World Journal of Pharmaceutical Sciences
ISSN (Print): 2321-3310; ISSN (Online): 2321-3086
Published by Atom and Cell Publishers
Available online at: http://www.wjpsonline.org/
Original Article

A clinical evaluation of depilation and curettage in the management of pilonidal sinus

Dr Praveen Kumar Choudhary, Associate Professor, Department of Shalya Tantra A & U Tibbia College, Karol Bagh, New Delhi – 110005

Received: 27-09-2015 / Revised: 21-10-2015 / Accepted: 25-10-2015

ABSTRACT

Pilonidal sinus is a chronic discharging sinus occurs at intergluteal cleft commonly in young adults. There is recurrent infection and discharge. While sitting the buttocks move, hair is broken off by friction, gets collected in cleft. The loose hair travels down the intergluteal furrow to penetrate the soft and moistened skin at that region or enters the open mouth of sudoriferous gland to give rise to formation of an abscess. The abscess bursts and forms pilonidal sinus. The conventional treatment is wide excision followed by second intention healing. Other treatment options are different types of plasty such as rhomboid flap, Z plasty etc. These procedures are highly invasive. Open wound takes months to heal and even after there are fair chances of recurrence. The present study was designed to carry out minimal invasive procedure of curettage of sinus and depilation as OPD procedure. The procedure performed in 20 patients who were randomly selected. The data collected for a period of almost two years. A follow up for 18 months was documented. The results of depilation and curettage in the management of pilonidal sinus were encouraging. The morbidity and recurrence were significantly less.

Keywords: Pilonidal sinus, depilation, curettage of sinus, sudoriferous gland

INTRODUCTION

Mayo described pilonidal disease as a hair containing cyst just below coccyx in 1833.[1] Hodges coined the term 'Pilonidal' in 1880.[2] Pilonidal means nest of hair. In the 19th and early 20th century, the researchers concluded pilonidal sinus as a congenital disease. In the Second World War, the pilonidal sinus disease was common in jeep drivers; hence, named jeep driver's disease. After the world war, Patey and Scarf concluded pilonidal sinus as an acquired disease due to the impaction of hair in moist skin in gluteal fold and consequent abscess and sinus formation. It is also pertaining to mention that pilonidal sinus also occurs in other parts of body on account of hair end penetration such as interdigital web of barbers and in axilla.[3]

Incidence: It occurs predominantly in males having hair abundance. The common age group of patient is between puberty and 40 years of age.[4] The persons with deep intergluteal space, sedentary lifestyle and obesity are prone to pilonidal sinus disease.[5]

Pathogenesis: The hair breaks on account of friction and rubbing and collects in dependent portion in intergluteal furrow. The hair is sucked inside the dilated sudoriferous gland. It is important to mention here that not only the gluteal hair but also hair of the back collects in to gluteal region after breaking.[6]

Fig.1 abundance of hair on back

Visible pits of dilated hair follicles may be seen in patients of pilonidal sinus; this dilatation occurs due to stretching of follicle openings by movements of buttocks more marked at point where natal cleft curves over sharp angle at sacrococcygeal joint. The force is amplified by activities such as bouncing while upright and it is cause of disease predominance in jeep drivers. [7]

***Corresponding Author Address:** Dr Praveen Kumar Choudhary, Associate professor, Shalya Tantra, A & U Tibbia College Hospital, Karol Bagh, Govt of Delhi - 110005*

Fig. 2 visible pits of hair follicles for hair entry

Hair acts as a foreign body and induces inflammation. Distention of the obstructed follicle leads to inflammation and edema and closing of mouth of pit. It gives rise to formation of an abscess and rupture of the abscess leads to formation of a sinus. To summarize, three factors are responsible for pilonidal sinus, the hair or invader, the negative pressure by which hair is sucked inside the pits and the vulnerable skin. [8] A tuft of hair may be seen coming from pilonidal sinus.

Fig. 3 hair inside the pilonidal sinus

Clinical features: The pilonidal disease may be presented as an acute pilonidal abscess or the chronic discharging pilonidal sinus.[9] An abscess is an acute condition characterized by severe throbbing pain, fluctuating swelling and cellulitis.

Fig. 4 *Pilonidal abscess*

The abscess after bursts forms a chronic discharging sinus. There may be multiple sinuses. Tuft of hair or other debris may be seen in sinus. There is inflammation, edema around the sinus. [4]

Fig. 5 tuft of hair

Fig.6. Hair in pits

Differential diagnosis: The pilonidal sinus remains confined to subcutaneous region. The track of the sinus moves towards sacrum and not towards anus. The following diseases may mimic pilonidal sinus disease and should be diagnosed carefully.

- Fistula in ano with opening in gluteal cleft
- Fissured skin in intergluteal cleft
- Hydradenitis suppurativa
- Gluteal abscess
- Tuberculosis
- Syphilis

Fig. 7 fistula in ano resembling pilonidal sinus but track direction was towards anus

Fig 8 Pyoderma

Management: The pilonidal sinus can be managed by conservative or operative means. There are many operative procedures for pilonidal sinus. They may be categorized as follows:

- Incision and drainage in acute abscess [10, 13]
- Excision and healing by secondary intention [11]
- Excision and primary closure
- Excision and reconstructive flap methods [12]

These surgical procedures carry significant morbidities and most importantly the chances of recurrence are significantly high in all of these surgical procedures.

Fig 9 recurrent pilonidal sinus after surgical excision and tuft of hair inside it

MATERIAL AND METHODS

The study was conducted in twenty patients of pilonidal sinus over a period of one a half years to evaluate the role of depilation and curettage as a substitute of highly invasive surgery. The surgery carries various risks including bleeding, infection, prolongs rest, delayed healing, extensive scarring and chances of recurrences. The main aim was to reduce morbidity and recurrence. Twenty patients were randomly selected.

