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Diagnosis at first sight

Violaceous patch in the leg of a tourist[☆]

Mácula eritemato-violácea en la pierna de una turista

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Description of the case

A 30-year-old Austrian woman with no medical history of note or regular medication visited due to pain and edema in her right leg which had developed while she had been on vacation. The patient reported that, following long hours of standing and walking, pain and redness had developed in her right leg two days earlier and subsequently progressed. The patient was concerned that she might have been bitten by a spider. She had no additional symptoms such as fever, headache, or fatigue. Physical examination revealed an erythematous-violaceous plaque measuring 8 × 6 cm on the outer aspect of the inferior part of the right leg, with a more marked center and periphery (Fig. 1).

Clinical course

A complete blood count, a liver panel, a renal panel and clotting tests were performed and yielded normal results. As a spider bite was suspected, a dermatology assessment was ordered with a view to establishing a treatment regimen that would allow for a faster recovery. When we assessed her, suspecting Lyme disease, the patient reported that two weeks earlier, while hiking in Austria, where she had been for the past six months, she suffered a bite on the same leg that did not lead to any further signs or symptoms. Based on her epidemiological and medical history, the patient was diagnosed with localized early Lyme disease or erythema migrans (EM), and empirical treatment with doxycycline 100 mg every 12 h for 10 days was prescribed. Both IgM and IgG results for *Borrelia* were negative. In follow-up by teledermatology, the patient's injury was found to have exhibited a complete response to treatment.

Final remarks

Lyme disease is an infection caused by *Borrelia* which is transmitted though the bite of a tick belonging to the genus *Ixodes*. Its



Fig. 1. Erythematous patch in which a central ring and another peripheral ring with a violaceous or purplish hue can be seen.

prevalence is high in the United States and Central Europe (Austria, the Netherlands, and Estonia, among others). In Spain, it has a higher incidence in the northern provinces of the Iberian peninsula, especially Lugo, Asturias, Huesca, and La Rioja.¹ Clinically, it presents different stages, with the initial stage being the most easily recognizable with respect to skin manifestations. In countries where Lyme is rare, EM may be diagnosed as a hypersensitivity reaction to a bite by an arthropod, loxoscelism, fixed drug eruption or other dermatosis.² Classically, a bull's-eye image (a ring within a ring) is reported; this may be seen in the image for our case (Fig. 1). The diagnosis is clinical and based not only on the typical skin lesion but also on epidemiological data (endemic area, summertime). The case presented showed atypical clinical characteristics such as localization and a pain component. In addition, patch expansion in EM occurs slowly and gradually, whereas the patient reported that it had developed within a few days. However, the patient did have the classically reported lesion and had been in an endemic area; therefore, the clinical diagnosis was EM. Regarding laboratory techniques, serology for borreliosis in patients with EM is often negative. In fact, serology testing is not recommended in the initial stage of Lyme disease given its low sensitivity.³ The most common treatment for EM in adults is doxycycline, as in endemic countries it is also effective in treating other species that cause concomitant infection such as *Anaplasma phagocytophilum* and *Borrelia miyamotoi*.⁴ The usual regimen in Europe is doxycy-

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cline 100 mg/12 h for 10 days when caused by *B. afzelii*, unlike *B. burgdorferi* in the United States, where the regimen is extended to 21 days. There are other valid alternatives, such as amoxicillin 500 mg/8 h for 14 days or cefuroxime 500 mg/12 h for 14 days, which are of choice in pregnant women.³

In conclusion, clinical suspicion is key in diagnosing EM in patients with consistent epidemiological histories. In these cases, empirical treatment should be started, and serology testing may be negative.

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