Pilonidal sinus is a chronic inflammatory disorder consisting of a midline pit situated in midgluteal cleft at postanal region usually associated with hairs. Prolong sitting, presence of deep natal cleft, obesity, repeated irritation due to hair, family history may increase the risk of disease. In Ayurvedic science, acharya Sushruta mentioned eight types of sinuses as nadivrana. Among these pilonidal sinus can be considered under shalya nadivrana (sinus due to foreign body). Ksharasutra is a kind of thread coated with caustic material prepared by ash of certain medicinal plant, minerals, latex etc. Sushruta described ksharasutra in the management of sinuses. A case of pilonidal sinus in a 35 years old male patient was thoroughly examined and treated with ksharasutra therapy. Bulk of hairs were expelled out during procedure. Ksharasutra is an ideal procedure to be adopted for the management of sinus track for not only it destroys the fibrous wall of track but also helps in its curettage. No recurrence and any complaint were found in the patient during the follow up period of 8 months. The details description with subsequent photograph will help to understand the procedure.

**Keywords:** Pilonidal sinus, Sushruta, shalyaj, nadivrana, ksharasutra.

**INTRODUCTION**

Pilonidal sinus is a chronic inflammatory disorder consisting of a midline pit situated in midgluteal cleft behind the anal canal between the buttocks associated with hairs. Prolong sitting, presence of deep natal cleft, obesity, repeated irritation due to hair, family history may increase the risk of disease. In Ayurvedic science, acharya Sushruta mentioned eight types of sinuses as nadivrana. Among these pilonidal sinus can be considered under shalya nadivrana (sinus due to foreign body). Ksharasutra is a kind of thread coated with caustic material prepared by ash of certain medicinal plant, minerals, latex etc. Sushruta described ksharasutra in the management of sinuses. A case of pilonidal sinus in a 35 years old male patient was thoroughly examined and treated with ksharasutra therapy. Bulk of hairs were expelled out during procedure. Ksharasutra is an ideal procedure to be adopted for the management of sinus track for not only it destroys the fibrous wall of track but also helps in its curettage. No recurrence and any complaint were found in the patient during the follow up period of 8 months. The detail description with subsequent photograph will help to understand the procedure.

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hairs, straw, wood pieces, stones, dust particles, bone pieces etc. So these are eight types of nadi (sinus) are told, among these pilonidal sinus can be considered to shalya nimitta nadi (foreign body sinus). According to acharya Sushruta a surgeon should excise a sinus by means of a sutra (thread) impregnated with caustic (alkali) material (kshara-sutra) occurring in the emaciated, the weak and the timid and also those (sinuses) which occur at the vulnerable areas. Kshara is a caustic material obtained after processing from the ashes of various medicinal plants. The kshara are superior to sharp instruments and their substitutes because of their capability to perform excision, incision and scraping, because of their power to alleviate all the three dosas. These caustic material are called kshara due to its capability of melting and destroying the lesion. So kshara are not only cause the destruction (lysis) of unhealthy tissue but also help in their debridement. Hence this is an ideal procedure to be adopted for the management of sinus track as it not only destroys the fibrous wall of track but also helps in its curettage. There is simultaneous cutting and healing of the tract and no pocket of pus is allowed to stay back. Thus it provides an environment for healthy granulation tissue to develop providing an avenue for nadvirana (sinuses) to heal completely. Further application of ksharasutra was described by Sushruta as direction of the sinus should first be ascertained by a probe. A ksharasutra should then be introduced into the track and brought out from the external end with the help of probe. The two ends of the thread should be firmly tied together. Another ksharasutra should be changed after assessing the strength of the thread or when the sinus cuts through. The surgeon should adopt a similar procedure in case of fistula-in-ano.

Preparation of Ksharasutra

The Barbour’s surgical linen thread no. 20 is tied on a hanger. Freshly collected latex of snuhi (Euphorbia nerifolia) is soaked in gauze piece and smeared over the thread. Once the thread is soaked with latex, the hanger is placed in a drying cabinet at a temperature of 40°C for a period of 6 hours. The process is repeatedly done for 11 times to achieve desire quantity of latex to adhere on the thread. The above thread is again smeared with latex and passed through fine powder of anhydrous apamarga (Achyranthes asparagus) kshara and placed in the cabinet. The process is repeated for 7 times. Similarly the above thread was smeared with fine powder of haridra (Curcuma longa), the procedure is done for 3 times. Thus total number of coating is done for 21 times.

