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Diagnosis at first sight

Infectious pathology imported from the northern hemisphere

Patología infecciosa importada desde el hemisferio norte

María Mercedes Ibáñez Alcalde*, Belén González de Prádena, Leticia Martínez Campos, Patricia Juárez Marruecos

Servicio de Pediatría, Hospital Universitario Torrecárdenas, Almería, Spain



Figures 1 and 2. Erythematous annular lesions and central clearing, with centrifugal growth on lower limbs.

Case report

A seven-year-old boy, usually resident in Germany, attended the paediatric emergency department of a hospital in the Mediterranean basin of south-east Spain, in the summer season, due to the appearance of several skin lesions of about 36 hours' duration on both legs. Initially there were six erythematous papules, which had been increasing in size, with an erythematous border and central clearing (Figs. 1 and 2). There were no local or constitutional symp-

toms and the physical examination was unremarkable, except for the aforementioned exanthem. The patient had no personal history of note, except for a trip to a wooded area in Denmark from which he had returned five days earlier and where he recalled being bitten by ticks, the last time seven days prior.

Clinical course and diagnosis

Given the reported symptoms and the epidemiological history, a clinical diagnosis of early Lyme disease was suspected. Serology was requested for *Borrelia burgdorferi* (*B. burgdorferi*), as well as for other exanthematous viruses and *Rickettsia conorii*, and empirical

* Corresponding author.
E-mail address: mmibanezalcalde@gmail.com (M.M. Ibáñez Alcalde).

antibiotic therapy with oral doxycycline 4 mg/kg/day every 12 h for 10 days was prescribed.

The clinical response was favourable, with resolution of the lesions within 48 h and no intercurrent diseases. *Borrelia* IgG was positive, with all other serologies, including IgM, negative. The patient returned to his usual place of residence two weeks after completing treatment.

Lyme disease is a multisystem infection caused by the spirochaete *B. burgdorferi sensu lato*, transmitted by the tick *Ixodes ricinus*. It is endemic in rural areas of central Europe and Scandinavian countries, with reported cases in wooded areas of northern Spain, where the genospecies involved is *B. garinii*, but it is not common in less humid areas with a Mediterranean climate¹ and is usually an imported infection.

Erythema migrans is characteristic of the early stage of the disease, but is usually a single lesion, whereas multiple erythema migrans is more common in young patients and is considered a sign of haematogenous spread to other areas of the skin. Studies from the United States of America have associated it with greater severity and greater likelihood of involvement of other systems. This has not been demonstrated in Europe,² where the genospecies causing the infection and clinical manifestations differ, but a higher rate of seropositivity has indeed been detected even at this early stage, as in our case, as a probable sign of spread.

The gold standard for confirmatory diagnosis is culture, but as it is a microorganism that requires specialised media, it is usually diagnosed by serological study. A case is considered confirmed if the clinical manifestation is erythema migrans or a late manifestation of the disease with microbiological confirmation, which may

be by isolation of the bacterium or two serological tests in cerebrospinal fluid or serum.³ However, in children with skin signs typical of the early stage of the disease, as in this case, microbiological confirmation is not considered necessary due to its high specificity.¹

Lyme disease is rare in Spain, but it must be taken into account in the broad differential diagnosis of exanthem in children, given the frequency of population movement to European wooded areas and the peninsular area itself, especially in the summer, and even more so in the context of global warming and changes in vector populations and migratory routes of the animals that carry them.

Erythema migrans, with the characteristic annular lesion of centrifugal growth, may be multiple, indicating spread in the early phase. Identification and appropriate treatment resolves the infection and prevents complications in a high percentage of cases.

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