period of time. Future studies will examine the efficacy of the ABC intervention on reducing the number of sunburns experienced by patients.

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Observation

**Cydnidae (Burrowing Bug) Pigmentation: A Novel Arthropod Dermatosis**

Insects can cause a variety of dermatologic problems usually presenting with inflammatory skin lesions. Cydnidae insects (family, Cydnidae; order, Hemiptera; suborder, Heteroptera; superfamily, Pentatomoidea), also known as burrowing (or burrower) bugs, are uncommon in urban areas and usually considered harmless to humans, though there have been anecdotal reports of the development of inflammatory plaques with stink bugs (also in the Pentatomoidea superfamily).

**Report of Cases | Case 1.** In the monsoon season, a preschool child presented with asymptomatic brown macules that had appeared suddenly on the soles of both feet (Figure 1). The spots were noted after the child visited a Hindu temple where, as required by custom, he walked barefoot. His mother, who accompanied him to the temple, had similar macules on her feet. Numerous small insects were found on the floor of the temple, and the priest who lived in the temple premises had similar lesions.

Case 2. An elementary school student developed asymptomatic small brown macules on the neck and chest after visiting a neighborhood grocery shop in the rainy season. Most of the macules were round or oval, and some also showed a streaky pattern. Many shop workers had similar spots on their skin. There were numerous winged, low-flying insects in the shop and the adjoining greenery.

**Figure 1. Burrowing Bug (Cydnidae) Pigmentation in a Child**

Brown macules of varying shapes and sizes on the soles.
Case 3. During the monsoon season, a man in his 20s presented with well-defined brown macules on both feet that had appeared suddenly after he visited a neighborhood temple located in the middle of a park. At the temple were found insects in large numbers.

Experimental Case. About 50 to 60 live insects were collected from the grocery store and temples associated with the cases reported herein. One of us (A.K.M.) pressed an insect firmly between the thumb and index finger of the right hand for 60 seconds. About 1 or 2 minutes after releasing the bug, red-brown pigmented macules were observed at the site of contact. Similar lesions were reproduced by rubbing an insect on the forearm. As lesions grew older, they turned a more uniform dark brown. It was difficult to wash off the pigment with soap and water. However, it could be rubbed off (with some effort) using acetone. Left alone, the pigment gradually and completely faded over 5 to 6 days.

Insects preserved in 70% alcohol were identified by the one of us (J.A.L.) as Chilocoris assmuthi Breddin, 1904, representing the family Cydnidae (Figure 2).

Discussion | The causal association between the clinical lesion and the insect was established by self-induction of lesions on the thumb and forearm. These induced lesions had an appearance and evolution identical to that seen in patients presenting with the condition, providing strong evidence for Cydnidae being the cause.

Cydnidae generally live in soil or sand and feed on roots or other underground parts of plants.1,2 They produce an odorous substance from special glands for self-defense, as do other true insects. These glands are found in the thorax in adult Pentatomoidea insects and in the lateral part of the abdomen in nymphs.1,2

The secretion, which is expressed actively or can be squeezed out by pressure on the insect, is a poorly studied mixture of hydrocarbons and other derivatives that function as a repellent and can cause paralysis in prey, act as a danger signal, help in attracting mates, and have antimicrobial activity.3-5

Pentatomoidea are usually considered harmless, but we found 2 reports of erythematous plaques due to Antiteuchus mixtus and Edessa maculata.6 To our knowledge, pigmentation as seen in our cases has not been previously described.

The sudden development of small pigmented macules can be mystifying. In some cases, spots are mistaken for the petechiae of dengue, which also occurs during the rainy season. Older lesions may resemble lentigines. Clues to the diagnosis include the suddenness with which the spots appear, their occurrence in rainy weather, and the shape of some macules, which appear stanky or show tapering edges.

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