



### Conceptual & clinical application of kshara in anorectal disease.

Ravishankar Pawar

MS Shalyatantra, Assistant Surgeon, Bhatia Hospital, Mumbai, Maharashtra.

**Author Correspondence:** Email- [kabeer008@gmail.com](mailto:kabeer008@gmail.com) ; Ph: 9021249329

#### Abstract:

Pilonidal disease is a common anorectal problem that typically affects young people. Pilonidal sinus describes a hair-filled cavity in the subcutaneous fat of the post sacral intergluteal region known as the natal cleft. the pilonidal sinus, presented with boil with slight seropurulent foul discharge from post anal region in the natal cleft.

The most commonly used surgical techniques for pilonidal sinus includes excision with primary closure and excision with reconstructive flap with their own limitation(PNS).In Ayurveda acharya Sushruta has considered it under shalyaj nadi vana ( sinus or fistula due to foreign body). Sushruta mentioned the chedana as well as ksharkarma in the management of Nadivrana. Hence the study concluded that excision & ksharkarma in pilonidal sinus is one of the potential treatment option to avoid recurrence.

Nowadays Pilonidal Sinus (PNS) is becoming common disease in between 20-50 years of age, in men and mostly dense hairy persons. Commonly it occurs midline over the coccyx. It results in purulent discharge, pain and discomfort. In Ayurvedic practice, there are many surgeons who are practicing classical

Ksharasutra management to treat PNS, which is very effective but there are some problems using classical Kshara in the management of PNS, such as discomfort, burning sensation, itching and irritation due to Snuhi-ksheera. So patients can do their daily routine work without any pain or discomfort.

In Ayurveda, Shastra and Anushtra Karma are described in detail. Kshara is best among Shastra and Anushastras. Two types of Kshara are there - Paneeya and Pratisarneeya. Pratisarneeya Kshara is of three types- Mridu, Madhyama and Teekshana. Kshara Karma include - Pratisarneeya Kshara application, Kshara Sutra therapy and Kshara Varti. Pratisaraniya Kshara is mainly used in wound management, various anorectal disorders such as Arsha (Haemorrhoids), kushtha, Arbuda, Dushta Nadivrana, Guda Bhramsha (Rectal prolapse). Kshara is a caustic material. It causes chemical burn on the area where it is applied. It helps in sloughing of necrosed and infected tissues. Kshara Sutra therapy is used specially in Bhagandara (Fistula in Ano), Nadivrana (Pilonidal sinus) and various benign growth of skin such as papilloma, warts etc. Kshara Varti is used in chronic non healing

wounds for debridement and in sinuses or fistula in ano. Ksahra Karma has been very much effective non surgical means in the management of various disorders especially in anorectal disorders.

**Key words:**

Pilonidal sinus, Snuhi Ksheera, Apamarg kshara, Nadivrana,

**Introduction:**

Pilonidal sinus is characterized by opening in mid sacrococcygeal line between natal clefts 4-5 cm behind the anus. A tuft of hairs with seropurulent foul discharge emerges through the opening. The entrance of the sinus tract is lined by modified cutaneous tissues. The tract enters into the cavity, which is entirely lined by granulation tissue and contains debris and hairs. Thus deeper tract and cavity of the sinus are not lined by skin tissue. Pilonidal is defined to pertaining “nest of hairs”, that pilo comes from the word pilus which means hairs and nidal comes from nidus that means, nest. In this regard the meaningful word is called as nest of hairs. In fact pilonidal sinus presents to the sinus which is having the nest of hairs. It is also called as the Jeep driver’s disease. The incidence of pilonidal sinus and other anorectal disorders such as haemorrhoid, fistula in ano, fissure in ano, proctitis, IBS, are increasing day by day in general practice due to busy, sedentary and fast lifestyle. Food habit less in fibres makes the bowel irregular now a days. Occupation related to continue sitting such as drivers, bankers, and computer job works, students etc. are suffering more from pilonidal sinus. It is common in 20-50 years of age. It is common in males and mostly affects hairy men. 74%, male sex hormone effect, hairy body, more sweat & maceration. The complications of pilonidal sinus arise if not treated in time; these are

formation of abscess, recurrent inflammation and recurrence of sinus formation which hampers quality of life in young adults. In Ayurveda on the basis of sign and symptoms this disease can be correlated with Nadivrana.

