Case Report

Cydnidae (Burrowing Bug) Pigmentation in a Non-Acral Site: Clinical and Dermoscopic Features

Şule Yıldız Sağcan Tercan, Göksu Dalgıç Demirtaş, Mustafa Turhan Şahin
Department of Dermatology and Venereology, Manisa Celal Bayar University Faculty of Medicine, Manisa, Türkiye

Abstract

Cydnidae can cause transient cutaneous pigmentation through defensive secretions. We report a case of 24-year-old woman who presented with sudden-onset asymptomatic brownish-black macules on the gluteal region following seaside exposure. The lesions were non-blanching and resistant to cleansing; dermoscopy revealed brown dots and irregular linear structures with superficial light-brown amorphous pigmentation. The pigmentation resolved spontaneously within one week, consistent with pigmentation caused by burrowing bugs. Awareness of this rare, self-limiting condition at atypical sites may prevent unnecessary diagnostic procedures.

Keywords: Burrowing bug, cydnidae pigmentation, dermoscopy, hemiptera, skin pigmentation

Introduction

Cydnidae, in the order Hemiptera, possess morphological adaptations for digging and release an odorous defensive secretion that can cause pigmented macules on human skin, especially during the rainy season.[1-3] Burrowing bug–induced pigmentation has been increasingly recognized through recent case reports; however, it remains an uncommon and likely underreported arthropod-related dermatosis. The condition typically presents with sudden-onset, asymptomatic brown to dark brown macules that may resemble lentigines or exogenous pigmentation.[4,5] Most cases involve exposed acral areas, consistent with the natural habitat of these soil-dwelling insects and with their increased activity during the wet or monsoon seasons.[4,6] Dermoscopic findings, such as superficial shiny brown globules, clods, and irregular streak-like structures with a characteristic "stuck-on" appearance, provide additional diagnostic support.[6] Recognition of these diverse presentations is essential to avoid misdiagnosis and unnecessary interventions.

Herein, we report an unusual case involving an uncommon body site.

Case Report

An otherwise healthy 24-year-old female presented with sudden-onset, asymptomatic, multiple tiny brown spots on the left gluteal region (Figure 1), which had developed one week prior to presentation. Lesion onset was observed following a stay at the seaside during summer vacation. There was no history of preceding trauma, drug use, or exposure to chemicals. On examination, multiple discrete, irregularly shaped, brownish-black macules with streaky ends, measuring 2–6 mm in diameter, and resembling lentigines, were observed on the left gluteal region (Figure 1). Other mucocutaneous sites were not involved.

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Address for correspondence: Şule Yıldız Sağcan Tercan, Department of Dermatology and Venereology, Manisa Celal Bayar University Faculty of Medicine, Manisa, Türkiye
Email: sule9635sagcan@gmail.com
ORCID ID: 0009-0002-4539-0383

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The patient stated that there had been no changes in the color or texture of the lesions from their initial appearance to the time of the current assessment. The macules were non-blanching upon pressure and remained unaffected when attempts were made to remove them using alcohol, soap, or water. Dermoscopic examination demonstrated irregular, superficial light-brown amorphous pigmentation accompanied by linear streaks and focal dark-brown dots, consistent with pigment deposition limited to the stratum corneum (Figure 2). No insect was identified at the time of presentation. The lesions resolved spontaneously within one week without any intervention. Given the patient's history, clinical presentation, dermoscopic features, and self-limiting course, a presumptive diagnosis of Cydnidae (burrowing bug) pigmentation was made.

Figure 1. Multiple discrete, irregularly shaped brownish-black macules with streaky ends, measuring 2-6 mm in diameter, resembling lentigines were observed on the left gluteal region

Discussion

Cydnidae, also known as burrowing bugs, belong to the order Hemiptera and are characterized by morphological adaptations that facilitate digging. These insects burrow into the soil to feed on plants and are therefore encountered less frequently.[1] The odorous secretion released from specialized glands serves as a defense mechanism; however, upon contact with human skin, it can induce pigmented macules. Patients, particularly during the rainy season, present with the sudden onset of asymptomatic pigmented spots.[2,3] The lesions typically resolve spontaneously within 1–2 weeks without the need for treatment.[4] Similar to other arthropod-induced pigmentation, these lesions predominantly affect acral areas; however, rare non-acral involvement, such as the abdomen, back, and chest, has been described in isolated reports.[2,3] Our case differs from previously published cases in demonstrating isolated gluteal involvement following seaside exposure, further expanding the anatomical spectrum of this condition. Lesions range from oval to irregular in shape, measuring from pinpoint to a few millimeters in diameter. They may appear as isolated spots or grouped formations with streaky, tapering ends, and usually develop within minutes of contact with the insect's fluid following accidental crushing. They closely resemble lentigines, particularly on exposed areas.[4] Acral melanoma, melanocytic nevi, petechiae, and exogenous pigmentation from chemical exposure can be excluded based on the patient's history.[5]

