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Case Study - Deep Cutaneous Mass Excision Reveals an Unusual Finding

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INTRODUCTION

The following is a case presentation of a 62-year-old male who presented to the emergency department complaining of a mass in his right hand which began 14 days prior to evaluation. The mass was located in the proximity of the multiple neurovascular structures; therefore, surgical excision in the operating room was required.

The patient's pathological findings revealed a thick-walled, smooth surfaced cyst consistent with a bot fly larva (Dermatobia hominis) enclosed in an exoskeleton casing, rendering the diagnosis furuncular myiasis. Because areas of cutaneous myiasis are frequently misdiagnosed as pyogenic infection, it is important that the clinician maintains bot fly larvae in their differential diagnosis for a boil-type lesion in a patient that has visited the American tropics.[2] It is imperative that providers consider surgical consultation in cases of suspected cutaneous myiasis due to the likelihood of complex anatomical structural involvement or unforeseen difficulty in removal when the larva is located subdermally with fascial encasement.

Case Presentation

A 62 year-old male patient presented to the emergency department complaining of a mass in his right hand which began approximately 14 days prior. The patient experienced associated symptoms of increased pain, purities, and hand "fullness." His history was positive for travel to Central America.

While there, the patient worked with cattle and was "bitten by a cow fly." Immediately following the bite, the patient noticed local inflammation consistent with a non-allergic type insect bite. Over time, a localized cystic mass formed, prompting the patient's visit to the emergency department. A surgical consult was placed because the mass was immobile and appeared to lie deep beneath the dermis.

After obtaining consent and discussing the risks and benefits of the procedure, the patient was taken to the operating room, draped and prepared using sterile technique, and given a local anesthetic. An image of the subcutaneous, cystic mass excised from his right hand is shown in Figure 1.

Figure 1: Right hand excised cystic mass.
photo by Dr. Rosenthal

This small mass was thick-walled and situated deep beneath the dermis covered by fascia (Figure 2). The pathological findings revealed a bot fly larva (*Dermatobia hominis*) enclosed in an exoskeleton casing, rendering the diagnosis furuncular myiasis.

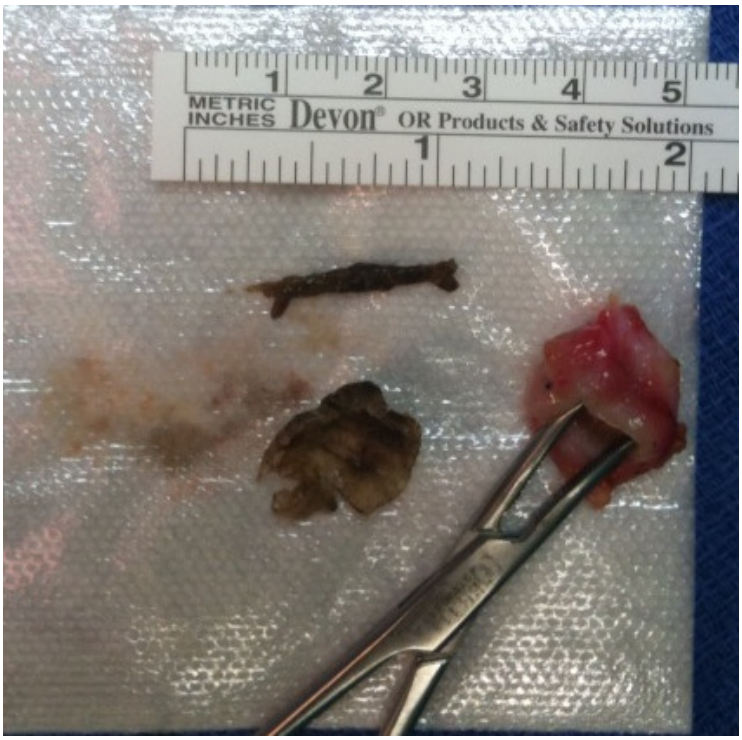

Figure 2: Open cystic tissue, exoskeleton and larva from the right hand.
photo by Dr. Rosenthal

Discussion

The term "bot fly" describes flies which cause furuncular and migratory myiasis. The larvae of the botfly, found primarily in the American tropics, penetrate the skin of hosts by attaching their eggs to the host while acquiring a blood meal.[1] Areas of cutaneous myiasis are frequently misdiagnosed as pyogenic infection; therefore, it is important that bot fly larvae remain in the

differential diagnosis for a boil-type lesion in patients who have visited the American tropics.[2] Ultrasonography can be helpful if the diagnosis remains in question.[3] Treatment requires mechanical removal via tweezers or by excision. However, the location and depth in this case made excision via tweezers or manual expression impossible. The growing number of people traveling to and from South and Central America increases the likelihood that patients with myiasis will present for treatment. Healthcare professionals should consider surgical consultation in cases of suspected cutaneous myiasis due to the risk of complex anatomical structural involvement or unforeseen difficulty in removal.

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