The management of Nadivrana mentioned in classic are- Ksharakarma, ksharasutra and

even Agnikarma. In chapter eleven of Sushrut samhita sutrasthana while describing about the indications of pratisarniya kshara, he mentioned nadivrana also. Kshara is made up of several drugs, in their most concentrated and subtle forms. It has shodhana properties as it has got ushna and teekshna gunas which help in desquamation of sloughs (debridement) and draining of pus when used externally. Kshara helps in ropana or healing process in vrana (wound) because of their cleansing and antiseptic properties.

**Causative Factors**

Type of hairs - tough/silky

Shape of hairs - straight/curled

Force of hairs insertion into subcutaneous tissue Soft skin with erosion, splits wide skin pores, wounds, prolonged sitting, presence of moisture and sweat are secondary factors.

Commonest site - Midline over the coccyx

Common age - 20-50 years(males and mostly hairy person)

Synonym - Jeep bottom / driver’s bottom disease

**Pathology**

Hairs penetrate the skin → Dermatitis → Infection → Pustule formation → Sinus formation → hairs get stuck into the sinus by negative pressure in the region → further irritation and granulation tissue formation → pus forms → multiple discharging sinus occurs.

- Primary sinus occurs in the midline over the coccyx.
- Secondary sinus occurs in laterally.

### **Clinical features**

- 1) Discharge - purulent / serosanguinous Pain - throbbing
- 2) Tender swelling just above the coccyx
- 3) Tuft of hairs are seen in opening of sinus

It causes recurrent infection, abscess formation which bursts; open forming recurrent sinus with pain, discharge and discomfort.

### **Methods :**

Literary review and clinical use of all forms of Kshara in clinical practice are described in the present article. Firstly classical review of Kshara has been described.

### **Preparation of Pratisarneeeya Kshara and Kshara Sutra.**

Basic methodology of preparation of all forms of Kshara is followed as described in classical literatures and some minor modifications are done presently to prepare Pratisarneeeya Kshara and Kshara Sutra. Plants used for the preparation of Kshara are -Apamarga, Plasha, Aragvadha, Snuhi etc.

**Preparation of Pratisarneeeya Kshara** e.g. Teekshana Apamarga Pratisarneeeya Kshara

### **Materials Required**

1. Aragvadha or Apamarga Panchanga
2. Container- 10 Litre
3. Shukti
4. Chitrakamoola
5. Air tight container

### **Method of Preparation:**

Aragvadha or Apamarga Panchanga (e.g. 10 kg) is collected and formed into a heap. The whole twig was burnt into ashes and then it was allowed to cool by itself. The whole ash is collected (1kg) and mixed with six times of water by volume and stirred well, allowed to settle overnight. Then it is filtered through double folded cotton cloth for 21 times, residue was thrown out. Amber colored filtrate is obtained. This is subjected to Mandagni Paka, when the content was reduced to 2/3rd, 100g, (1/10th of ash) of Shukti is heated red hot and then mixed with Ksharajala to dissolve it completely. Again content is reduced to 2/3rd and 10g (1/10th of Shukti) of Citrakamoola Kalka is added to the boiling Ksharajala and allowed to boil for a few more minutes, when the content attained consistency as described by Acharya Sushruta (not too liquid or too solid). Then it is removed from fire and transferred into separate air tight container with lid and stored for use. After preparation pH value of the Aragvadaadi or Apamarga Teekshna Pratisarneeeya Kshara is measured. Usually pH is found to be >12. The prepared Kshara is kept in air tight container.

**Preparation of Kshara Sutra** e.g. Apamarga Kshara Sutra

### **Materials required for Kshara Sutra preparation**

1. Apamarga Kshara
2. Snuhee Ksheera
3. Haridra Churna
4. Barbour's thread No. 20
5. Kshara Sutra cabinet

### **Apamarga Kshara preparation:**

Apamarga Panchanga is collected and burnt as whole. Ash of Apamarga is collected and mixed with 21 times weight of the ash. The Ksharajala is kept for

overnight. Next day onwards it is filtered to get Ksharajala. This is subjected to Mandagni, when the content was reduced to 2/3rd, 100g, (1/10 of ash) of Shukti is heated red hot and then mixed with Ksharajala to dissolve it completely and again kept for Mandagni Paka. All the water content is evaporated and whitish coloured Kshara is obtained. Snuhi Ksheera is collected as fresh from Snuhi plant. Haridra churna and Barbour's thread No-20 is kept ready

