

OUTCOMES OF AYURVEDIC PARASURGICAL INTERVENTION IN TEN CASES OF PILONIDAL SINUS - A RETROSPECTIVE CASE SERIES

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Abstract

The primary objective of this retrospective study was to analyze the outcomes of parasurgical intervention in ten cases of pilonidal sinus, in The Ano Rectal Clinic, AVT Institute of Advanced Research, Coimbatore over a span of five years from October 2005 to January 2010. Ten patients were subjected to parasurgical interventions out of which nine were administered *ksharasutra* - medicated caustic alkaline thread and one *ksharavarti* - medicated caustic alkali wick. A minimum of 42 days and a maximum of 133 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. The application of *ksharavarti* in one patient took 14 days to heal completely.

Key Words - *Ksharasutra*, *ksharavarti*, pilonidal sinus

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Introduction

Pilonidal sinus is managed by Ayurvedic surgeons by the application of *ksharasutra*. Although the practice is widespread, documentation of the practice, clinical studies and publications are inadequate limited to a few case reports or pilot studies^{1, 2, 3}. The published researches however do not adequately discuss variation in healing time and response of patients to the application of *ksharasutra*.

The present study is a retrospective case series of patients who underwent *ksharasutra* treatment for pilonidal sinus. This paper provides information on average healing time and type of internal medications used which are not dealt adequately in previous publications.

A sinus track, or small channel, may originate from the source of infection and open to the surface of the skin. It is located near or on the natal cleft of the buttocks that often contains hair and skin debris. Material from the cyst may drain through the pilonidal sinus⁴. In the initial stage, sufficient drainage of the pus is done and the wound is neatly dressed. The later stages are treated with wide excision and secondary healing. Postoperative recurrence following surgery is high, leading to frequent and time-consuming wound care⁵. Pilonidal sinus is not described in classical texts of *Ayurveda* but correlates with the clinical features of *nadi vrana* (tubular ulcer) caused by

shalya (foreign body)⁶. The treatment mentioned is the application of *varti*, *kshara*, *agni* (cauterisation) and *yantra* (blunt instruments) through the track⁷. The main advantage of this treatment is the lesser recurrence comparing to conventional therapy.

Methods of Study

All patients who presented in the OPD with specific complaints of recurrent boil in the area between the buttocks, mild pain, and occasional pus discharge, were clinically examined, and probed to identify the track, by the Ayurvedic proctologist in the Ano Rectal Clinic, AVT Institute of Advanced Research, Coimbatore. Over a span of five years, 24 cases were diagnosed as pilonidal sinus, out of which there were nineteen males and five females. Fourteen patients did not agree to undergo the recommended treatment.

Out of nine patients who underwent *ksharasutra* treatment, six patients belonged to age group 20-40yrs and the rest were above 40. The subjects included were seven males and two females. While a pilonidal sinus can be observed in both sexes and at any age, they predominate in men and in the second and third stage of life⁸.

Previous Treatment

Three out of the selected patients had a history of previous incision & drainage treatment at a conventional biomedical

facility. Due to the recurrence of symptoms, these patients have reported at our hospital for ayurvedic management. The rest seven were fresh patients and were clinically evaluated and diagnosed by ayurvedic proctologist. All the ten patients included in this study were of single diagnosis.

Treatment details

Nine patients underwent the *ksharasutra* treatment, and one was given the *ksharavarti*. The patient chosen for *ksharavarti* had a very small sinus track and could not be probed.

The sinus is a blind track that is probed with a metallic probe to identify the opening of the track on the other side. If the track cannot be probed, and the length of the track is small, then the *ksharavarti* is applied. The

ksharasutra and *ksharavarti* is an OPD procedure, and the patient can leave immediately after the treatment. The patients selected for the parasurgical procedure were asked to do a routine blood test to confirm the feasibility of the procedure.

Apamarga ksharasutra used for the treatment is prepared as per the text *bhaishajya kalpana*⁹. The *ksharasutra* is tied through the track, neither too loose nor too tight. Once the pain, inflammation and sloughing reduces, the *ksharasutra* has to be tied tightly until it completely cuts the track with simultaneous healing.

Ksharavarti is a wick that is made by cutting the *ksharasutra* into fragments of 2-3cm in length and is inserted into the sinus. The *varti* is replaced every alternate day until the sinus completely heals.

Table 1. No. of days taken for removal of *ksharasutra* from the track in each patient.

S. No	Age	Sex	No. of days	Previous allopathic treatment
1	28	F	133	incision & drainage
2	25	F	126	incision & drainage
3	24	M	98	incision & drainage
4	65	M	84	Nil
5	49	M	63	Nil
6	50	M	49	Nil
7	32	M	49	Nil
8	23	M	49	Nil
9	29	M	42	Nil

The rethreading was done once a week until the track was completely cut and healed. Table 1 represents the number of days required for removal of *ksharasutra*. The minimal residual wound gets healed completely by regular dressing for seven days.

