Chronic verrucous plaques on bilateral lower extremities

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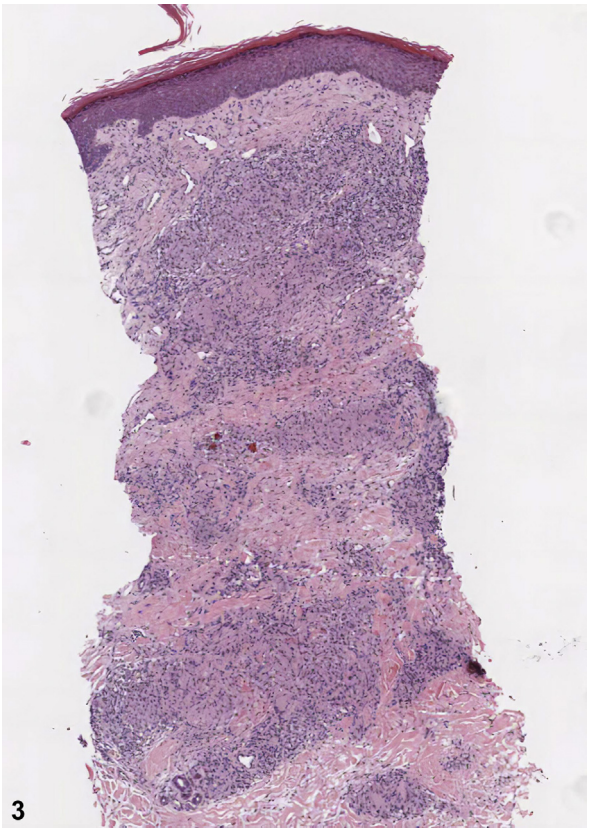

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A 40-year-old man with a past medical history of diabetes mellitus and hydrocephalus requiring ventricular-peritoneal shunt placement was admitted to the neurology intensive care unit for a workup of altered mental status. Dermatology was consulted for the evaluation of chronic fungating lower extremity lesions. The family history was significant for pulmonary sarcoidosis in his mother and an unknown type of sarcoidosis in his sister. Physical examination revealed well-demarcated, hyperkeratotic, verrucous plaques on the bilateral aspect of the lower portion of the patient's legs, without drainage or tenderness (Figs 1 and 2). Biopsies were obtained for hematoxylin-eosin staining (Fig 3) and bacterial, fungal, and acid-fast bacilli deep tissue cultures, which were negative.

Question 1: Based on the history, presentation, and histopathology, which of the following is the most likely diagnosis?

A. Histoplasmosis

B. Blastomycosis

C. Sporotrichosis

D. Cutaneous sarcoidosis, verrucous subtype

E. Granulomatous (vegetative) pyoderma gangrenosum

Answers:

A. Histoplasmosis—Incorrect. Although disseminated histoplasmosis can lead to chronic skin lesions, it typically presents as multiple papules, pustules, or nodules in the context of additional systemic symptoms and a positive fungal culture, making this diagnosis unlikely.

B. Blastomycosis—Incorrect. Although blastomycosis may present with verrucous skin lesions, the chronicity of these lesions, lack of subcutaneous nodules, abscesses, or concurrent pulmonary disease, and negative fungal culture make this diagnosis less likely.

C. Sporotrichosis—Incorrect. The chronicity of these lesions and lack of ulceration or occurrence along lymphatic channels make this diagnosis unlikely.

D. Cutaneous sarcoidosis, verrucous subtype—Correct. The presence of chronic and discrete verrucous plaques on the lower extremities of a patient with a family history of sarcoidosis, dermal epithelioid granulomas on histopathology, and negative infectious stains or cultures make this the most likely diagnosis. Cutaneous sarcoidosis often presents a diagnostic challenge due to its ability to mimic other dermatologic conditions, and verrucous sarcoidosis is an extremely rare subtype. It generally presents as well-demarcated exophytic and hyperkeratotic plaques, as seen in this patient, or discrete papillomatous papules. Diagnosis requires a compatible clinical picture and histopathologic findings, in addition to the exclusion of similarly presenting diseases, specifically infection.[1]

E. Granulomatous (vegetative) pyoderma gangrenosum—Incorrect. Although granulomatous pyoderma gangrenosum can have a verrucous appearance, it typically presents as superficial ulcerative lesions on the head and neck, with intra- or subepidermal granulomas rather than dermal granulomas, making this diagnosis less likely.[2]

Question 2: Which of the following is the most appropriate management option for this patient?

A. Topical corticosteroids

B. Intralesional corticosteroids

C. Systemic glucocorticoid therapy

D. Methotrexate

E. Antimalarials

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Answers:

A. Topical corticosteroids—Incorrect. For severe disfigurement, such as that seen in this patient, topical therapy is likely to be insufficient.[3]

B. Intralesional corticosteroids—Incorrect. Intralesional therapy may be used for small skin lesions, such as those seen in papular cutaneous sarcoidosis, but it is unlikely to be effective for the treatment of large plaques.[3]

C. Systemic glucocorticoid therapy—Correct. For rapidly progressing or severely disfiguring verrucous sarcoidosis, such as that seen in this patient, systemic glucocorticoid therapy is the first-line treatment option.[3]

D. Methotrexate—Incorrect. Due to the extensive and severely disfiguring nature of this patient's lesions, systemic glucocorticoid therapy was chosen as the first-line treatment. Methotrexate is typically reserved for steroid-resistant sarcoidosis or for patients who are unable to tolerate the side effects of steroids.[3] However, after initial improvement, one should consider adding methotrexate as a steroid-sparing agent while tapering the systemic glucocorticoids,[3,4] especially given this patient's history of diabetes mellitus.

E. Antimalarials—Incorrect. For rapidly progressing or severely disfiguring verrucous sarcoidosis, such as that seen in this patient, systemic glucocorticoid therapy is the first-line treatment option. Antimalarials may be considered as an adjunct to steroid therapy or for individuals who do not desire or tolerate long-term steroid use.[3]

Question 3: Which of the following extracutaneous manifestations is typically seen in patients with this condition?

A. Pulmonary involvement

B. Neurologic involvement

C. Cardiovascular involvement

D. Ocular involvement

E. Renal involvement

Answers:

A. Pulmonary involvement—Correct. Patients with verrucous sarcoidosis typically have significant pulmonary sarcoidosis as well.[5] This patient's lack of pulmonary involvement makes this a unique case.

B. Neurologic involvement—Incorrect. Although patients with verrucous cutaneous sarcoidosis may have virtually any manifestation of sarcoidosis, pulmonary sarcoidosis is the most common.[5]

C. Cardiovascular involvement—Incorrect. Although patients with verrucous cutaneous sarcoidosis may have virtually any manifestation of sarcoidosis, pulmonary sarcoidosis is the most common.[5]

D. Ocular involvement—Incorrect. Although patients with verrucous cutaneous sarcoidosis may have virtually any manifestation of sarcoidosis, pulmonary sarcoidosis is the most common.[5]

E. Renal involvement—Incorrect. Although patients with verrucous cutaneous sarcoidosis may have virtually any manifestation of sarcoidosis, pulmonary sarcoidosis is the most common.[5]

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