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A case of typical mycosis fungoides in an HIV-positive patient

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Abstract

Non-Hodgkin's lymphomas in HIV patients are generally B-cell lymphomas. The coexistence of HIV-1 infection with Cutaneous T-Cell Lymphoma (CTCL) is an infrequent occurrence, particularly in the classic variety of Mycosis Fungoides (MF). This case demonstrates that in an HIV-1 positive patient, CTCL can manifest as MF with features comparable to those reported in the general population. We report a 52-year-old male patient with asymptomatic HIV-1 who presented with the eruption of pruritic papules with overlying grey scales over his torso and extremities for two years. In a biopsy specimen, small intraepidermal lymphocytes without significant atypia were detected. Immunohistochemistry confirmed the diagnosis of T-cell lymphoma. The disease had spread to lymph nodes throughout the body. This is one of the few cases in which a typical MF is described in an HIV-1 patient. MF can be difficult to identify owing to its slow progression and resemblance to other inflammatory conditions such as spongiotic dermatitis. While MF is a very uncommon sign in HIV-infected individuals, it should be included in the differential diagnosis of all patients presenting with relevant cutaneous manifestations.

Keywords: Cutaneous T-cell lymphoma; Immunosuppression; HIV.

Introduction

Non-Hodgkin's Lymphomas (NHL) are more common among patients with Acquired Immunodeficiency Syndrome (AIDS) than in the general population and occur in approximately 10% of all HIV-infected patients [1]. Most NHLs detected in AIDS patients are B-cell lineage and extranodal in origin, with primary sites in the gastrointestinal tract and central nervous system [2-4]. In comparison, cutaneous NHLs are a relatively uncommon occurrence in HIV-1-infected individuals. HIV-associated cutaneous lymphomas are predominantly T-cell lineage and classified into indolent diseases mimicking Mycosis Fungoides (MF) or Sezary syndrome or large cell lymphomas with a dismal prognosis, often CD30+ T-cell phenotype with Epstein-Barr virus positivity [5]. The majority of reported instances of Cutaneous T-Cell Lymphomas (CTCL) in HIV positive individuals resemble MF or Sezary syndrome [6-11,12-16]. Additionally, HIV positivity may operate as a protective factor against CTCL since HIV-infected patients have a better rate of survival and a lower risk of total mortality compared to non-HIV-infected CTCL patients [17]. We describe a case of MF in an HIV-positive patient who had typical MF features consistent with those observed in the general population.

Case presentation

We report the case of a 52-year-old male patient with a history of asymptomatic HIV-1 infection who was referred for assessment of a rash and nonspecific skin eruption. When he arrived at our dermatology clinic, the patient felt good with no systemic symptoms but reported that these cutaneous symptoms began

two years ago and progressively deteriorated. He stated that he had pruritus on his trunk and extremities, which he could alleviate by using baby oil. Clinical examination revealed a scattering of annular hypopigmented to mottled hyperpigmented macules, some with overlying scales, involving the arms, chest, abdomen, back, buttocks, and legs, against a background of scaly skin and increased skin lines on the chest, abdomen, back, and bilateral upper and lower extremities (Figure 1). The laboratory analysis consisted of an unremarkable Complete Blood Count (CBC), Comprehensive Metabolic Panel (CMP), and lipid panel. The patient previously had an asymptomatic HIV-1 infection, which was confirmed by serology testing. At baseline, the patient's absolute CD3/CD4 helper T-cell count was 878/ uL, and he is not currently on antiretroviral therapy.

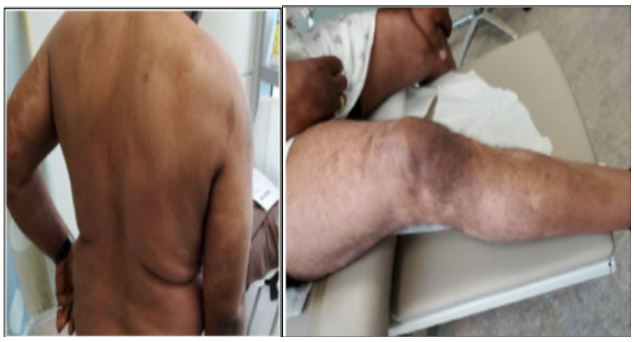

Figure 1: Scattered annular hypopigmented to piokilodermatous macules, some with overlying scales on the back (a) and legs (b).

