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Case Report

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Syphilitic Hepatitis: An Uncommon Manifestation

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Abstract

Syphilis is a systemic disease caused by the transmission through sexual contact of *Treponema pallidum*. It has a high incidence in men who have sex with other men, and is associated with human immunodeficiency virus (HIV) infection. The diagnosis depends on serological tests or confirmation of the spirochete in histological samples. The primary lesion courses after a latency period of 2 to 6 weeks, and the secondary disseminated phase, usually associated with mucocutaneous lesions and lymphadenopathy, may involve any organ. Symptomatic syphilitic hepatitis is a rare manifestation, the diagnosis of which is a challenge. It is characterized by a marked elevation of alkaline phosphatase, moderate elevation of transaminases, and no bilirubin changes. Histologically, portal inflammation and non-caseous granulomas predominate without associated necrosis. The case described is a rare manifestation of secondary syphilis, in the form of hepatitis in a sexually active HIV-infected patient with good response to the recommended benzathine penicillin treatment.

Keywords: Syphilis; *Treponema pallidum*; Hepatitis; Maculopapular rash

Introduction

Syphilis is a complex systemic disease caused by *Treponema pallidum*, a very invasive spirochete. It is transmitted through sexual contact, with a high incidence in men who have sex with men (MSM), and is associated with other sexually transmitted diseases (STDs) such as human immunodeficiency virus (HIV) infection [1]. Diagnosis is not made by isolation in culture, but usually depends on serological tests or confirmation of the spirochete in histological samples [2].

It occurs with primary lesion after a latency period of 2 to 6 weeks. The secondary phase, disseminated, usually associated with mucocutaneous lesions and lymphadenopathy, may involve any organ [3].

Symptomatic syphilitic hepatitis is a rare manifestation, characterized by a marked elevation of alkaline phosphatase, moderate elevation of transaminases, and no changes in bilirubin. Histologically, portal inflammation and non-caseous granulomas are identified without associated necrosis [4].

The treatment involves the use of benzathine penicillin, with the schedule depending on the stage of the disease and the organs involved [5].

Case Report

A 46-year-old male, leukodermal, MSM, had been followed by a diagnosis of infection with HIV for 5 years, with sustained virological suppression and cluster of differentiation (CD)4+ T lymphocyte count of 516/mm^3, under antiretroviral therapy with tenofovir, emtricitabine and efavirenz. The patient had a history of unprotected sexual contacts with multiple partners in previous years.

He was admitted by pruritic maculopapular rash localizing to the dorsal region and the proximal region of the lower limbs, with changes in the evidence of hepatic function. Abdominal objective examination showed no significant changes, such as organomegaly. There was no symptom or signs at the genital level.

From the analytical study, a mixed pattern hepatitis of predominant cholestatic predominance with alkaline phosphatase (308 U/L), with infection screening for hepatitis A, B, C and E viruses was negative.

IgG/IgM serology (CLIA) was positive, rapid plasma reagin (RPR) of 512 and fluorescent treponemal antibody-absorption (FTA-ABS) positive.

Based on the laboratory findings, biopsy, cutaneous and hepatic biopsies were performed, with primary suspicion of secondary lesions of syphilitic disease.

Cutaneous biopsy (Fig. 1) showed mild inflammatory infiltrate by lymphomonuclear cells, occasional dispersed eosinophils and neutrophils, some of which were intravascular, changes compatible with syphilitic involvement.

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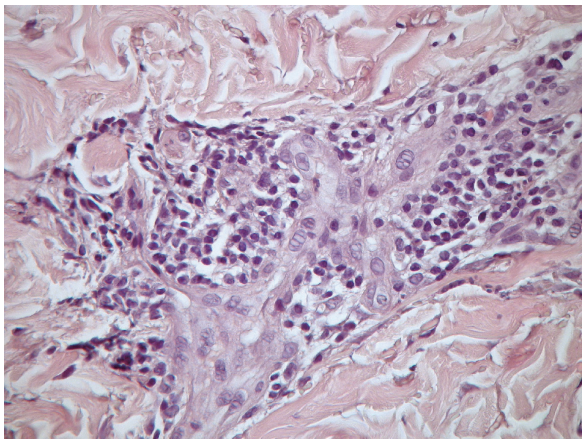

Figure 1. H&E stain, inflammatory infiltrate by lymphomonuclear cells, dispersed eosinophils and neutrophils, some of which are intravascular.

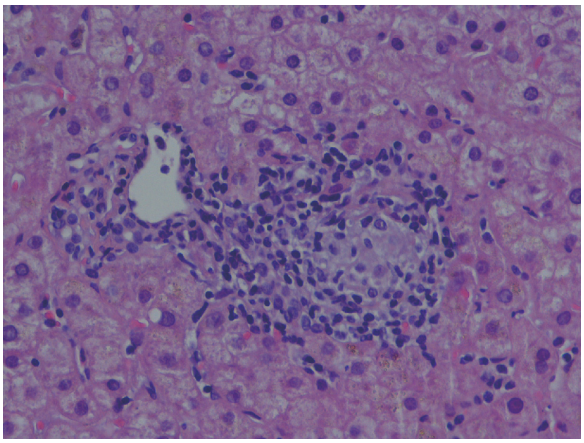

Figure 2. H&E stain, epithelioid granuloma in portal space, not necrotizing.

Hepatic biopsy was performed (Fig. 2), with description of mononuclear inflammatory infiltrate of some portal spaces and discrete lobular necroinflammatory activity, with dispersed acidophilic bodies and focal formation of epithelioid granulomatous aggregates without necrosis compatible with hepatic involvement by syphilis.

The patient was treated with three doses per week of 2.4 million units of benzathine penicillin for a total of 7.2 million units and was asymptomatic with resolution of rash and cutaneous pruritus. Standardization of the transaminases and enzymes of hepatic cholestasis was verified.

Discussion

Secondary syphilis can affect any organ, sometimes hindering and delaying diagnosis, particularly when there is no cutaneous involvement. The fact that our patient has secondary lesions with maculopapular rash and hepatic cholestasis without other probable cause has increased our suspicion of syphilitic hepatitis.

As described in the literature, most patients with hepatic involvement are asymptomatic, 50% of whom have only slight elevation of alkaline phosphatase [4]. In rare cases with symptomatic hepatitis, there is a particular increase in cholestatic enzymes. As seen in our histological piece, there is portal inflammation, without hepatocellular necrosis and non-caseous granulomas.

The usefulness of this case is the description of a rare manifestation of secondary syphilis in the form of hepatitis, with good response to the recommended treatment with benzathine penicillin. In HIV-infected patients, sexually active, this should be one of the differential diagnoses to be taken into account.

Acknowledgments

None to declare.

Financial Disclosure

None to declare.

Conflict of Interest

None to declare.

Informed Consent

Informed consent was obtained from the patient.

Author Contributions

Leila Cardoso and Ruben Carvalho contributed to the elaboration, Eduardo Rabadao, Jose Saraiva and Armando Carvalho contributed to the review, Ana Gameiro contributed in the cutaneous biopsy, Rui Caetano Oliveira contributed in the hepatic biopsy.

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