

Expert Offers Tips to Squash Creepy Parasites

BY KERRI WACHTER

BALTIMORE — Parasite infections may not be one of the more common conditions treated by dermatologists, but the creepiness factor makes them stand out, judging from the series of anecdotes and advice presented by Dr. Dirk Elston.

"If you're not squirming by the end of this lecture, I have not done my job," joked Dr. Elston, at the Atlantic Dermatological Conference.

Dr. Elston, director of the dermatology department at Geisinger Medical Center in Danville, Pa., provided helpful tips and more than a few gross-out moments during his presentation on onchocercosis.



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ma, *Sparganum proliferum*, cutaneous larva migrans, myiasis, *Amblyomma americanum*, and lice and scabies.

Onchocercosis

An onchocercosis is a dermal or subdermal ball of writhing worms (*Onchocerca*), for which humans are the definitive host. *Dirofilaria* (heartworms) should be included in the differential diagnosis for onchocercosis, said Dr. Elston. However, humans are an accidental host for *Dirofilaria*.

"You develop a rip-roaring immune response to *Dirofilaria* in the form of an abscess, which you don't see with *Onchocerca*." It is possible to tell the two apart on histology. *Dirofilaria* is very muscular on histology, while *Onchocerca* has no muscle tone. In addition, *Dirofilaria* has a distinct ridge pattern on histology.

Sparganum proliferum

Dr. Elston described the case of a man, who was involved in a motorcycle accident years earlier. The local farmers had

treated him with a meat poultice, which apparently contained a tapeworm (*S. proliferum*) that migrated into his body. He presented 40 years later with a multilocular cyst that contained the live tapeworm, when excised.

S. proliferum has all the features of a cestode: an intact secretory tegument, subtegumental cells, and smooth muscle cells. Many types of cestodes can live for many years and can reproduce asexually.

Cutaneous Larva Migrans

Cutaneous larva migrans (caused by worms) manifests as an erythematous, serpiginous, pruritic, cutaneous eruption caused by accidental percutaneous penetration.

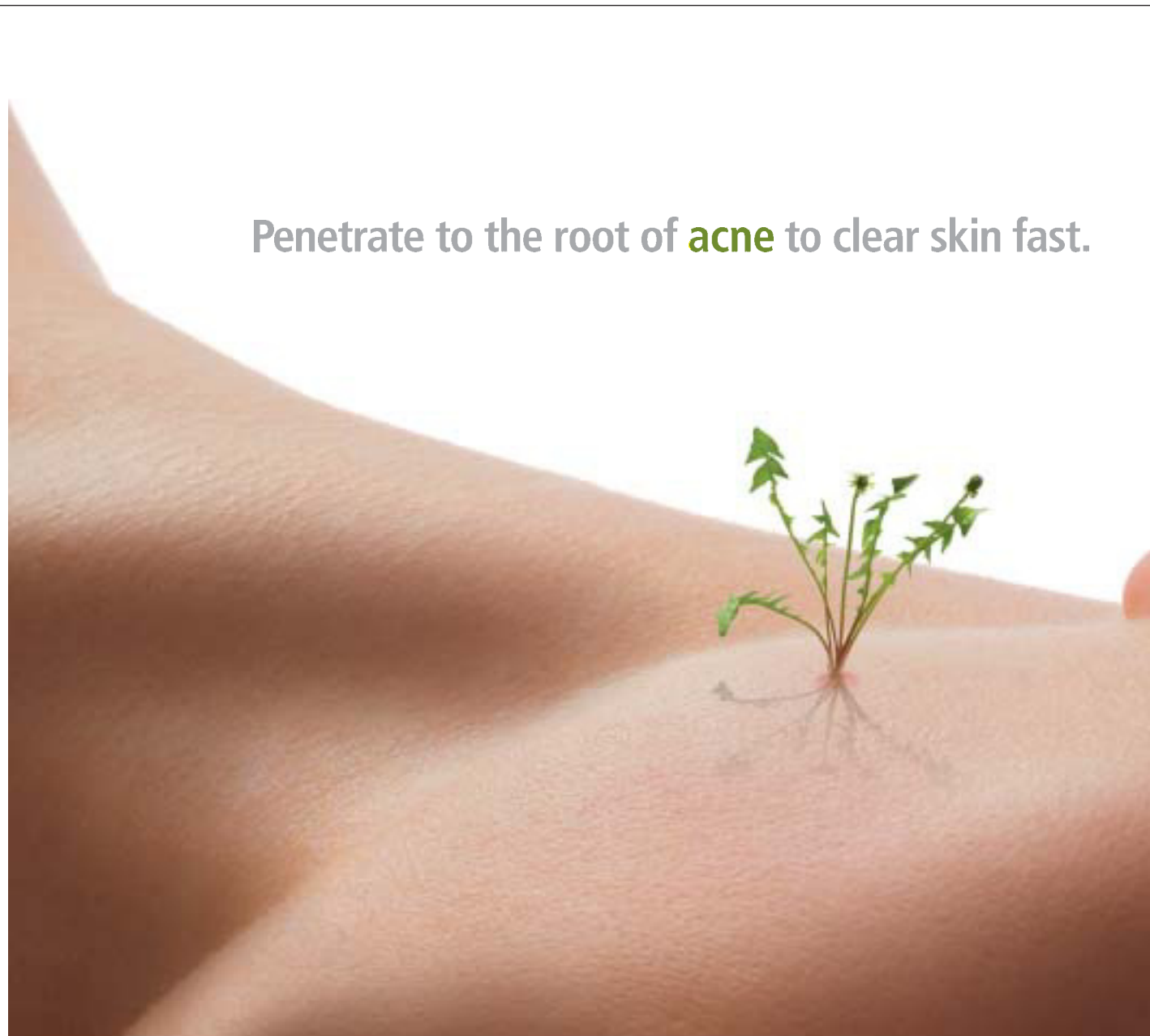
"The trick is finding the worm, which can be anywhere within a centimeter [of the eruption]," said Dr. Elston. However, "nowadays, we tend to use ivermectin orally, off label." This systemic

