

Hyperpigmentation in toes resembling ischemia: a challenging diagnosis

Hiperpigmentação nos dedos dos pés assemelhando-se a isquemia: um diagnóstico desafiante

Maria M. Resende^{1*}, Tomás Ferrão¹, Manuel Cordeiro², and Inês Sobreira¹

¹Department of Pediatrics, Centro Hospitalar do Baixo Vouga, Aveiro; ²Department of Nursing Sciences, Escola Superior de Saúde, Viseu. Portugal

Keypoints

What is known

- Some insects, such as beetles, release vesicant and irritant substances when threatened.
- Skin lesions due to human contact with these substances occur mostly in tropical regions and are rarely found in literature.

What is added

- A differential diagnosis can be challenging as the skin lesions can resemble potentially more serious pathologies, such as tissue necrosis.
- It is important to be aware of, and able to recognize, this entity in order to prevent misdiagnosis.

A healthy six-year-old male child was seen at the emergency department for ischemic-appearing dark macules on the extremities of the first two toes on his left foot (Fig. 1). The lesions appeared about 30 minutes after removing his shoes and noticing an insect inside his footwear (Fig. 2). He did not complain of pain, itching, stinging sensation, or any other symptoms. On examination, the child appeared well, had normal vital signs, and no obvious portal of entry or signs of inflammation were seen. Pedal pulses were palpable and symmetrical, and the sensory examination of the extremities was normal. The picture taken by the parents revealed a beetle, which led to the hypothesis that the lesions originated from contact with a substance released by the insect. The area was irrigated with a saline solution and skin hydration was recommended for the following days. The lesions resolved completely within two weeks, with no complications or further symptoms.

Similar cases are rarely found in literature, occurring mostly in tropical regions. These substances have vesicant and irritating properties and are released when the insect feels threatened. They can cause lesions that range from vesicles and blisters, resembling other pathologies such as contact dermatitis and herpetic infection, to hyperpigmented spots, as in this case, simulating tissue necrosis and that can persist for months. There is a risk of secondary infection as well as the possibility of systemic symptoms, such as fever, nausea, and vomiting. It is recommended to disinfect and clean the skin with soap. In some cases, treatment with corticosteroids is advised^{1,2}.

The authors emphasize the importance of recognizing this entity which, despite the favorable outcome of this case, provides a differential diagnosis with potentially more serious pathologies. Both the anamnesis and physical examination were essential to the differential diagnosis, therapeutic approach, and reassurance given by caregivers.

*Correspondence:

Maria M. Resende

E-mail: mmsr.pediatrics@gmail.com

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Figure 1. Dark purple macules resembling ischemia on the left foot, namely on the tip of the first toe, interdigital surface and the second toe, with no plantar involvement.

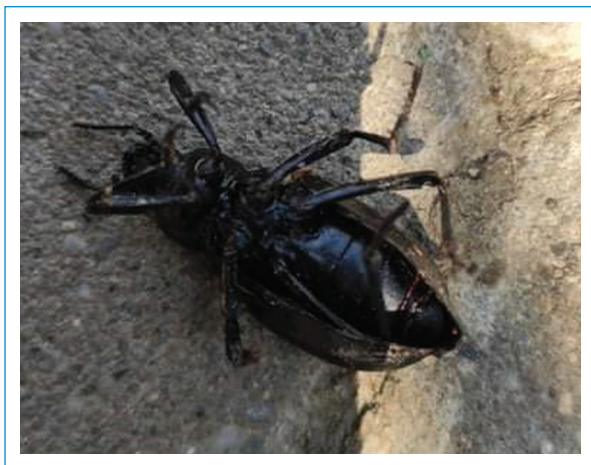


Figure 2. Picture of the beetle removed from the child's shoe.

Authors' contribution

Maria Miguel Resende and Tomás Ferrão: Conception and design of the study, report, review or other type of work or paper. Acquisition of data either from patients, research studies, or literature. Analysis or interpretation of data either from patients,

research studies, or literature. Drafting the article. Critical review of the article for important intellectual content. Final approval of the version to be published. Agreement to be accountable for the accuracy or integrity of the work. Manuel Cordeiro and Inês Sobreira: Conception and design of the study, report, review or other type of work or paper. Acquisition of data either from patients, research studies, or literature. Analysis or interpretation of data either from patients, research studies, or literature. Critical review of the article for important intellectual content. Final approval of the version to be published. Agreement to be accountable for the accuracy or integrity of the work.

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Conflicts of interest

None.

Ethical disclosures

Protection of human and animal subjects. The authors declare that no experiments were performed on humans or animals for this study.

Confidentiality of data. The authors declare that they have followed the protocols of their work center on the publication of patient data.

Right to privacy and informed consent. The authors have obtained the written informed consent of the patients or subjects mentioned in the article. The corresponding author is in possession of this document.

Use of artificial intelligence for generating text. The authors declare that they have not used any type of generative artificial intelligence for the writing of this manuscript, nor for the creation of images, graphics, tables, or their corresponding captions.

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