

# Recurrent asymptomatic reddish-brown pigmented macules on the palms

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Sir,

An encounter with arthropods or exposure to their remains may cause a spectrum of cutaneous manifestations in humans that range in severity from benign asymptomatic lesions to life-threatening anaphylactic reactions. The morphology of such cutaneous lesions may vary from several-millimeter asymptomatic macules to widespread irritant contact dermatitis, depending upon the type of the insect involved and the severity of the hypersensitivity reaction [1,2]. In recent times, a peculiar form of pigmentation on acral parts, known as Cydidae pigmentation, has been described in the literature [1,3]. In this article, the author reports a case of recurrent asymptomatic reddish-brown pigmented macules on the palms of a furniture retailer male. Despite meticulous history taking, examination, and laboratory work-up, a definitive diagnosis was not established. However, clinical examination and dermoscopy were in favor of Cydidae pigmentation.

A 34-year-old male, furniture retailer by occupation, visited our dermatology clinic with a history of the recurrent appearance of asymptomatic, reddish-brown pigmented lesions on his palms. There was no history of fever, rash in any other body part, joint pain, or trauma. There was no history suggestive of exposure to dyes and external chemicals. He denied any history of attending gatherings. On examination, there were multiple well-circumscribed, irregularly shaped, dark brownish-red colored macules variable in size ranging from 2 to 5 mm, present on the palmar aspects of the fingers of both hands (Figs. 1a and 1b). However, on the palmar aspect of the right index finger, there was a linear streak of pigment reaching a length of almost 25 mm (2.5 cm). The macules



**Figure 1:** a) Multiple irregularly-shaped, dark brownish-red colored macules on the palms; b) Close-up view of irregular streaky brownish macules; c) Dermoscopy showing a background of pinkish-orange hue with orange globules, clods, blotches, and granules having a stuck-on appearance in some places while scattered in other places. Also, several blotches having feathery margins; d) Pinkish-orange hue with orange globules, clods, blotches, and granules with a stuck-on appearance as well as scattered peripherally. Similar pattern yet nearly resolved lesions. (Hand-held contact dermoscope DermLite DL4 4<sup>th</sup> generation).

had feathery and irregular borders. The lesions could neither be wiped off with soap water nor with 70% isopropyl alcohol. However, a trial with acetone was not done due to unavailability in the clinic. A review of the systems was non-contributory. The examination of the hair, nails, mucosae, and soles was unremarkable. Contact dermoscopy with a hand-held dermoscope (DermLite DL4 4<sup>th</sup> generation) showed a background of pinkish-orange hue with orange globules, clods, blotches, and granules having a stuck-on appearance in some places while scattered in other places. Also, there were some

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blotches having feathery margins (Figs. 1c and 1d). Routine laboratory tests were unremarkable. These lesions disappeared spontaneously by two weeks. The patient had a similar episode several months back, which resolved on its own. Despite thorough history taking, clinical examination, and laboratory work-up, a definitive diagnosis was not established. However, because of the transient nature of the lesions; being asymptomatic; irregularly shaped, dark brownish-red colored macules; characteristic dermoscopic findings; self-limiting character of lesions, and the absence of alternative diagnosis, a probable diagnosis of Cydnidae pigmentation was made. The patient was explained the self-limiting nature of the condition.

The *Cydnidae* (kingdom: *Animalia*; phylum: *Arthropoda*; class: *Insecta*; order: *Hemiptera*; suborder: *Heteroptera*; superfamily: *Pentatomoidea*; family: *Cydnidae*; subfamily: *Cydninae*; tribus: *Cydnini*; genus: *Chilocoris*) are the arthropods belonging to the *Pentatomoidea* superfamily (having a pair of five-segmented antennae) and comprise more than 750 species [1,4]. They are usually called *burrowing bugs* or *burrower bugs* because they burrow in the soil and sand to feed on the underground parts of plants and usually breed during the rainy season. However, some live above the ground and feed on plants and seeds. They are known to produce a malodorous chemical secreted by special glands found in the thorax of adult insects and the abdomen in nymphs. This malodorous substance is used as part of self-defense and is the cause of the pigmentation [5]. The pigmentation is unaccompanied by any signs of inflammation, such as pain, swelling, erythema, and *functio laesa*. The lesions usually involve acral sites such as the hands and feet. However, uncommon sites such as the back and neck have been reported. These lesions may be rubbed off with difficulty using acetone, yet not with soap and water [2,6]. The secretion causing pigmentation is a mixture of hydrocarbonates and other substances, which serve several functions: as repellent, inducing paralysis in the prey, as self-defense, for attracting mates, signaling danger, having antimicrobial activity, etc. [3,6]. However, these insects are usually considered harmless. The dermatologically important species, *Chilocoris assmuthi*, has been reported to produce brownish lesions on the skin with its defensive secretions [1].

Dermoscopy is a valuable tool in evaluating several pigmented dermatological conditions and, thus, may

help in evaluating a case of Cydnidae pigmentation by yielding certain dermoscopic features. The dermoscopic features of Cydnidae pigmentation that have been reported in the literature include oval to bizarre-shaped shiny-brown globules, clods with a superficial stuck-on appearance, homogeneous black-colored areas, brownish-orange pigmentation with darker irregular streaks, a rhomboidal pattern of pigment accentuation, parallel furrows with feathering resembling a frayed rope, and blackish-orange follicular openings and pigment accentuation around sweat pores [2,6,7]. The dermoscopic features in our case were consistent with previously reported cases.

Cydnidae pigmentation is a relatively common entity yet remains an under-reported entity due to its transient nature. Such pigmentation may be a source of anxiety among the patients. Hence, awareness among dermatologists about this self-limiting condition is imperative. It may be mistaken for several other conditions. The differential diagnosis of Cydnidae pigmentation includes acral lentiginos, Laugier–Hunziker syndrome, Peutz–Jeghers syndrome, junctional melanocytic nevi, resolving petechiae, tinea nigra, acral melanoma, dermatitis neglecta, post-inflammatory hyperpigmentation, and pigmented purpuric dermatoses [1,3,6].

The sudden onset of asymptomatic pigmented macules may be distressing. However, the pointers that aid in the diagnosis of this pigmentation is a detailed history of asymptomatic brownish macules of sudden-onset with a size of several millimeters with streaky or tapering edges usually occurring on the acral parts, with dermoscopy findings of oval to bizarre-shaped brown shiny globules and clods having a stuck-on appearance as well as a spontaneous resolution of the lesions in 1–2 weeks.

The limitation in this case was that the presence of the causative insect was not established. We need to understand that such cases have not been reported from Saudi Arabia before. It needs to be seen in the future if such cases are reported from this part of the world, the nature and character of such species, their size, relation of their life cycle with respect to weather, etc. Whether the involved species is visible to the naked eye or not will also decide whether the causal relation will be able to be demonstrated or not. The author understands that this is an era of evidence-based medicine, yet

on rare occasions, when all our available resources cannot establish a likely cause, then probability deserves a chance.

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## Consent

The examination of the patient was conducted according to the principles of the Declaration of Helsinki.

The authors certify that they have obtained all appropriate patient consent forms, in which the patients gave their consent for images and other clinical information to be included in the journal. The patients understand that their names and initials will not be published and due effort will be made to conceal their identity, but that anonymity cannot be guaranteed.

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