Case Study

www.ijrap.net

MANAGEMENT OF PILONIDAL SINUS WITH AYURVEDIC KSHARASUTRA THERAPY: A CASE STUDY

Ashish Soni*
Ayurvedic Medical Officer, District Pali, Government of Rajasthan, India

Received on: 12/01/15 Revised on: 04/02/15 Accepted on: 02/03/15

***Corresponding author**
Dr. Ashish Soni, BAMS, MS (Shalya-BHU), DNHE, Ayurvedic Medical Officer, District Pali, Government of Rajasthan, India
E-mail: dr.ashishsoni84@gmail.com

DOI: 10.7897/2277-4343.06253

ABSTRACT

Pilonidal sinus is chronic condition 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 shalyaj 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 35 years old male patient was thoroughly examined and treated with ksharasutra therapy. Bulk of hairs were expeled 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. A complete cure of disease achieved in 40 days with minimum scar formation. No recurrence and any complain were found in the patient during the follow up period of 8 months. The detail description with susequent photograph will help to understand the procedure.

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

INTRODUCTION

Pilonidal sinus is chronic inflammatory disorder consisting of a midline pit sited in midgluteal cleft behind the anal canal between the buttocks associated with hairs.[1] Pilonidal sinuses usually occur in the postanal region but they may be found in the axilla, the groins, the interdigital web of the hands or feet and on the occiput. The most important predisposing factors for the development of pilonidal sinus are the existence of a deep natal cleft and the presence of hair within the cleft. A deep natal cleft is a favorable atmosphere for maceration, sweating, bacterial contamination and penetration of hairs. Thus, for treatment and prevention, these causative factors must be eliminated.[2,3] Loose hairs in the natal cleft skin create a foreign body reaction that ultimately leads to formation of midline pits and in some cases secondary infection.[4,5] Postanal pilonidal sinus can present acutely as a pilonidal abscess, asymptomatically as a small pit or non tender lump, or as a discharging lesion with or without pain or a lump. The main features of the chronic sinus are present of a midline primary pit (or more than one) at the base of the natal cleft, which is epithelial lined and usually not inflamed and may have several hair fragments inserted into it that can be pulled out. A secondary opening may be present, which usually on one side (laterally) and it may discharge pus or blood and be lined by granulation tissue. There may be a palpable track leading from the midline pit. More than one secondary opening means the sinus track has branches. Several treatment modalities have been tried for pilonidal disease, including shaving, incision and drainage, phenol application, cryosurgery, excision with primary closure, excision with open packing, excision with marsupialization, and recently, flaps surgery.[6-9] Pilonidal sinus is still a troublesome disease entity because of the high recurrence rate of most treatment options. The main problems with the primary closure technique appear to be high recurrence rate and high infection rate.[10-12] On the other hand, patients generally complain about open packing or marsupialization methods because of painful wound management and dressing changes. Although, reconstructive or flaps surgical technique has achieved better results. The main aim of these reconstructive techniques is to avoid midline scar to reduce recurrence. Despite the controversy about the best surgical technique for the treatment of pilonidal sinus, an ideal operation should be simple, should not need a prolonged hospital stay, should have a low recurrence rate, and should be associated with minimal pain and wound care.[13]

Ayurvedic view about sinus and ksharasutra

In Ayurvedic science acharya Sushruta described sinuses under the heading of nadivrana. Acharya Sushruta scientifically described eight types of nadivrana along with their symptoms and management. According to Sushruta the irresponsible person who mistakes a suppurated inflammation for an unripe one, ignores a suppurated one, or when patient allows a lot of pus to accumulate in an ulcer, then that pus having entered into his aforesaid tissues (i.e. skin, subcutaneous tissue, muscle), penetrates inside.[14] Because of copious flow, it is known as ‘gati’ (track) and as it flows like a drain, it is opened as ‘nadi’ (sinus). That is caused by a combined action of the three dosas (vata, pitta, kapha) or due to each one of them seperately and also due to two together only. The others are due to shalya (foreign bodies) such as

hairs, straw, wood pieces, stones, dust particles, bone pieces etc.[15] 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.[16] 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.[17] These caustic material are called kshara due to its capability of melting and destroying the lesion.[18] 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.[19] Thus it provides an environment for healthy granulation tissue to develop providing an avenue for nadivrana (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 other end with the help of probe. The two ends of the thread should be firmly tied together. Another ksharsutra 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.[20]

