EFFECT OF PRATISARANEeya KSHARA IN PILONIDAL SINUS WITH SPECIAL REFERENCE TO NADI VRANA.

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ABSTRACT

The disease Nadi Vrana is of eight types, among this Shalyajanya Nadi Vrana or Aganthuja Nadi Vrana is one that is explained by Acharya Sushruta in Nidanasthana and Chikitsasthana, Shalya (foreign body) is the cause of this type of Nadi Vrana. Pilonidal sinus is more commonly found in drivers and sedentary workers because of the continuous sitting and exertion, the post anal region of pits pulls the hair inside the body and causes the Pilonidal sinus. All the sinuses were found on the post anal region. The Pilonidal sinus is considered as Shalyaja Nadi Vrana as per Ayurvedic literature. Total 20 Patients were included and treated with observation of 90 days. Finally, it was concluded that the application of Pratisaraneeya Kshara helped after the excision by Lekhana of pits in the surrounding tissue of the sinus avoids the formation of unhealthy granulation tissue and helps in healing of the wound from the base. Study was carried out in Single Group. In this study it was found that the proper follow up of the patient is playing one of the major role from the postoperative day in the wound management to avoid the recurrence.

Keywords – Nadi Vrana, Pilonidal Sinus, Apamarga Kshara, Kshara Karma, Pratisaraneeya Kshara, Lekhana, Aganthuja Nadi Vrana, Margashodhana, Chedana Karma, Ropana.

1. INTRODUCTION

The Shalya Tantra- the field of surgical science embraces such sources of knowledge, which aim at the removal of factors responsible for producing sensation of pain or misery to the body or mind. Among all these eight branches surgery is considered to be superior most because of it’s being radical in removing the shalya (foreign body), which are denied to other branches.

To pursue the good health and to avoid painful stimuli disease is the instinct of every living being. Disease is nothing but association of sufferings, misery and pain. Nadi Vrana was one among such disease, which by its many folds nature and persistence has given a challenge to most indigenous surgeons. The disease Nadi Vrana is of eight types.1 Pilonidal sinus is more commonly found in drivers and sedentary workers because of the continuous sitting and exertion, the post anal region of pits pulls the hair inside the body and causes the Pilonidal sinus.2 This disease manifest itself as a blind track leading down to the tissues ending blind internally and discharging sero-purulent material associated with severe pain.3,4

The disease Nadi Vrana is of eight types, among this Shalyajanya Nadi Vrana or Aganthuja Nadi Vrana is one that is explained by Acharya Sushruta in Nidanasthana and Chikitsasthana, Shalya (foreign body) is the cause of this type of Nadi Vrana. In this present clinical study, the Shalyajanya Nadi Vrana or Aganthuja Nadi Vrana is taken and it is caused by hair (Bala). Acharya Sushruta has given much importance to hair as foreign body, in the definition of Shalya Tantra he has included hair as the foreign body or Shalya. So, the Shalyajanya Nadi Vrana is compared with Pilonidal sinus, hair acts as a foreign body or and it produces the disease Pilonidal sinus.5 In this era this disease is increasing frequently because of the present-day life style so it requires a great concern. In the contemporary sciences, there are several methods to treat Pilonidal sinus but the recurrence rate is more, in this regard Acharya Sushruta has given elaborative description regarding treatment.
of Aganthuja Nadi Vrana that is Nirharana of shalya followed by Margashodhana and Ropana. In the indication of Pratisaraneeya kshara Sushruta has included Nadi Vrana. So, in the present study an attempt has been made to evaluate the efficacy of Pratisaraneeya kshara in Nadi Vrana (Pilonidal sinus) after Chedana karma.

2. METHODS

2.1. Research design

It was an observational study. Here the excision of the Pilonidal sinus is done followed by application of Apamarga Pratisarneeya Kshara and observation is made to see the time of wound healing and recurrence of the sinus.

2.2. Source of Data

Patients were randomly selected from OPD and IPD of Amruta Ayurveda Medical College, Chitradurga.

