

# Syphilitic retinitis in HIV seropositive patient

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### Abstract

The authors present a case report of a 25-year-old man admitted in the hospital complaining of bilateral progressive loss of vision.

Five years ago a diagnosis of primary syphilis was made and two years ago he was found to be HIV positive.

Treatment with penicillin was given and the patient had an

eventful recovery with complete resolution of the retina lesions and recovery of visual acuity. The final diagnosis was syphilitic retinitis.

Keywords: syphilitic retinitis, human immunodeficiency virus seropositivity, neurosyphilis.

### Introduction

Syphilis and HIV infection are diseases of distinct historic periods emerging at present interrelated and with an evident epidemiologic association.<sup>1</sup>

Syphilis is a chronic systemic infection caused by *Treponema pallidum*, almost always sexually transmitted and characterized by episodes of active disease separated by periods of latency.

Individuals at high risk of contracting syphilis also are at a higher risk of HIV contagion. This way, such infections are often found in the same patient.

There is evidence that syphilis and other genital ulcerative diseases would be important risk factors for acquiring and transmitting the HIV infection.<sup>2</sup>

The frequency of uncommon clinical and laboratory manifestations in syphilis patients co-infected by HIV was not yet established. Such alterations may depend on the infectious stage by HIV and the degree of immunosuppression.<sup>2</sup>

In most patients infected by HIV, the serological results are not substantially different from those found in seronegative individuals.<sup>2</sup>

Before an uveitis diagnosis in the seropositive patient, a syphilitic retinitis should be also considered in the differential diagnosis, along with other infection causes (CMV, *Toxoplasma gondii*, and herpesvirus) frequently associated to HIV infection.<sup>3</sup>

This case aims to point out the attention for the ever more frequent association between syphilis and HIV infection and to remind the importance of considering syphilitic aetiology in cases of seropositive retinitis, as it is a condition sensitive to penicillin treatment, with which an important clinic improvement can be achieved.

### Case report

PMSR, male, 25 years old, Caucasian, bisexual, born in Atalaia and residing in Lisbon, was admitted due to a progressive reduction on the visual acuity.

He had been asymptomatic until a month ago, time where he started losing weight and congestion has appeared on the left eye globe, along with a progressive reduction of the visual acuity.

He was seen at the ophthalmology service, having been medicated with steroids and a topic mydriatic. Progressively it was seen a reduction of visual acuity (VA) (left eye vision < 1/10).

Around three weeks later, he noticed congestion on the right eye with a reduction on visual acuity (Right eye vision = 6/10).

Five years previously, the patient had a condition compatible with primary syphilis undergoing therapy.

Two years ago he had been diagnosed as positive for HIV-1.

In the background there was only a mention of

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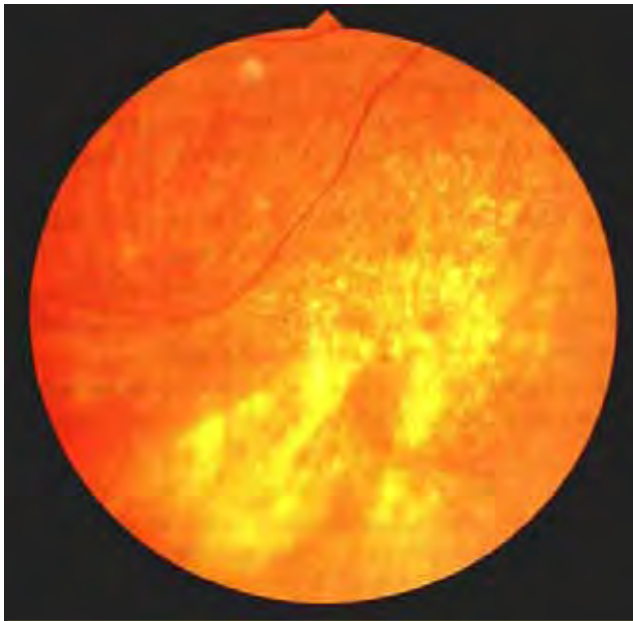
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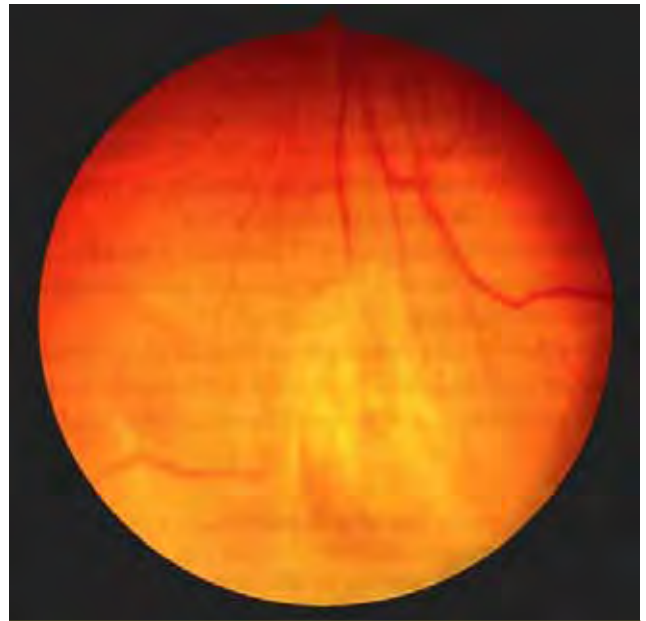
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Received for publication on the 4th March 96



Right eye retinography / chorioretinitis with retina atrophy.