Treatment outcome

On an average the cutting rate of *ksharasutra* through the track is 1.00cm / week¹ but the number of days required varies from patient to patient, depending on the length of the track, flabbiness of the muscles, chronicity of the condition, drugs used in preparation and their concentration, pressure exerted by the *ksharasutra* on the

track and sensitivity of the patient. In post surgical recurrence cases of pilonidal sinus, eventually developed fibrous tissue reduces the cutting and subsequently the healing rate. Out of the nine patients, a minimum of 42 days and a maximum of 133 days were found required for complete healing of the track. Number of days required for removal of *ksarasutra* were less in younger age group (20-40 yrs.) comparing to the elderly(above 40yrs.). In a male patient aged 29, the healing was completed in 42 days. In the other three male patients between 23 and 50 years of age, the healing time was 49 days. In one patient who was fifty years old, the healing took 63 days to complete. The male patient aged 65 took 84 days for

healing. On the other hand, the patients who had undergone incision and drainage earlier took longer time to heal. Two female patients took 126 and 133 days to heal and one male patient took 98 days to heal. Due to less number of females, it was not possible to determine whether gender influenced the healing of the track. The patients who had undergone incision and drainage took a longer time for removal of the *ksharasutra* from the track.

Phases of treatment

Patients were given treatment in three phases (Table 2).

Phase I – Application of primary thread (Barbers seton thread no.20).

The track is probed, external openings are located and the primary threading is done to initiate the pus drainage.

Phase II – Application of *ksharasutra* (approximately two & half months)

After 7 days the primary thread is replaced with a *ksharasutra*. The replacing of the *ksharasutra* with a new one is done once a week until the thread completely cuts through the track. The medications given during this period were *gugguluthiktaka kashaya*², *kaishora guggulu*³ and *madhusnuhi rasayana*⁴ for facilitating drainage and healing of the sinus.

Table 2. Phases of Treatment

Phases of treatment	Procedure	Medications	Main Ingredients
I (Day 1)	Primary threading	No Medication	—
II (Day 2 to Approx 2 & 1/2 months)	During Application of <i>Ksharasutra</i>	1. <i>gugguluthiktaka kashaya</i> 2. <i>kaishora guggulu</i> 3. <i>madhusnuhi rasayana</i> 4. <i>jatyadi ghrta</i>	1. <i>nimba, amrta, vrsha</i> 2. <i>triphala, amrta, guggulu, guda, guduci</i> 3. <i>trikatu, triphala, trijata</i> 4. <i>jatipatra, sushavi, nirgundi</i>
III (Approx 1 month)	After Application of <i>Ksharasutra</i>	1. <i>varanadi kashaya</i> 2. <i>triphala guggulu</i> 3. <i>gandhaka rasayana</i> 4. <i>jatyadi ghrta</i>	1. <i>kasisa, saindhava, shilajit, hingu, varunatvak</i> 2. <i>triphala, krshna, guggulu</i> 3. <i>gandhaka, erandabija, shunthi</i> 4. <i>jatipatra, sushavi, nirgundi</i>

During treatment patients were advised to take easily digestible food in little quantities and appetizing foods with little amount of cow's ghee¹. They were also advised

15 ml of *gugguluthiktaka kashaya* with 60 ml of lukewarm water, twice in a day on empty stomach; two tablets of *kaishora guggulu*, twice in a day after food; one teaspoonful of *madhusnuhi rasayana*, at bedtime followed by a glass of warm water were the internal medications given. *Jatyadi ghrta*⁵ was applied locally on wound twice a day. Warm sitz bath after defecation was recommended to every patient following *ksharasutra*.

Phase III – After the application of *kshara sutra* (approximately one month)

After the *ksharasutra* has completely cut through the track, the patient is advised to do dressing daily for a week, along with internal medications for one month.

The medications given during this period were *varanadi kashaya*⁶, *triphala guggulu*⁷ and *gandhaka rasayana*⁸ to promote the healing of residual wound.

15 ml of *varanadi kashaya* with 60 ml of lukewarm water, twice in a day on empty stomach; two tablets of *triphala guggulu*, thrice a day after food; two tablets of *gandhaka rasayana*, thrice a day before food were the internal medications given during this period. *Jatyadi ghrta* was again applied on the wound twice a day. Warm sitz bath after defecation was advised.

to avoid activities that may unduly stretch the area of the lesion.

Conclusions

It was found that *ksharasutra* and *ksharavarti* are effective in management of pilonidal sinus. The time taken for healing was variable and depended on the age of the patient and prior management of the sinus with incision and drainage. Younger patients healed faster and older patients slower. For them the healing time ranged between 42 and 84 days. Patients who had undergone incision and drainage before application of *ksharasutra* took longer time to heal irrespective of their young age. Here the healing time ranged between 98 and 133 days. The application of *ksharavarti* took 14 days for the sinus to heal completely. The patients have been followed up regularly for the last few years, and reported no recurrence till date. Further studies are essential to analyse the variation in the healing time across patients.

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