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A case of borderline leprosy presenting with urticaria-like eruptions: are there lessons to be learned for allergists?

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Keywords: borderline leprosy; chronic urticaria; urticaria-like eruption.

Urticaria is characterized by the rapid appearance of wheals and/or angioedema. Although the diagnosis of urticaria is straightforward in most patients, on occasion, it may require additional consideration, as many cutaneous and systemic diseases may manifest urticaria-like lesions. We report a case of borderline leprosy presenting with urticaria-like eruptions, which was initially misdiagnosed as chronic urticaria and urticarial vasculitis.

Necessary vigilance should be kept on sporadic cases of borderline leprosy presenting with urticaria-like eruptions.

A 45-year-old man was admitted to our department with 2-month history of slightly pruritic, urticaria-like erythematous plaques on his face, trunk, and forelimbs. According to the patient, skin eruptions appeared first on the trunk and progressed to involve face and all the extremities. However, most eruptions could not disappear within 24 h. He had no fever, pain, lassitude, or other systemic symptoms. No medications were taken before eruptions occurred. He was diagnosed with chronic idiopathic urticaria and urticarial vasculitis 2 weeks later, in the allergy department of a general hospital, but did not respond to the treatment with antihistamines and even low-dose corticosteroid.

The cutaneous examinations revealed dozens of wheal-like maculopapules and erythematous plaques throughout his body (Fig. 1A–D). Other signs, including hypoesthesia, alopecia, and the enlargements of peripheral nerves, were not found. The personal and familial medical history was unremarkable. No abnormalities were observed in complete blood count, liver and kidney function tests, autoimmune antibodies screening, urinalysis, and serum complement C4 concentrations. Histopathological examinations of skin biopsy from the urticaria-like lesion on his trunk revealed multiple well-formed nodules composed of lymphocytes, foamy histiocytes, and macrophages surrounding vessels and nerves in the dermis (Fig. 1E). Fite staining showed a few bacilli within the foamy cells (Fig. 1F).

Based on the clinical and histopathological characteristics, the patient was diagnosed with borderline leprosy and admitted to the local leprosarium to receive multidrug therapy. Cutaneous lesions regressed completely after 6 months of initial treatment. Signs of flare had not been found during subsequent follow-ups for 2 years.

Leprosy, like syphilis and lupus, has been known as a great imitator and still poses big challenges for clinical diagnosis. The spectrum of clinical presentation and histopathologic findings of leprosy are currently classified based on polar forms, with lepromatous leprosy (LL) at one end and tuberculoid leprosy (TT) at the other end. In-betweens are the clinical forms including borderline tuberculoid (BT), mid-borderline (BB), and borderline lepromatous leprosy (BL) (1, 2).

Borderline leprosy, which has features that are intermediate between those of the two polar forms, can present with distinct forms and/or numbers of eruptions in asymmetric distribution, including wheal-like, annular, or bizarre-shaped edematous maculopapule and erythematous plaque (1, 2), depending on the position of the patients in the borderline spectrum. These various types of lesions could mimic disease with urticarial and annular eruptions, such as urticaria, urticarial vasculitis, erythema annulare centrifugum, and erythema multiforme (1–3).

Because of the decreased prevalence of leprosy in the past decades and the inadequate knowledge on leprosy during the dermatological training in general hospital, misdiagnosis of this disease, especially those with atypical manifestations or at the early stage of the disease, as showed in our case, has been increasingly reported. In one retrospective study focusing on 80 newly detected patients in one metropolis of China, 53 cases (66.25%) had been misdiagnosed (51 cases in general hospitals and two cases in local leprosarium) (4, 5). Even in western countries, the diagnosis of leprosy is often delayed because of its low prevalence (2). Because borderline leprosy is unstable, under-diagnosis and/or misdiagnosis of this disease would lead to medical and social problems. This case strongly demonstrates allergists should be taught to recognize and keep the possibility of sporadic cases of leprosy in mind, especially patients presenting with urticaria-like eruptions that cannot subside spontaneously.

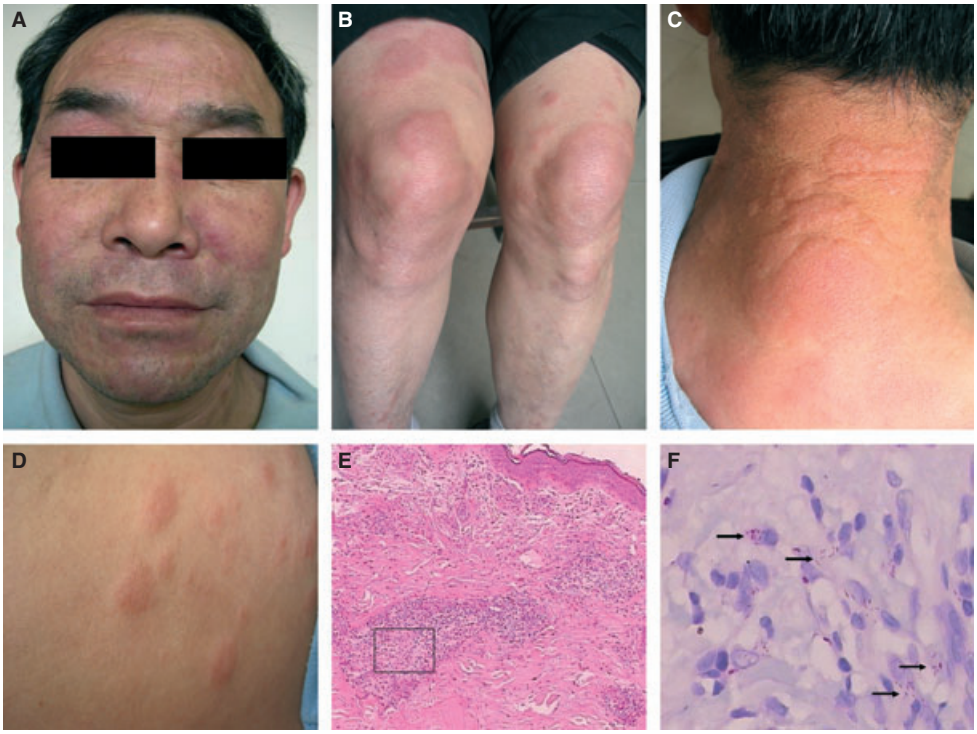


Figure 1 A number of urticaria-like eruptions on patient's face, trunk, and forelimbs (A–D). Histological examination showed multiple well-formed nodules composed of lymphocytes, foamy histiocytes, and macrophages infiltrating around vessels and nerves in the dermis (E). Fite staining showed a few bacilli within foamy cells (F).

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Conflict of Interest

None declared.

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