



Can you identify this condition?

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A previously healthy adolescent presented with an intermittently painful lesion on the left ear. She had had the lesion for 2 months, beginning at the end of a 1-week trip to Honduras, where she stayed at a 4-star hotel. She had been treated unsuccessfully with topical antibacterial ointments, and 2 successive courses of oral second-generation cephalosporin antibiotics were prescribed. Examination of the reddish, mobile, 0.5-cm lesion showed a mildly tender, soft mass in front of her ear.

The most likely diagnosis is

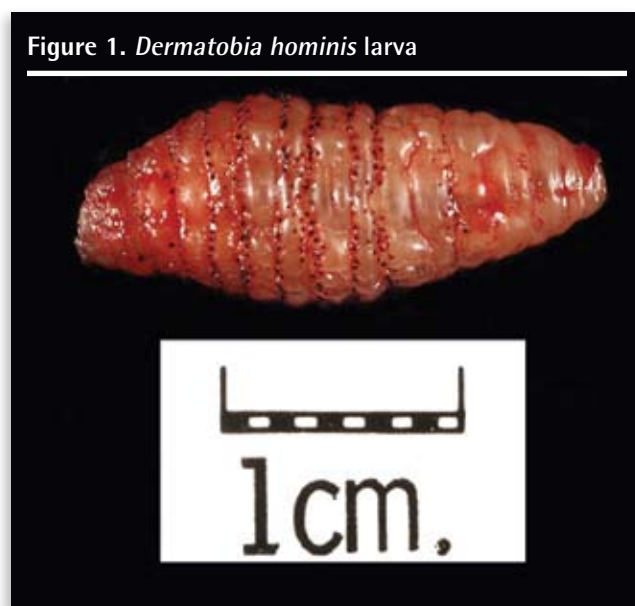
1. Cutaneous leishmaniasis
2. Folliculitis due to skin flora
3. *Dermatobia hominis* infestation
4. Furuncle due to *Staphylococcus aureus*

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3. *Dermatobia hominis* infestation

Following antiseptic preparation of the site, a single incision was made in the lesion. A larva wriggled onto the skin; it was later identified as *Dermatobia hominis* or human botfly (Figure 1).



Myiasis is the infestation of living human tissue by fly larvae. *Dermatobia hominis* infestation is the most common localized myiasis in tropical America.¹ In a North American clinic review, myiasis was the fourth most common skin disease associated with international travel.² *Dermatobia hominis* is an obligate parasite that affects cattle, humans, and other mammals. The female uses host-visiting carrier (phoretic) insects as mechanical vectors to carry the eggs to susceptible hosts. When the carrier insect feeds on a host, eggs are deposited and hatch with the rise in ambient temperature. The larvae enter the host via the hair follicle or the insect's bite wound. As the larvae develop in the skin, a boil-like, painful lesion usually develops. The larvae feed and grow to adulthood, breathing through the opening in the skin and discharging feces through it. The natural history in a tropical climate would be for the larvae to then leave the cavity, fall to the ground, and pupate in the soil.

The differential diagnosis for a painful cutaneous swelling and inflammation of the skin in an international traveler would include bacterial infection, such as folliculitis or a furuncle, myiasis, and tungiasis.³ Tungiasis is an infestation by the burrowing flea *Tunga penetrans*,

which more commonly occurs on the foot. Cutaneous leishmaniasis lesions in their early stages should be considered, although these are usually not painful. The failure of topical and systemic antibiotics in this case are clues that the inflammatory lesion is not of bacterial origin. Some patients report a "crawling" or moving sensation in the lesion, but this was not reported by our patient. As well, a punctate lesion might be visible at the centre of the papule, through which the larva can be seen.

Treatment of cutaneous myiasis consists of removal of the larvae by one of a variety of methods.⁴ Occlusion of the skin opening with petroleum causes anoxia and the larvae can be extracted with tweezers. Lidocaine can be injected locally and the larvae squeezed or pushed out manually. In cases where the larva is large, surgical excision is necessary. Removal with a venom extractor is preferred by some.⁵

Insect bite prevention, including use of repellents and wearing tightly woven clothing to cover exposed skin, might prevent infestation.

Family physicians will be most likely to see returning travelers with cutaneous lesions. Recognition that painful papules or nodular lesions could be infestation with fly larvae might prevent unnecessary investigations and treatment with antibiotics. ❁

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Competing interests

None declared

References

1. White G. Flies causing myiasis. In: Cook G, Zumla A, editors. *Manson's tropical diseases*. London, Engl: WB Saunders; 1996. p. 1661-3.
2. Caumes E, Carriere J, Guermonprez G, Bricaire F, Danis M, Gentilini M. Dermatoses associated with travel to tropical countries: a prospective study of the diagnosis and management of 269 patients presenting to a tropical disease unit. *Clin Infect Dis* 1995;20(3):542-8.
3. Ryan ET, Wilson ME, Kain KC. Illness after international travel. *N Engl J Med* 2002;347(7):505-16.
4. Tamir J, Haik J, Orenstein A, Schwartz E. *Dermatobia hominis* myiasis among travelers returning from South America. *J Am Acad Dermatol* 2003;48(4):630-2.
5. Boggild AK, Keystone JS, Kain KC. Furuncular myiasis: a simple and rapid method for extraction of intact *Dermatobia hominis* larvae. *Clin Infect Dis* 2002;35(3):336-8. Available from: <http://www.journals.uchicago.edu/CID/journal/issues/v35n3/011565/011565.web.pdf>. Accessed 2007 Mar 15.

