

POST HERNIOPLASTY SINUS TRACK MANAGEMENT WITH KSHARASUTRA PLUGGING - A CASE STUDY

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ABSTRACT

A sinus is a blind track leading from the surface down to the tissues. The sinus is lined granulation tissue which may be epithelialized. Post surgical sinus is the commonly encountered sinus which results from non-absorbable suture material acting as a focus of infection within the wound. It is more common after closure of contaminated wound. Larger sinuses may occur as a result of postsurgical intraabdominal abscesses or anastomotic leaks, This may form a fistula if the abscess cavity is in continuity with the bowel lumen. The internal opening usually closes leaving a chronic discharging sinus that fails to heal due to inadequate drainage of the abscess cavity. It can be correlated with *Nadi vrana* in *Ayurveda* and treatment mentioned is *Kshara sutra* application. *Kshara sutra* helps for cutting, curetting and healing of the track faster. *Kshara* is having antimicrobial action so chance of infection is very rare. A case of Post hernioplasty sinus in 27y/m patient was thoroughly examined and treated with *ksharasutra* therapy. *Ksharasutra* (prepared with *Apamarga kshara* and *Haridra*), application was done in the form of plugging to the sinus after preoperative procedures and thread replacing was done till tract was healed completely, lately followed by dressing with *Yastimadhu taila*. Internally *Gandhaka rasayana* and *Triphala guggulu* was given. Symptoms like pain, discharge, size of wound and length of the track was assessed throughout the treatment. Pain and discharge was reduced after 3rd sitting of *Ksharasutra* application. *Apamarga ksharasutra* application was found to be effective in post surgical sinus.

Keywords: *Nadivrana*, Hernioplasty, *Ksharasutra*

INTRODUCTION

A sinus is a blind track leading from the surface down to the tissues. The sinus is lined granulation tissue which may be epithelialized.

It may be due to presence of foreign body or necrotic tissue in the depth, absence of rest, non-dependent

drainage of abscess, when a specific chronic infection is the cause, when the track become epithelialized, sometimes there may be a dense fibrosis around the wall of the track and cavity preventing the healing.

Post surgical sinus is the commonly encountered sinus which results from non-absorbable suture material acting as a foci of infection within the wound. It is more common after closure of contaminated wound treatment. Larger sinuses may occur as a result of postsurgical intraabdominal abscesses or anastomotic leaks, this may form a fistula if the abscess cavity is in continuity with the bowel lumen. The internal opening usually closes leaving a chronic discharging sinus that fails to heal due to inadequate drainage of the abscess cavity. 1

As with all surgeries, there are some side effects with hernia repair also. They are infection, organ or tissue damage, recurrence, Seroma formation, nerve damage or neuralgia, constipation or slow bowel movement, difficulty in micturition, extensive scarring, incisional hernia, fistula or sinus formation, UTI.2

NADIVRANA

Improper management or negligence will lead the *vrana* into chronic stages, that condition is known as *nadi vrana*. Improper incision and drainage of a ripened abscess and at the same time indulging unhealthy foods by the patient, the pus retained inside the ulcer and entering into the tissues produces pathway of pus/channels (sinus) inside them for a long distances.3 In *susrutha samhitha*, *nidana sthana* it is mentioned as when a doctor opens a *Apakwa vidradhi* and ignores a *pakwa vrana shophya* and if the patient continues unhealthy foods and activities, then the pus breaks down the unimpaired intact tissues, passes deeper and deeper destroying the *vranas* because of its moving inside greatly it is known as *gati* and since the spread is through a tube it is called as *nadi* (sinus).4

Any foreign body lost (remaining hidden) within the tissue mentioned earlier (skin, muscles) produces a sinus quickly; which exudes a warm liquid, frothy, churned up, clear and/or blood mixed, suddenly/always and accompanied with pain.5

Treatments in Ayurveda

- *Chedana* (incision)
- *Salyanirharana* (removal of foreign bodies)
- *Margasodhana* (cleaning the tract)
- *Ropana* (wound healing).6

In *salyaja nadi vrana* if the patient is unfit or do not want surgery (I&D), persons who are emaciated, weak and frightful and if the ulcer is present in vital organs, the wise physician should treat the sinus by using *Ksharasutra* and not using sharp instruments.7

METHOD OF PREPARATION OF APAMARGA KSHARASUTRA:

Although most of the ancient authors have described the use of *Ksharasutra* in a variety of diseases yet a very few among them have given the method of its preparation. The cause may be, in that era, the thread was so popular that they did not consider highlighting it broadly. The second cause may be the conservatism. By above description, one can say that Cakrapanidatta and Sadananda Sharma are the backbone, who has provided the basic ground about the preparation, use and further research of *Ksharasutra*. They have used *Snuhi* latex mixed with *Haridra*. It shows their scientific vision to avoid clotting.

