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Review Article

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## AYURVEDIC MANAGEMENT OF PILONIDAL SINUS

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## **ABSTRACT**

Human the supreme creation of almighty becomes unable to enjoy the different kind's beauty pervaded on this earth due to various diseases. Pilonidal sinus is one of them. It occurs in the cleavage between the buttocks (natal cleft) and cause both discomfort and embarrassment to the sufferers. Direct costs to the health care system and indirect cost through absence from work are high. It is a common problem in primary care due to recurrence following surgery and the need for frequent and time consuming wound care. So there is a need of alternative treatment to combat lacunae of surgical process and that is kshar sutra. This article covers the causes, pathology, clinical presentation and ayurvedic management of pilonidal sinus.

**KEYWORDS:** pilonidal, sinus, surgery, infection, kshar sutra.

## INTRODUCTION

The name pilonidal sinus was first coined by Hodges in 1880.<sup>[1]</sup> Pilonidal sinus is a midline post anal sinus commonly seen in young adults usually without any communication with rectum and anal canal. Males are affected more frequently than females, probably due to their more hirsute nature.<sup>[2]</sup> Pilus means hair, Nidus means nest, so pilonidal sinus means Nest with hair inside, where hair is invigilated in subcutaneous tissue as a bulbous diverticulitis with branching and bifurcating from side. Pilonidal sinus is lined by squamous epithelium and hair lies loose or embedded in the granulation tissue. They are responsible for persistent infection and sinus fails to heal. It is common in the glutial cleft, while sitting the buttocks move and the hair is broken off by friction. The hair collects in glutial cleft and penetrates the soft and moist skin of this region, may enter in the open mouth of sudorifous gland. It causes the pilonidal sinus, the hair tuft is present in the sinus.

## Other sites of pilonidal sinus<sup>[3]</sup>

- Axilla
- Interdigital cleft of barbarous
- Umbilicus
- Interdigital web of foot of a worker in hair mattress factory
- Sometimes on the face

#### **Congenital causes**

- Vestiges of medullary tube
- Dermoid traction
- Inclusion dermoid
- Preen gland
- Deep natal cleft providing favourable environment for maceration, sweating, bacterial contamination and penetration of hairs.

## **Predisposing factors**

- Abundance of hair (70%)
- Sedentary occupation (44%)
- Positive family history (38%)
- Obesity (50%)
- Local irritation of trauma (34%)

## **Pathology**

The origin of pilonidal disease is not fully understood, but the majority of opinion favours the acquired theory, which may be summed up as:

- Hormones: at the onset of puberty sex hormones increases the activity of sebaceous glands of natal cleft.<sup>[4]</sup>
- Hair: it acts as a foreign body causing the inflammatory reaction and can lead to prolonged inflammation and development of chronic pilonidal sinus. The source of hair can be either the natal cleft itself or hair from the head or back that falls down inside clothes into the natal clefts
- Friction
- Infection: anaerobic infection predominates on the aerobic infections. Anaerobic bacteria particularly bactericides, enterococci predominates over the aerobic bacteria

{staphylococci, haemolytic streptococci} in the development of follicles and abscess formation.

Detention of obstructed follicles leads to oedema and inflammation resulting in closing of the mouth of the pits. Net result is abscess formation and it is the formation of the tract draining this abscess cavity that is known as sinus. The combination of deep abscess cavity with surrounding moist conditions and abundant bacteria, hairs, debris and friction causes recurrent infection associated with chronic pain and discharge.

## **Extension of pilonidal sinus**

Pilonidal sinus extends into the subcutaneous from the surface of the skin. It ends blindly in the subcutaneous tissue and does not reach to the bone. It contains hair, infected material debris etc. Sometimes it may extend into anus.

#### Clinical features

- Mostly occurs in the person having abundance of hair in the buttocks.
- There is a chronic sinus about the level of first coccyx.
- A tuft of hair is seen projecting from its mouth.
- Blood stained foul discharge from the sinus.
- Pain and tenderness may have some secondary openings on either side of the middle or a little away from the main sinus.
- Sinus has ramifications and sometimes midline pits which are having hair follicles.

## **Complication**

- Recurrent infection causes pus discharge and foul smell.
- Abscess formation.
- It is prone to recurrence after surgical removal.
- Rarely malignant changes may occur.<sup>[5]</sup>

#### **Conservative management**

- Antibiotics and anti-inflammatory drugs.
- Maintenance of local hygiene such as shaving, application of antiseptic lotion etc.
- Injection of phenol in almond oil caused sclerosis of the sinus track. [6] However underlying pathology of impaction of hair remains unsolved.

## **Operative management**

- Incision and drainage
- Excision (wide) and healing by secondary intention
- Excision and primary closure (recurrence rates are high)
- Excision with grafting (flap plasty).<sup>[7]</sup>

#### **Excision of sinus track**

- The outline of the sinus cavity may be done.
- Surrounding healthy tissue may be involved and excised.
- The fibrous tissue is removed and packing of wound is done.
- Extensive excision is carried out. It takes long time to heal.
- The healing takes place with the formation of granulation tissue.

## Post operative wound infection

Early sign of wound infection includes increased pain and an abnormal dark beefy red appearance to the granulation tissue which is friable, bleeds on contacts and exhibits superficial bridging.

#### Recurrence

- Ramifications in the pilonidal sinuses are common cause of recurrence.
- Such types of pilonidal sinuses should be deal with care and all ramifications should be opened or cut with kshar sutra.
- Residual hair or debris.
- Inadequate wound care.
- Union of wound edges without healing from the base.

#### **Need for alternative treatment**

To get rid of this troublesome disease as patients socioeconomic status is also disturbed due to prolonged immobilisation, there is a need of alternative treatment and that is kshar sutra. [8] Kshar sutra is a medicated thread (seton) coated with herbal alkaline drugs like Apamarga(kshara –ash of Achyranthus ascera), Snuhi(Euphorbia nerufolia) latex and haridra(Curcuma longa) powder in specific order. This combination of medicines on the thread helps in debridement and lysis of tissues exerts anti- fungal, anti-bacterial and anti-inflammatory. Certainly kshar sutra has got supremacy over other treatments.

#### Kshar sutra treatment of choice

- Kshar sutra (alkaline thread) therapy is ideal in the management of pilonidal sinus.
- It ensures complete healing without recurrence.
- It removes hair from the tract in subsequent changing of the thread.
- There is little discomfort to the patient.
- There is a small scar left after the application.

#### Steps of threading

- Sinus has only one opening. We have to make second opening at its other end.
- A probe is passed in the track.
- Secondary opening is formed.
- The track is threaded with a kshar sutra.
- Bandaging is performed.

## Benefits of kshar sutra

- Minimum tissue loss in comparison to the surgery.
- No bleeding, no hospital stay and no need to put huge dressings.
- Procedure takes not more than five minutes.
- Minimum discomfort, pain is very less.
- No recurrence.

## **CONCLUSION**

- Kshar sutra is very good to treat sinus. It is also better in terms of patient acceptability as well as final results.
- The pain is very less during and after application.
- Discharge was noticed to be reduced in early sittings.
- Kshar sutra is also very useful even in cases of multiple recurrences.
- Our patient's are more satisfied with this therapy.
- We have been receiving many patients by mouth to mouth publicity.
- It is concluded that kshar sutra therapy is best mode of treatment in pilonidal sinus.

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