Exclusion criteria: The patients of co-morbidities such as diabetes mellitus and morbid obesity were excluded. Patients of hydradenitis suppurativa, pyoderma gangrenosum, perianal abscess, syphilis were excluded from the study.

Inclusion criteria: Patients of age group between 20 to 40 years were included in the study. The diagnosis was made on clinical basis. MRI was conducted in all cases to exclude any associated lesion.

Procedure: All patients were subjected to shaving of entire gluteal region and back. The patient was laid down on operation table in prone position. After cleaning and draping, topical lignocaine 4% was pushed inside the track. Lignocaine 1% was also infiltrated in and around sinus.

The opening of the sinus was dilated by using artery forceps. Depilation was carried out by mosquitoe forceps.

Fig. 10 depilation

It is supplemented by the curettage of the track by various sizes curettes. The entire track was washed with chlorine water. After proper depilation and cleaning, the track was packed with chlorine water impregnated gauze. The dressing was done and the patient was asked to take a little bit rest for a while. The procedure was carried out on day care basis without admission in hospital. The follow up was carried out for next 3 days and then on fortnight basis. The patients were asked to wash the wound by povidone iodine lotion till healing. Average healing time was 7 to 10 days. [14]

Each patient's details were documented including their address and mobile number. Some patients didn't turn up for follow ups. A telephonic conversation was arranged for these patients. In the follow up period, none of them reported recurrence.

RESULTS AND DISCUSSION

The patient was followed up the next day for examination. Pain, discharge, swelling, wound were examined in each and every case. Pain was significantly reduced in all cases. Not a single patient complained of pain. Mild discomfort was noticed by a few patients. Only a few patients required use of analgesics. There was not any discomfort on sitting. All patients joined the duties the very next day. Discharge was significantly reduced from the sinus wound. The slough was almost negligible and the wound was seen containing healthy granulation tissue. Packing was performed only in a few cases. Most of the patients instructed to perform povidone and alum water irrigation after taking sitz bath. The average wound healing time was 7 to 10 days.

Fig 11 closed mouth of sinus wound on 7th day

Swelling and redness was reduced. There was not any discomfort in walking or sitting. Wound was reduced to a minimum, the very next day. There was not any need of gauze packing after primary procedure. The complete healing took 7 to 10 days.

Fig. 12 healed wound without ugly scar

The patients resumed the duties a day after the procedure. There was not any need to get admitted. In a follow up of 18 months, no recurrence of the disease noticed.

CONCLUSION

Conventional surgical procedures such as excision, grafting or primary closure have been the treatment modalities for the pilonidal sinus diseases. All of them have their advantage and disadvantages. The big issue has been the size of wound, morbidity and on healing the recurrence. Patients used to take long off from the work and even then recurrence was not by chance but as a rule.

The present study was devised to keep the patients ambulatory without loss of work, to minimize morbidity and to check the recurrence. Since the procedure is a day care procedure; therefore, patients were not admitted in the hospital. The procedure was carried out under topical and local anesthesia. First follow up was on the very next day to see the wound and any complication associated with the procedure. Next follow up was on 4th day and then after 7th day. It was followed by the 15th day follow ups.

There was not any major complication associated with the therapy. The patients were comfortable with the procedure. Pain, discharge etc were reduced very early. The healing was satisfactory and took significantly less time in comparison to conventional open surgery.

It is concluded that depilation and curettage is a good alternative to highly invasive surgical procedure. It is simple, safe, and economic and best suited for all kind of chronic discharging pilonidal sinus patients.

REFERENCES

1. Hull TL, Wu J. Pilonidal disease, Surg Clin North Am. 2002 Dec. 82(6):1169-85, Medline
2. Hodges RM, Pilonidal sinus, Boston Med Surg J 1880; 103: 485-586
3. Miller D, Harding K, Pilonidal Sinus Disease, Dec 2003
4. Sondenaa K, Nesvik I, Anderson E, Natas O, Soreide JA. Patient characteristics and symptoms in chronic pilonidal sinus disease. Int J Colorectal Dis 1995; 10(1): 39-42
5. Pandey S, management of pilonidal sinus, Chaukhmba publishing house, p 40-41
6. Sijoria KK, Kumar P, Role of hair on the back as a predisposing factor in pilonidal sinus diseases, A monograph on Pilonidal diseases, p. 57, 2013
7. Bascom JU. Pilonidal disease: correcting over treatment and under treatment, Contemporary Surg 1981; 18: 13-28
8. Caestecker J, Mann BD, Castellanos AE, Straus J. Pilonidal Disease, Medscape Reference from WebMD, Last updated Jan 22, 2009
9. Solla JA, Rothenberger DA. Chronic pilonidal disease, An assessment of 150 cases, Disease of Colon Rectum, 1990; 33(9): 758-61
10. Bissett IP, Isbister WH. The management of patients with pilonidal disease: a comparative study. *Aust NZ J Surg* 1987; **57**(12): 939-42.
11. Marks J, Harding KG, Hughes LE, Riberio CD. Pilonidal sinus excision: healing by open granulation. *Br J Surg* 1985; **72**(8): 637-40.
12. Khanna AK. Rhomboid flap plasty in pilonidal sinus, woundcon 2009: sovenier p. 22-25
13. Berry DP. Pilonidal sinus disease. J Wound Care 1992; 1(3): 29-32
14. Buie LA, Curtis PD. Pilonidal disease. *Surg Clin NA* 1952; **32**: 1247-59.