FIG. 1



Left eye retinography – retina displacement.

FIG. 2

gastritis six years ago.

The observation showed a lucid patient, orientated in time and space, thin (weight 58 kg), colored skin and mucosa, anicteric. Normal oral pharynx and no alterations on the cardiopulmonary auscultation. Observing the abdomen, it was found hepatomegaly 3 cm below the right costal rib. Adenopathies of the cervical and inguinal chains were palpable.

Ophthalmological observation has revealed: visual acuity right eye = 6/10 after dilation was observed a chorioretinitis process with a retina atrophy condition (Fig. 1); the visual acuity left eye < 1/10 (perception of lights and shades); after dilation, it was verified retina displacement (Fig. 2).

The clinical study carried out got the following results:

Hemogram revealed: red blood cells for 4,290,000/mm<sup>3</sup>, hemoglobin 10.7 g/dL, hematocrit 32%, MCV 74  $\mu$ , leucocytes 3904/mm<sup>3</sup> (neutrophils 39%, lymphocytes 50%), platelets 120,000/mm<sup>3</sup>. Liver and kidney functions did not show alterations. Positive VDRL (reagin + at, 1/16). Positive TPHA 1/10,240. Positive HIV-1 (Elisa and Western Blot methods), CD4 150; toxoplasmosis IgM (-) IgG (+) HSV IgM (-) IgG (+) CMV IgM (-) IgG (+). Hepatitis B markers compatible

with immunologic scar. Negative hepatitis C markers.

A lumbar puncture was carried out with the CSF looking normal, normotensive, revealing nucleate elements 32/mm<sup>3</sup>,<sup>3</sup> with some lymphocytes, proteins 49 mg/dL, glucose 39 mg/dL, chlorites 134 mEq, positive VDRL, positive TPHA. Negative antibody anti-CMV and negative antibody for the anti-herpes virus, negative research for Koch bacillus.

Abdominal ultrasound: liver within the upper threshold of normality, normal contour and diffuse and hyperechogenic echo-structure, without any images of lesion occupying spaces. Rounded spleen of regular contour and homogeneous echo structure.

Cranial-encephalic CT scan without signs of vasculitis or infarction.

Echocardiogram: non-dilated aorta root; absence of organic valvular pathology.

Ganciclovir therapy was carried out with ganciclovir (5 mg/kg 2x daily IV, for fortnight) with deterioration of lesions and reducing visual acuity (right eye vision = 4/10). Afterwards, therapy was started penicillin G (16 millions unit /day IV) with an improvement on the lesions and visual acuity of the right eye, increasing to 8/10 in 21 days.

Subsequently it was carried out a lumbar punc-

ture after penicillin therapy revealing normotensive normal aspect CSF, with 70 nucleate elements/mm<sup>3</sup>, predominance of lymphocytes, proteins 74 mg/dL, glucose 65 mg/dL, chlorite 118 mEq; positive VDGR, positive TPHA. Negative antibodies anti-CMV. Negative antibodies anti-herpes virus *simplex*. Bacterial and mycological exam negative and also negative KB search.

After being discharged the patient was followed up as an outpatient. Improvement on the general condition and nutrition with a stabilization of the visual acuity was seen.

### Discussion

In HIV seropositive individuals, *Treponema Pallidum* infection is frequent with CNS involvement (neurosyphilis) and not rarely with an aggressive course.

It has been verified a change of the clinical and laboratory syphilis presentation in co-infected individuals. There is a higher progressive probability, namely in CNS involvement and a shorter time gap between the primary accident, the secondary manifestations and the emergence of neurosyphilis.<sup>4,5,6</sup>

Laboratory tests may show a negative VDRL in the CSF however it does not exclude a neurosyphilis diagnosis.<sup>3,7</sup>

It is suggested an investigation of syphilis presence in all HIV seropositive patients and if confirmed, it must be carried out a lumbar puncture with a request for VDRL and TPHA in the CSF, regardless of the duration of the condition or whether neurologic symptoms are present.

HIV seropositive increases the incidence of neurosyphilis and the risk of recurrence after administration of penicillin conventional doses.<sup>8</sup>

In a patient with progressive loss of vision without known aetiology, syphilis must be considered in the differential diagnosis, although ocular syphilis is rare.<sup>9</sup> For such purpose, the following laboratorial tests should be carried out TPHA/FTA – ABS and VDRL to confirm the diagnosis, being also compulsory to ask for the HIV serology. The treatment for ocular syphilis is the same as for neurosyphilis, with high doses of G penicillin for 2 to 3 weeks.<sup>10</sup>

In the case of such patient, eye lesions were not typical of syphilis. However the quick improvement, followed by the recovery of the visual acuity after therapy with penicillin, leads to the conclusion that probably these were lesions of syphilitic chorioreti-

nitis. It is possible that the atypical characteristics of these lesions can be due attributed to the fact that the patient was immunodepressed. ■

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