EFFECT OF APAMARG KSHAR SUTRA IN THE MANAGEMENT OF SHALYAJ NADI VRANA W.S.R. TO PILONIDAL SINUS

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ABSTRACT
The primary objective of this retrospective study was to analyze the outcomes of Para-surgical intervention in twenty cases of pilonidal sinus were selected and treated with Apamarg Kshar sutra. All patients were treated (Outpatients basis) in minor kshasutra OT in govt. ayurved college Raipur (C.G.), India. A minimum of 52 days and a maximum of 114 days were required for the complete healing of the track when ksharasutra was applied. It was found that patients who had undergone incision and drainage prior to ayurvedic intervention required more time for healing. Advanced age was also found to prolong the duration of healing.

KEYWORDS: Shalyaj Nadivrana, Pilonidal Sinus, Apamarg Kshar Sutra.

INTRODUCTION
In Shalyaj Nadi Vrana, hair can be considered as shalya (Foreign body) because hair follicles have never been demonstrated in the walls of the sinus. The hairs projecting from the sinus are dead hairs, with their painted ends directed towards the blind end of the sinus. While describing the “shalya” Acharya Sushruta has given much importance of hair (Bala) as foreign body or noxious element. If the kantakadi shalyas (such as; dirt, bone, splinder etc.) are lodged within the body, which are invisible to naked eye, if left to stay for long time it forms a track or Gati, tends to burst open the skin etc. of the locality along its channel of insertion discharging puya (Pus). This discharge is frothy (phenayukta) as if it was stirred and mixed with blood. This discharge comes continuously associated with pain although and increases on movement of the part. This type is called as shalyaja Nadi Vrana. Sushruta has
also mentioned fistula situated on upper anal region & pelvic bone (Coccyx bone) called “(Kukandarasti Bhagandara)” while describing incurable disease.\textsuperscript{[1-7]}

**Pilonidal sinus**\textsuperscript{[8, 9]}

The term of pilonidal sinus is given by Hodges in 1880. The term of “Pilonidal” derived from Latin “Pilus” means hair and “nidus” means nest. The term literally means nest of hairs. The term pilonidal sinus describes a condition found in the natal cleft overlying the coccyx consisting of one or more, usually non-infected, midline opening which are communicated with a fibrous track lined by granulation tissue and containing hair lying loosely with the lumen.

The onset of Pilonidal sinus is primarily affects young adults and teenagers, the maximum incidence being between 20 to 30 years. The disease mostly affects men in particularly hairy men. Study proved that risks of development of pilonidal sinus increases with obesity, injury and family history. Other factors which are also play important role in disease prognosis are vehicle riding for long periods, prolonged sitting, excessive sweating and poor personal hygiene.

**CLINICAL FEATURES**

A pilonidal sinus may be an incidental finding, it may give rise to recurrent episodes of chronic sepsis, acute pilonidal sinus or as recurrent sinus after surgical treatment (Postoperative ulcer with hair).

**Asymptomatic:** The typical appearance is of one or more minute line pits in the pre-sacral area, approximately 5 cm behind the anus.

**Symptoms of infection include**

- Pain when sitting or standing.
- Swelling of the cyst.
- Reddened, sore skin around the area.
- Pus or blood draining from the abscess, causing a foul smell.
- Hair protruding from the lesion
- Formation of more than one sinus track.\textsuperscript{[10, 11]}
AIMS AND OBJECTIVES
1. To assess the efficacy of Apamarg kshar sutra in the management of Shalyaj Nadivrana w.s.r. to Pilonidal sinus.
2. To give maximum relief of symptom without any complication.
3. To prove the efficacy of kshar sutra described in Samhita for cure of Shalyaj Nadivrana.

MATERIALS AND METHODS
- **Patients:** The patients attending the OPD &I.P.D. of Shalya-tantra in the Govt. Ayurvedic College and Hospital, Raipur (C.G.) have been selected irrespective of their age, sex, religion, occupation etc. randomly for the present study. Patients will be diagnosed on the basis of signs and symptoms as per Ayurveda as well as modern aspects.
- **Research protocol:** A detailed protocol was prepared for the study incorporating all the relevant points from both the Ayurvedic as well as Modern point of view.

Procedure of Kshar sutra karma
**Preoperative preparation**
Written and informed consent is obtained. The patient was given proctoclysis enema before the one hour of procedure. The patient’s perianal area was shaved and disinfected with povidine- iodine solution. Tetanus prophylaxis is given in the form of T.T. 0.5ml i.m. state. Lignocaine sensitivity is done with a test dose.

**PRADHAAN KARMA**
**Position**
Jack Knife position
Prone position with the sacro-coccygeal region elevated by pillow or angulations of the table. It is also known as the Jack Knife position.

**Anesthesia**
This procedure was performed under local anesthesia (lignocaine2%) with infiltration around the sinus in different planes deep up to natal cleft.

**Procedure**
Remove the visible hairs firstly and also remove the bad debris with pus from the sinus to make it ready to probing.
Step 1- Probing- Methylene blue dye is injected through the external opening to stain the sinus tracks. Probing of the sinus is done to locate the track and its branches. Care must to be taken not to create a false tract. A pin-pointed director now introduced though the external opening deep up to the sacro-coccygeal cleft or wherever the probe negotiates without any difficulties.

Step 2- Widening of the opening- Now the external opening widened with the help of artery forceps in the direction of probe. Widening is done enough so that one can visualize well into the sinus. Visualized hairs are removed.

