

Dermscopy of Cydnidae Pigmentation: A Novel Disorder of Pigmentation

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Introduction

The wide spectrum of insect-induced cutaneous manifestations ranges from localized irritant contact dermatitis to life-threatening anaphylactic reaction, with morphology and severity being dependent on the involved subset of insects. Burrowing bugs have generally been considered harmless to humans, excepting anecdotal reports of inflammatory plaques [1]. Recently, a peculiar pattern of tiny pigmented macules caused by Cydnidae insects was described [1]. In this case report, the clinico-dermoscopic features of such pigmentation encountered in an adult Indian woman.

Case Presentation

A 42-year-old woman, head chef of a restaurant centered in a heavily vegetated pasture, presented with an asymptomatic cluster of tiny brown macules in a streaky pattern over the dorsomedial aspect of the left forefoot (Figure 1A) that had developed 1 week previously, during the monsoon season in North India. Her workplace dress included the chef hat, long polythene gloves for hands and forearms, and perforated rubber clogs as footwear. Her coworkers admitted develop-

ing similar evanescent lesions over the forearms. The patient admitted having observed a few winged, low-flying insects in her kitchen that became more noticeable with the onset of the monsoons. Dermoscopy revealed a healthy pink background with a cluster of numerous oval to bizarre-shaped shiny brown globules, clods, and a few granules that demonstrated a superficial “stuck-on” appearance (Figure 1B).

After firmly rubbing with acetone, the lesions nearly disappeared clinically (Figure 2A), and dermoscopy revealed that the majority of pigmented structures had disappeared with only a few residual globules and clods (Figure 2B).

Suspecting pigmentation due to insects of Cydnidae family, the author procured 2-3 insects from the restaurant that a medical entomologist confirmed to be *Chilocoris assmuthi Breddin, 1904*. A final diagnosis of Cydnidae pigmentation (CP) was made.

Conclusions

To the author’s knowledge, this is the second report of CP and the first to show dermoscopic features. As recently described in 3 index cases by Malhotra et al [1], CP presents with superficial staining of the human skin produced

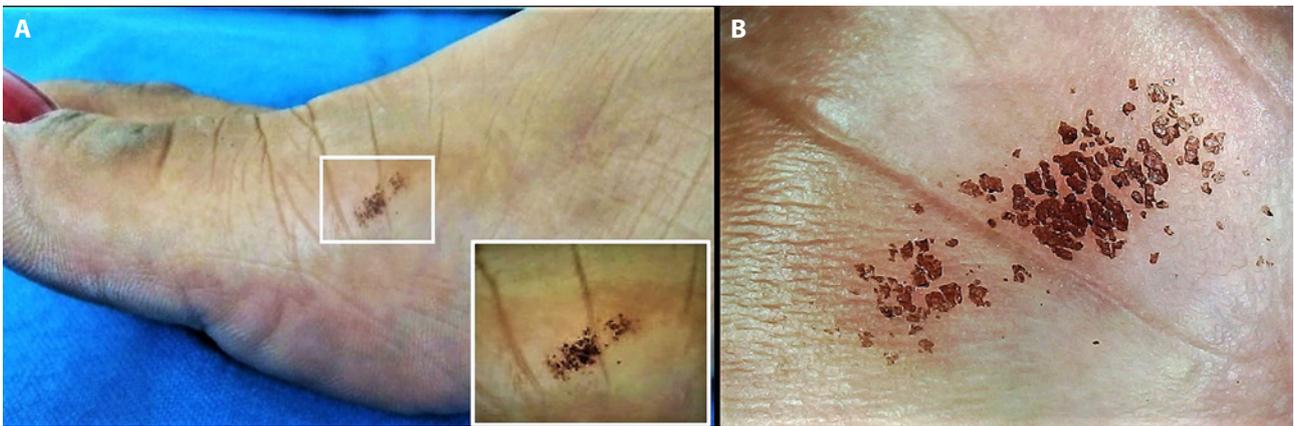


Figure 1. CP in a 42-year-old chef: (A) over the medial aspect of right foot, with the inset showing close-up view of the pigmented macules with streaky and bizarre margins; and (B) dermoscopy revealing healthy pink background with a cluster of numerous oval to bizarre-shaped shiny brown globules, clods, and a few granules. The pigmented structures have a superficial “stuck-on” appearance (Escope Videodermoscope, polarized, $\times 20$). [Copyright: ©2019 Sonthalia.]

