

## CLINICAL IMAGES

### Common Bite—Bizarre Rash

A 21-year-old man with no significant medical history presented to a travel medicine clinic with an itchy rash. Both anterior thighs were itchy, red, warm, and swollen.

There was a large bulla on the anterior aspect of the left thigh. He had been bitten by mosquitoes on both thighs less than 24 h previously. What is your diagnosis?



**Figure.** Erythema with clear margins and swelling over both thighs. Large bulla on the anterior left thigh. Photograph by Simant Thapa, MD, DiMM.

**Answer****SKEETER SYNDROME**

The patient had arrived in Nepal from the United States 1 day previously. On the day before presentation, he visited Chitwan National Park in the tropical region of Nepal. He was bitten by mosquitoes soon after reaching the National Park camp in the evening. He had been wearing shorts and had not used insect repellent. Most of the mosquito bites were on his lower extremities. About 1 to 2 h after being bitten, he noticed itching, redness, warmth, and swelling of his anterior thighs (Figure). The rash rapidly progressed over the next 8 to 10 h, becoming a severe local reaction with formation of a large bulla on the left anterior thigh. We treated him with oral antihistamines and topical steroid cream. He had complete resolution of the rash in about 2 weeks.

Skeeter syndrome is an allergic reaction to the polypeptides in the saliva of the mosquito. It presents as a large local inflammatory reaction that clinically resembles cellulitis.<sup>1</sup> The rash is red, itchy, and warm. Swelling begins within hours of being bitten. Itchy papules, vesicles, and bullae appear 8 to 12 h later and may persist for days.<sup>2</sup> Both immunoglobulin E and immunoglobulin G appear to play an important role in the pathogenesis of allergy to mosquito bites.<sup>3</sup> An early rise in immunoglobulin E and immunoglobulin G has been seen in prospective monitoring of natural sensitization and desensitization to mosquito bites.<sup>4</sup>

The saliva of different species of mosquito may contain slightly different polypeptide enzymes.<sup>3</sup> An individual may be allergic to a specific species of mosquito while showing little or no reaction to the bites of other species. This might explain why an individual who has no history of mosquito allergies might develop a severe reaction to mosquito bites when traveling to another country.

It can be difficult to distinguish allergic inflammation caused by mosquito bites from cellulitis due to a secondary bacterial infection. It is important to obtain a careful history of the time of onset of the local

inflammatory reaction after a witnessed or presumed mosquito bite.<sup>1,2</sup> Identification of Skeeter syndrome may avoid unnecessary diagnostic procedures and antibiotic treatment.

Treatment consists of oral antihistamines and topical steroid cream. In severe allergic reactions, oral steroids may be necessary. Useful preventive measures include avoiding mosquito bites, wearing long sleeves and long pants in mosquito-prone areas, and using insect repellent.<sup>2,5</sup>

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Simant Singh Thapa, MD, DiMM  
*Department of Internal Medicine, Saint Vincent  
 Hospital, University of Massachusetts Medical School  
 Worcester, MA*

Buddha Basnyat, MD, Msc, FACP, FRCP  
*Nepal International Clinic, Travel and Mountain  
 Medicine Center, Kathmandu, Nepal; Oxford University  
 Clinical Research Unit–Nepal; and Centre for  
 Tropical Medicine and Global Health, University of  
 Oxford, UK*

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