

A case report of sacrococcygeal foreign body presenting as pilonidal sinus

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Abstract

Pilonidal disease occurs most commonly in those males who have to sit long hours at their work place e.g. online office workers or drivers. It is caused by piercing of broken hairs into the sacrococcygeal region which causes localised inflammation. Inflammation in this area due to any other foreign body is very rare. Among many treatment options for pilonidal sinus, instillation of crystalloid phenol showed promising results in terms of low recurrence rates, low post-operative complications and less healing time. Here, we present the case of a 13-year-old female student who had pilonidal sinus in sacrococcygeal region for six months and was unresponsive to multiple treatments. Later, on exploration it was revealed to contain a small foreign body of 3cm of hard straw of grass. The patient was treated with crystalloid phenol and on regular follow-up she was completely fine by the end of the third week.

Keywords: Pilonidal, Foreign body, Inflammation, Phenol.

DOI: <https://doi.org/10.47391/JPMA.4762>

Submission completion date: 01-09-2021

Acceptance date: 23-04-2022

Introduction

Herbert Mayo first described pilonidal disease in 1833. It is caused during the embryogenesis due to incomplete separation of ectoderm and mesoderm. In 1880 Hodges declared that pilonidal disease is caused due to inflammation of the hair follicles. Later, it was discovered that this disease is caused due to penetration of unattached hairs into the skin causing a foreign body reaction.¹

Pilonidal cyst can occur anywhere in the body but most commonly they are formed in the sacrococcygeal or upper gluteal cleft. The reason for this is that it is the most common pressure and hairy area while sitting and this is the reason it is most common in drivers.² The symptoms of pilonidal cyst are similar to that of abscess i.e. pain, inflammation, tenderness and swelling; however, the diagnosing point in most of the cases of pilonidal cyst is the presence of cutaneous pits along the midline of the gluteal cleft. They occur mostly after puberty and 40 years of age. Male to female ratio is 3:1.³

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The treatment options for this disease are local application of phenol, fibrin glue, incision and drainage, excision, Karydakis operation, Limberg flap and many others.⁴

While in almost all the cases unattached hairs act as foreign body making pilonidal cyst, in very rare cases some other foreign body cause pilonidal sinus. This case report discusses the case of a pilonidal sinus caused by foreign body other than unattached hairs.

Case Report

A 13-year-old school going female presented in the outpatient department of East Surgical ward Mayo Hospital Lahore, Pakistan, in November 2020 with chief complaints of discharge and pain off and on for six months. She had taken multiple medical treatments during these six months but her pain and discharge did not stop. She had no co-morbidities and no history of any surgical intervention.

On physical examination, after consent in the presence of a female chaperone, a small opening of about 0.5 x 0.5 cm was noted over the sacrococcygeal region at 6 o' clock position about 8 cm away from the anal verge (Figure 1). There was purulent discharge from the opening and the surrounding area was tender on palpation with normal overlying skin. The digital rectal examination was unremarkable. Pus was taken for culture and sensitivity. Keeping in mind the failed medical treatments for the past six months, and according to history and examination, the

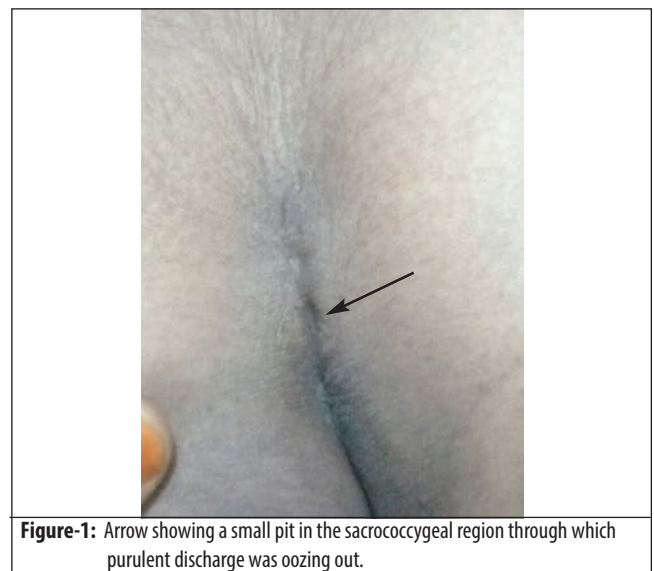


Figure-1: Arrow showing a small pit in the sacrococcygeal region through which purulent discharge was oozing out.



