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A Case of Syphilitic Hepatitis

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INTRODUCTION

Syphilis is a sexually transmitted infection that is recently increasing in incidence nationwide. In 2020, there were an estimated 133,945 reported cases of syphilis (all stages), up 52% from 2016. While it can affect many organ systems, liver involvement is uncommon. We present a case of syphilitic hepatitis in an individual with HIV presenting with abdominal pain and liver function test (LFT) elevations.

CASE DESCRIPTION

A 60-year-old male with well-controlled HIV on antiretroviral therapy (CD4 699 cells/µL, undetectable VL) presented to his PCP with right upper quadrant and epigastric pain. Workup revealed elevated LFTs and he was admitted for further workup.

The patient reported 2-3 weeks of abdominal pain exacerbated by eating as well as headaches, dry mouth, and nausea. He denied other symptoms including jaundice, fevers, and chills. On exam, he was noted to have macules and papules on his palms and chest (Figures 1,2).

Blood work revealed: AST 97 IU/L, ALT 284 IU/L, ALP 870 IU/L, GGT 1062 IU/L, and total/direct bilirubin 1.6/0.8 MG/DL, Treponema pallidum antibodies >8 AI (prior unavailable), a reactive RPR (titer 1:64; non-reactive 6 months prior), and Lyme antibodies >8 AI. Serologies for Hepatitis A and Hepatitis B were negative. RUQ US with incidental liver hemangioma and MRCP unrevealing. He later recalled a penile lesion that had healed before presentation.

A diagnosis of syphilitic hepatitis was made, and the patient was treated with penicillin G 2.4 million units weekly for 3 doses, due to unknown latency status. Within 2 months, LFTs normalized, RPR titer down trended, and symptoms resolved.

SIGNS AND SYMPTOMS

Signs and symptoms of syphilis vary widely based on stage of syphilis infection (Table 1). Stages of infection include primary, secondary, tertiary, early and late latent infections. Neurosyphilis, ocular syphilis, and otosyphilis can occur at any stage.

Stage	Onset of Symptoms	Common Manifestations
Primary	9-90 days	Chancre
Secondary	1-6 months	Skin rash, mucocutaneous lesions, lymphadenopathy
Tertiary	Months to years	Cardiac involvement, gummatous lesions, tabes doralis, general paresis
Early Latent	Acquired within preceding year	None
Late Latent	Acquired >1 year ago	None

Table 1. Stages of Syphilis

Patient presented with very subtle maculopapular rash on palms and chest (Figures 1,2).

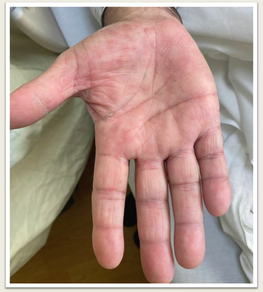

Figure 1. Maculopapular rash on palms.

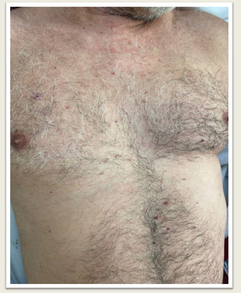

Figure 2. Maculopapular rash on chest.

After three treatments with penicillin G, patient's LFTs and RPR titer normalized (Table 2).

	Initial Labs	After PCN Dose 1	After PCN Dose 2	After PCN Dose 3	6 months after initial diagnosis
AST (IU/L)	97	129	36	18	22
ALT (IU/L)	284	269	78	19	27
Alkaline Phosphatase (IU/L)	870	891	405	119	77
Total Bilirubin (MG/DL)	1.6	2.1	0.8	0.5	0.7
Direct Bilirubin (MG/DL)	0.8	1.1			
RPR Titer	1:64			1:8	1:1

Table 2. LFT and RPR trend throughout treatment

DISCUSSION

Syphilis has variable presentations depending on stage (primary, secondary, tertiary) and the involved organ systems. Secondary syphilis is a systemic illness typically presenting with a characteristic rash that is disseminated and/or on the palms and soles. Syphilitic hepatitis is uncommon but when seen, presents as part of secondary syphilis with abdominal pain accompanied by disproportionate elevations in ALP and GGT rather than AST and ALT, as seen here.

Definitive diagnosis is made by liver biopsy. However, combination of clinical history, positive syphilis serology, lack of other identifiable hepatic insult, and the resolution of symptoms and lab abnormalities following treatment, strongly support syphilitic hepatitis as the primary diagnosis.

CONCLUSIONS

This case should increase recognition of hepatitis as a possible manifestation of syphilis, the great imitator, and allow proper treatment without unnecessary expensive and invasive work-up. Prompt recognition and treatment are particularly important in this case, given an increased risk for neurologic and ophthalmologic syphilis complications in individuals with HIV.

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