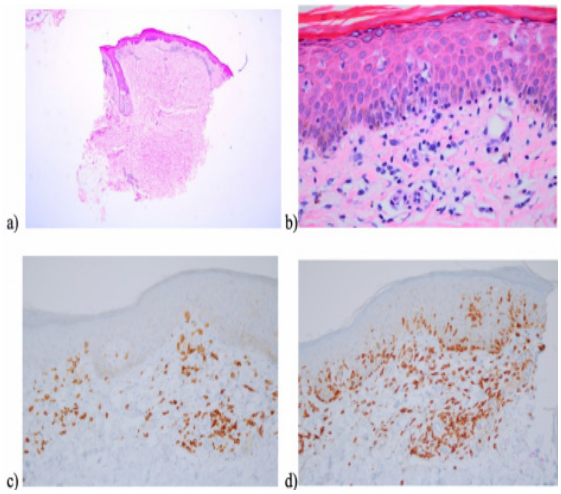

Figure 2: A punch biopsy obtained from a hypopigmented area on the right thigh showed skin with overlying parakeratosis. (A) Histologic sections of the epidermis displayed acanthosis with minimal to moderate spongiosis. (H & E, 20X) (B) Many small intraepidermal lymphocytes without significant atypia were identified scattered throughout the epidermis (epidermotropism) with prominent tagging along the dermal-epidermal junction. The superficial dermis was fibrotic and contained an infiltrate of small lymphocytes. (H & E, 200X). (C) CD3 immunostain confirmed the intraepidermal infiltrate to be composed of CD3+ T-cells. (CD3 immunostain, 100x). (D) The CD4 immunostain also highlights focal Pautrier's microabscesses not evident on histologic sections. (CD4 immunostain, 100x).

Clinical and pathological findings were consistent with mycosis fungoides stage 1B. Triamcinolone cream was begun on the patient with moderate control, so treatment was escalated to include full body NB-UVB three times a week. The treatment plan improved his rash and kept his labs well controlled.

Discussion

In comparison to the general population, individuals with HIV have an estimated 11-fold increased risk of developing malignant non-Hodgkin's neoplasms [7]. Only a few of these neoplasms are T-cell lymphomas; the vast majority are B-cell lymphomas. CTCL can manifest itself in two ways in HIV-positive patients: as an indolent type mimicking mycosis fungoides or as an aggressive Sezary syndrome and large cell lymphoma. Goldstein et al. identified the first instance of localized CTCL in a patient infected with HIV-1. The patient had cutaneous tumors with no peripheral adenopathy or other indications of spreading. Local radiation treatment was used successfully to control the patient's tumors [11]. Following that initial case, additional cases of CTCL in HIV-positive individuals have been described, in which patients present with aggressive lesions and a dismal prognosis [6-11,12-16].

Analysis of the Surveillance, Epidemiology, and End Results program, 1973–2013, of the US National Cancer Institute data showed that HIV-infected patients with CTCL have a significantly higher survival rate and a decreased risk of overall mortality than non-HIV-infected patients [17]. We herein report another rare case of mycosis fungoides with the typical features of indolent scaly patches that may or may not be irritating in an HIV-1 positive patient, as found in the general population. This case adds to the data that HIV may confer a protective status on the patient by destroying neoplastic T cells and that, in the absence of severe immunodeficiency, CTCL responds to standard therapy and progresses more slowly [8,17]. Notably, one of the primary goals of this case is to emphasize the critical nature of quick detection in such cases. The early stages of MF might be mistaken for non-cancerous inflammatory illnesses. Early biopsy of lesions may prevent a delay in diagnosis, averting the need for severe therapy later.

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