

SKIMages

An Unusual Clinical Presentation of Cutaneous Syphilis

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Figure 1: Annular, friable violaceous plaque with surrounding erythematous raised border with solitary nodules containing pinpoint petechiae

A 33-year-old Black homosexual male presented with a plaque that appeared four months after he injured his hand on a metal railing under his car seat. A 3.0 x 3.5 cm well-defined, annular friable violaceous plaque with surrounding erythematous raised border with solitary nodules containing pinpoint petechiae was seen on physical examination

(Figure 1). His medical history was significant for HIV, and he admitted to stopping his antiretroviral treatment two months prior to presentation. Similar appearing lesions were present on his back and scrotum. The initial differential diagnosis included a deep fungal infection, granuloma annulare, Kaposi's sarcoma, and neutrophilic dermatosis of

the hands. Minocycline 100 mg twice daily for 14 days was prescribed, with notable improvement at the two-week follow-up. Histopathology showed psoriasiform epidermal hyperplasia with elongated thin rete ridges and a superficial to mid dermal perivascular and periadnexal infiltrate of lymphocytes, histiocytes, some neutrophils, and numerous plasma cells. The infiltrate obscured the dermo-epidermal junction, which was associated with vacuolar alteration and necrotic keratinocytes. Spirochete immunohistochemistry was done and yielded the presence of rare spirochetes within the specimen (Figure 2). The diagnosis of syphilis was made, and the health department was contacted for further treatment.

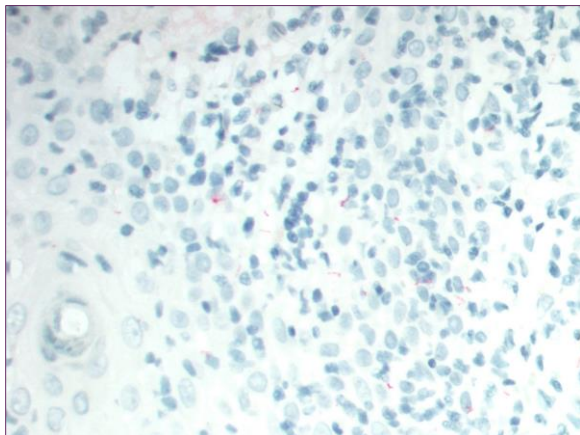


Figure 2: Positive spirochete immunohistochemistry stain in biopsy specimen

Syphilis is a sexually transmitted infection (STI) caused by the bacteria *Treponema pallidum* that presents with symptomatic and asymptomatic stages. The incidence of syphilis has been increasing since the early 2000s, when the rates of syphilis were at their historic lowest. Between 2019 to 2020, the rate of syphilis increased by 6.8%. Men

especially are vulnerable, as many cases are seen in men who have sex with men.¹ Co-infection with syphilis and HIV is highest in African Americans, which may alter the clinical presentations of either disease.² Syphilis is known as the “great mimicker,” both clinically and histologically; it can present differently depending on the stage of the infection and when the biopsy was taken. Diagnosis of syphilis is made by a screening rapid plasma reagin test (RPR) followed by a more specific fluorescent treponemal antibody test absorption test (FTA-ABS).

Cutaneous manifestations of syphilis are often atypical and even more variable within skin of color (SOC) patients, further complicating the diagnostic process. Reports of papulosquamous syphilis have presented in an ichthyosiform photo-distributed pattern within Black populations.³ Similarly, syphilitic alopecia in Caucasian and SOC patients may often mimic alopecia areata with its “moth-eaten,” non-scarring distribution.⁴ Due to the variance of syphilis and how it can resemble other conditions, misdiagnosis without additional testing can delay treatment and worsen disease progression.

Our case highlights an unusual presentation of cutaneous syphilis in a vulnerable population and how a diagnosis is difficult based on clinical presentation alone. Serologic testing or a biopsy is necessary to make a proper diagnosis. While intramuscular 2.4 million units benzathine penicillin G single dose remains the gold standard of treatment, minocycline has been shown to be an effective alternative therapy for early syphilis if penicillin is unavailable.⁵

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