

Axillary pilonidal sinus: A case report

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Abstract

Context: Pilonidal sinus is a disease which is very common, especially in men and usually located in sacrococcygeal area. However, the disease can be also seen in rare localizations such as umbilicus, forehead, scalp, clitoris, interdigital area and axilla. In the etiology of pilonidal sinus, acquired theory is accepted by most of surgeons instead of the congenital one. **Case report:** In the present study, we purposed to report our case of hirsute Turkish women aged 25 having axillary pilonidal sinus. After application of total surgical excision with elliptical skin incision, histopathological evaluations confirmed the prediagnosis of axillary pilonidal sinus. The patient was lost to follow-up and neither recurrences nor distant metastasis has been detected during 36 months. **Conclusions:** In our opinion; surgical therapy of axillary pilonidal sinus, allows to complete resection in addition to absolute histopathological diagnoses and it may be an appropriate choice of treatment especially for the disease having one or two sinuses.

Keywords: Pilonidal sinus, axilla, axillary pilonidal sinus.

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Introduction

Pilonidal sinus is a disease which is reported by Anderson et al [1] as a hair detected in a sacrococcygeal ulcer in 1847, defined firstly by Hodges et al [2] as a term of pilonidal sinus and mostly found in sacrococcygeal area [3,4]. Besides this area, it can be also seen in rare localizations such as umbilicus [5], forehead [6], scalp [7], clitoris [8], interdigital area [9], penis, abdomen, neck and axilla [10 – 12, 13].

In the etiology of pilonidal sinus, congenital theory was accused by Kooistra et al [3] in 1942, collection of hairs on midline of back was become a current issue by Karydakos et al [14] firstly in 1992 and acquired theory was reported by Bascom et al [15] in 1980.

Case Report

A hirsute Turkish woman aged 25 applied to our clinic in November 2006 with the history and complaint of the intermittent small amount of leakage from her right axilla during the past year. There was no any history of pilonidal sinus and operation of which at the other sites of her body.

On the physical examination, one small sinus sized 2 mm in diameter in her right axilla not including any hair was detected. No discharge was observed in inspection and also palpation. The edematous area of 1 cm in length was recognized around the sinus. Pilonidal sinus was defined as neither the intergluteal sulcus and nor the other regions of her body.

The surgical treatment was performed via elliptic skin incision. After application of methylene blue through the

orifice of the pilonidal sinus, total excision of the tractus with the neighbouring subcutaneous tissue and the elliptical skin part containing the sinus orifice was performed. Following the total surgical excision, primer suturation of the subcutaneous tissue and the skin were carried out. The tractus was limited only in subcutaneous tissue and the histopathological evaluations confirmed the preassumptive diagnosis of axillary pilonidal sinus. Any perioperative or postoperative complication and recurrence has not been detected during the 36 months follow-up.

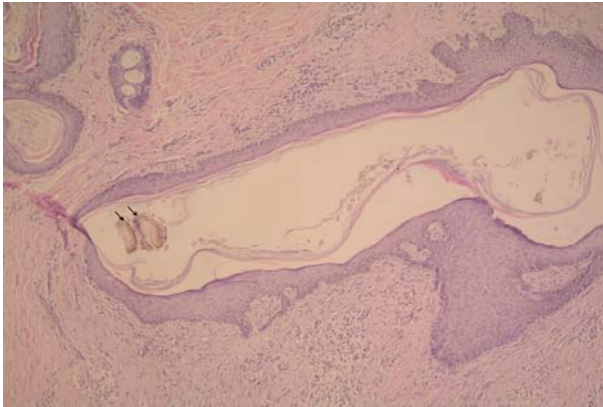


Fig. 1 Sinus tract and the section of the hair inside it (*arrows*) (H & E, original magnification, 10x20).

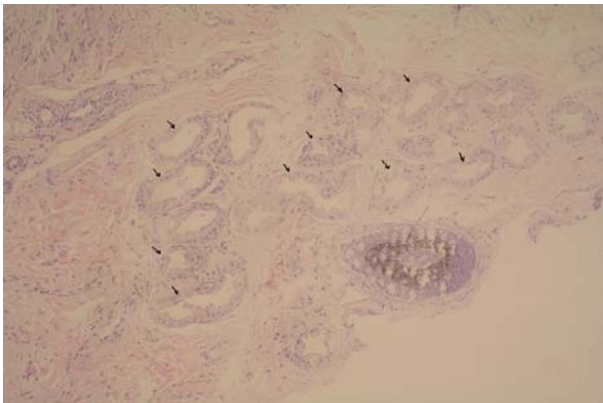


Fig. 2 Apocrine gland structures (*thick and short arrows*) and the neighbouring section of the hair (*thin and long arrow*) (H & E, original magnification, 5x10).

Discussion

In the beginning, the congenital theories have been suggested for the pathogenesis of pilonidal sinus, but afterwards the acquired theory is accepted by most of surgeons [4-16]. Friction (abduction – adduction), suction, massage, shaving, pounding, minor infection and maceration are assorted mechanisms which play a part in acquired theory of pilonidal sinus [16].

Mayo et al [5] indicated that the hairs may curl back on themselves and pierces the surrounding skin with their distal ends first by growth forces. On the contrary, Oryu et al [10] suggested that penetration of shed hairs with their proximal or distal ends first could not be designated, so the mentioned authors could not be designate the penetration direction of hair in their 5 patients.