2.3. Duration of Study

The selected patients were treated for 90 days.

2.4. Objective

To evaluate the effect of Chedana shastrakarma (excision) followed by application Pratisaraneeya Kshara in Pilonidal sinus for good wound healing to avoid recurrence.

2.5. Method of Selection of Patients

2.5.1. Sampling Technique

Complete history of 20 patient was taken according to case proforma. The patients were examined completely on Ayurvedic and Modern concepts of examination and essential investigations were performed to diagnose and assess the disease.

2.5.2. Inclusion criteria

Patients with Pilonidal sinus (Shalyajanya Nadi Vrana).

2.5.3. Exclusion criteria

- Secondary sinuses due to tuberculosis, osteomyelitis, Carcinoma etc.
- Spinal disorders like Potts disease, Scoliosis, Inter vertebral disc prolapse etc.
- Lumbosacral and coccyx bony disorders.

2.6. Drug Review (Pratisaraniya Kshara)$^6,7$

This term consists of two words in it, ‘Pratisarana’ and Kshara. The term Kshara is already been defined. Pratisarana is an Upakrama, Garshana. It is also used to denote, healing or dressing the edges of a wound or an instrument used for anointing a wound. The term Pratisarana consists of two words in it. ‘Prati’ meaning every or opposite, ‘Sarana’ meaning to spread or to stretch. In this context Pratisarana is used for local application.

2.7. Method of preparation of Teekshna Kshara$^1$

The plants used for the preparation of Kshara are Apamarga and Chitrakamula and Shukti. Acharya Sushruta has dedicated the whole of 11th Chapter of Sutrastana to describe kshara. After reviewing classical texts, Sushruta's technique is found to be ideal in Pratisaraniya Kshara treatment. The physician who prepares the Kshara should have a clean bath early in the morning of autumn season and has to observe fast on the same day. It must be an auspicious day. He should go up the hills and look for such plants, which are middle aged and free from ravages or insects. The Panchangas of plants should be collected, dried up and made into small pieces. Then these are burnt with limestone. While burning the dispersed parts of the plants are kept with the help of Tilnala. When the ash cools down it should be separated from the residue of lime stone and Bhasmasharkara. The collected ash should be mixed well with six times of water or cow's urine, then filtered twenty-one times in a big vessel through a piece of cloth. The residual portion is thrown away and the filtrate (Ksharodaka) should be kept on Mandagni and continuously stirred well until it reduces to 1/3rd. This is Mrudukshara. From these eight Palas has to be taken and mixed with Shankanabhi, Shukti and Kata Sharkara, each in eight Palas, to make Prativapa. In the meantime, heating should continue and Prativapa should be mixed. Care should be taken that it is not too liquid or too dried up. The solution thus obtained is known as Madhyama Kshara. Madhyama Kshara should be heated up again by adding some medicinal plants such as Danti, Chitraka. With this thick solution is obtained which is known as Tikshna Kshara. If Tikshna Kshara loses its potency then it should be mixed with new Kshara and heated again to maintain sufficient concentration.

2.8. Method of application of Kshara
After diagnosing the patient of Pilonidal sinus, the routine three stages

A. Purva Karma (Pre-operative)

- Pre-operative check-up was done to rule out any systemic disorder like diabetes etc.
- Pre-operative anesthetic check.
- Nil by mouth six hours before surgery.
- Part preparation.
- Soap water enema.
- Inj. T.T.

B. Pradhana Karma (Operative)

- The anesthesia given was spinal and local in some cases.
- Patient was made to lie down in left lateral position.
- Painting to the operative site was done with betadine and spirit.
- Followed with Draping done.
- Probing is done to see the length of the tract.
- With the help of scalpel an elliptical incision is made around the post anal sinus.
- The whole sinus tract will be excised deep up to the presacral fascia.
- During the whole surgical procedure, the haemostasis was maintained.
- After this the Pratisarneeya Kshara prepared from the Apamarga will be applied over the created wound.
- After application of the Kshara should wait for 100 matra kalas, after this the whole area become black followed by wash with Nimbu Swaras to operative wound. Packing was done by the application of Jatyadi ghrita.

