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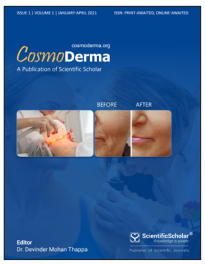

Letter to the Editor

Revisiting a rare cause of cutaneous ulcers in an immunocompetent patient

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Dear Sir,

Syphilis, "the great imitator," can present with a wide spectrum of manifestations. Tertiary syphilis is rarely encountered nowadays. The protean presentations of this condition make it difficult to diagnose. We report a case of noduloulcerative tertiary syphilis who presented to our clinic.

A 56-year-old male patient presented with multiple, painless crops of erythematous nodules, which ulcerate spontaneously to result in noduloulcerative plaques of size up to 10 × 5 cm with peripheral hyperpigmentation for the past 7 years. The lesions initially appeared over the left thigh 7 years back, which progressed in the past 2 years to involve the right thigh, chest, upper limbs [Figure 1a and b], shoulder, and buttocks [Figure 1c]. The ulcers had minimal pus discharge and healed with atrophic scarring. One examination, the patient also had multiple, superficial ulcers with dirty-white slough over the inner surface of his prepuce. He had had unprotected extramarital heterosexual genito-genital contact twice with known female friend 25 years back and 1.5 years back. He did not have lymphadenopathy or symptoms suggestive of immunosuppression. He had been diagnosed with erythema induratum and lupus vulgaris in the past and treated with antitubercular therapy for 1.5 years without any improvement. On histopathological examination (buttock lesion), superficial and deep dermis showed dense inflammatory infiltrates in a perivascular and periadnexal distribution [Figure 2a]. The dermis contained neutrophils, lymphocytes, histiocytic aggregates, plasma cells, eosinophils, and multi-nucleated giant cells [Figure 2b]. Caseous necrosis or well-formed granulomas were not seen. Warthin Starry stain showed occasional fringe-like filamentous spirochetes [Figure 2c]. Histopathological examination (prepuce) showed a similar picture with additional leucocytoclastic vasculitis in the small vessels of dermis [Figure 2d and e]. Acid–fast stain was negative [Figure 2f]. Culture for microorganisms did not have any growth. Imprint smear for Leishman bodies and rk 39 antibody test were negative. Serum ACE level was normal. The patient was screened negative for HIV, hepatitis B, and hepatitis C. Serum VDRL was reactive at 1:8 dilution, and TPHA was positive. On further evaluation, CSF VDRL was reactive at 1:8 dilution without any biochemical changes in CSF fluid. Ultrasound abdomen revealed multiple, well-defined, and hyperechoic areas involving the spleen and liver suggestive of gummas. There was no evidence of skeletal involvement. Based on these features, a diagnosis of noduloulcerative tertiary syphilis with asymptomatic neurosyphilis and hepatosplenic gummas was made. The patient was treated with intravenous benzylpenicillin[4] million units 4th hourly for 2 weeks followed by IM benzathine penicillin 2.4 million units weekly injections for 3 weeks. The patient had very good improvement

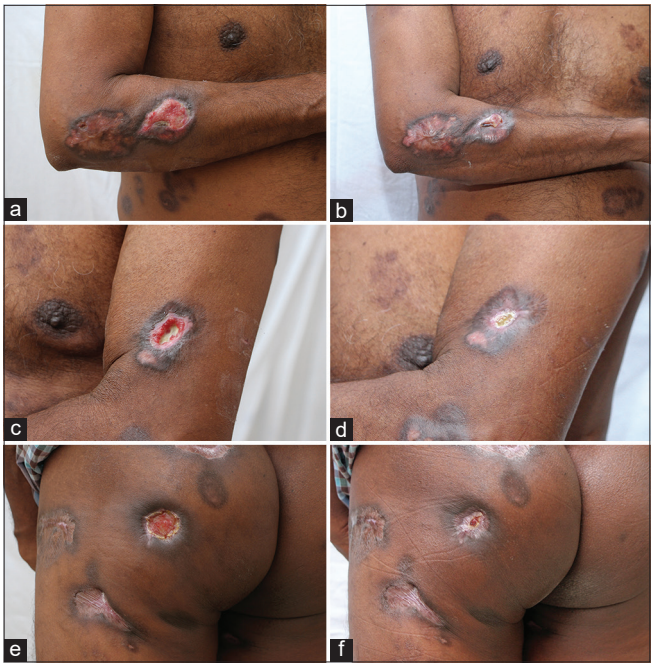

Figure 1: Noduloulcerative plaque with peripheral hyperpigmentation over the (a) right forearm, (b) right forearm, (c) left arm, (d) left arm, (e) gluteal area which healed to result in a scarred, non-contractile plaque over the, and (f) gluteal area after treatment with intravenous benzylpenicillin 4 million units 4th h for 2 weeks.

after treatment with benzylpenicillin with ulcers healing with atrophic and non-contractile scars [Figure 1d-f].