#### **Steps of Kshara Sutra preparation:**

1. Barbour's thread is applied on Kshara Sutra preparation ring. Snuhi ksheera is applied over the thread and dried. Similarly total 11 coatings of Snuhi ksheera are achieved.
2. Snuhi Ksheera is applied over thread again and Apamarga Kshara is applied over it with the help of gauze. This step is repeated for 7 times so that 7 coatings of Apamarga Kshara are achieved.
3. Snuhi Ksheera is applied over thread again and Haridra Churna is applied thereafter. It is kept for drying. This step is repeated for 3 times so as to achieve 3 coatings of Haridra. After each coating on barbour's thread, it is dried and second coating is done after proper drying. The Kshara Sutra preparation ring is kept inside the Kshara Sutra cabinet.

#### **Clinical Application of Kshara:**

Teekshana Pratisarneeeya Kshara is widely used in anorectal conditions such as haemorrhoids, rectal prolapse, polyps, fistula in ano. Method of application of

Kshara is almost similar in all kind of diseases.

#### **Kshara in Rectal prolapse and Haemorrhoids Poorva Karma (Preoperative Preparation)**

- a) Part preparation
- b) Bowel clearance
- c) Inj. Tetanus toxoid
- d) Lignocaine sensitivity test

#### **Materials required for Kshara application**

- 1) Teekshana Pratisarneeeya Kshara
- 2) Nimbu Swarasa or Kanji
- 3) Slit Proctoscope Applicator
- 4) Bowl and cotton swab

#### **Pradhana Karma (Operative Procedure):**

- a) Lithotomy position
- b) Anaesthesia- Local anesthesia with lignocaine 2%.
- c) After achieving local anesthesia manual anal dilatation, sufficient enough to admit four fingers is done. Slit proctoscope is introduced and skin around pile mass is pulled laterally with Allis tissue holding forceps to get a better view of haemorrhoids. The healthy anal mucosa is covered with wet cotton balls to prevent spilling of Kshara on it. Then Kshara is applied over pile mass and kept for 2 minutes. In case of rectal prolapse Kshara is applied over anorectal junction/ring. Then the pile mass/anorectal ring is cleaned with distilled water followed by Nimbu Swarasa and observed that whether the pinkish pile mass was turned to blackish (Pakvajambu Phala Varna). If not, Kshara is applied once again till the pile mass turned to blackish colour. This procedure is repeated on all the haemorrhoids. Thereafter the anal canal is packed with gauze piece

soaked in Jatyadi/Madhuyasti Taila to prevent burning sensation and local oedema.

**Post operative management (Pashchat Karma):**

Patient is kept nil by mouth for 6 hours after the procedure. Packing is removed after 24 hours or till patient defecation, and 15 ml of Jatyadi/Madhuyasti Taila is administered per rectal. From next day onwards patient is advised to take sitz bath with Sphatika Bhasma after passing stool for 10-15 min twice a day and Jatyadi/Madhuyasti Taila 15 ml twice daily is pushed per rectally after sitz bath.

1. Kshara in Fistula in ano and Pilonidal sinus Teekshana Pratisarneeya Kshara can be applied in case of fistula in ano or pilonidal sinuses.

In fistula in ano after fistulotomy Kshara is applied over open wound. It is kept till Kshara Dagdha Lakshana is observed as described earlier. Same procedure is adopted in pilonidal sinus after excision of the sinus track. Then it is wiped with distilled water and Nimbu Swarasa as in case of haemorrhoids.

2. Kshara Sutra in Fistula in ano, Pilonidal sinus and Haemorrhoids

**Preoperative procedure** - Same as described in Kshara application haemorrhoids.

**Operative procedure:**

- a) After achieving local anesthesia with lignocaine 2%, a copper probe is inserted from external opening to internal opening in fistula in ano.
- b) Partial fistulotomy is done.
- c) Kshara Sutra is applied at one end of probe and is taken out from other opening along with probe and knot is applied.
- d) Antiseptic dressing is done with Jatyadi Taila.

e) In case of pilonidal sinus partial excision is done around the sinus opening. All dead tissues and hairs are removed.

f) A copper probe is inserted along the sinus track and it taken out through a artificial opening created at distal or proximal end. Rest of the procedure is similar as in case of fistula in ano.

g) In haemorrhoids Kshara Sutra is used for transfixation of pile mass base during open haemorrhoidectomy.

