

Visual Diagnosis in Emergency Medicine

A MAN WITH AN UNUSUAL FOREIGN BODY

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CASE REPORT

A 35-year-old white, previously healthy man presented with an 8-h history of pain on the right heel that worsened while walking. There had been no prior foot or ankle injury. On physical examination there was no abnormality (foreign body, swelling, or deformity) found. The patient was asked to walk on his tiptoes, and then on the

heels, and he reported pain while walking on his right heel. On reevaluation, a hair seemingly attached to the right heel (Figure 1) was observed. Dermoscopy with a handheld dermatoscope showed a 5-mm hair (Figure 2) penetrating the skin. A hair measuring 10 mm (Figure 3) was removed with tweezers and pain relief was immediate.



Figure 1. Close examination showing a fine black line (arrow) on the right heel.

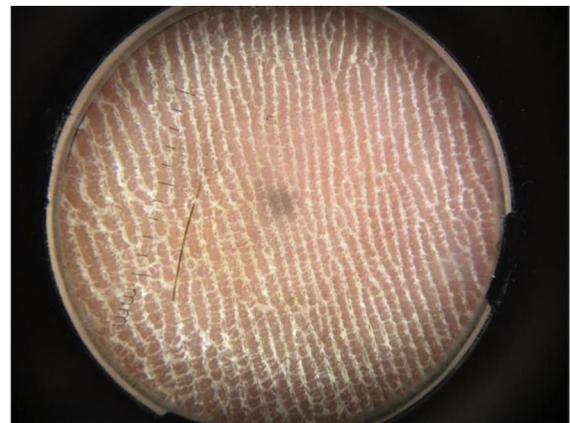


Figure 2. Dermoscopy shows the hair measuring 5 mm penetrating into the stratum corneum (DermLite II Pro 3Gen, San Juan Capistrano, CA).

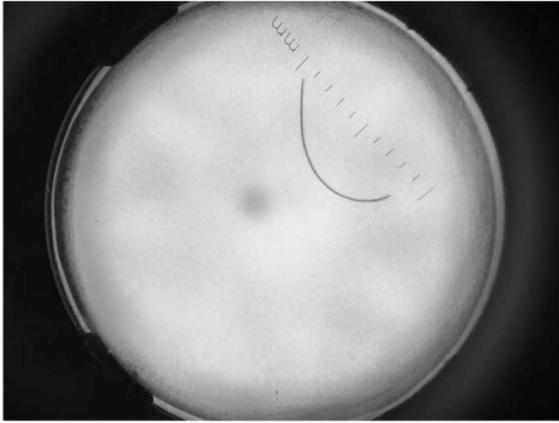


Figure 3. A 10-mm hair removed with tweezers.

DISCUSSION

Cutaneous pili migrans (CPM) is a rare condition in which one can observe the presence of a hair shaft or hair fragment embedded in the skin (1). A hair penetrates into the superficial layer of the stratum corneum and thence it can migrate due to foot movements in a creeping pattern resembling cutaneous larva migrans (2,3). CPM differs from cutaneous larva migrans by the black staining and linear migration of the hair and also by the absence of pruritus (3). Usually, CPM is asymptomatic, however, sometimes it presents with mild pain (2,4). Differential diagnosis includes intradermal hair growth, which occurs more often in the area of the beard (5).

The authors propose that the hair shaft had been trampled on by the patient's bare feet and become embedded obliquely in the superficial layer of the stratum corneum, stimulating the free nerve endings in the superficial dermis. Asian hair has a larger diameter, and is circular in cross section. It is firmer and straighter than African or Caucasian hair (6). This makes it easier for it to exist and extend within the skin, being the predominant type of hair in cutaneous pili migrans; this probably being a similar mechanism to that seen in ingrowing hair (6). The diagnosis is essentially clinical, and complete removal of the hair is required for cure. Physicians should be aware of this unusual foreign body reaction in patients with discomfort on the soles of the feet.

REFERENCES

1. Kim YH, Kim JI, Hwang SH, et al. Cutaneous pili migrans. *Ann Dermatol* 2014;26:534–5.
2. Luo DQ, Liu JH, Huang YB, He DY, Zhang HY. Cutaneous pili migrans: a case report and review of the literature. *Int J Dermatol* 2009; 48:947–50.
3. Kim JY, Silverman RA. Migrating hair: a case confused with cutaneous larva migrans. *Pediatr Dermatol* 2010;27:628–30.
4. Khare S, Sengar SS. Cutaneous pili migrans: a creeping eruption like condition easy to diagnose and cure. *Med J Armed Forces India* 2016; 72:97–8.
5. Liu JH, Zhao YK, Wu HH, Wang F, Luo DQ, Huang YB. Intradermal growing hair: two case reports. *Am J Mens Health* 2019;13. 1557988319825774.
6. Luo DQ, Liang YH, Li XQ, Zhao YK, Wang F, Sarkar R. Ingrowing hair: a case report. *Medicine (Baltimore)* 2016;95:e3660.