KSHARSUTRA THERAPY IN NADIVRANA W.S.R. TO PILONIDAL SINUS

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ABSTRACT

A pilonidal sinus is of infective origin and occurs in sacral region between buttucks, umbilicus, axilla, etc and can cause discomfort, embarrassment to the patient. The most commonly used surgical treatment for this disorder includes excision and primary closure and excision with reconstructive flap. However the risk of recurrence or of developing infection in the wound after operative is high. Also, the patient requires longer hospitalization, and the procedure is expensive. There is a similarity between pilonidal sinus and *shalyaj Nadivrana*. Sushruta has described a minimally invasive para-surgical treatment by Ksharsutra procedure for management of *Nadivrana* (Pilonidal sinus). The trial of this treatment in pilonidal sinus not only minimizes the complications and recurrence but also reduces hospital stay and it is cost effective too.

Keywords: pilonidal, axilla, buttucks, *shalyaj Nadivrana*.

INTRODUCTION

A pilonidal sinus is of infective origin and occurs in sacral region between buttucks, umbilicus, axilla, etc. Commonest site is inner buttuck region; it is epithelial lined track, situated short distance behind the anus, containing hairs and unhealthy granulation tissue. It is due do penetration of hair through the skin into subcutaneous tissue. It forms granuloma or unhealthy granulation tissue in deeper plan. Type of hair, force of hair insertion in unhealthy granulation tissue, vulnerability of skin is the three factors that cause pilonidal sinus. Cut hair from above descent into cleft and stay there to get buried into pilonidal sinus. It is common in 20 to 30 age groups. It is common in males and mostly affects hairy men.¹

During the Second World War the condition was common in jeep drivers so know as “Jeep disease”. The most commonly used therapy is surgery including wide excision and healed by secondary intention. However, post operative recurrence following surgery is high. Leading to frequent and time consuming wound care. Hence there is a need to evaluate the alternative and innovative technique to cure this disease. So as to minimise the recurrence, make it cost effective, and minimal hospitalization.
PATHOLOGY

Hair penetrates the skin
  ↓
Dermatitis
  ↓
Infection
  ↓
Pustule formation
  ↓
Sinus formation
  ↓
Hair gets sucked into the sinus by negative pressure in the area
  ↓
Further irritation and granulation tissue formation
  ↓
Pus formation
  ↓
Multiple discharging Sinus

AYURVED AND PILONIDAL SINUS

In Ayurved texts, pilonidal sinus comes under Nadivrana (shalya nimittyaj) caused by Shalya (i.e.foreign body). Sushrut Samhita describes a condition Shalyaj nadivrana. Which is very much similar to pilonidal sinus? Shalyaj Nadivrana is a track due to presence of pus, unhealthy granulation tissue and hairs, etc. inside left unnoticed. Acharya Sushruta has described a minimal invasive procedure to cure Nadivrana (Pilonidal sinus). Sushruta has described that hair can be a root cause for formation of sinus, and also mentioned various methods for management. Shalyaj Nadivrana should be treated by cut open the sinus track by using Ksharsutra, and this sinus should be probed with the help of probe, then insert the needle having ksharsutra till the end of sinus is reached, the needle is then lifted up, the end of the thread is pulled out and knot tied and extraction of foreign body, like tufts of hair with the help of small curved artery forceps. After considering the strength of ksharsutra, a new Ksharsutra should be inserted to replace previous one during follow up after every week. We use rail road technique till the whole length of the track is cut. Varti or medicinal wicks are also useful in healing Nadivrana or pilonidal sinus.

INTRODUCTION OF KSHAR AND KSHARSUTRA

Kshar is most important among all shas-tra (sharp instruments) and anushstra (accessory instruments) as it does the function of excision, scraping, cutting, migrates all the doshas. The ksharsutra therapy is well known therapy of ayurved in various diseases, like Fistula in ano: its supremacy has been proved in all three dimensions. Ksharsutra therapy is simplified, sure, and safe.

MATERIAL AND METHODS

Drugs Used

Many drugs have been advised by Sushruta and other Ayurvedic texts for the preparation of Kshar.

The important among them are – Apamarge, Palash, Arka, gomutra etc.
Method of Preparation

According to the three types of Kshar are prepared on the basis of their strength.