Case study

A male patient age of 35 years old clerk in bank came to my OPD with complaints of watery discharge from an opening at left buttock near midgluteal cleft since 2 year, occasionally feel mild pain, discomfort and itching at natal cleft and low back region (Figure 1). Patient had h/o an abscess at the site of opening before 2 and half year back, for that he took antibiotics and anti-inflammatory medicines from a doctor for 7 days and got relief from acute condition. Gradually he developed a small opening near gluteal cleft at left buttock. Patient had not any history of painful defecation, bleeding per rectum, mucus or any kind of discharge through anus. No history of Diabetes mellitus, tuberculosis, hypertension, bronchial asthma, chronic constipation and any kind of chronic illness. Patient had good appetite, bowel habit, sleep, no any kind of addiction. Blood pressure, pulse rate, respiratory rate were in normal limit.

Local examination

First examination was done in prone position of patient, the findings were: patient was hairy and had a small opening at 2 cm lateral to midgluteal cleft at left buttock region with good amount of hair nearby. At palpation a cord like indurated structure was felt at external opening to gluteal cleft. Mild tenderness and watery discharge was present while palpation of the diseased site. Their was no any other opening or any lump was found near or in gluteal cleft. Probing was done from external opening to accessed branching and extension of tract. About 4 cm tract was found during probing in midgluteal cleft. Second examination was done in lithotomy position to access any anal pathology or any anal connection. It is also important to perform a thorough anorectal examination to evaluate for concomitant fistulous disease, Crohn’s disease, or other anorectal pathology. In that patient perianal skin was normal no dermatisis, no any external opening was present nearby anal verge, no sentinel tag, no prolapsed pile mass and no external piles were found. At digital rectal examination no any induration, tender point, pit, fissure bed, haemorrhoidal mass or any pathology was found. By complete thorough examination the diagnosis was confirmed as pilonidal sinus without anal connection or any associate anorectal disorder. All routien investigation were ruled out, CBC, ESR, Hb, blood sugar, blood urea, serum creatinin, CT, BT, ECG, were with in normal limit and HBsAg, HIV were non reactive to the patient. All situations about disease and its management were explained to the patient and finally it was planned for ksharasutra therapy under local anaesthesia as day care procedure.

Pre operative preparation

Local part preparation, 5 g haritaki (Terminalia chebula) churna with 250 mg krimimudgar ras tablet were given to the patient on night before operation. Sodium phosphate enema (proctoslysis) was given at early morning on day to be operated. After proper bowel clean up patient was taken to recovery room and injection T.T. 0.5 ml IM was given and plain xylocain 2 % was given intradermal for sensitivity test.

Operative procedure

Patient was taken in prone position on operation theatre table and after proper cleaning, draping local anesthesia with 2 % xylocain was infiltrated nearby opening and in gluteal cleft (Figure 3). Reassessment of extention was done by probing and about 2 cm incision was taken from
external opening to cleft. There was a tract 2.5 cm upward and about 3 cm downward by the incised wound in gluteal cleft. Bulk of hairs were expelled out (Figure 4) and cleaning was done with normal saline. Extention of wound was done downward and probe was inserted from wound to most upper part of the tract. A small incision was given most upper part and probe was taken out (Figure 5). So the ksharsutra was placed in the tract and tied (Figure 6). Hemostasis was maintained and tight bandaging was done. Broad spectrum antibiotic, anti-inflamatory, Ayurvedic triphala guggul, septillin of himalaya, isabghol husk were advised to patient for 5 days.

**Follow ups**

Patient was asked for changing ksharsutra every 7th day and kept continue to Ayurvedic triphala guggul, septillin and isabghol husk. Patient was advised return to job after 5 days of operation. In 6 sitting (about 40 days) the tract was totally cut by ksharsutra and healing of wound was achieved (Figure 8). Itching over healed wound was present for that patient was advised kaishor guggul and application of jatyadikair tailam over scar mark, rest all medicine were stopped. Complaint was subsided by 10 days and patient is living his healthy life till date.
DISCUSSION

The incidence of pilonidal sinus and other anorectal disorder such as hemorrhoid, 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, computer job works, students etc are suffering more from pilonidal sinus. Although, several conservative and surgical techniques are available to treat pilonidal sinus now a days but all are having its limitations such as recurrence, cost effectiveness, prolong hospital stay, switch off to the job for a long time, infection etc. Ksharasutra therapy is a minimal invasive procedure and it can be performed effectively in most of the patients as a day care procedure. It is a simple, safe, very low recurrence rate and sure treatment of sinuses. It prevents accumulation of pus within the track by ensuring continuous drainage causes lysis of unhealthy granulation tissue. It produces fibrosis simultaneous to the cutting and helps in minimizing inflammatory components, thus ensures early minimizing. This therapy is very cost effective, no longer hospital stay requires during treatment so it is very beneficial in large amount of population. Many research works have been done on various type of ksharasutra in postgraduate colleges of ayurveda in country. So ksharasutra therapy in management of pilonidal sinus has shown very good result.

REFERENCES


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