C. Paschat Karma (Post-operative)

- Daily dressing was done.
- Weekly shaving was done to the post anal area.

During this period keen observation were made to the operative wound according to proforma about the Varna, Vedana, Srava, Pitika (Granulation tissue), Size of the wound etc. and were immediately noted down on their respective proforma papers.

2.9. Assessment Criteria

The results were evaluated by subjective and objective parameters mainly based on clinical observation by grading method.

- **Varna**
  - Grade 0 - Twak samavarna
  - Grade 1 - Kapota varna (gray)
  - Grade 2 - Jihwatalaba varna
  - Grade 3 - Krishna

- **Srava**
  - Grade 0 - No discharge
  - Grade 1 - If vrana wets 4x4 gauze piece (Mild)
  - Grade 2 - If vrana wets 6x6 cm gauze piece (Moderate)
  - Grade 3 - If vrana wets more than 6x6 cm gauze piece (Profuse)

- **Vedana**
  - Grade 0 - No pain
  - Grade 1 - Pain relieved without using analgesics (Mild pain)
  - Grade 2 - Pain relieved with using of analgesics (Moderate pain)
  - Grade 3 - Pain not relieved even after using of analgesics (Severe pain)

- **Pitika (Granulation tissue)**
  - Grade 0 - Healthy granulation
  - Grade 1 - Moderate granulation
  - Grade 2 - Unhealthy granulation
  - Grade 3 - Granulation tissue absent

- **Size of the wound**
  - Grade 0 - Healed
  - Grade 1 - Within 1-4 cm
  - Grade 2 - Within 5-8 cm
  - Grade 3 - Within 9-12 cm

2.10. Follow-up study

The results of the study were drawn from the observation findings in the study after the Chedana of the Nadi Vrana (Pilonidal sinus). The total duration of treatment was three months.

2.11. Ethical Clearance

Ethical Clearance was obtained from Institutional Ethical Committee.
3. RESULTS AND DISCUSSION

Out of 20 patients there were three (15%) patients in between the age group of 15-25, 14 (70%) patients in between the age group of 25-35, 2 (10%) patients in between the age group of 35-45 and 1 patient (5%) between the age group of 45-55 were observed. This shows that patients of age group 25-35 between are more prone for Pilonidal sinus (Graph No 01).

The Varna of the Vrana on day of procedure was mean score 3 which changed to 2.8 after first week showing 6.6% of relief which is less significant statistically, after third week mean score was 1.40 with 53.33% relief which is statistically significant. On fifth week mean score was 1.85 with 61.6% relief. On the seventh week mean score 2.7 with relief of 95% which is statistically highly significant. (Table No 01, Graph No 02).

The Srava of the Vrana on day of procedure was mean score 3 which changed to 2.45 after first week showing 18.33% of relief means discharge from the wounds was more. Third week mean score was 2.3 with 23.33% of improvement. In the fifth week Srava was reduced and improvement noticed was 90% that is statistically good significant. On seventh week mean score were 2.8 with 93% of relief that is statistically highly significant. (Table No 02, Graph No 03).

The Vedana of the Vrana on day of procedure was mean score 2.2 which changed to 2 after first week showing 9.09% of relief which is statistically less significant after third week mean score was 1.75 with 20% of relief which is statistically significant. On fifth week mean score was 1.1 with 50% of relief, which is statistically significant. On seventh week mean score was 0.3 with 86.36% of relief from the pain, which is statistically highly significant. (Table No 03, Graph No 04).

The Granulation tissue of the Vrana on day of procedure was mean score 3 which changed to 2.25 after first week showing 25% of relief which is statistically less significant after third week mean score was 1.3 with 56.60% of relief which is statistically significant. On fifth week mean score was 0.15 with 95% of relief, which is statistically significant. On seventh week mean score was 0.1 with 96.66% of relief from the pain, which is statistically highly significant. (Table No 04, Graph No 05).