treatment does not require finding the worm.

Myiasis

Myiasis is infestation by the larvae (maggots) of dipterous (two-winged) flies and occurs most frequently in tropical climates. Dr. Elston related a story about an excised cyst. The patient had returned to the surgeon with wound infection and dehiscence, and "as he was injecting the

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The exit site wound of a patient with a myiasis infestation is shown. The warble fly is the most common cause.



SEPPÄNEN M, ET AL. MYIASIS DURING VISIT TO THE SOUTH PACIFIC ISLANDS IN 2004. INFECT DIS SEMINAR. 2004; 27(10):1001-1004. HTTP://WWW.CDC.GOV/NCIDOD/EID/VOL10NO1/02-0825.HTM

wound . . . something shot out of it.” Standard treatment of myiasis is to cover the site with occlusive dressing to

force the larvae out. “In this case, because there was secondary infection, we had to go in and clean it up,” he said. The patient’s infestation involved the warble fly (*Derma-
tobia hominis*), the most common cause. “The warble is the furuncle; the bot is the organism in it,” Dr. Elston noted.

Amblyomma americanum

A. americanum, the lone star tick, is “taking over the United States. Their range is now way up into the upper Midwest and through the Eastern seaboard. . . They are becoming a very well-adapted tick,” said Dr. Elston.

“They tend to attach in very, very large numbers,” he noted. There are anecdotal stories of people crouching in the overgrown areas of Texas and having 2,000-3,000 ticks removed.

“*Amblyomma* likes the lower half of the body . . . and they carry Rocky Mountain spotted fever, tularemia, and hu-

man granulocytic ehrlichiosis,” Dr. Elston said. These ticks are very small. “It’s not until they start to engorge that people realize that they’re ticks because they’re so small that you don’t even see them.”

Patients with *Amblyomma* infection often present for generalized pruritus, but *Amblyomma* can be identified on histology, even when the tick has disintegrated. “There’s this cement that retains the



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Lone star ticks are small in size, attach in large numbers, and carry disease.

shape of the mouth; sometimes you’ll see just that in the tissue,” said Dr. Elston. This mouth-shaped cement is diagnostic. The infiltrate is characteristic with CD30-positive lymphocytes.

Lice and Scabies

Pubic lice can occur anywhere on the body, including the eyelashes. “So if you see lice or nits on the eyelashes, don’t look north for the source of the infestation. Look south,” said Dr. Elston.

With head lice, parents and teachers sometimes find hair casts and assume they have found nits. “There are kids who get sent home numerous times because of ‘no-nit’ policies at schools, who never had lice. They’ve got hair casts.” This may lead to unnecessary overexposure to permethrin, which has been associated with childhood leukemia.

“Body lice are important internationally because they are vectors for disease,” Dr. Elston noted. On histology, chitin scrolls (pigtales) are diagnostic of scabies.

Unfortunately, “there are sheets of Langerhans cells in the tissue induced by scabies,” which have led to incorrect diagnosis and chemotherapy of children for Langerhans histiocytosis, said Dr. Elston at the meeting.

Dr. Elston said he had no relevant financial relationships. ■



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A papular, pruritic rash is commonly seen with scabies infection, as on the foot of this baby.