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 (*Achyranthus aspara*) 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, occasionaly 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 dischage 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 acsess any anal pathology or any anal connection. It is also important to perform a through anorectal examination to evaluate for concomitant fistulous disease, Crohn's disease, or other anorectal pathology.[21] In that patient perianal skin was normal no dermatitis, no any external opening was present nearby anal verge, no sentinal tag, no prolapsed pile mass and no external piles were found. At digital rectal examination no any induration, tender point, pit, fissure bed, heamorrhoidal mass or any pathology was found. By complete thorough examination the diagnosis was confirmed as pilonidal sinus without anal connection or any associate anarectal 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 ksharsutra therapy under local anaesthesia as day care procedure.

Pre operative preparation

Local part preparation, 5 g haritaki (*Termanilia chebula*) churna with 250 mg krimimudgar ras tablet were given to the patient on night before operation. Sodium phosphate enema (proctoclysis) 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, drapping local anasthesia with 2 % xylocain was infiltreted nearby opening and in gluteal cleft (Figure 3). Reaccessment of extention was done by probing and about 2 cm incision was taken from

external opening to cleft. Their was a tract 2.5 cm upward and about 3 cm downward by the incised wound in gluteal cleft. Bulk of hairs were expeled 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 mantained and tight bandaging was done. Broad spectrum antibiotic, anti-inflammatory, 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.

