

Pilonidal Sinus at The Appendectomy Incision

Apendektomi İnsizyonunda Gelişen Pilonidal Sinüs

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Öz

Pilonidal sinüs, cildin epidermis tabakasına nüfuz eden kıllar nedeniyle iltihaplanma ile ilerleyen bir hastalıktır. Bu olgu sunumunda apendektomi kesisinde oluşan insizyonel pilonidal sinüs olgusunun tanı ve tedavi süreci sunulmuştur. 47 yaşında erkek hasta apendektomi kesisinde yaklaşık üç gündür pürülan akıntı ve kızarıklık şikâyeti ile başvurdu. Hastaya yaklaşık sekiz yıl önce sağ paramedian kesi ile apendektomi yapılmış olup ameliyat sonrasında dönemde kesi izinde tekrarlayan apseler gelişmişti. Apse kesesi de dahil olmak üzere deri ve deri altı dokuları cerrahi olarak eksize edildi. Hastadan alınan eksizyon materyalinde tüm dermisi kaplayan kıllarla yoğun inflamatuvar reaksiyon ve epidermin erozyon ve ülserasyonu mevcuttu.

Anahtar Kelimeler: Apendektomiler, Cerrahi Yara, Pilonidal Sinüs

Abstract

Pilonidal sinus is a disease that progresses with inflammation due to hairs that penetrate the epidermis layer of the skin. This case report presented the diagnosis and treatment process of the incisional pilonidal sinus case, which occurred at an appendectomy incision. A 47-year-old male patient was admitted with purulent discharge and erythema for about three days in the appendectomy incision. The patient underwent appendectomy with a right paramedian incision approximately eight years ago, and recurrent abscesses developed in the incision scar in the postoperative period. The skin and subcutaneous tissues, including the abscess sac, were surgically excised. In the excision material taken from the patient, there was an intense inflammatory reaction with hair covering the entire dermis and erosion and ulceration of the epidermis.

Keywords: Appendectomies, Surgical Wound, Pilonidal Sinus

Introduction

Pilonidal sinus (PS) is a disease that progresses with inflammation due to hairs and hairs penetrating the epidermis layer of the skin (1). Although PS is generally located in the sacrococcygeal region, it can also be atypical in other regions of the axillary area, inter-mammary area, navel, clitoris, penile skin, scalp, and post-auricular (2,3). In this case report, the diagnosis and treatment process of a case of the pilonidal sinus in an appendectomy incision, an area that has never been described before, is presented.

Case

A 47-year-old male patient was admitted to the general surgery outpatient clinic with purulent discharge and redness for about three days in the surgical incision in October 2021. About eight years ago, he was taken to emergency surgery with the diagnosis of acute appendicitis, and an appendectomy was performed with a right paramedian incision. He did not have any complaints two years after the appendectomy—an abscess developed in the incision scar in the third year after

the operation. The abscess was drained, and the abscess area returned to normal with daily cleaning. On his history check, he had recurrent abscess three-four times yearly in the incision (Figure 1).



Figure 1. Preoperative view of the wound.

On physical examination, his vital findings were as follows: blood pressure: 138/68 mmHg, pulse rate: 78 beats per minute, oxygen saturation on room air: 97%, and body temperature: 36.7° Celsius. On physical examination, there was an inflamed, edematous PS in the incision scar. Other system

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examinations, including the abdomen, were unremarkable. He only had mild leukocytosis ($11.8 \times 10^9/L$) on laboratory evaluation. Then, ultrasonography (USG) was performed to rule out foreign body reactions due to suture material. USG only showed a fistula tract of approximately 17 mm in depth. No significant intra-abdominal extension/fascial extension was observed in USG. Elective surgery was planned. The fascia was reached by passing the skin and subcutaneous layers over the old incision scar. The fascia was in a completely natural appearance. The skin and subcutaneous tissue were excised, including the abscess pouch. The wound was closed primarily. Since there was no problem in the follow-up of the patient who was taken to the service, the patient was discharged on the third postoperative day. In the excision material taken from the patient, there was an intense inflammatory reaction, with hair covering the entire dermis and erosion and ulceration of the epidermis (Figure 2). In the 6-month follow-up, no pathological finding was detected in the incision scar (Figure 3).



Figure 2. Pathological view of the specimen (yellow arrows indicate hair in the follicle).

