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Case Study

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AYURVEDIC CARE AND SURGICAL APPROACH IN PILONIDAL DISEASE – A CASE REPORT

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ABSTRACT

Background: Pilonidal disease refers to sub cutaneous infection occurring in the upper half of the gluteal cleft having no communication in anal canal. It may present as an acute abscess or chronic wound having pus discharge through an opening, resistant to spontaneous healing and causing discomfort. It presents in the third decade & more men than women, common individuals with more body hairs. **Objective:** Acquired Pilonidal disease has been treated in many different ways. Excision of sinus without sutures followed by *Kshara Karma* treatment meet the criteria as easy to perform, short hospital stay, low recurrence rate, minimal pain and easy wound care, early return to daily routine activity and cost effective. **Methods:** Pilonidal sinus track is widely excised up to the post sacral fascia with a wide mouth and base & tuft of hair removed. After application of *Apamarga Kshara* wound left open to heal by secondary intention & *vranaropan* wound dressing done. Systemic *vranashodhan* drug was given. **Result:** Wound dressing by *Jatyadi taila* has healing properties which mainly reduce healing time by microbicidal effect. *Apamarga Kshara* helps to remove unhealthy granulation tissue & cellular debris by sclerosing property where recurrence rate is low. *Gandhak rasayan* & *Triphala guggulu* has anti inflammatory and analgesic effect. **Conclusion:** Complete healing occurs in 4 weeks. Pilonidal disease can be treated by excision & *kshara karma* with wound dressing by local ayurvedic and systemic drugs without antibiotic use.

KEYWORDS: *Pilonidal sinus, Nadi vrana, Kshara karma, vranaropan, vranashodhan.*

INTRODUCTION

Pilonidal sinus[1] apparently minor condition can present the surgeon with major challenges. The initial pathology is of one or tinier deep midline pits in the natal cleft, which connect with a granulation tissue-lined cavity, lying in the subcutaneous fat and containing loose hairs.

Recurrent infections occur in this cavity, which later extends under apparently normal skin, both in natal cleft and laterally into one or both buttocks. Minor infections may settle on antibiotics, but if an abscess develops it will discharge or require drainage. The underlying disease remains, however, and repeated episodes of infection are likely.[5]

Pilonidal[2] infections and chronic pilonidal sinuses are usually found in the midline of the sacrococcygeal region of young hirsute men. The presence of hair in the gluteal cleft seems to play a central role in the pathogenesis of this disease. This is consistent with the observation that pilonidal disease rarely occurs in those with less hair.

Other risk factors include obesity, local trauma, and sedentary lifestyle, deep natal cleft and family history.[3]

Diagnosis is generally a clinical one, patients may present with a chronic inflammation or a sinus with persistent drainage. Acutely, there may be an abscess or multiple complex subcutaneous tracks.[2]

The incidence of disease is approximately 26 per 100000 populations.[4]

In *Atharva Veda* different ailments are explained and its effects on different organs were mentioned, along with there are the references about the disease of *Asrava* (formation of pus) along with other disease.

It's give an idea that people of *Vedic* period also suffered from collection of pus and formation of *Nadi Vrana*, but we don't get direct reference of the term *Nadi Vrana* as such.[24]

The term *Nadi Vrana* was coined during this period and several methods are explained for the treatment of *Nadi Vrana*. One among them is *Chedana* of *Nadi Vrana* and application of *Pratisaraneeya Kshara*.

A *Vrana Visesha,* the nature of which remains unhealed with the characteristic of oozing or discharge of pus is called as *Nadi Vrana*.

CASE STUDY

Chief complaints

A female patient of 40 years old, housewife from Hassan, Karnataka came to SDM college of Ayurveda & Hospital with the complaint of discharge from lump in gluteal natal cleft behind anus since 6 months.

History of present illness

According to the patient she was apparently healthy 6 months back, and then she felt some swelling on gluteal natal cleft. It was mild tenderness occasionally associated with pus discharge. She had history of repeated boils or abscess or slight seropurulent foul discharge from base of spine in post natal region in the natal cleft. It was self reducing in nature after bursts itself with discharge. She was also suffering from intermittent fever.

History of past illness

No relevant past history of illness like diabetes, tuberculosis.

Personal history

She was non vegetarian. The appetite of patient was good. The bowel & bladder habit was normal. She had good sleep. She had no habit of alcoholism or smoking.

Examination of patient

The blood pressure of the patient was 120/80 mmhg on supine position. The pulse rate was 76 beat per minute. The patient had no pallor, no lymphadenopathy, no cyanosis, no clubbing, and no oedema. She was in afebrile state.

