

Letters

OBSERVATION

Hydraulic Expulsion of Tumbu Fly Larvae

Furuncular myiasis is rarely observed outside of endemic areas, which may hamper accurate diagnosis. Herein we report 2 cases of *Cordylobia anthropophaga* larval removal using a hydraulic expulsion technique.

Report of Cases | Case 1. A woman in her 30s presented to the dermatologist with a 3-week history of a painful nodule on her right inner thigh. She had recently returned from travel in

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Uganda, where she had hand washed her clothing and hung them to dry. She reported that the nodule first appeared during her trip as a small papule that increased in size over time and became painful. After her return to the United States, 2 weeks after the nodule's initial appearance, the patient developed a fever and went to a local emergency department, where she was noted to be febrile and tachycardic with a fluctuant nodule and significant surrounding erythema. Findings of blood smears were negative for malaria, and blood culture findings were also negative. The patient was diagnosed as having an abscess with surrounding cellulitis and prescribed oral doxycycline. She was seen in follow-up for the next 3 days with resolution of fever.

Despite this, the nodule persisted and became increasingly more painful. Three weeks after its initial appearance, the patient reported feeling and seeing movement within the nodule. Physical examination revealed a 1.5-cm nodule with minimal erythema and a central operculum, through which a larval body could be identified (Figure 1).

Figure 1. Case 1 Skin Lesion at Presentation



A 1.5-cm nodule on presentation with visible larval body in central operculum.

Case 2. A man in his 30s presented to the dermatologist with 2 nodules on his back similar to that seen on patient 1. The man had also recently traveled to Uganda. He denied any pain or sensation of movement. On examination, both 1-cm nodules were found to have visible larvae within.

Clinical Resolution of Cases 1 and 2. In preparation for extraction of the larvae, we performed local infiltration of lidocaine, 1%, with 1:100 000 epinephrine at the base of the nodules in both patients. The larva from patient 1 and one of the larva present on patient 2 were expelled by hydraulic pressure alone (Video). The second larva from patient 2 was pushed to the operculum following infiltration and was painlessly extracted with forceps. The larvae were collected for microscopic examination and morphologically identified as second-stage larvae of the African tumbu fly, *C anthropophaga* (Figure 2). All 3 nodules healed without complication.

Figure 2. Fly Larvae on Extraction



Fly larvae identified as *Cordylobia anthropophaga*.

Discussion | Cutaneous furuncular myiasis results from skin invasion by fly larvae of the order Diptera, including the tumbu fly, *Canthrophaga*. Furuncular myiasis is rarely observed outside of endemic areas, which may hamper accurate diagnosis. The tumbu fly is endemic to sub-Saharan Africa and can be identified as a large, brownish-yellow fly with black abdominal spots and brown wings.¹ The adult female fly can lay up to 300 eggs on ground or on wet clothing. The larvae hatch about 2 to 4 days after deposition and can remain dormant for 7 to 20 days until contact with skin occurs, allowing the larvae to burrow into the subdermal layer.² Pain and itching can occur, and after 15 days inside the host, larvae exude from the skin and fall to the ground to pupate.³

Though tumbu fly myiasis is thought to be self-resolving, removal of the larva is indicated to prevent pain or secondary infection. As the tumbu fly lacks the recurved spines typical of other myiasis-causing species,⁴ removal usually involves application of pressure to both sides of the lesion and removal using forceps or a needle.⁵ In our cases, 2 of the larvae were expelled with hydraulic pressure alone. Since the tumbu fly is not endemic to North America, most practitioners trained in the region have little experience with the clinical presentation and management of this larval cutaneous disease.

Eric Dybbro, BS
 Polly Fordyce, PhD
 Maya Ponte, MD, PhD
 Sarah T. Arron, MD, PhD

Author Affiliations: School of Medicine, University of California, San Francisco (Dybbro); Department of Biochemistry and Biophysics, University of California, San Francisco (Fordyce); Department of Dermatology, University of California, San Francisco (Ponte, Arron).

Corresponding Author: Sarah T. Arron, MD, PhD, Dermatology Clinical Research Unit, University of California, San Francisco Dermatologic Surgery and Laser Center, 1701 Divisadero St, Third Floor, PO Box 316, San Francisco, CA 94115-0316 (arrons@derm.ucsf.edu).

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