Tertiary syphilis is classically seen 3–10 years after primary syphilis in 25% of untreated cases.[1] Skin involvement in tertiary syphilis can present as superficial noduloulcerative tertiary syphilis or deeper gummatous syphilis.[2] Noduloulcerative syphilis presents as rounded, dull-red, slowly progressing nodules which ulcerate with time to result in punched-out ulcers that heal with "tissue-paper" like scars. These lesions are present over the face, trunk, and extensor aspect of extremities. As the primary lesions heal, new nodules form at the advancing border of primary lesions. This process continues for years in neglected cases, usually involving the face, back, and extremities.

Differential diagnoses include pyoderma gangrenosum, pseudolymphoma, nodular secondary syphilis, cutaneous tuberculosis, leishmaniasis, and sarcoidosis. The response to penicillin in our case suggested an infective etiology, ruling out pyoderma gangrenosum. The lack of response to antitubercular treatment made the possibility of cutaneous tuberculosis unlikely. The histopathological features were also not pointing toward any of the other differential diagnosis. Making the distinction between nodular secondary syphilis and tertiary syphilis is challenging in patients presenting

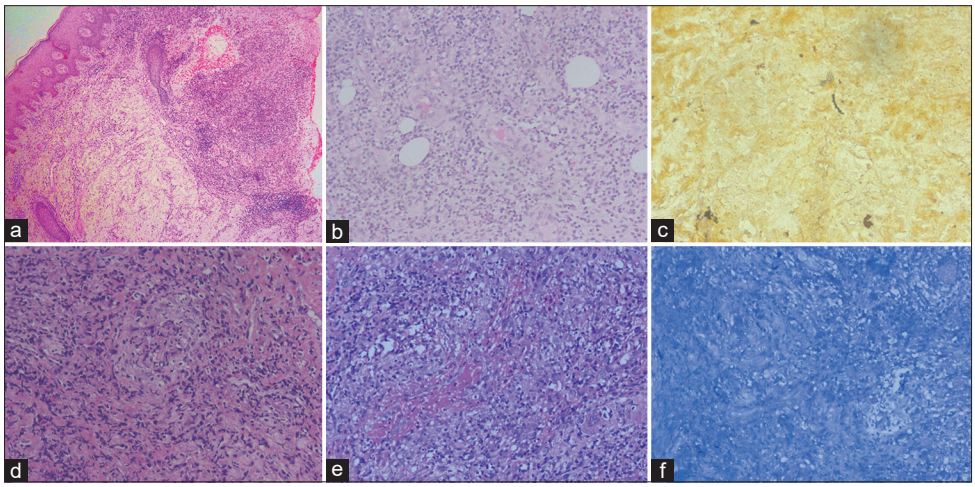

Figure 2: Skin biopsy from the gluteal region shows (a) orthokeratotic epidermis with irregular acanthosis, superficial and deep dermis shows dense acute and chronic inflammatory infiltrate (H&E, ×40), (b) prominence of thin-walled capillaries and inflammatory infiltrate comprising of neutrophils, lymphocytes, histiocytes, and eosinophils situated predominantly perivascularly (H&E, × 200), (c) occasional fringe like filamentous spirochete highlighted by Warthin-Starry stain (Warthin-Starry stain, × 400). Skin biopsy from the prepuce shows, (d) dense acute and chronic inflammatory infiltrate in dermis comprising predominantly of neutrophils along with lymphocytes, plasma cells, and few eosinophils (H and E, ×200), (e) evidence of leucocytoclastic vasculitis in the small vessels of the dermis causing transmural destruction of the vessel wall with fibrinoid necrosis and karyorrhectic debris (H and E, ×400), and (f) acid–fast stain (AFS) stain negative for tuberculous bacilli (AFS, ×400).

with ulcerating nodules and papules. The presence of hepatic and splenic gummas, the CSF VDRL positivity, and the absence of interface dermatitis in the histopathology made us consider noduloulcerative tertiary syphilis over nodular secondary syphilis.

Histopathology reveals a granulomatous process with scattered islands of multinucleated giant cells, lymphocytes, and plasma cells. An interesting point to note is that plasma cells can be inconspicuous. Necrosis is not conspicuous in the noduloulcerative type.[3] Granulomas are small and may be absent.[4] This is in contrast to the gummatous type, which demonstrates a central area of central tissue necrosis surrounded by a zone of granulation tissue.[5]

While tertiary syphilis has become rare across the world due to the widespread use of antibiotics, some cases are still reported in the literature. Dermatologists should keep in mind Sir William Osler's statement that says "syphilis simulates every other disease"[6] and, thus, maintain a high level of suspicion to diagnose syphilis.

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