 28th day, the tract showed satisfactory healing with absence of discharge and tenderness.

Results

The patient showed significant improvement during the treatment period. Pain, discharge and tenderness were reduced after treatment. Progressive healing of the sinus tract with healthy granulation tissue was observed. Complete healing was achieved after 4 sittings. No complications or recurrence were observed during follow-up.

Discussion

Nadi Vrana is described in Shalya Tantra as a chronic sinus tract which can be correlated with Pilonidal sinus due to similar clinical presentation such as discharging sinus, presence of hair, pus discharge and chronic inflammatory pathology. According to Acharya Sushruta, Nadi Vrana develops due to improperly treated Pakwa Shopha and the presence of Shalya (foreign body) which prevents proper healing and leads to sinus formation.

In this case, the patient presented with a sinus opening in the sacrococcygeal region associated with discharge and mild pain. The case was managed with Nimbapatradi Varti, local dressing with Jatyadi Taila on every 3rd day and internal administration of Gandhaka Rasayana and Triphala Guggulu. Varti was changed at weekly on 7th, 14th, 21st and 28th day.

Nimbapatradi Varti contains Nimba, Haridra, Yashtimadhu, Ghrita and Madhu which possesses Vrana shodhana and Vrana ropana properties. Nimba (Azadirachta indica) has Krimighna and Shothahara properties which help in reducing microbial infection and inflammation[7]. Haridra (Curcuma longa) possesses antiseptic, anti-inflammatory and antioxidant properties which help in wound cleansing and healing[8]. Yashtimadhu (Glycyrrhiza glabra) acts as Vrana ropaka and promotes tissue regeneration and faster healing[9]. Ghrita acts as Yogavahi facilitating deeper penetration of drugs and supports tissue repair. Madhu due to its Lekhana, Shodhana and Ropana properties helps in desloughing, reducing discharge and promoting healthy granulation tissue.

Thus, the combined action of these drugs provides antimicrobial, anti-inflammatory, debriding and wound healing effects which help in effective management of Nadi Vrana.

Varti plays both mechanical and pharmacological roles. Mechanically it helps in continuous drainage of the sinus tract and prevents premature closure of the superficial opening. Pharmacologically it reduces infection, removes unhealthy tissue and promotes healing from the base of the tract.

In this case, on the 3rd day, the Varti was found dissolved and there was absence of pus, pain and tenderness indicating effective Vrana shodhana action. During further follow-ups progressive improvement was observed with reduction in discharge and development of healthy granulation tissue. Gradual healing of the tract was observed during 7th , 14th , 21st and 28th day follow-up.

Local dressing with Jatyadi Taila further enhanced the healing process due to its Vrana ropana, Shothahara and Vedanasthapana properties. It helped in reducing inflammation, preventing secondary infection and promoting tissue regeneration.

Internal administration of Gandhaka Rasayana helped due to its Krimighna, Rasayana and Kushtaghna properties. It improves immunity, prevents infection and supports faster tissue healing. Triphala Guggulu due to its Shothahara, Shodhana and Ropana properties helped in reducing inflammation and promoting wound healing. Guggulu also acts as an anti-inflammatory agent and helps in reducing local swelling.

The combined effect of local and internal treatment resulted in satisfactory healing without complications. No adverse effects were observed during the treatment period. The procedure was found to be simple, safe, minimally invasive and cost effective compared to surgical excision. The treatment can be effectively performed at OPD level with minimal discomfort and reduced recurrence chances.

Thus, the combined approach of Nimbapatradi Varti, Jatyadi Taila dressing, Gandhaka Rasayana and Triphala Guggulu proved effective in the management of Nadi Vrana by

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providing both local wound management and systemic support for healing.

Conclusion

In modern science, Nadi Vrana can be correlated with Pilonidal sinus. Modern treatments mainly include surgical excision, antibiotics and regular dressing, which may be associated with pain, recurrence and longer healing time. In the present case, treatment with Nimbapatradi Varti, regular dressing with Jatyadi Taila and internal administration of Triphala Guggulu and Gandhaka Rasayana showed satisfactory results.

Nimbapatradi Varti helped in effective drainage and cleansing of the sinus tract, while Jatyadi Taila promoted wound healing. Gandhaka Rasayana supported the treatment by reducing infection and improving tissue healing. This combined therapy provided both curative and preventive effects.

Thus, this Ayurvedic treatment protocol proved to be simple, safe, cost-effective and minimally invasive compared to modern surgical procedures. Therefore, it can be considered as an effective alternative approach in the management of Nadi Vrana (Pilonidal sinus).

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