Ulcerated and Verrucous Plaque on the Chest

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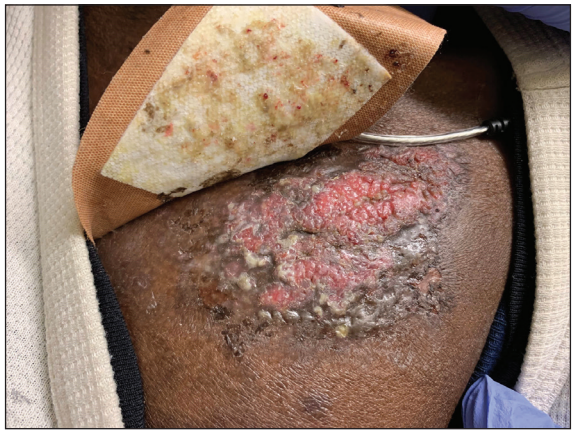

A 36-year-old man presented to the emergency department in the southwestern United States with a cough, fatigue, and worsening back pain associated with night sweats of 1 month's duration. He experienced a 9.07-kg weight loss, as well as development of a rough, nontender, nonpruritic rash along the left upper chest over the prior month. The patient was born in West Africa and reported that he had moved to the southwestern United States from the eastern United States approximately 6 years prior to presentation. Physical examination on admission revealed a 5×3-cm, purple-brown, verrucous plaque with a central pink cobblestone appearance and ulceration. Chest radiography was notable for perihilar adenopathy with no focal infiltrates or cavitary lesions. Computed tomography and magnetic resonance imaging of the chest were notable for miliary nodules throughout the lungs; extensive lytic spine lesions of cervical, thoracic, and lumbar vertebral bodies and left twelfth rib; and a left paraspinal thoracic epidural soft tissue phlegmon. Initial laboratory investigations revealed peripheral eosinophilia without absolute leukocytosis and a microcytic anemia.

WHAT'S YOUR **DIAGNOSIS?**

a. cutaneous leishmaniasis
b. disseminated blastomycosis
c. disseminated coccidioidomycosis
d. disseminated histoplasmosis
e. lupus vulgaris

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involving clinical and laboratory reevaluation every 3 months for 2 years is highly recommended.[8]

Treatment generally is based on location and severity of infection, with disseminated nonmeningeal infection being treated with oral azole therapy (ketoconazole, itraconazole, or fluconazole).[11] If there is involvement of the central nervous system structures or rapidly worsening disease despite azole therapy, amphotericin B is recommended at 0.5 to 0.7 mg/kg daily. In patients with disseminated meningeal infection, oral fluconazole (800–1000 mg/d) or a combination of an azole with intrathecal amphotericin B (0.01–1.5 mg/dose, interval ranging from daily to 1 week) is recommended to improve response.[11]

The differential diagnosis of cutaneous disseminated coccidioidomycosis is broad and includes other systemic endemic mycoses (histoplasmosis, blastomycosis) and infections (mycobacteria, leishmania). Lupus vulgaris, a form of cutaneous tuberculosis, presents as a palpable tubercular lesion that may coalesce into erythematous plaques, which may mimic endemic mycoses, especially in patients with risk factors for both infectious etiologies such as our patient.[12] Disseminated histoplasmosis may present as polymorphic plaques, pustules, nodules, and ulcerated skin lesions, whereas disseminated blastomycosis characteristically presents as a crusted verrucous lesion with raised borders and painful ulcers, both of which may mimic coccidioidomycosis.[13] Biopsy would reveal the characteristic intracellular yeast in *Histoplasma capsulatum* and broad-based budding yeast forms of *Blastomyces dermatitidis* in histoplasmosis and blastomycosis, respectively, in contrast to the spherules seen in our patient's biopsy.[13] Localized cutaneous leishmaniasis initially develops as a nodular or papular lesion and can progress to open ulcerations with raised borders. Biopsy and histopathology would reveal round protozoal amastigotes.[14] Other diagnoses that should be considered include mycetoma, nocardiosis, and sporotrichosis.[15] As the cutaneous manifestations of *Coccidioides* infections are varied, a broad differential diagnosis should be maintained, and probable environmental and infectious exposures should be considered prior to ordering diagnostic studies.

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