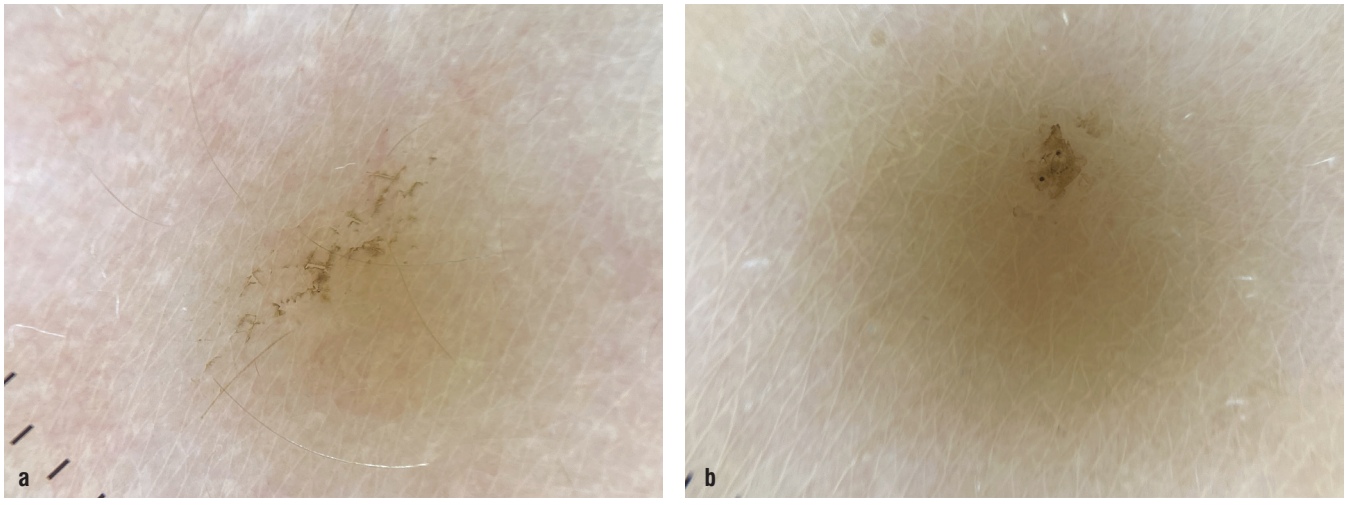

Figure 2. Dermoscopic examination showing (a) superficial structureless brown pigmentation with irregular linear streaks and (b) irregular, superficially located light brown amorphous pigmentation with focal dark brown dots (polarized, 10x)

In the present case, the diagnosis was based on clinical morphology, dermoscopic features, and spontaneous resolution, as no insect specimen was available for identification. This represents a limitation; however, the characteristic presentation and clinical course strongly support the diagnosis.

Awareness of this rare and benign condition is crucial to avoid unnecessary biopsies, laboratory investigations, and patient anxiety, particularly when lesions occur at atypical sites.[6]

Conclusion

This case report emphasizes that pigmentation caused by Cydnidae (burrowing bugs) may present in non-acral regions, warrants consideration in the differential diagnosis, and necessitates dermoscopic assessment.

Footnotes

Informed Consent: Written informed consent was obtained from the patient for publication.

Authorship Contributions

Concept: Ş.Y.S.T., G.D.D., M.T.Ş., Design: Ş.Y.S.T., G.D.D., M.T.Ş., Data Collection or Processing: Ş.Y.S.T., G.D.D., M.T.Ş., Analysis or Interpretation: Ş.Y.S.T., G.D.D., M.T.Ş., Literature Search: Ş.Y.S.T., G.D.D., M.T.Ş., Writing: Ş.Y.S.T., G.D.D., M.T.Ş.

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