**Postoperative management :**

a) Daily sitz bath with Tankana Bhasma/Sphatika Bhasma is advised and antiseptic dressing with Jatyadi Taila.

b) Kshara Sutra is changed weekly for 2-4 weeks as per need in case of fistula in ano and pilonidal sinus. In haemorrhoids Kshara Sutra is not changed. It gets sloughed off as the pile mass is sheds off after necrosis.

c) After 3, 4 weeks Kshara Sutra is removed, wound is laid open and dressing with Jatyadi Taila is continued till the wound is healed completely. In case of haemorrhoidectomy, Jatyadi Taila is used per rectal 5 ml twice daily after sitz bath.

**DISCUSSION:**

Kshara is a parasurgical method of treatment which is very much effective in the management of various diseases especially in anorectal disorders. As Kshara is prepared from many drugs it has Tridosha Shamaka property. Teekshana

Pratisarneeeya Kshara is better than Mridu and Madhyama Kshara. After Kshara is applied in haemorrhoids it creates chemical burn of the pile mass. Later it sheds off after necrosis. Simultaneously the wound of Kshara Daghdha heals spontaneously as Kshara possess wound healing property. The wound created by Kshara completely heals within 2 weeks. No severe adverse effects are reported after the application of Kshara. But some minor effects are observed burning sensation and Sphincter spasm and they can be treated days by administering Madhuyasti Taila or Jatyadi Taila. There is no anal stricture by this therapy. But during the procedure few precautions should be taken like performing lord's anal dilatation and proper application of Kshara only on the affected site (haemorrhoids) not on the rectal mucosa. Average recovery time is 14 days. In this way Teekshna Pratisaraneeya Kshara is considered efficient in the treatment of internal haemorrhoids. The treatment modalities of hemorrhoids medical, surgical or para-surgical come under four treatment principles of Arsha (Haemorrhoids) told by Acharya Sushruta. The criteria of assessing the correct potency of Pratisaraneeya Kshara are getting Jambuphalavarna of pile mass within shatamatra Kala (approximately two minute). This has been achieved here by strictly following the technique of Kshara preparation explained by Sushruta. The pH value of Teekshna Pratisarneeeya Kshara lays between 12-14. The Pratisarneeeya Kshara acts by chemical burn and necrosis of tissues and obliteration of haemorrhoidal radicles. Thereafter sloughing of haemorrhoidal mass and it causes fibrosis and scar formation.[12] In rectal prolapsed Kshara

is applied at anorectal ring, therefore it strengthens the anorectal ring due to caterization and prolapse does not occur Kshara Sutra in fistula and pilonidal sinus is a multistage procedure. So the patients need to visit the hospital every week; hence, the duration of treatment in the Kshara Sutra is longer. During Kshara Sutra treatment partial fistulotomy is performed to open the external opening and Kshara Sutra is placed. It gradually causes debridement

and healing the wound. This procedure is less painful than other techniques of fistula management. After Kshara Sutra procedure patients can resume their work from the next day of the procedure and it doesn't affect their normal activities. Average healing in Kshara Sutra therapy is assessed by Unit cutting Time (UCT) i.e. total no days taken to cut through the track divided by initial length of Kshara Sutra in centimeters. Average UCT is 7 days. During the therapy in subsequent follow up Kshara Sutra is changed and size of track is reduced. There are no major side effects of Kshara Sutra therapy. No any effect on continence. There is minimal tissue trauma as well as lesser bleeding. Minimum hospital stay and early ambulation is achieved in Kshara Sutra therapy. There is very less recurrence rate.

#### **CONCLUSION :**

Kshara and Kshara Sutra therapy provide adequate treatment to the anorectal diseases very effectively. Kshara and Kshara Sutra should be prepared as described in classical texts. Recurrence rate in fistula in ano is negligible as compared to conventional treatments available. These procedures are minimal painful and can be even performed without the use of anesthesia. But with the use of

anesthesia its effect is achieved much conveniently.

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