

## Brownish pigmentation on palms and soles. Case report

María F. Martínez<sup>✉</sup>, Silvina Bruey<sup>✉</sup>, Ana Lanteri Sambrizzi<sup>✉</sup>, María V. Angles<sup>✉</sup>  
y Luis D. Mazzuocolo<sup>✉</sup>

Sección de Dermatología Infantojuvenil, Hospital Italiano de Buenos Aires. Buenos Aires, Argentina  
Servicio de Dermatología, Hospital Italiano de Buenos Aires. Buenos Aires, Argentina

### CASE REPORT

A 5-year-old previously healthy female patient presents with a 1.5 by 4 cm brown macule on the sole of her foot, asymptomatic, non-pruritic (Fig. 1), of a few days' duration. During the interview, she did not report recent traumas. A dermoscopy revealed diffuse pigmentation without a characteristic pattern (Fig. 2), ruling out suspicion of a melanocytic lesion. Differential diagnoses proposed included hematoma, pigmentation from a green bug, and tinea nigra. We

decided to maintain a watchful waiting approach and scheduled a clinical follow-up. After a week, the mother returned to the consultation, reporting a similar lesion on her hand that she had noticed after a stabbing pain in this location. On physical examination, she presented a lesion with similar characteristics on her palm (Fig. 3), while the child's lesion had resolved without sequelae. We interpreted it as pigmentation from a green bug and maintained the same approach.



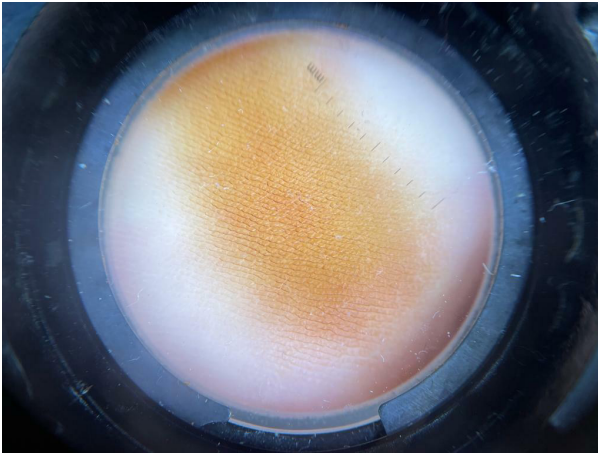
**Figura 1.** Oval brown-orange macule on the sole of the foot (heel), measuring 1.5 cm x 4 cm.

Author for correspondence: [florencia.martinez@hospitalitaliano.org.ar](mailto:florencia.martinez@hospitalitaliano.org.ar), Martínez MF.

Received: 11/29/23 Accepted: 12/12/23 Online: 12/29/2023

DOI: <http://doi.org/10.51987/revhospitalbares.v43i4.318>

**How to cite:** Martínez MF, Bruey S, Lanteri Sambrizzi AD, Angles MV, Mazzuocolo LD. Brownish pigmentation on palms and soles. Case report.. *Rev. Hosp. Ital. B.Aires.* 2023;43(4):206-208.



**Figure 2.** Dermoscopy of foot sole lesion: diffuse orange-brown pigmentation without melanocytic lesion criteria.



**Figure 3.** Figure 3. Rounded brown-orange macule on the palm of the hand, measuring 1 cm x 1.5 cm

Insect pigmentation is a group of infrequent, benign, and self-resolving dermatoses. In our environment, it is most commonly produced by the green bug (*Nezara*

*viridula*) belonging to the Pentatomidae family. It is also called “stinky bug” or “stink bug” because, upon certain stimuli, it secretes through its pores a substance with a very characteristic odor, similar to that of coriander<sup>1-3</sup>.

The incidence of these lesions increases in the fall and winter, as it is during this time that the green bug seeks shelter near homes to mitigate the winter cold<sup>1,4</sup>. It is not the only insect that causes pigmented lesions. Others from the same family, such as *Halyomorpha halys* (marbled brown stink bug) and other insects (of the order Coleoptera), can clinically produce very similar lesions<sup>1,3,4</sup>.

