

Terminal Hairs That Resemble Occipital Hairs in Pilonidal Sinus Disease: A Case Report

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ABSTRACT

This is the first demonstrated case in which terminal hairs that resembled occipital hairs and ranged from 2 to 13 cm in length were extracted from a patient with primary pilonidal sinus disease. This case provides evidence that occipital hairs may enter the pilonidal sinus and perhaps also play a role in the pathogenesis of the disease.

KEYWORDS: derroofing, flap, local anesthesia, pilonidal sinus, occipital hairs

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INTRODUCTION

The pathophysiology of pilonidal sinus disease (PSD) is far from clear. In addition to intergluteal hairs, hairs from the occipital region of the scalp have also been postulated to play a contributing role.^{1,2} This hypothesis has been supported with indirect evidence: Because occipital hairs are significantly stronger and stiffer than lumbar or intergluteal hairs, the discovery of strong hair fragments in the pilonidal nest may suggest the presence of occipital hairs in PSD.¹ In a comparative morphologic examination, an expert forensic biologist found that in 38.5% of cases (5/13), hairs found in the pilonidal sinus (PNS) were quite similar to occipital hairs.² However, no direct documentary evidence has yet been published.

CASE REPORT

The authors operated on a 19-year-old woman for primary PSD. She had a 2-year history of recurrent abscess formation and episodic pus discharge in the midline of her lower back (see Figure and Supplemental Video, <http://links.lww.com/NSW/A162>). They derroofed the sinus and performed curettage of the cavity while the patient was under local anesthesia (Supplemental Video).^{3–5} Several hairs were extracted from the sinus that ranged from 2 to 13 cm in length; many hairs were longer than 10 cm (Figure, Supplemental Video). The patient had long scalp hairs but scant hair in the lumbar and intergluteal regions and no previous history of long hair in these regions. The patient provided written informed consent to publish the case details, associated images, and video.

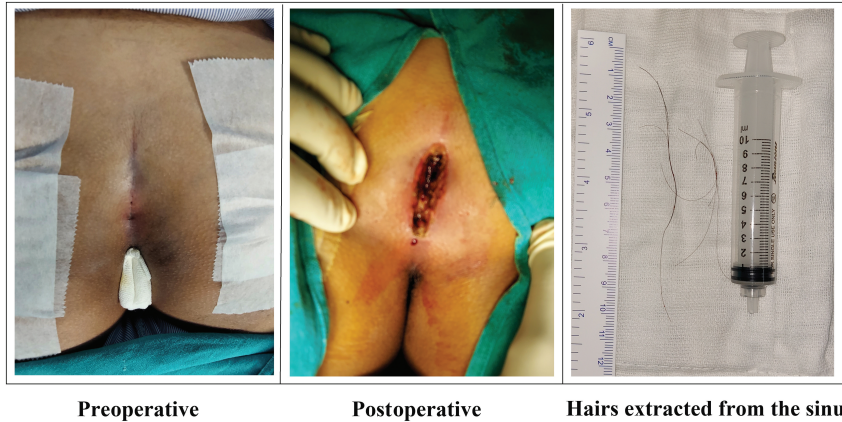
DISCUSSION

Researchers have analyzed the physical and morphologic properties of hairs found in PNS to differentiate the various hair sources.^{1,2,6} Doll et al² compared the axial hair strength of pilonidal hair and body hair harvested from the head (occipital region), lower back (glabella sacralis), and the cranial third of the intergluteal fold. In 80% of cases of PSD (16/20), the strongest hair (maximum axial hair strength) present in the PNS resembled the maximum axial hair strength of hairs from the

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Figure. PERIOPERATIVE IMAGES

Left, Preoperative. Pilonidal sinus pits can be seen in the lower back midline. Middle, Immediately postoperative. Pilonidal sinus deroofting and curettage of cavity were performed under local anesthesia. Right, Hairs extracted from the sinus (some approximately 10 cm in length).



occipital region.² An expert forensic biologist examined sinus and dorsal body hairs to tabulate the gross (length, color, shape, presence/absence of root/tip, and root status) and fine (hair diameter; size; pigment density and distribution; the shape of pigment aggregations, if present; cortical texture; and medulla) morphologic characteristics. In 6 of 20 patients with PSD, the hair morphology did not match with hairs of any region.² Of the remaining 14 patients, the hairs in PNS were similar to hairs from the occipital region in 5, similar to hairs from the intergluteal fold in 4 patients.² Thus, those authors concluded that occipital hairs played at least a contributory role in PSD along with hairs from other regions.² In addition to examining the source of hairs in PNS from different regions of the body, it would also be interesting to evaluate men versus women in terms of hair as a cause of inflammation and infection in PSD.

It is important that patients with PSD be educated to prevent disease recurrence. The most important action is to regularly clean hairs from the surrounding area⁷ through at least 30 years of age, at which point PSD becomes much less common.^{3,4} In tropical climates, applying powder in

the intergluteal cleft to absorb sweat and keep the skin dry is beneficial for PNS prevention.^{3,4}

CONCLUSIONS

This case is the first of its kind to provide documentary evidence that long terminal hairs (which may be occipital hairs) can enter the PNS and perhaps play a role in the pathogenesis of the disease. ●

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