Disseminated Vesicles and Necrotic Papules

David Oberlin, MD; Alison Tisack, MD; Marsha Chaffins, MD

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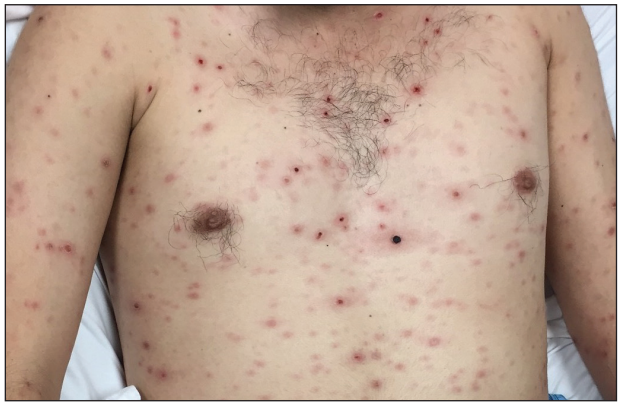

A 30-year-old man who had contracted human immunodeficiency virus from a male sexual partner 4 years prior presented to the emergency department with fevers, chills, night sweats, and rhinorrhea of 2 weeks' duration. He reported that he had been off highly active antiretroviral therapy for 2 years. Physical examination revealed numerous erythematous, papulonecrotic, crusted lesions on the face, neck, chest, back, arms, and legs that had developed over the past 4 days. Fluid-filled vesicles also were noted on the arms and legs, while erythematous, indurated nodules with overlying scaling were noted on the bilateral palms and soles. The patient reported that he had been vaccinated for varicella-zoster virus as a child without primary infection.

WHAT'S THE **DIAGNOSIS?**

a. disseminated coccidioidomycosis
b. disseminated herpes simplex virus
c. disseminated varicella-zoster virus
d. lues maligna
e. pityriasis lichenoides et varioliformis acuta

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From the Department of Dermatology, Henry Ford Health System, Detroit, Michigan.
The authors report no conflict of interest.
Correspondence: David Oberlin, MD, 3031 W Grand Blvd, Ste 800, Detroit, MI 48202 (doberli1@hfhs.org).

THE **DIAGNOSIS:** Lues Maligna

Laboratory evaluation demonstrated a total CD4 count of 26 cells/μL (reference range, 443–1471 cells/μL) with a viral load of 1,770,111 copies/mL (reference range, 0 copies/mL), as well as a positive rapid plasma reagin (RPR) test with a titer of 1:8 (reference range, nonreactive). A reactive treponemal antibody test confirmed a true positive RPR test result. Viral culture as well as direct fluorescence antibodies for varicella-zoster virus and an active vesicle of herpes simplex virus (HSV) were negative. Serum immunoglobulin titers for varicella-zoster virus demonstrated low IgM with a positive IgG demonstrating immunity without recent infection. Blood and lesional skin tissue cultures were negative for additional infectious etiologies including bacterial and fungal elements. A lumbar puncture was not performed.

Biopsy of a papulonodule on the left arm demonstrated a lichenoid lymphohistiocytic infiltrate with superficial and deep inflammation (Figure 1). Neutrophils also were noted within a follicle with ballooning and acantholysis within the follicular epithelium. Additional staining for *Mycobacterium*, HSV-1, HSV-2, and *Treponema* were negative. In the clinical setting, this histologic pattern was most consistent with secondary syphilis. Pityriasis lichenoides et varioliformis acuta also was included in the histopathologic differential diagnosis by a dermatopathologist (M.C.).

Based on the clinical, microbiologic, and histopathologic findings, a diagnosis of lues maligna (cutaneous secondary syphilis) with a vesiculonecrotic presentation was made. The patient's low RPR titer was attributed to profound immunosuppression, while a confirmation of syphilis infection was made with treponemal antibody testing. Histopathologic examination was consistent with lues maligna and did not demonstrate evidence of any other infectious etiologies.

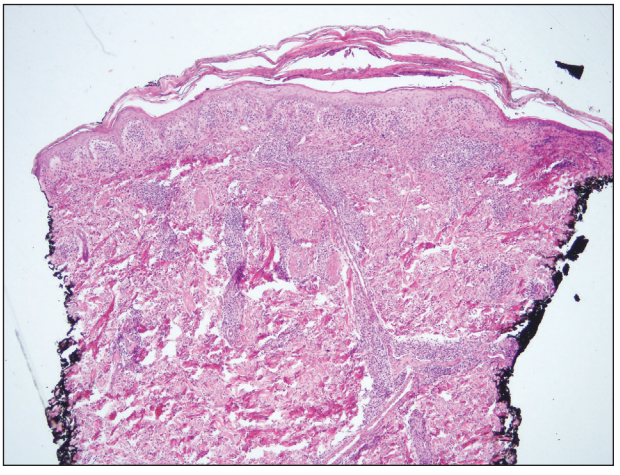

FIGURE 1. Lues maligna. Punch biopsy of the left forearm demonstrated lichenoid lymphohistiocytic infiltrate with superficial and deep inflammation (H&E, original magnification ×100).

Following 7 days of intravenous penicillin, the patient demonstrated dramatic improvement of all skin lesions and was discharged receiving once-weekly intramuscular penicillin for 4 weeks. In accordance with the diagnosis, the patient demonstrated rapid improvement of the lesions following appropriate antibiotic therapy.

After the diagnosis of lues maligna was made, the patient disclosed a sexual encounter with a male partner

FIGURE 2. Scattered erythematous indurated nodules with overlying scaling on the bilateral palms in a patient with lues maligna.

6 weeks prior to the current presentation, after which he developed a self-resolving genital ulcer suspicious for a primary chancre.

Increasing rates of syphilis transmission have been attributed to males aged 15 to 44 years who have sexual encounters with other males.[1] Although syphilis commonly is known as the great mimicker, syphilology texts state that lesions are not associated with syphilis if vesicles are part of the cutaneous eruption in an adult.[2] However, rare reports of secondary syphilis presenting as vesicles, pustules, bullae, and pityriasis lichenoides et varioliformis acuta–like eruptions also have been documented.[2-4]

Initial screening for suspected syphilis involves sensitive, but not specific, nontreponemal RPR testing reported in the form of a titer. Nontreponemal titers in human immunodeficiency virus–positive individuals can be unusually high or low, fluctuate rapidly, and/or be unresponsive to antibiotic therapy.[1]

Lues maligna is a rare form of malignant secondary syphilis that most commonly presents in human immunodeficiency virus–positive hosts.[5] Although lues maligna often presents with ulceronodular lesions, 2 cases presenting with vesiculonecrotic lesions also have been reported.[6] Patients often experience systemic symptoms including fever, fatigue, and joint pain. Rapid plasma reagin titers can range from 1:8 to 1:128 in affected individuals.[6] Diagnosis is dependent on serologic and histologic confirmation while ruling out viral, fungal, and bacterial etiologies. Characteristic red-brown lesions of secondary syphilis involving the palms and soles (Figure 2) also aid in diagnosis.[1] Additionally, identification of the Jarisch-Herxheimer reaction following treatment and rapid response to antibiotic therapy are helpful diagnostic findings.[6,7] While histopathologic examination of lues maligna typically does not reveal evidence of spirochetes, it also is important to rule out other infectious etiologies.[7]

Our case emphasizes the importance of early recognition and treatment of the variable clinical, laboratory, and histologic presentations of lues maligna.

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