Diffuse cutaneous leishmaniasis – A rare cutaneous presentation in an HIV-positive patient

Sir,

Leishmaniasis is a vector-borne disease that is transmitted by sandflies and caused by obligate intracellular protozoa of the genus *Leishmania*. Leishmaniasis occurs in four different forms of diseases known as visceral leishmaniasis, or kala-azar, cutaneous leishmaniasis, mucocutaneous leishmaniasis, and diffuse cutaneous leishmaniasis.[1] We present this case because of widespread mucocutaneous lesions noticed in an HIV-infected patient, which was initially misunderstood as histoplasmosis but was later correctly diagnosed as diffuse cutaneous leishmaniasis and treated accordingly. Very few such cases were reported in Indian context.

A 33-year-old HIV positive male from Jodhpur, Rajasthan, rickshaw/truck driver by profession presented at Department of Dermatology, Civil Hospital, Ahmedabad, with extensive skin lesions. He had complaint of fatigue, recurrent diarrhea, and weight loss. On careful history taking he reported to have multiple unprotected sexual exposures. There was no past history of any prolonged fever with hepatosplemomegaly suggestive of kala-azar.

Our case had multiple widespread infiltrated papulonodular lesions (>200) over the skin, nasal, and oral mucosa. In the present case, post-kala-azar dermal leishmaniasis was ruled out as our patient hailed from an area nonendemic for kala-azar.

For HIV infection patient was on stavudine+lamivudine+nevirapine (baseline cd4-201) since 2004 along with septran prophylaxis under the National AIDS Control Program since 18 months from ART Centre, Jodhpur, Rajasthan. He was referred to our ART Centre for further management of HIV infection [Figure 1].

At our ART Centre, CD4 was 95. Other investigations: Complete blood counts, liver function tests, and renal function tests reported within normal limits. Serological tests for hepatitis B and hepatitis C virus was nonreactive. Serum lactate dehydrogenase (LDH)

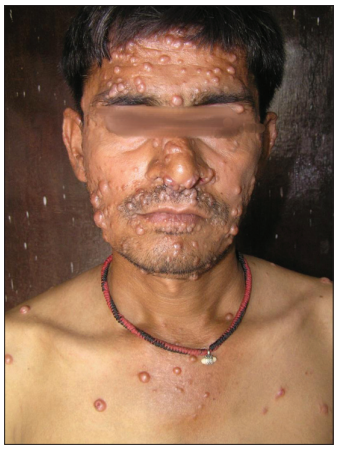

Figure 1: Cutaneous lesions. Patient showing cutaneous lesions on face and body, specially note the lesions on nasal and beard area

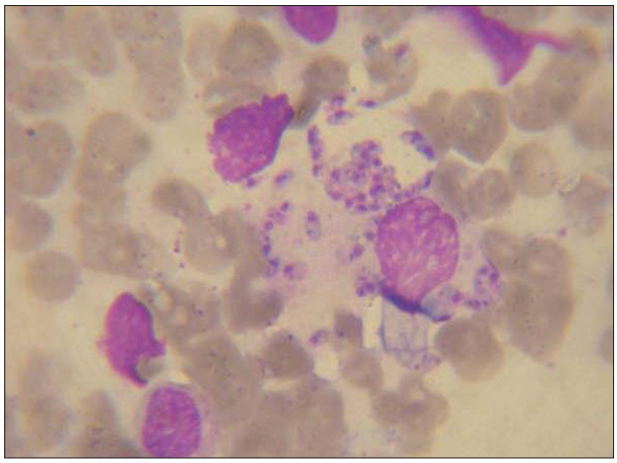

Figure 2: LD bodies. Bone marrow smear stained with Giemsa stain showing intracellular *Leishmania donovani* amastigote forms stained red-violet kinetoplast with pale cytoplasm

was raised (308 U/L) and serum ferritin was normal (151 ng/ml).

Microscopic examinations of skin smear using giemsa staining revealed exta- and intracellular leishman bodies. Skin biopsy revealed a massive dermal histolytic infiltration with round cytoplasmic microgranules 1–2 μ in diameter. Elisa test for *Leishmania donovani* antigen and antibody detection was negative.

Bone marrow biopsy examination report commented as "bone marrow studded with plenty of intracellular as well as extracellular amastigote forms of leishmania organisms having two dots – kinetoplast and nuclei" and also confirmed no evidence of any primary hematological malignancy or marrow infiltration by lymphoma [Figure 2]. Polymerase chain reaction method has the potential to become technique of choice for diagnosis of cutaneous leishmaniasis, but in our case we could not perform it.[2] However, it was not much clear whether this infection is a case of opportunistic infection or immune reconstitution inflammatory syndrome. In India, CL is commonly seen in states of Rajasthan, Bihar, West Bengal, and Orissa; therefore, endemicity of the disease must be taken into consideration for diagnosis.[3]

Patient was treated with ketoconazole 200 mg twice daily and rifamycin 450 mg daily. He was referred to Medicine Department, where he was admitted. Multifosine is drug of choice, but due to unavailability he was put on pentavalent antimony compounds – sodium stibogluconate.[4] The drug appears to inhibit amastigote glycolytic activity and fatty acid oxidation. Literature also suggests use of alternative drugs such as amphotericin B, metronidazole, levamisole, and dapsone.[5]

Response to antimony compounds was seen in terms of decrease in size and number of lesions. But he developed jaundice as a complication of the treatment. Later on patient took discharge on request. He was advised recommended course of treatment and given follow-up in OPD but he never returned. On tracking through ART centre, we found he expired. Cutaneous leishmaniasis and HIV infection as management of such condition are crucial compared to immunocompetent patient.

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