Systemic examination

Central nervous system was normal. Cardiovascular like normal heart beat, no added sound or murmur was present. Bi lateral lungs were clear. Per abdomen no organomegaly was present.

Local examination

Inspection on prone position- single pit with serous discharge in mid sacrococcygeal region behind anus and one secondary sinus opening extend to just right lateral to midline was present. On pressure with finger purulent discharge was escaped from opening.

Perianal area was normal.

Digital rectal examination- normal anal verge with normotonic anal sphincter.

Proctoscopy- nothing abnormality was detected. No communication was found with sinus tract.

Linear tract extending up to coccyx posterior to sacrum with subcutaneous oedema

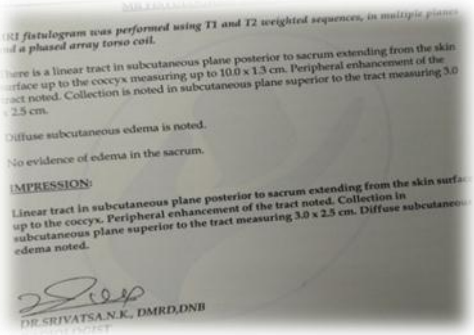

Figure 1: Single pit in mid sacrococcygeal & secondary sinus lateral to midline.

Pre operative Investigation

Table 1: Blood report.

Haemoglobin	12gm%
Total leucocytes count	9800 cells/ cmm
Neutrophil	49%
Lymphocytes	46%
Monocytes	02%
Eosinophils	03%
Basophils	00%
Fasting Blood sugar	100 mg/dl
Creatinine	0.8 mg/dl

Figure 2: MRI Sinogram.

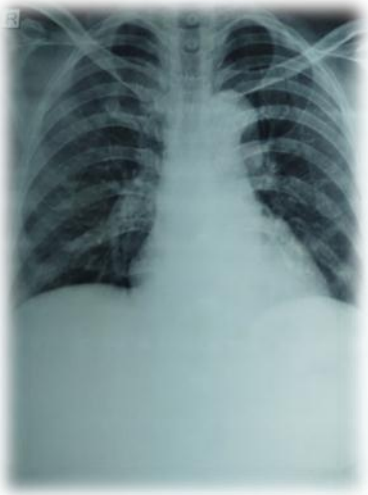

Figure 3: There is no osteomyelitis of the coccyx.

Figure 4: Chest x ray PA view normal findings.

Post operative report

Histopathological report of post operative excised sinus tract did not prove tubercular lesion. On histopathological examination, caseating necrosis, langerhan's cell and epitheloid cell infiltration were absent.

Possible *Samprapti* or pathogenesis of disease

Vacuum forces and negative suction in the natal cleft draws hair and debris into the midline pits, which are stretched and ruptured hair follicles, resulting in obstruction. These stretched follicles, stretch and eventually rupture into the subcutaneous tissue, causing the classic pilonidal abscess.[25]

Body weight is mainly borne by axial structures like pelvic bone or we can say by both the hips or knee joint. These areas get rubbed repeatedly by cloths during sitting or in lying posture. Hairs present in area around the natal cleft get broken by friction and trapped in the natal cleft.

Due to repeated irritation by pointed ends of hairs on post anal dimple, skin become invaginated and gradually the shallow pit is filled with tuft of hairs. These tuft of hairs cause obstruction and infection in the hairs follicles. Minute abscess is formed in the subcutaneous hairs follicles.

The abscess may burst with discharge or the track penetrates the deep subcutaneous tissues. The cavity with hairs and necrotic materials progressively enlarges. The sinus track spreads upward on the head side and downward towards the post anal region. Secondary tracks lateral to midline develops which extends 1-2 cm upwards and laterally.

The pus breaks through the barriers of *twak, mamasa, sira, snayu* etc and enters inside the tissues having single outlet giving seropurulent discharge outside. Since this *puya* has *atimarga gumanaths*, it enters deep into the tissues forming a *gati* or tubular tract inside, which is called as *Nadi Vrana.*

Final diagnosis

Pilonidal sinus.

Treatment

The *samanya chikitsa* of *nadi vrana* is explained by different *Acharyas*. *Chakrapani* says first of all probing of the sinus is done followed by *patana karma* followed by *shodhana* & *ropana karma* to be performed.

Application of the *pratisarneeya kshara* as a general line of the treatment in all the types of *nadi vranas* mentioned while describing about the indications of *pratisarneeya kshara.*

Performing the *chedana Karma* in all the types of the *nadi vrana* mentioned while describing about the indication of *chedya vyadhis*.