We come across with axilla as a very rare body area for including pilonidal sinus [10-12, 16]. Differential diagnosis of axillary pilonidal sinus consist of folliculitis and ruptured epidermal cyst [16]. Malignant degeneration of pilonidal disease is a rare complication composed of approximately 0.1 % of patients with chronic untreated or recurrent pilonidal disease [17, 18] and is associated with a high recurrence rate and poor prognosis comparing with regular nonmelanoma skin cancer. Among malignant degeneration of pilonidal sinus most cases are squamous cell carcinoma [19]. Biological behavior of pilonidal sinus carcinoma is much more aggressive than squamous cell carcinoma at the other sites [17] and they are deeply invasive into the subcutaneous tissue in the great majority of cases. Underlying bone is involved in 8% of cases, also. Inguinal lymph node metastasis is very poor as a prognostic sign and is associated with a median survival time of only 7 months [20].

According to our point of view, besides complete resection allows to appropriate choice of treatment especially for the disease having one or two sinuses [16], it also enables to absolute histopathological diagnoses.

In conclusion, pilonidal disease is a very common disease, especially in men and generally located in sacrococcygeal area. However, axillary pilonidal sinus is very rare. So, we aimed to present our case of hirsute young Turkish women having the mentioned disease. Histopathological evaluations revealed the characteristic structures of axillary pilonidal sinus, after application of total surgical excision via elliptical skin incision. The case was lost to follow-up and no recurrences or complication has been detected during 36 months. Awareness of the probability of a pilonidal disease even in seldom locations like groins of axilla is important and although the malignant degeneration of the disease is very rare, it has much more poor prognosis comparing with squamous cell carcinoma and regular nonmelanoma skin cancer.

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GM was the contributor in writing the manuscript and the linguistic revision, also. DS provided the photos of the histopathological sections of the axillary pilonidal sinus and was the contributor in writing the manuscript, especially for the parts are related to histopathological assessments of the axillary pilonidal sinus. IS performed the the preoperative, perioperative and the postoperative evaluation and the management of the patient, and was a major contributor in writing the manuscript.

All authors read and approved the final manuscript. There is no competing interest.

References

1. Anderson A. W. *Boston Med Surg J* 1847;36:74.
2. Hodges R. M. *Boston Med Surg J* 1880;103:485.
3. Kooistra HP. Pilonidal sinuses, review of literature and report of 350 cases. *Am J Surg* 1942;55:3-17.
4. Davage ON. The origin of sacrococcygeal pilonidal sinuses based on an analysis of four hundred sixty-three cases. *Am J Pathol* 1954;30:1191-1205.
5. Mayo CW, Franckowiak JJ, Dockerty MB: Pilonidal sinus of the umblicus, report of a case. *Proc Staff Meet Mayo Clin* 1960;35:175-178.
6. Abdel-Aziz AM. Pilonidal sinus caused by cutting trauma. *Cutis* 1981;28:455-457.
7. Moyer DG. Pilonidal cyst of the scalp. *Arch Dermatol* 1972;105:578-579.
8. Werker PMN, Kon M. A pilonidal sinus of the clitoris? *Ann Plast Surg* 1990;25:63-64.
9. Patel MR, Bassini L, Nashad R, Anselmo MT. Barber's interdigital pilonidal sinus of the hand: a foreign body hair granuloma. *J Hand Surg [Am]* 1990;15:652-655.
10. Oryu F, Minagawa H, Chiba N. Three cases of a pilonidal sinus of the axilla. *Clin Dermatol* 1992;34:1631-4.
11. Aird I. Pilonidal sinus of the axilla. *Br Med J* 1952;1:902-903.
12. Imamura T. A case with a pilonidal sinus of the axilla (abstract). *Jpn J Dermatol* 1993;103:1467.
13. Sion-Vardy N, Osyntsov L, Cagnano E, Osyntsov A, Vardy D, Benharroch D. Unexpected location of pilonidal sinuses. *Clin Exp Dermatol*. 2009 May 26. [Epub ahead of print]
14. Karydakis GE. Easy and successful treatment of pilonidal sinus after explanation of its causative process. *Aust N Z J Surg* 1992;62:385-389.
15. Bascom J. Pilonidal disease: origin from follicles of hairs and results of follicle removal as treatment. *Surgery* 1980;87:567-572.
16. Ohtsuka H, Arashiro K, Watanabe T. Pilonidal sinus of the axilla: report of five patients and review of the literature. *Ann Plast Surg*. 1994;33(3):322-325.
17. Kulaylat MN, Gong M, Doerr RJ. Multimodality treatment of squamous cell carcinoma complicating pilonidal disease. *Am Surg* 1996; 62:922-929.
18. Abboud B, Ingea H. Recurrent squamous-cell carcinoma arising in sacrococcygeal pilonidal sinus tract: report of a case and review of the literature. *Dis Colon Rectum* 1999; 42: 525-528.
19. Davis KA, Mock CN, Versaci A, Lentricchia P. Malignant degeneration of pilonidal cysts. *Am Surg*. 1994;60:200-204.
20. de Bree E, Zoetmulder FA, Christodoulakis M, Aleman BM, Tsiftsis DD. Treatment of malignancy arising in pilonidal disease. *Ann Surg Oncol*. 2001;8:60-64.