Snuhi ksheera – 11 coatings

Snuhi ksheera + *Apamarga kshara* – 7 coatings

Snuhi ksheera + *Haridra churna* – 3 coatings

At first thread was spread out length wise in the *Ksharasutra* hangers specially designed for this purpose. The *Snuhi ksheera* was smeared on the thread on its whole length. Then this wet threaded hanger was placed in the *Ksharasutra* cabinet for a day. Next day, dried thread was again smeared with the latex of *Snuhi*. The process was repeated for 11 days. On 12th day again thread was smeared with *Snuhi ksheera* then in the wet condition the thread was smeared with *Apamarga kshara* powder. The thread was dried and the same procedure repeated for 7 times for 7 days. On 19th day the dry thread was smeared with latex of *Snuhi*, and then in wet state immediately with *Haridra churna*. The procedure was repeated for 3 days continuously. In this way the thread has total 21 coatings of *Snuhi ksheera*, 7 coatings of *Apamarga kshara* and 3 coatings of *Haridra churna* and the Prepared *sutra*'s were stored in the air tight container.

PROPERTIES OF KSHARA IN DIFFERENT LITERATURES

Sl. No.	Properties	<i>C.S</i>	<i>Su.S</i>	<i>A.H & A.S</i>	<i>Rasatarangini</i>
		<i>sutrasthana</i>	<i>sutrasthana</i>	<i>Sutrasthana</i>	
		(27/306)	(11/16)	(30/355)	
1	<i>Teekshna</i>	+	-	-	+
2	<i>Ushna</i>	+	-	-	+
3	<i>Ruksha</i>	+	-	-	-
4	<i>Laghu</i>	+	-	-	-
5	<i>Kledi</i>	+	-	-	-
6	<i>Pakti</i>	+	-	-	-
7	<i>Vidarana</i>	+	-	-	
8	<i>Dahakaaraka</i>	+	-	-	
9	<i>Deepana</i>	+	-	-	-
10	<i>Chedana</i>	+	-	-	-

Symptoms	Day 1	Day 4	Day 7	Day 10	Day 13	Day 16	Day 19	Day 22
Length of tract	3.8	3cm	2.5 cm	1.75cm	1.5cm	1cm	0.5	0
Discharge	3	3	2	2	1	0	0	0
Pain	2	2	1	1	0	0	0	0
Size of wound	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

Advantages and benefits of Ksharsutra Therapy

1. It is a simple, safe and sure treatment for fistula-in-ano (95% success rate)
2. *Ksharsutra* is – chemical fistulectomy rather than surgical fistulectomy
3. It is a simple minimum invasive surgical technique
4. Recurrence is negligible (3-5%)
5. Performed in Minor O.T. conditions
6. No damage to anal sphincter and chances of incontinence is practically nil.
7. It is an Ambulatory procedure, no hospitalization, Only local/topical anaesthesia required
8. No antibiotic coverage required
9. *Ksharsutra* is very safe in patients who are otherwise not fit for surgery e.g. Diabetics, cardiac patients, Hypertensive, elderly and weak patients.
10. Cost effective – very low treatment as compared to surgery
11. Fully Ayurvedic management, associated medicines for Internal and External use has many benefits.
12. Minimum scar formation at the wound site.

Mode of action of Apamarga Kshara sutra

- Provide medicinal debridement by reducing slough or tissue debris.

- Helps cutting, curetting, drainage and healing of the tract.
- Provide healthy base for healing
- Accelerates healing by inhibiting fibrotic process
- Produce significant pathophysiological change
- Helps in progression of healing
- States harmony of physical properties of tissue
- It destroys and removes unhealthy tissue and promotes healing of the tract due to caustic action.
- Controls infection by the antimicrobial action
- Cutting through the tissue and laying the tract open

Assessment criteria

1. Length of the sinus
2. Pain
3. Discharge
4. Size of wound.

CASE REPORT

27 yr old male patient was examined in the hospital OPD and took OPD level treatment for inguinal sinus (*Nadivrana*). He underwent hernioplasty 5 years back. And there was pain and profuse discharge of pus from the closure of the wound since 6 months. Consulted allopathic doctor and diagnosed as sinus tract in the

inguinal hernioplasty wound closure communicating with the mesh. He also complained about throbbing type of pain in the right inguinal region.

Personal history

While taking personal history it is noted that the patient had good appetite, normal bowel micturition and sleep.

Diet mainly non-veg.

Irregular food habits.

Local examination-

On inspection there was a small opening over the scar of previous surgery in right inguinal region.

On probing, the length of the sinus was 3.8cm.

Treatment given

Internal medicines given

1. *Gandhaka rasayana* 1 TID x 1 month

2. *Triphala guggulu* 1 TID x 1 month

Externally

Procedure: the area was properly shaved and cleaned with betadine. *Apamarga ksharasutra* was plugged into the sinus track and dressing done. Thread was replaced 8 times with interval of 3 days each. After tract was healed completely, cleaning and dressing was done with *Yastimadhu taila*.

RESULTS AND DISCUSSIONS

The patient had followed diet and medicines strictly. From 10th day onwards there was remarkable reduction in pain and pus discharge. In first 2 sittings there was profuse sanguineous discharge and after that with the progression of cutting and healing of the tract pus discharge also diminished. *Ksharasutra* provided medicinal debridement by reducing slough or tissue debris. Also helped in cutting, curetting, drainage and healing of the tract. It created healthy base for healing and accelerated healing by inhibiting fibrotic process and its antimicrobial action. Initially tract length was 3.8cm and track completely healed on 22nd day. Follow up was done for 2 months.

CONCLUSION

Easy, cost effective and minimally invasive procedure. Promotes healthy healing and recurrence is al-

most ruled out. Management of postsurgical sinus with *Apamarga ksharasutra* is found to be very effective.

NOTE; can try with different kshara sutra and for different sinuses also.

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