Case report

Mucocutaneous leishmaniasis as presentation of HIV infection in Sardinia, insular Italy

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A B S T R A C T

Leishmaniasis is endemic in Sardinia but only cutaneous and visceral cases have been reported to date. We report a case of mucocutaneous leishmaniasis as presentation of HIV infection in a Sardinian patient who had never visited endemic areas. Serological and clinical diagnosis was cytologically and histopathologically confirmed. The patient had a good response to treatment with liposomal amphotericin combined with highly active antiretroviral therapy without recurrences after four years. Our case report highlights the need to better assess the circulation of species, risk factors and clinical spectrum of Leishmania infection in the Italian Mediterranean islands.

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Leishmaniasis is an anthropozoanosis caused by Leishmania spp., protozoa of the order Kinetoplastida, family Trypanosomatidae and transmitted to humans through the bite of sand fly vectors of the genus Lutzomyia in the America and Phlebotomus elsewhere. Leishmania spp. can also be acquired through transfusion of contaminated blood, accidental needle stick injuries and sharing of contaminated needles or syringes by intravenous drug users. The spectrum of the disease includes visceral, cutaneous and mucocutaneous leishmaniasis, the latter found in approximately 90% of all cases in Brazil, Peru and Bolivia [1]. Leishmaniasis is endemic in Sardinia but only cutaneous and visceral cases have been reported to date [2]. Mucous membrane involvement, caused by Leishmania braziliensis or related Leishmania spp., occurs in a small percentage of patients with primary skin lesions and is rare in the Mediterranean area [3,4].

We describe the case of a 44 year old man, admitted to our infectious disease unit in October 2008. Anamnesis was negative for travels in foreign countries but positive for sexual contacts with occasional partners. He also referred dysphagia and recurring oro-pharingeal candidiasis during the previous year.

On physical examination we observed gingival and soft palate hypertrophy with ulcerative vegetative lesions covered with whitish exudates (Fig. 1A) and papular, vesicular and crusty lesions localized in both hands. A biopsy and a fine needle aspiration for cytological evaluation of the oral lesions were performed. HIV screening test resulted positive, plasma HIV-RNA was 58,000 cp/ml and CD4 count was 343 (20%) cells/μl. He was classified as CDC '92 stage B2. The patient started highly active antiretroviral therapy (HAART) with lopinavir/ritonavir and tenofovir/emtricitabine without significant side effects. Brain and neck computed tomography showed rinopharingeal, uvula and maxillar sinus mucosa hypertrophy, laterocervical and undermandibolar lymphadenopathy. Numerous intracellular amastigotes were identified in cytological smears (Fig. 1B). Histologically, marked epithelial hyperplasia and a lymphohistiocytic inflammatory infiltrate with presence of leishmanias (Leishman Donovan bodies) inside the histiocytes were observed. Anti-Leishmania IgG antibodies were detected in serum (ELISA and indirect immunofluorescence, titer = 1:160). The instrumental, clinical and histological features were consistent with mucocutaneous leishmaniasis.

Liposomal amphotericin B was started at the dose of 4.0 mg/kg body weight/day on days 1 to 5, 10, 17, 24, 31 and 38 with a complete clinical resolution. After more than four years from first admission to our division, we have not observed any relapse and the patient continues HAART with optimal viro-immunological outcomes.

The clinical manifestations of leishmaniasis depend on interaction resulting from parasite's pathogenicity and tropism, and the host's cell-mediated immune response [5]. HIV infection is responsible for an incidence increase and for atypical presentation, as a clinical appearance of oral neoplasia, of leishmaniasis cases [6,7].
Fig. 1. Gingival and soft palate hypertrophy with ulcerovegetative lesions covered with whitish exudates (A). Giemsa stain of the lesion sample showing Leishmania amastigote forms (B).

Leishmania spp./HIV coinfection has been described in 34 countries all over the world, especially in southern Europe, mostly in the visceral form [8]. In endemic areas of the New World, leishmaniasis in HIV patients appears in the cutaneous form, ranging from small, dry, crusted single or multiple lesions, cutaneous ulcers to diffuse cutaneous leishmaniasis.

Very few cases of non-imported mucocutaneous leishmaniasis have been reported in Europe and although the parasite was identified in only one case, these cases have been assumed to be the result of Leishmania infantum infection [9]. Purely mucosal or mucocutaneous leishmaniasis in association with HIV infection is of exceptional occurrence in European patients, and can represent the presentation of HIV infection. It appears to be more frequent in cases of leishmaniasis acquired in Southern America and Northern Africa, presumably because of the tropism of the infecting Leishmania species.

A recent review of leishmaniasis in Brazil showed that HIV patients with a severe immune compromised develop mucosal involvement in 53% of cases [9]. However, our case showed a mucosal involvement in a patient with a moderate immune deficiency who has never traveled to endemic areas. Furthermore, although intravenous route predominates in the Mediterranean area for transmission of viscerotropic Leishmania species in HIV patients [10,11], our patient acquired the infection through the usual insect bite.

Relapses are common in patients with AIDS, in both visceral and mucocutaneous forms, with a high mortality rate even in the HAART era [12]. We used high-dose liposomal amphotericin B in association with HAART, with complete recovery and no relapses after more than four years from diagnosis. Liposomal amphotericin B has been successfully utilized in HIV patients [13] but it should be considered that the high cost may limit its use in resource limited countries.

In conclusion, our case report suggests that mucocutaneous leishmaniasis is present in the Italian Mediterranean area and should be considered in differential diagnosis of oral cavity lesions, especially in HIV-infected patients. Previously unidentified pathogens have been recently reported in Sardinia as cause of aseptic meningitis and Mediterranean spotted fever-like illness [14,15]. Therefore, further studies are needed to better assess the circulation of species, risk factors and clinical spectrum of Leishmania infection in the Italian Mediterranean islands.

References