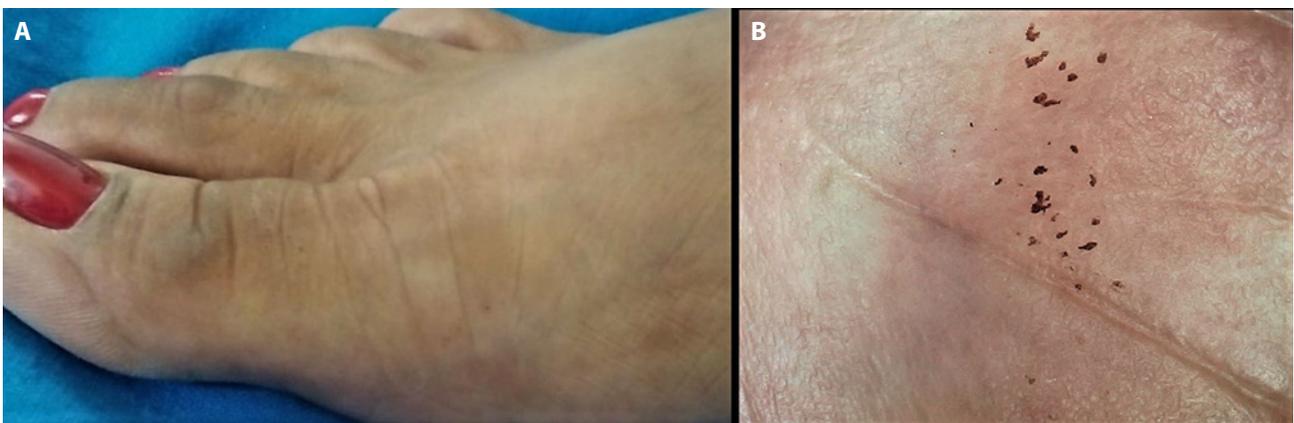


Figure 2. After forceful manual swabbing with acetone-soaked gauze: (A) the pigmentation seems to have been almost completely “rubbed off”; and (B) dermoscopy revealing disappearance of the majority of pigmented structures with only a few residual globules and clods (Escope Videodermoscope, polarized, $\times 20$). [Copyright: ©2019 Sonthalia.]

by secretions of the burrowing bug *Chilocoris* spp (family, Cydnidae; order, Hemiptera; suborder, Heteroptera; superfamily, Pentatomoidea). The species implicated in the first report and in this case was the same: *Chilocoris assmuthi* Breddin, 1904 [1]. Although the natural habitat of Cydnidae is soil or sand [2], these insects are often seen in vegetation-rich areas and adjoining human dwellings with an apparent tendency to proliferate in rainy season. Essentially harmless to humans, their odorous secretions can stain the human skin, producing oval to bizarre pigmented lesions, especially over exposed areas. The patient developed the clustered Cydnidae pigmented macules over a small area of her left foot left exposed by a window in her footwear at that site.

Maturation of lesions over time leads to darkening of pigmentation. Curiously, these macules can be rubbed off with acetone, but not with soap and water. If untouched, the pigment reportedly fades away over a week [1].

The abrupt appearance of asymptomatic pigmented macules can be perplexing. Although dermatitis neglecta, postinflammatory hyperpigmentation following viral exanthems, lentigines, and pigmented purpuric dermatoses constitute differentials, the clinical clues for suspicion of CP in this case were abrupt onset, rainy season, involvement of exposed area, lesions affecting workplace contacts, bizarre and streaky configuration of macules, and removal with acetone swab. Dermoscopy may confirm the diagnosis with the cluster of oval to bizarre-shaped brown and shiny globules and clods with a superficial “stuck on” appearance.

References

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