1. Mild - Mridu,
2. Moderate - Madhyama and

The general procedure can be narrated as -

1) 'Mridu' Bhāṣmikara a (conversion to ash) Adding to water (1:6 ratio), Filtration (21 times), Distillation (boiling the ksharajala still all water evaporates), collection (process called lixiviation)

2) 'Madhyama' Here the procedure is same among them are extra powders of Katasharkara Bhasmasharkara, Ksheerapaka, Shankhanabhī (gravel of lime and ash, oyster-shell & core of conch-shell) are added to the boiling ksharajala before distilling it.

3) 'Tikshna' Similar to madhyama kshara here added is the powders of drugs like Chitrika, danti, vacha etc. in place of the lime stones.

"Kshar Sutra" is a sanskrit phrase in which “Kshar” refers to anything that is corrosive or caustic; while “Sutra” means a thread. It is described by many Ayurvedic texts which originated and flourished in India. It is one among popular Ayurvedic treatment modality in the branch of Shalyatantra followed by Sushruta.

PREPARATION OF KSHARSUTRA

HISTORY: Various ancient authors have provided various literatures about ksharsutra.

Sushruta has mentioned the use of ksharsutra in nadivrana chikitsa.

Charak has described in the chapter of shothachikitsha that ksharsutra should be used with other measures in the management of bhagandara (ch.su.chi.12/97).

Chakradutta has first given the idea about the preparation and use of ksharsutra, but the use of kshar in preparation of this thread has not been mentioned by him.

Later on in Rasatarangini - Sadanand Sharma has described the preparation and uses of ksharsutra.

Although he has not mentioned, the apamarga or any type of kshar in the preparation of this thread, yet he has described that 7 coatings of haridra powder should be done on thread, layered by snuhilax i.e. Snuhiksheer. He further said that this thread can be used in the management of Bhagandara.

Method of preparation

The standard kshar sutra is prepared by repeated coatings of snuhiksheera (latex of Euphorbia Nerifolia) apamargkshara (ash of Achyranthusaspera) and haridra powder over a surgical linen thread no. 20. This thread is spread throughout lengthwise in hangers. Each thread on the hanger is then smeared with snuh latex with the help of gauze piece soaked in the latex. This wet hanger is transferred in ksharasutra cabinet. The same process is repeated next day. Eleven such coatings with snuhiksheera alone should be accomplished.

The twelveth coating is done by first smearing the thread with snuhiksheera and in wet condition thread is passed through the apamargkshar.

It is again transfer into the cabinet for drying. This process is repeated till seven coatings of snuhiksheer and apamargkshara are achieved.

The final three coatings are completed with snuhiksheera and fine powder of Haridra (termaric) in the same fashion. Thus twenty-one coatings over the thread are completed.

MODE OF ACTION

Ksharsutra is now a popular treatment modality in India for the management of Sinus and fistula in ano. Many Clinical trials have done all over in different institutes to evaluate the action. Precisely the action of Ksharsutra is thought to be due to its cutting, healing and cleansing effect according to Ayurveda.
It can be suggested that, it allows the proper drainage of pus from then a sinus and fistula and works as a good chemical debriding agent that leads to a proper healing. On the other hand the cutting effect of thread incises the skin gradually without a surgical incision. Many studies confirm that it is more effective in the way of reducing hospital stay and lesser the chance infection. Researches suggest that it is having the action of Excision, Scrapping, Draining, Penetrating, Debridement, Sclerosing and Healing. It is Bactericidal and Bacteriostatic.\textsuperscript{12}

**DISCUSSION AND CONCLUSION**

This minimally invasive procedure *Ksharsutra* has good potential in the management of Pilonidal sinus. It minimizes the rates of complication and recurrence and enables the patient to resume work and normal social activities as early as possible. It is an acceptable treatment to the patient in terms of cost of treatment, extent of discomfort, impact upon body image. Pilonidal sinus disease is a chronic and painful condition that can affect self-esteem, body image and personal relationships. Multiple studies have shown *Ksharsutra* therapy decreases both short-term and long-term recurrence of the condition and this treatment should be considered in every case. There is a need for further study into follow-up periods longer than five years, as recurrences are known to occur after this time period.

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