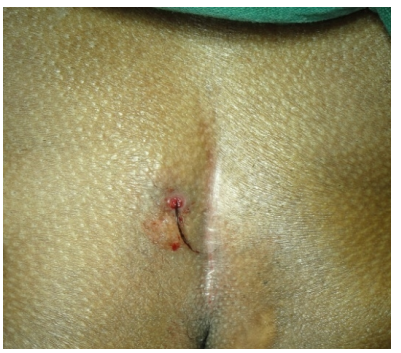

Figure 1: Pilonidal sinus with associate hairs

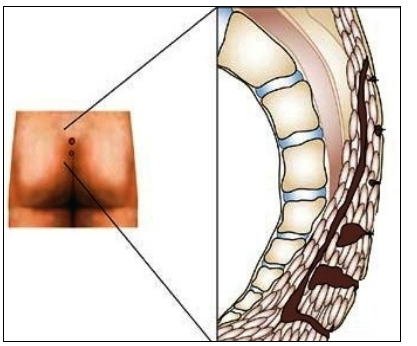

Figure 2: Diagrammatic presentation of pathology

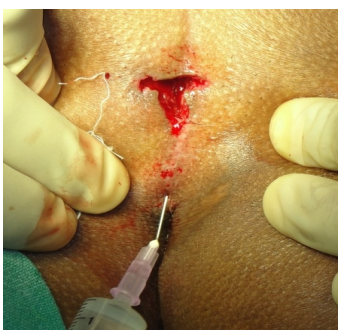

Figure 3: Local anesthesia is being given in mid gluteal cleft

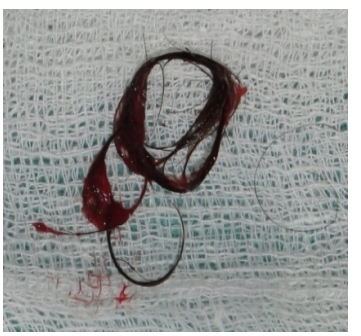

Figure 4: Bulk of hair expelled out

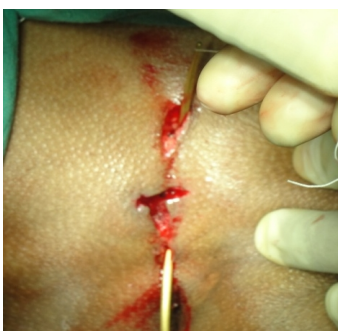

Figure 5: probing and placing of thread

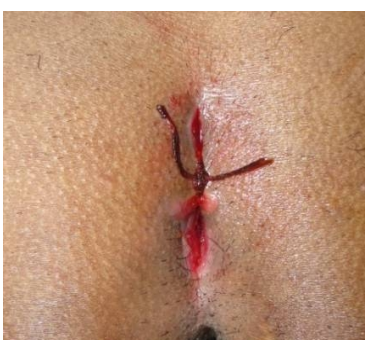

Figure 6: Placing of ksharasutra

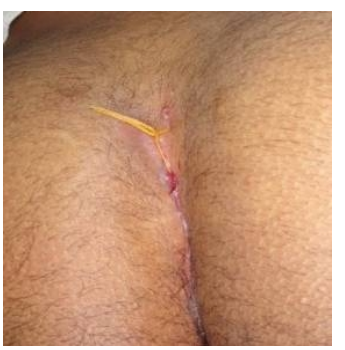

Figure 7: After 14 days

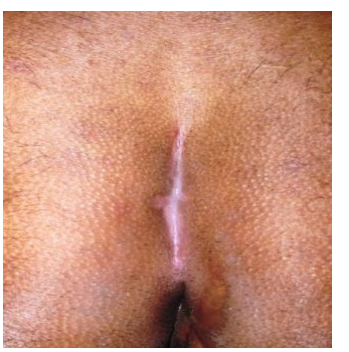

Figure 8: After 40 days complete healing

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 habbit 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 effectivness, 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 healing. 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

