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Case Report

**Syphilis Revealed by Evocative Palmoplantar Eruption and
Ocular Inflammation in HIV-Infected Patients Ocular
Inflammation and HIV-Syphilis Co-Infection**

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Abstract

Background: After years of declining incidence in many countries, syphilis infection has re-emerged as a major public health problem in the last decade. Concomitant infection with HIV can cause syphilis to have atypical characteristics.

Material and Methods: We report on 2 cases of syphilitic uveitis and one case of papilledema secondary to syphilis in patients co-infected with HIV.

Results: The ocular manifestations of syphilis led to the discovery of HIV-1 seropositivity in two patients. All patients were male and homosexual. One patient presented with anterior uveitis and 1 patient had panuveitis. Bilateral optic nerve

involvement was also observed in one patient. All patients presented with evocative palmoplantar eruption. All patients were treated with intravenous penicillin G and ceftriaxon. Ocular inflammation decreased and visual acuity improved in all patients.

Conclusion: As a great imitator, syphilis may affect all ocular structures but none of ocular lesions are stereotyped. Palmoplantar eruption must be searched in any patient with ocular inflammation to suggest the diagnosis of syphilis. This rare combination is likely to be associated with patients suffering from HIV infection.

Keywords: HIV infection, Palmoplantar rash, Papilledema, Syphilis, Uveitis.

Introduction

After years of declining incidence in many countries, rates of concomitant infection of human immunodeficiency virus (HIV) and syphilis have been increasing. Concomitant infection with HIV can cause syphilis to have atypical characteristics. These atypical findings can involve the skin as well as organs that are rarely affected in HIV-negative individuals such as the eyes (Gaudio, 2006; Lynn, 2004; Wöhrl, 2007). We present three cases of syphilis causing palmoplantar rash and ocular disease.

Material and Methods

Case reports.

Results

The first patient was admitted to the hospital for visual field disorders. On ophthalmologic examination, visual acuity was 0.8 in both eyes. Slit lamp examination did not note any uveitis. Fundus examination found a bilateral papilledema (Fig 1A). Goldmann visual fields were marked by a caecocentral scotoma on the left field and an inferior altitudinal field defect on the right. Diagnosis of syphilis was suspected on the association with evocative papulosquamous eruption of the palms and soles within two weeks following a previous asymptomatic general skin eruption (Fig 1B). No chancre was found. Serological tests on blood sample and cerebrospinal fluid confirmed syphilitic infection. Cranial MRI was normal and excluded raised intracranial pressure. Co-infection with HIV (HIV viral load was

4.78 log) was discovered and patient's CD4 T lymphocyte count was greater than 500/ μ L.

The second patient complained about painful visual acuity loss related with an unilateral anterior granulomatous uveitis (Fig 1C) associated with palmoplantar pustulous eruption within 1 week (Fig 1D) and a general rash within three weeks. No persistent chancre was found. Venereal Disease Research Laboratory (VDRL) tests were positive, and hemagglutination assays for antibodies against *Treponema pallidum* were reactive, confirming a diagnosis of secondary syphilis. Co-infection with HIV was known for this patient for 4 years and he had no treatment with an actual HIV viral load at 5.09 log. His CD4 T lymphocyte count was 354/ μ L.

The third patient was referred for unilateral panuveitis including anterior granulomatous uveitis and posterior placoid chorioretinitis associated with a history of palmoplantar eruption three weeks earlier. No persistent chancre was found. Serological tests on blood sample and cerebrospinal fluid confirmed syphilitic infection. Co-infection with HIV (HIV viral load was 5.20 log) was discovered and patient's CD4 T lymphocyte count was greater than 500.



Figure 1. Association of palmoplantar eruption and ocular inflammation secondary to syphilis in HIV-infected patients Patient 1,

Fig 1A: Bilateral papilledema,

Fig 1B: Papulosquamous palmoplantar rash Patient 2,

Fig 1C: Anterior granulomatous uveitis,

Fig 1D: Pustulous palmoplantar eruption

All patients were male and homosexual. Treatment included intravenous penicillin G (16 millions units / day) during 3 days with a short Jarish-Herxheimer reaction at the beginning for two patients (requiring oral corticosteroids), then ceftriaxone injections (2 g/day) for three weeks to facilitate home care. All patients with ocular syphilis exhibited functional improvement and resolution of ocular inflammation after a period of 2 to 10 weeks.

Discussion

Ocular involvement usually follows cutaneous lesions which are common in secondary syphilis. Skin lesions are common during secondary syphilis (86.4%). Cutaneous eruption is made of non-pruritic pink discrete macules (roseola syphilitica) or maculopapular exanthema which typically appears around 6 weeks after primary lesions and are connected to haematogenous spread of *Treponema pallidum*. Palmoplantar rash is less common (37.6%) and is suggestive of secondary syphilis (Gaudio, 2006; Lynn, 2004; Wöhrl, 2007). The pustulous lesions of palms and soles are rare and differential diagnosis, such as guttata psoriasis or atypical pityriasis can be discussed (Wöhrl, 2007). In our patients, palmoplantar rash was concomitant with visual symptoms.

Posterior uveitis is the most common presentation of syphilitic uveitis reported in the literature. Anterior uveitis due to syphilis, as observed in the second case report, is a rare manifestation but is more likely in HIV-positive patients (Puech, 2010; Stoner, 2007). Optic neuritis with visual field scotomas was noted in our first patient. Because ocular syphilis is considered to be frequently associated with neurosyphilis and because antibiotic penetration of the blood-ocular barrier can be poor, patients with ocular syphilis are treated with regimens for neurosyphilis (Gaudio, 2006; Stoner, 2007). This treatment consists of intravenous penicillin G benzathine 3 to 4 million units every 4 hours. Ceftriaxone 1 to 2 g per day for 14 to 21 days may be an alternate treatment (Stoner, 2007). With these regimens of treatment, most of the patients exhibited functional improvement

and resolution of ocular inflammation, as observed in our three cases (Amaratunge, 2010).

Ocular symptoms led to the discovery of HIV infection in two of our patients. This highlights the need for HIV infection screening in patients with syphilitic uveitis. This recommendation is valid for all those patients with any form of syphilis symptoms.

Patients diagnosed with ocular syphilis should be tested for HIV, because the presence of a primary genital chancre increases the risk of acquiring or transmitting HIV, and because the risk factors for the two diseases are similar (Lynn, 2004; Wöhrle, 2007). As observed in our three reports, ocular syphilis is not correlated with HIV-infection staging (Stoner, 2007).

In conclusion, ocular syphilis may affect all ocular structures but none of ocular lesions are stereotyped in HIV-infected patients. Syphilis should be tested in all HIV-infected patients with uveitis as it is the most common bacterial eye infection in HIV-positive patients. Palmoplantar eruption in patients with ocular inflammation is suggestive of syphilis and should be looked for.

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