Discussion

The pilonidal sinus (PS) consists of an abscess and hair content that creates a cavity surrounded by inflammatory processes. While the most common site for PS, at rates up to 97.8%, is the sacrococcygeal region, the umbilical region is the most common location outside the sacrococcygeal area. A literature review searched the common extra sacrococcygeal PS cases, including 302 patients, and the prevalence of umbilical PS was 90.1% (3). Apart from the umbilical region, PS can also be seen in atypical areas such as the axilla, suprapubic area, inguinal region, neck, face, clitoris, penis, nose, and the endoanal canal (2,3). However, until now, no case of PS has been defined in the incision site. For

this reason, we presented the diagnosis and treatment process of a PS case that occurred in a new location.

Male gender, excessive hairy body structure, hair type, poor body hygiene, prolonged sitting, local microtraumas, deep intergluteal sulcus, and obesity predispose factors for PS (4). PS is more common in men, and occupations requiring prolonged sitting suggest that factors such as hair density and regional microtrauma are also influential in addition to hormonal factors (5). In the case we have presented, although the male gender is seen as a predisposing factor, the main predisposing factor is previous surgery. In addition, our case occurred in the abdominal wall that was not significantly exposed to pressure.



Figure 3. Wound image of the patient at six months.

PS symptoms depend on the stage of the disease at presentation, acute or chronic. In the acute form, inflammation and abscess formation are seen in the sinuses. In the chronic form of PS, serous/seropurulent/purulent discharge is seen in the sinus and a fistula orifice away from the sinus (6). Recurrent abscesses that may be in remission for many years may also occur in chronic form. USG, computed tomography (CT), magnetic resonance imaging, and colonoscopy are helpful in diagnosis in cases of sacrococcygeal PS if there is a deep-located abscess, anal fistula suspected, and Crohn's disease is suspected (7). In patients with extra sacrococcygeal localization, additional imaging tools/tests are required according to the localization of the lesion. In the present case, suture reaction was primarily considered since he had a history of surgery. Since only a fistula tract smaller than 20 mm was seen on USG and there was no significant relationship between the fistula tract and anterior abdominal fascia, additional imaging techniques such as CT or fistulogram/sinogram were not considered by the patient.

The primary treatment in PS cases is the excision of the lesion and primary closure. Surgical resection with clean margins is inevitable, especially in chronic infections with recurrent abscesses. In this case, primary resection and closure were performed due to recurrent infection.

Conclusion

The pilonidal sinus consists of an abscess and hair content that creates a cavity surrounded by inflammatory processes. Most pilonidal sinus cases are present in the sacrococcygeal area and umbilical area. There are also cases of pilonidal sinus outside the sacrococcygeal and umbilical regions. Until now, no case of PS has been defined in the incision site. Whether in the typical location or the atypical location, the treatment decision depends on recurrent infection/abscess. In our case of incisional pilonidal sinus, our treatment recommendation is resection of the lesion with a solid margin and primary closure.

Written consent: Written consent of the patient was obtained on 18.10.2021.

References

1. Salih AM, Kakamad FH. Preauricular pilonidal sinus: The first reported case. *Int J Case Rep Images.* 2016;7(3):162-4.
2. Shareef SH, Hawrami TA, Salih AM, et al. Intermammary pilonidal sinus: The first case series. *Int J Surg Case Rep.* 2017;41:265-8.
3. Salih AM, Kakamad F, Essa R, et al. Pilonidal sinus of atypical areas: Presentation and management. *Pilonidal Sinus J.* 2017;3(1):8-14.
4. Harlak A, Menten O, Kilic S, et al. Sacrococcygeal pilonidal disease: Analysis of previously proposed risk factors. *Clinics.* 2010;65(2):125-31.
5. Duman K, Ozdemir Y, Yucel E, et al. Comparison of depression, anxiety and long-term quality of health in patients with a history of either primary closure or Limberg flap reconstruction for pilonidal sinus. *Clinics.* 2014;69:384-7.
6. Iesalnieks I, Ommer A. The management of pilonidal sinus. *Dtsch Arztebl Int.* 2019;116(1-2):12-21.
7. Nixon AT, Garza RF. Pilonidal cyst and sinus. 2022 Apr 21. In: StatPearls. Treasure Island (FL): StatPearls Publishing; 2022 Jan.