Figure-1: Foreign body of hard straw of grass retrieved from the pilonidal sinus in the sacrococcygeal area.

diagnosis of pilonidal sinus was made and plan of exploration of sinus tract under local anaesthesia was made after taking written and informed consent from the guardians of the patient (Father and Mother).

After taking aseptic measures and application of local anaesthesia (1% lidocaine 4.5 mg/kg) the sinus opening was opened using mosquito artery forceps. On opening the tract, there was 5ml of purulent fluid in the cavity and a solid foreign body was noted in the tract cavity which on removal was discovered to be a 3cm long hard straw of grass (Figure 2). Xylocaine gel was applied all around the sinus track to protect the skin and perineal region during the instillation of Phenol. About 2- 4 gm of Phenol crystals 100% was diluted in 5 ml normal saline 0.9% and injected into the sinus tract for 20 minutes. Later, the wound was packed with surgical dry gauze and the patient was discharged on the same day on broad spectrum antibiotics and painkillers. On follow-up after one week, the wound was healthy; there was no complaint of pain, discharge, burning or itching. At three-weeks follow-up, the sinus track had healed completely and there was no associated complaint.

Later, on taking a detailed history, the patient said that she had a history of fall on the back while playing in school after which the symptoms started. The consent for publishing this case report was taken from the father of the patient.

Discussion

Acute pilonidal disease is a common condition encountered in outpatient clinic. Mostly these patients work that need long hours sitting, like office workers or drivers. This leads to pressure on the sacrococcygeal area and breaking of hair that penetrate the skin and leads to the

formation of pilonidal cyst.⁵ It is very difficult to differentiate inflammation in the sacrococcygeal area due to any foreign body or due to abscess formation because both conditions present with the same features. Also, there is very low threshold for considering any other foreign body besides unattached hairs as very few cases have been reported in literature documenting this phenomenon.⁶

Traumatic foreign bodies are more commonly encountered on exposed areas like face, hand and feet. Sacrococcygeal area is a very unusual area for traumatic foreign body which is encountered in this case report. One such case report available in literature was reported by Kayaalp C et al, which showed a 7cm pencil penetrating from sacral fascia to the muscle plane mimicking pilonidal sinus in a 13-year-old male. That patient also had a history of trauma 10 months back.⁷

The detection of foreign body in this area is difficult because no such investigation is available and clinical picture cannot tell the nature of the foreign body even on palpation. The only thing that helps in this regard is detailed history which includes even any minor trauma. Also, the prevalence of pilonidal sinus is very low in females as compared to males so a detailed history is the key point in proper treatment.⁸

In literature, many treatment options are enlisted from simple fibrin glue injection to complex Limberg flap. None of these procedures have 0% recurrence rates and mostly it is the surgeon's decision to choose between different treatment options. Among these procedures, treating pilonidal sinus with instillation of phenol is a relatively new technique and showed promising results in terms of less healing time and low recurrence rates. According to a study done by Kober et al, 80% liquid phenol treatment should be kept as first line of treatment for both acute and chronic pilonidal disease in adolescent patients as it leads to low recurrence rates and high satisfaction rates.⁹ Another study, conducted by Lamdark et al, showed that crystalloid phenol is an easy to apply and comfortable method for pilonidal disease with low recurrence rates as compared to Karydakias and Limberg flap procedure.¹⁰

Conclusion

High index of suspicion for foreign body other than unattached hairs should be kept in mind in patients who have pilonidal disease for a long time and are non-responsive to different treatment options. Detailed history focusing on any past minor physical trauma is an important step in treatment. Patients should be offered treatment with crystalloid phenol as it is easy to apply with low recurrence rates and no postoperative complications.

Disclaimer: None.

Conflict of interest: Person who signed ethical approval letter is also the co-author of this case report.

Funding disclosure: None.

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