Botfly Infestation (**Dermatobia hominis**)

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A 61-year-old woman noted pruritic lesions on her back, proximal right thigh, and in her left supraclavicular area about 2 weeks after returning from a 10-day vacation in Belize, which included 4 days of snorkeling in the ocean (no freshwater exposure) and 6 days of jungle hiking. She was well during the trip, taking mefloquine for malaria prophylaxis, applying diethyltoluamide, and wearing long-sleeved shirts and pants while in the jungle, although she would change to shorts at night while indoors. She could not recall mosquito, tick, or fly bites.

Three weeks later, the ‘bites’ had enlarged to 10 cm in diameter and were raised, warm, and red. She noted that the lesions were often draining clear liquid or blood, although she made an effort not to scratch them. At times, she described a hole forming in them “like a clam under the sand,” which would then disappear, but she did not describe a sensation of any movement within the lesions. Of note, several companions who were also on the trip had similar lesions. The lesions were drained, and she was given antibiotics for 5 days. With continued drainage and pruritis, she was referred for surgical excision.

Other than biting and acting as vectors of disease, flies may affect humans by causing myiasis, infestation of the skin or a body orifice with fly larvae of Diptera species, which include the human botfly (**Dermatobia hominis**). These flies are acquired during travel to an endemic area. The female botfly attaches her eggs to the abdomen of a biting arthropod as a mechanical vector. The eggs hatch, and the first-stage larvae burrow into the skin through the insect bite, a hair follicle, or other wound. The larva does not migrate, but spends between 4 and 14 weeks in the skin developing into a third-stage larva or instar, which can measure 2 cm or more in length (see Figures 1 through 3). The larva then emerges to pupate in the soil.

Lesions may resemble insect bites, allergic reactions, herpes virus infection, molluscum contagiosum lesions, or bites of the mite *Sarcoptes scabiei*. As the lesions enlarge, they may resemble a cellulitis, pyogenic furuncle, or an infected sebaceous cyst. Before removal, pork fat or bacon classically has been used to encourage migration of the larvae out of the infected site, but petroleum jelly may be applied over the skin opening, causing the larvae to migrate to the surface seeking air.

Diagnosis depends on examination of the larvae, which is facilitated by a dissecting microscope (Figure 1, the actual length of this larvae is 1.5 cm). The anterior end possesses 2 curved oral hooks, which extend and retract, grasping and tearing host tissues on which the botfly larva feeds (Figure 2). Larvae anchor themselves in the skin using a number of parallel concentric rows of posteriorly pointing spines on their body, as well as by having a wider anterior end than posterior end (Figure 3).