Step 3- Curettage - Unhealthy granulation tissue along with the impacted bunch of hairs is curetted with a curette.

Step 4- Trimming of the edge- To promote proper drainage and healing trimming of the edge is performed. All the dead part is removed during trimming.

Step 5- Application of Ksharsutra- The ksharasutra application is done through the sinus tract deep into the natal cleft and taken out though the secondary opening, if present or external opening is made in the dependent part where pus collection is expected. The ksharasutra is taken out though that opening and loose ligature is applied. The free ends of ksharasutra are placed into the sinus cavity for action of ksharasutra. After kshar sutra karm, wound is mopped and cavity is packed with the gauze soaked with a weak iodine solution and bandage is applied.

![Removal of Visualized hairs](image1.jpg) ![Application of kshar sutra](image2.jpg) ![Ligation of Kshar sutra](image3.jpg)

Figure 1. Application of Kshar Sutra in Pilonidal Sinus
PASCHATA KARMA (AFTER KSHAR SUTRA OR SETON THERAPY)

Usnodak awagaha (Hot water sitz bath): Patient is advised to undertake Usnodak awagaha twice daily to maintain local hygiene and reduce pain & inflammation.

Application of Jatyadi ghrita: Cleaning the wound and it is applied over the wound after sitz bath.

CRITERIA OF ASSESSMENT OF CASES

The assessment of the result is purely based on major signs and symptoms (Local) of the disease presented before and after the completion of treatment. On the basis of degree of relief in the textual features of ShalyajaNadiVrana (Pilonidal Sinus) and on the basis of the condition of the patients, were assessed in the form of scores under following headings:

The details of scoring pattern are as follows

➢ ASSESSMENT OF PAIN

0- No pain
1- The pain is mild as to tolerate
2- The pain is moderate while sitting and walking
3- The pain is severe and not relived in any condition

➢ ASSESSMENT OF DISCHARGE

0- No discharge / dry dressing
1- Scanty occasional discharge & little wet dressing. (The area of wetness in gauze is up to \( \frac{1}{2} \times \frac{1}{2} \) cm.)
2- Discharge evident on examination and patient complains of often feeling of often feeling of wetness. (The area of wetness in gauze is up to 1×1 cm)
3- Professed, continuous discharge which needs frequent dressing (More than 1 cm. gauze is wet)

➢ ASSESSMENT OF TENDERNESS

0- No tenderness
1- The pain on deep palpation
2- The pain and tenderness on deep pressure.
3- The patient does not allow palpation due to pain even in touching and difficulty in sitting.
ASESSMENT OF UNITCUTTING TIME (U.C.T.)
U.C.T. = Total number of days / initial length of the thread in cm.

Table 1: Statistical Analysis Showing the Effect of Therapy on Various Sign and Symptom after the Treatment in 20 Patients.

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>% Relief</th>
<th>S.D.</th>
<th>S.E.</th>
<th>T-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain</td>
<td>89.73 %</td>
<td>0.486</td>
<td>0.124</td>
<td>18.53</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Tenderness</td>
<td>87.86 %</td>
<td>0.701</td>
<td>0.181</td>
<td>10.63</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Discharge</td>
<td>82.74 %</td>
<td>0.633</td>
<td>0.162</td>
<td>09.78</td>
<td>&lt; 0.001</td>
</tr>
</tbody>
</table>

Table 2: Complete Healing Time

<table>
<thead>
<tr>
<th>No.</th>
<th>Healing Periode</th>
<th>No. of Patients</th>
<th>Healing (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>&lt; 30 Days</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>31-60 Days</td>
<td>7</td>
<td>35.0</td>
</tr>
<tr>
<td>3</td>
<td>61-90 Days</td>
<td>8</td>
<td>40.0</td>
</tr>
<tr>
<td>4</td>
<td>91-120 Days</td>
<td>5</td>
<td>25.0</td>
</tr>
</tbody>
</table>

Table 3. Total Effect of Therapy

<table>
<thead>
<tr>
<th>Parameters</th>
<th>No. of Patients</th>
<th>% Achieve</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cured</td>
<td>18</td>
<td>90.0 %</td>
</tr>
<tr>
<td>Improvement &gt;50-74%</td>
<td>01</td>
<td>05.0 %</td>
</tr>
<tr>
<td>Uncured</td>
<td>01</td>
<td>05.0 %</td>
</tr>
</tbody>
</table>

RESULT & DISCUSSION

Pain: Before treatment the mean score of pain was 2.5 which were reduced to 0.27 after treatment. Thus this treatment provides 89.73 % of relief. The value was also found to be significant statically.

Tenderness: Before treatment the mean of tenderness was 2.3 which were reduced to 0.25 after treatment. Thus this treatment provides 87.86% of relief. The calculated 't' value was found to be 10.63 (P <0.001) which was highly significant.

Discharge: Before treatment the mean of discharge was 1.83 which was reduced to 0.32 after treatment. Thus this treatment provides 82.74% of relief. The calculated 't' value was 9.78 (P<0.001) which was found to be highly significant. The discharge from Shalyaj Nadi Vrana
(Pilonidal sinus) track was reduces very early in the patient treated by Guggulu based Ksharasutra.

**CONCLUSION**

Acharya Sushruta has advocated Ksharsutra ligation as minimally invasive parasurgical treatment for Nadi Vrana. Ksharsutra treatment not only minimizes complications and recurrence but also enable the patient to resume their work quickly and with less discomfort as well as reduce cost of treatment.

**REFERENCES**