1. Sondenaa K and Pollard ML. Histology of chronic pilonidal sinus, Acta Pathologica Microbiologica Et Immunologica Scandinavica 1995; 103: 267-272. http://dx.doi.org/10.1111/j.1699-0463.1995.tb01105.x
2. Schoeller T, Wechselberger G, Otto A, *et al*. Definite surgical treatment of complicated recurrent pilonidal disease with a modified fascio-cutaneous V-Y advancement flap. Surgery 1997; 121: 258–63. http://dx.doi.org/10.1016/S0039-6060(97)90354-8
3. Bascom J. Pilonidal disease: origin from follicles of hairs and results of follicle removal as treatment. Surgery 1980; 87: 567–72.
4. Patey DH, Scarff RW. Pathology of post anal pilonidal sinus; its bearing on treatment. Lancet. 1946; 2: 484–486. http://dx.doi .org/10.1016/S0140-6736(46)91756-4
5. Hull TL, Wu J. Pilonidal disease. Surg Clin North Am 2002; 82: 1169–1185. http://dx.doi.org/10.1016/S0039-6109(02)00062-2
6. Arumugam PJ, Chandrasekaran TV, Morgan AR, et al. The rhomboid flap for pilonidal disease. Colorectal Dis 2003; 5: 218–21. http://dx.doi.org/10.1046/j.1463-1318.2003.00435.x
7. Yilmaz S, Kirimlioglu V, Katz D. Role of simple V-Y advancement flap in the treatment of complicated pilonidal sinus. Eur J Surg 2000; 166: 269–72. http://dx.doi.org/10.1080/ 110241500750009410
8. Cubukcu A, Gonullu NN, Paksoy M, *et al*. The role of obesity on the recurrence of pilonidal sinus disease in patients, who were treated by excision and Limberg flap transposition. Int J Colorectal Dis 2000; 15: 173–5. http://dx.doi.org/10.1007/s003840000212
9. Quinodoz PD, Chilcott M, Grolleau JL, *et al*. Surgical treatment of sacrococcygeal pilonidal sinus disease by excision and skin flaps: the Toulouse experience. Eur J Surg 1999; 165: 1061–5. http://dx.doi.org/10.1080/110241599750007900
10. Zimmerman CE. Outpatient excision and primary closure of pilonidal cysts and sinuses. Long-term follow-up. Am J Surg 1984; 148: 658-9. http://dx.doi.org/10.1016/0002-9610(84)90346-5
11. Al-Hassan HK, Francis IM, Negl EN. Primary closure or secondary granulation after excision of pilonidal sinus. Acta Chir Scand 1990; 156: 695–9.
12. Khatri V, Espinosa MH, Amin AK. Management of recurrent pilonidal sinus by simple V-Y fasciocutaneous flap. Dis Colon Rectum 1994; 37: 1232–5. http://dx.doi.org/10.1007/BF02257787
13. Solla JA, Rothenberger DA. Chronic pilonidal disease: an assessment of 150 cases. Dis Colon Rectum 1990; 33: 758–61. http://dx.doi.org/10.1007/BF02052321
14. Kaviraja Ambikadutta Shastri, Sushruta Samhita of Maharishi Sushruta edited with Ayurveda Tattva Sandipika, Nidana Sthan, Visarpa-nadi-stanaroga nidana, Chapter 10/9, Chaukhamba Sanskrit Sansthan, Varanasi, Reprint; 2007. p. 268.
15. Kaviraja Ambikadutta Shastri, Sushruta Samhita of Maharishi Sushruta edited with Ayurveda Tattva Sandipika, Nidana Sthan, Visarpa-nadi-stanaroga nidana, Chapter 10/10, Chaukhamba Sanskrit Sansthan, Varanasi, Reprint; 2007. p. 268.
16. Kaviraja Ambikadutta Shastri, Sushruta Samhita of Maharishi Sushruta edited with Ayurveda Tattva Sandipika, Chikitsa Sthan, Visarpa-nadi-stanaroga chikitsa, Chapter 17/29, Chaukhamba Sanskrit Sansthan, Varanasi, Reprint; 2007. p. 81.
17. Kaviraja Ambikadutta Shastri, Sushruta Samhita of Maharishi Sushruta edited with Ayurveda Tattva Sandipika, Sutra Sthan, Ksharapaka vidhi, Chapter 11/3, Chaukhamba Sanskrit Sansthan, Varanasi, Reprint; 2007. p. 34.
18. Kaviraja Ambikadutta Shastri, Sushruta Samhita of Maharishi Sushruta edited with Ayurveda Tattva Sandipika, Sutra Sthan, Ksharapaka vidhi, Chapter 11/4, Chaukhamba Sanskrit Sansthan, Varanasi, Reprint; 2007. p. 34.
19. Gupta Shyam K, Khanna Vishal, Gupta Geetanjali, Bhardwaj Ankush. A comparative study to evaluate the efficacy of standard fistulectomy procedure and kshar-sutra ligation in the management of fistula in ano. Int. J. Res. Ayurveda Pharm 2014; 5(4): 470-473. http://dx.doi.org/10.7897/2277-4343.05496
20. Kaviraja Ambikadutta Shastri, Sushruta Samhita of Maharishi Sushruta edited with Ayurveda Tattva Sandipika, Chikitsa Sthan, Visarpa-nadi-stanaroga chikitsa, Chapter 17/30, 31, 32, Chaukhamba Sanskrit Sansthan, Varanasi, Reprint; 2007. p. 81.
21. Chinn BT. Outpatient management of pilonidal disease. Semin Colon Rectal Surg. 2003; 14: 166–172. http://dx.doi.org/10.1053 /j.scrs.2004.03.001

Cite this article as:

Ashish Soni. Management of pilonidal sinus with Ayurvedic ksharasutra therapy: A case study. Int. J. Res. Ayurveda Pharm. 2015;6(2):261-264 http://dx.doi.org/10.7897/2277-4343.06253

Source of support: Nil, Conflict of interest: None Declared