According to above mentioned different treatment principle for *nadi vrana* we can do surgical technique or *utpatana karma*, para surgical technique or *kshara karma*, medical treatment or *oushadha*.

Intervention

We planned for complete excision of sinus tract with adjoining tissue. After all laboratory and pre anaesthetic evaluation, Kshara Karma[13] (application of chemical cautery) followed by *vranaropan* wound dressing by Jatyadi taila was planned for patient. Apamarga kshara (Alkaline preparation made by Achyanthes aspera) was used. *Systemic vranashodhan* drugs like Triphala guggulu and Gandhak rasayana were given.

Preoperative procedure

Written surgical consent was taken from legal guardian. Patient was kept nil by mouth for 6 hours prior to surgery. Surgical part preparation was done. Injection tetanus toxoid 0.5 ml was given in intramuscular in right upper limb deltoid muscle. Injection lignocaine 0.2 ml intradermal was given for pre anaesthetic skin sensitivity test purpose.

Intraoperative procedure

Patient was taken on prone position in operation table. The natal cleft including gluteal region is cleaned with antiseptic lotion and covered with cut towel leaving the operative area exposed. A small gauze piece packed in the lower part of the cleft behind the post anal region to prevent the spread of the septic materials to anal region. The lips of the natal cleft are retracted laterally to expose the opening in the mid sacral line, where one minute opening of pinhead size was identified.

Local anaesthesia was given. Next the probe was passed through the secondary opening, which was located 2 cm above and right laterally to the primary opening in the mid spinal line. Methylene blue dye was injected to stain the sinus tract.

An elliptical incision was made in the natal cleft, which includes sinus tract and its branches & 2 cm adjoining healthy tissues. Incision was deepened to cut the deeper tissues. It reaches up to the presacral fascia, which covers the sacrococcygeal region.

Now elliptical piece was held with Allice forceps and traction was applied firmly. Deep dissection was carried out with the scissor and scalpel to separate the ellipse of the tissue from deep fascia upward and analwards. The dissected piece of the tissue was removed and bleeding points are controlled by diathermy. Complete excision of sinus tract with adjoining tissues was done satisfactorily.

The open wound was painted with tikshna prateesaraneya kshara (high potency alkali). Just within 30 seconds the wound surface become cauterized and turns blackish. Then the wound was irrigated with nimbu swarasa or lime juice water to remove additional kshara, which prevent further damage of the tissue.

Minute bleeders stop from kshara cauterization. Any residual granulation tissues which may left during excision may cause recurrence are destroyed by kshara cauterization.

After complete haemostasis the wound was packed tightly with ribbon gauze soaked in to Jatyadi taila.

Post operative procedure

Post operative care is aimed to achieved pain management and wound care with prevention of recurrence.

During immediate post operative period, anti inflammatory and analgesic drugs containing guggulu (Commiphora mukul) like triphala guggulu and Gandhak rasayana[12] was prescribed.

Hot sitz bath was adviced for pain relief purpose. Wound was left open to heal by secondary intention & wound dressing was done with *Jatyadi Taila*[11] (Medicated oil).

Systemic drugs

Triphala guggulu 2 tablets twice daily after food and Gandhak rasayana 2 tablets twice daily after food was given for 2 weeks.

Other care

Diet and lifestyle regimen are inseparable parts of management of disease in ayurveda as these play an important role in treatment outcome.[16]

Diet should be light, soft and easily digestible with less spice. Fruits and vegetables should be taken. Meat or chicken soup is good for weak and emaciated persons. Contaminated food and drinks, alcohol should be avoided.[15]

Suppressing of natural urges, prolonged sitting, riding on two wheelers etc should be avoided during treatment.[14]

Therapeutic complication

There were no complications like— hypersensitivity of kshara and no other generalized symptoms like *Murcha*[17] *(Syncope), Angamarda*[18] *(body ache)* etc. There was no injury to *Guda marma*.[19]

Progress chart

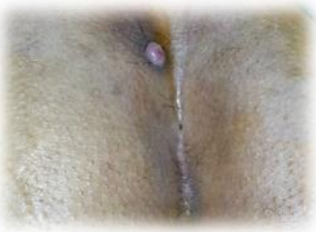

Figure 5: Pilonidal sinus.

Figure 6: Intra operative sinus excision.

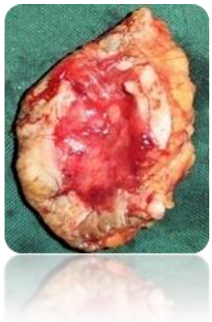

Figure 7: Excised tract.

