

Painful Nodules With a Crawling Sensation

Faraz Yousefian, DO; Michael G. Foss, DO; Austin Ambur, DO; Charles Dunn, MD; Rajiv Nathoo, MD



A 20-year-old man presented with progressively enlarging, painful lesions on the arm with a crawling sensation of 3 weeks' duration. The lesions appeared after a recent trip to Brazil where he was hiking in the Amazon. He noted that the pain occurred suddenly and there was some serous drainage from the lesions. He denied any trauma to the area and reported no history of similar eruptions, treatments, or systemic symptoms. Physical examination revealed 2 tender erythematous nodules, each measuring 0.6 cm in diameter, with associated crust and a reported crawling sensation on the posterior aspect of the left arm. No drainage was seen. A punch biopsy was performed.

WHAT'S YOUR DIAGNOSIS?

- a. cutaneous furuncular myiasis
- b. cutaneous larva migrans
- c. gnathostomiasis
- d. loiasis
- e. tungiasis

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Dr. Yousefian is from the Center for Clinical and Cosmetic Research, Aventura, Florida, and the University of Incarnate Word, San Antonio, Texas. Drs. Foss, Ambur, Dunn, and Nathoo are from the Department of Dermatology, Kansas City University Graduate Medical Education Consortium, Missouri, and Advanced Dermatology and Cosmetic Surgery, Orlando, Florida.

The authors report no conflict of interest.

Correspondence: Faraz Yousefian, DO, 2925 Aventura Blvd, Ste 205, Aventura, FL 30180 (yousefian.faraz@gmail.com).

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THE **DIAGNOSIS:**

Cutaneous Furuncular Myiasis

Histopathology of the punch biopsy showed an undulating chitinous exoskeleton and pigmented spines (setae) protruding from the exoskeleton with associated superficial perivascular lymphohistiocytic infiltrates on hematoxylin and eosin stain (Figure 1). Live insect larvae were observed and extracted, which immediately relieved the crawling sensation (Figure 2). Light microscopy of the larva showed a row of hooks surrounding a tapered body with a head attached anteriorly (Figure 3).

Myiasis is a parasitic infestation of the dipterous fly's larvae in the host organ and tissue. There are 5 types of myiasis based on the location of the infestation: wound myiasis occurs with egg infestations on an open wound; furuncular myiasis results from egg placement by penetration of healthy skin by a mosquito vector; plaque myiasis

comprises the placement of eggs on clothing through several maggots and flies; creeping myiasis involves the *Gasterophilus* fly delivering the larva intradermally; and body cavity myiasis may develop in the orbit, nasal cavity, urogenital system, and gastrointestinal tract.¹⁻³

Furuncular myiasis infestation occurs via a complex life cycle in which mosquitoes act as a vector and transfer the eggs to the human or animal host.¹⁻³ Botfly larvae then penetrate the skin and reside within the subdermis to mature. Adults then emerge after 1 month to repeat the cycle.¹ *Dermatobia hominis* and *Cordylobia anthropophaga* are the most common causes of furuncular myiasis.^{2,3} Furuncular myiasis commonly presents in travelers that are returning

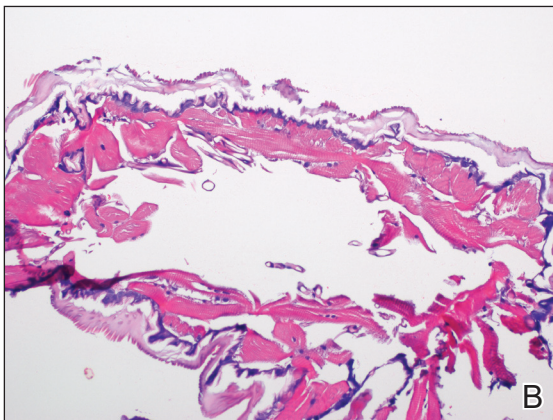
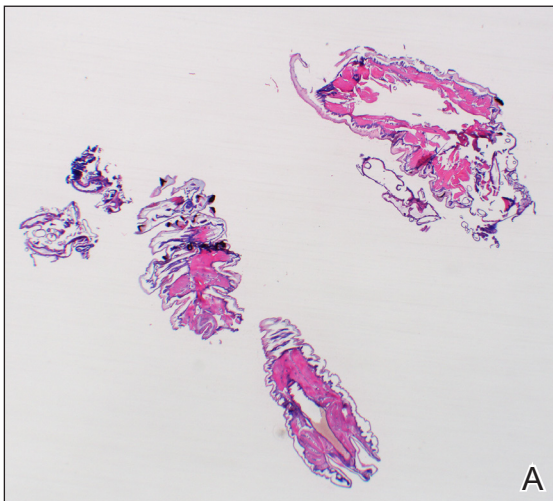


FIGURE 1. A and B, Histopathology showed an undulating chitinous exoskeleton and pigmented spines (setae) protruding from exoskeleton with associated superficial perivascular lymphohistiocytic infiltrates (H&E, original magnifications $\times 4$ and $\times 40$).



FIGURE 2. An insect larva was extracted from a lesion on the arm, which immediately relieved the crawling sensation experienced by the patient, characteristic of furuncular myiasis.



FIGURE 3. Light microscopy of the larva showed a row of hooks surrounding a tapered body with a head attached anteriorly (original magnification $\times 40$).

from tropical countries. Initially, an itching erythematous papule develops. After the larvae mature, they can appear as boil-like lesions with a small central punctum.¹⁻³ Dermoscopy can be utilized for visualization of different larvae anatomy such as a furuncularlike lesion, spines, and posterior breathing spiracle from the central punctum.⁴

Our patient's recent travel to the Amazon in Brazil, clinical history, and histopathologic findings ruled out other differential diagnoses such as cutaneous larva migrans, gnathostomiasis, loiasis, and tungiasis.

Treatment is curative with the extraction of the intact larva from the nodule. Localized skin anesthetic injection

can be used to bulge the larva outward for easier extraction. A single dose of ivermectin 15 mg can treat the parasitic infestation of myiasis.¹⁻³

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