Syphilitic Hepatitis: Rare or just Unrecognized?

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Syphilis is a chronic, infectious, sexually transmitted disease caused by *Treponema pallidum* and can affect all tissues and all organs (1). Untreated syphilis progresses through four stages: primary, secondary, latent and tertiary (1). Among the less common manifestations of the secondary stage is syphilitic hepatitis; syphilis remains one of the unrecognized etiologies of liver dysfunction (2). Timely treatment as well as effective control of disease are only possible with the early diagnosis (3).

A 27-year-old male presented with macular rash localized on the trunk and upper extremities, mild edema of penile glans, and frequent urination (Figure 1, Figure 2). The symptoms persisted for several months and were treated by his general practice physician with clotrimazolum and miconazole creams.

Antihistaminic drugs were prescribed immediately by dermatologist at once a day over a two week period, along with 40% mometazone in Hydrolotio cream once a day over a 10 day period for the trunk and upper extremities, and alclometasonum cream twice a day over 7 days for the genital region pending further laboratory work up.

Blood tests showed an increased erythrocyte sedimentation rate (38 mm/ks), lowered erythrocyte count ($4.16x10^{12}$/L), lowered hemoglobin (126 g/L), lowered hematocrite (0-366 L/L), normal white cell count with slightly elevated monocyte count (12.8%), elevated aspartate aminotransferase level (AST; 121 U/L), elevated alanine aminotransferase level (ALT; 200 U/L), elevated gamma-glutamyl transferase level (GGT; 182 U/L), elevated C-reactive protein (CRP; 33.7 mg/L) and normal total immunoglobulin E (IgE; 36 kIU/L). TPHA was 1:640 and VDRL was reactive. Hepatitis B, hepatitis C, and human immunodeficiency virus serology was negative. *Borrelia burgdorferi* serology was immunoglobulin G (IgG) positive, and immunoglobulin M (IgM) negative. Abdominal ultrasound showed a normal sized liver with signs of steatosis. Blood work for IgG and IgM fluorescent treponema antibody-absorption (FTA ABS) was taken before therapy. 5 mg of dexamethasonum was administered intramuscularly followed by a single dose of 2.4 million units of benzatin prenicilin G.

The control examination one month later showed a complete regression of all skin and genital changes with normal values of AST, ALT, GGT, AP and CRP levels, VDRL 1:32, TPHA 1:2560, IgM FTA ABS nonreactive, IgG FTA ABS reactive 1:320. Further follow-up examinations are planned.

The first association between hepatitis and syphilis was described in 1943 by Hahn, and since then over 100 cases have been described globally (4). In 2004 Mullick recommended the following criteria in establishing syphilitic hepatitis: abnormal levels of liver enzyme indicating hepatic involvement, serological evidence for syphilis with a positive TPHA titer in conjunction with an acute clinical presentation consistent with secondary syphilis, exclusion of alternative causes of hepatic injury, and improvements in liver enzyme levels with an appropriate antimicrobial therapy (5). In our case presented here, all of these criteria were met. Early discovery of reactive TPHA and VDRL led to a prompt antibiotic treatment and an effective conclusion of our patient's symptoms and normalization of the previously unconnected liver enzyme dysfunction. Although syphilitic hepatitis is a rare manifestation of primary and secondary syphilis, laboratory work up of patients with elevated liver enzymes of unknown etiology should include TPHA and VDRL measurement to rule out the possibility of an underlying syphilis (6).

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