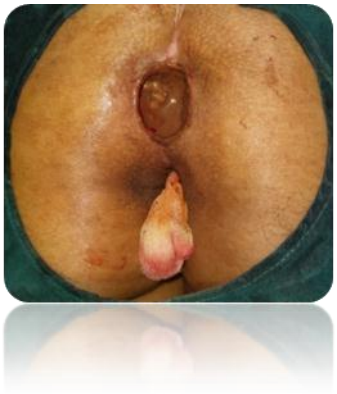

Figure 8: Apamarga pratisaraneeya Kshara application.

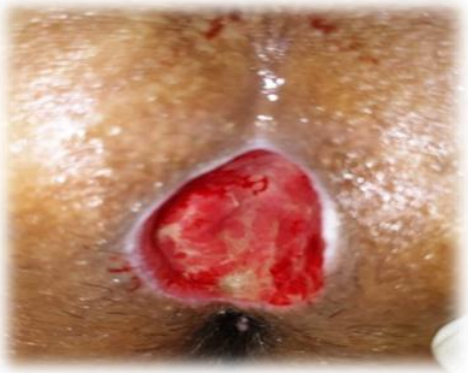

Figure 9: Considerable progress in wound healing.

Figure 10: Wound near complete healing.

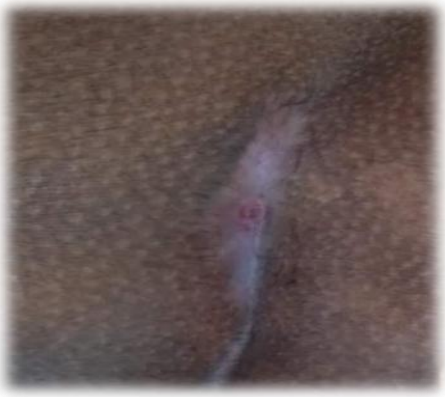

Figure 11: Wound healed after 4 weeks.

OBSERVATION

This technique of extensive excision of the tissue and kshara application does not save the time but it may be definitely capable of preventing the recurrence.

RESULT

Pilonidal sinus excision & left open for healing by secondary intention with convenient post operative wound care complete healing from the base in 4 weeks was observed. The wound was closed and healed up leaving a minimal scar tissue. Follow up study reveals complete cure without any complication. It was well tolerable and affordable to the patient also.

DISCUSSION

Different forms of surgical techniques for pilonidal[6] sinus have been advocated, but none of them provide good result. Surgeons[7] mainly face two problems one is with wound healing and other is post operative recurrence.

Excision of complete sinus tract with adjoining tissue and removal of tuft of hair results in terminating the ongoing acute inflammatory process.

Kshara[8] being alkaline in nature causes fat saponification and alkaline proteinates which result in liquefaction necrosis when applied over tissue. It also extracts considerable water from cells due to hygroscopic nature causing cell death and tissue damage.

So by virtue of its caustic action it destroys and removes unhealthy tissues and promotes healing. Any residual granulation tissues which may be left during excision may cause recurrence are destroyed by kshara[20] application and probably decreasing the chances of recurrence.

Apamarga Kshara[21] helps to remove unhealthy granulation tissue & cellular debris by sclerosing property where recurrence rate is low.

Hot sitz bath was given to reduce post operative pain.

In post operative *vranashodhan*[22] drugs which convert unhealthy wound to healthy wound having anti inflammatory and microbicidal properties like Triphala guggulu containing Emblica officinalis, Terminalia chebula, Terminalia bellerica, Piper longum, and Commiphora mukul was helpful.

Once the granulation tissue formation takes place, *vranaropan* drug like Jatyadi taila which accelerate wound healing. It also helps in local cleaning of wound and minimizes wound infection by virtue of microbicidal effect.

Jatyadi Taila[23] helps in reducing microbial load and promotes healthy granulation. Wound dressing by

Jatyadi taila has healing properties which mainly reduce healing time.

CONCLUSION

Hence, complete excision of sinus tract without primary suturing and application of pratisaraneeya Apamarga kshara with wound care by Jatyadi taila with systemic vranashodhan[10] drugs are found to be having promising efficacy for the treatment of pilonidal sinus. It can be a better alternative to all current standard procedures. It has very less or no adverse effects. It is found to be very cost effective. It can also be done in OPD basis. Study of rate of recurrence and study on large sample size is still to be conducted.

CONFLICTS OF INTEREST

There is no conflict of interest.

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