Contact with the substance emanating from the green bug, which contains a series of aldehydes, results in one or more pigmented, macular lesions, usually confined to the palms and or soles, with a characteristic orange-brown color. The lesions tend to go unnoticed by the patient and may sometimes be associated with throbbing pain. It is usually an asymptomatic lesion with no signs of inflammation. One theory is that the thickness of the stratum corneum of the palmoplantar region may have some protective effect since it is in body areas with a thinner stratum corneum epidermis that cases with associated symptoms such as pruritus, burning, or erythema have been described<sup>1,3</sup>.

The dermoscopy shows a diffuse, superficial, orange-brown pigmentation, without any dermoscopic criteria that would lead to suspect a melanocytic origin<sup>2</sup>.

The main differential diagnosis is a melanocytic lesion. This typically does not appear abruptly, usually lacks the characteristic orange hue of green bug pigmentation, has a dermoscopic pattern that often aids in diagnosis, and, on the other hand, does not tend to disappear within a few weeks. Another important consideration for differential diagnosis is a hematoma, but this one has a classic progressive color change, and the patient usually perceives a traumatic antecedent. We could also think of *tinea nigra*. This is a superficial mycosis caused by *H. werneckii*, which also causes asymptomatic, grayish-brown hyperpigmented lesions on palms and soles. The dermoscopy typically shows a network of very fine lines and dotted areas. Although there are cases described with spontaneous resolution (after several weeks), topical antifungals associated with keratolytics are generally required. Finally, according to the clinical presentation and interrogation findings, drug-induced and dye-related pigmentation should be ruled out.

The diagnosis is established through clinical examination, dermoscopy, and the natural course of the condition. It typically resolves spontaneously within one to three weeks without leaving residual pigmentation or scarring. Occasionally, the patient may identify the insect near their home. Histopathological examination is not necessary for reaching the diagnosis and would only be conducted in cases where there are diagnostic uncertainties, especially in the presence of clinical and dermoscopic suspicion of an atypical nevus or melanoma.

Treatment is only necessary in cases where symptoms are present, but generally, a watchful waiting approach is recommended. It is important to prevent the insect from entering the home, for example, by using mosquito nets, and especially by trying to eliminate the causal agent from the environment, using specific insecticides for this species and clearing overgrown areas.

We present these images of a little-reported dermatosis that occurred in two members of the same family group, whose clinical and dermoscopic presentation was typical and allowed us to arrive at the diagnosis without the need for invasive procedures. On the other hand, we explained the expected evolution of this condition, maintaining a watchful waiting approach due to the benign nature of the condition.

**Conflicts of interest:** the authors declare no conflicts of interest.

---

## REFERENCES

1. Uhara H, Sano T, Miyake T, et al. Orange pigmentation spots on the sole may be from a stink bug. *J Dermatol.* 2016;43(10):1247-1248. <https://doi.org/10.1111/1346-8138.13367>
2. Nomura Y, Noborio R, Kiyohara T. Black-to-brown macules, mainly involving the surface ridges on the plantar arch, caused by a stink bug: The first biopsied case demonstrating a pigmented cornified layer. *J Dermatol.* 2019;46(10):e364-e365. <https://doi.org/10.1111/1346-8138.14919>.
3. García V, Palmero L, Vilchez ME, et al. Pigmentación plantar por chinche verde (*Nezara viridula*). *Educádonos.* 2021;7(3):38-40.
4. Mokni S, Boussofara L, Saïdi W, et al. Four cases of exogenous acral pigmentation related to a darkling beetle (coleoptera: Tenebrionidae: Blaps). *J Eur Acad Dermatol Venereol.* 2017 Jul;31(7):e330-e331. <https://doi.org/10.1111/jdv.14118>.
5. Giordano MC, De la Fuente A, Lorca MB, Kramer D. Tiña negra: reporte de tres casos pediátricos. *Rev Chil Pediatr.* 2018;89(4): 506-510. <http://dx.doi.org/10.4067/S0370-41062018005000404>.