The Size of the operated Vrana on day of procedure was mean score 2.75 which changed to 2.4 after first week showing 12.75% of relief which is statistically less significant after third week mean score was 1.6 with 41.81% of relief which is statistically significant. On fifth week mean score was 1.2 with 56.36% of relief, which is statistically significant. On seventh week mean score was 0.1 with 96.36% of relief from the pain, which is statistically highly significant (Table No 05, Graph No 06).

The disease Pilonidal sinus as such is not mentioned in our classics but Acharya Sushruta has explained eight types of Nadi Vrana among them Shalyajanya nadi Vrana is one among them which is caused by any of the foreign body when retained in the body. Regarding hair as it is the main causative factor of Pilonidal sinus in Sushruta samhita only two references are available regarding presence of hair in the body as shalya these are in the definition of shalya tantra itself Sushruta has explained hair as foreign body in the context of baddagudodara he included Bala (hair) is the cause for the obstruction. So, with these references we can say that hair is one of the causative factors of different diseases in this study Chedana of Nadi Vrana was done followed by the application of Pratisaraneeya Kshara if we discuss this then we will get the reference of Chedya Vyadhis there Sushruta has included Nadi Vrana and during the explanation of Kshara he included Nadi Vrana under the indications of Pratisaraneeya Kshara.

The drug selected for the study is Apamarga pratistasaraneeya kshara it is prepared by the combination of three drugs that is Apamarga, Chitraka, and Sukti. Prepared kshara, being a composite of many drugs, alleviates three doshas, being white in colour it is plain. In spite of placidity its actions like cauterising, digesting and splitting is carried out as it is made of drugs having the property of pungent hot, sharp, digestive and suppurative. When used externally it has cleansing, heating, absorbent, and scraping. All these properties of Kshara helps in curing the wound created after the excision of Pilonidal sinus.

Probable mode of action:

After application kshara on Nadi Vrana it coagulates the protein intern does the necrosis of the tissue with obliteration of slough hence rate of recurrence is negligible.

For analysis and assessment purpose five factors were considered, these criteria were taken to evaluate the normal healing time in post operative period, among them main complaints were pain and discharge these factors are evaluated before the operation and values are compared for seven weeks of treatment. Follow-
Pilonidal sinus is more commonly found in drivers and sedentary workers because of the continuous sitting and exertion, the post anal region of pits pulls the hair inside the body and causes the Pilonidal sinus.

All the sinuses were found on the post anal region.

The Pilonidal sinus is considered as Shalyaja Nadi Vrana as per Ayurvedic literature.

Wound healing process is a normal phenomenon starts right from the surgery and continues in sequential manner till the formation of healing scar. But the application of Pratisaraneeya Kshara helped after the excision by:

- Lekhana of pits in the surrounding tissue of the sinus.
- Avoids the formation of unhealthy granulation tissue.
- Helps in healing of the wound from the base.
- It is observed that the anal hygiene and judicious shaving cannot be over emphasized.
- This procedure can be adopted rather than major reconstructive methods of contemporary science.
- In this study it was found that the proper follow up of the patient is playing one of the major role from the postoperative day in the wound management to avoid the recurrence.

5. ACKNOWLEDGEMENT

I am very much thankful to management, Principal and Medical Superindent of our Institute as they permit, guided and helped to carry out the clinical trials.

6. REFERENCES

1. Anant Ram Sharma, Editor(s), (Reprint ed.). Sushruta Samhita (Vol 3) of Sushruta, Sutrasthana; Visarpnadistanarog Nidan Adyaya: Chapter 10, Verse 9-10. Varanasi: Chaukhamba Sanskrit Pratishthana, 2008; p. 534
Table No 1 Postoperative assessment of Varna (Colour of the wound)

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<th>Post operative period</th>
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<th>Mean diff.</th>
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Table No 2 Postoperative assessment of Srava (Discharge)

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Table No 3 Postoperative assessment of Vedana (pain)

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Table No 4 Postoperative assessment of Granulation tissue

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Table No 5 Postoperative assessment of size of the wound

Source of Support: Nil; Conflict of Interest: None declared.