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Case report of syphilitic hepatitis

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Abstract

Syphilitic hepatitis is a rare clinical presentation of syphilis and is easily misdiagnosed. However, clinical and histopathologic manifestations of Syphilitic Hepatitis can imitate other infectious and non-infectious diseases, and the diagnosis should be considered in patients with abnormal liver function tests. We present an unusual case of syphilitic hepatitis presenting with jaundice and abdominal bloating after treatment with benzylpenicillin, liver enzymes, and mucocutaneous findings improved.

Key words: syphilis, hepatitis, jaundice, liver enzyme

Introduction

Syphilis is a multisystem disease caused by the bacterium Treponema pallidum and can involve any organ of the body [1]. Syphilis infection is the least recognized etiological factor in liver dysfunction, and the prevalence of syphilitic hepatitis is about 0.2% to 3% of patients with syphilis [1-3]. The most common stage that causes abnormal liver enzymes is secondary Syphilis, and it is estimated that 3% of secondary syphilis cases can present as syphilitic hepatitis [4]. The prevalence is higher than reported since this pathology is often not detected. The more interesting is the appearance of patients with severe syphilitic hepatitis, which sheds light on the presence in modern practice of this variant of visceral Syphilis [3].

Case presentation

A 41-year-old man came to our clinic with an interesting medical history—the debut of the disease at the end of September 2021 with jaundice and abdominal bloating. There was no fever, abdominal pain, vomiting, stool disorders, fatigue, articular manifestations and skin rashes.

He started examination in a local hospital: in the biochemical analysis, increased values of serum total bilirubin (TBIL) 98.4 umol/L, direct bilirubin 33.2 umol/L, alanine aminotransferase (ALT) 175 U/L, aspartate aminotransferase (AST) 97 U/L, an alkaline phosphatase (ALP) 511 U/L and gamma-glutamyl transpeptidase (GGT) 104 U/L. Screening for viral hepatitis markers: antiHCV, HBsAg, antiHAV was negative. HIV and rapid plasma reagin test (RPR) were negative. Casual sexual relations are excluded; a regular partner is a spouse. There is no history of drug abuse, alcohol consumption and blood transfusion. An ultrasound of the abdomen and MRCP revealed hepatomegaly and mildly splenomegaly and were negative for biliary or pancreatic ductal dilation, lesions and ascites.

There were positive autoimmune markers: AMA-M2 +, M2-3E +, gp210 +, LKM-1+, LC-1 +, level of IgG and gamma-fraction were normal 14.26 g/L and 18.6%, respectively. He started therapy with UDCA (10mg/kg) in September and had asked to review after 1 month with the plan of performing a liver biopsy.

In October, he repeated testing for Treponema pallidum, and had positive results: increase of total Treponema pallidum IgG/IgM antibodies performed by Siemens ADVIA Centaur Syphilis treponemal assay - 20.6 COI, and FTA-ABS was also positive. Examination of the patient revealed multiple erythematous papules and plaques on the soft palate, on the trunk, upper and lower extremities, papules of the palm, soles and genitals, wide condylomas of the perianal region, bilateral inguinal scleradenitis. 21.10.21 hospitalized to dermatology department, started treatment with benzylpenicillin sodium salt 4 million units intramuscular per day for 20 days. During the treatment, patient became asymptomatic with a resolution of jaundice and mucocutaneous findings. In control biochemical results, there was normalization of TBIL from 60 to 10.8 umol/L, ALT from 110 to 50 U/L and AST from 80 to 35.1 U/L.

Figure 1 - Hyperpigmentation after erythematous scaly macules and papules on forearms and palms.

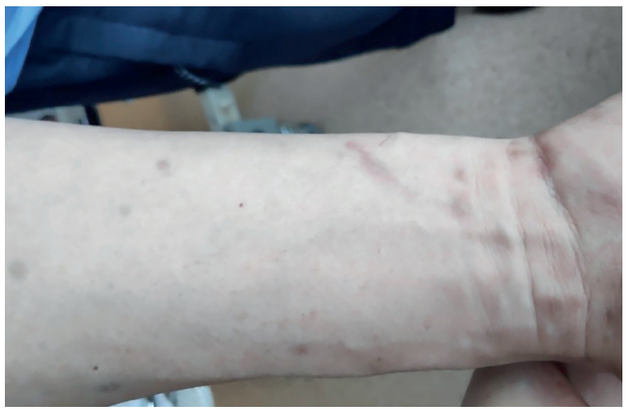
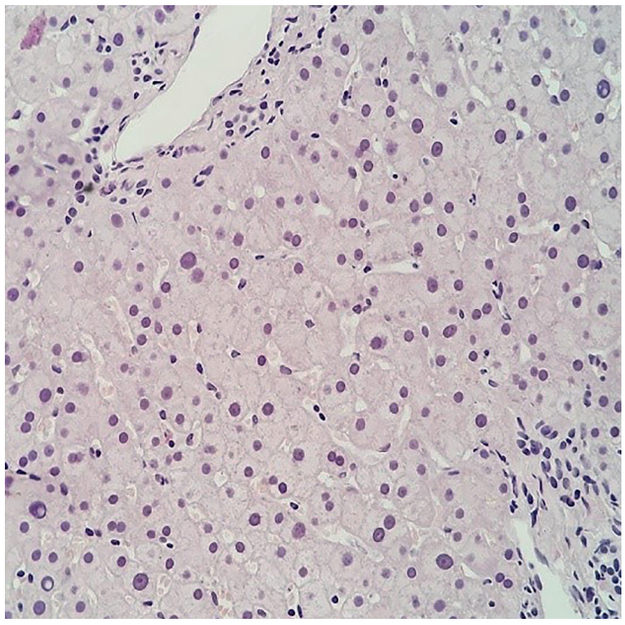


Figure 2 - Histopathological findings - mild lymphocytic infiltration of portal tracts (haematoxylin-eosin x40/0.55).



In January, he was hospitalized in our hepatology department; during examination on both forearms and palms, areas/spots of secondary hyperpigmentation (Figure 1). In addition, a control check of liver autoimmune markers also showed that previously positive markers had become negative, except weak positive anti-LKM-1.

A liver biopsy was performed after the normalization of biochemistry. It showed mild lymphocytic infiltration of portal tracts and early fibrosis around the portal tracts, the Knodell histology activity index 6/18, stage of fibrosis – 1 by K. Ishak (Figure 2).

Discussion

In a systematic review of SH, also liver damage occurred commonly in early Syphilis, with the most common symptoms: being rashes, fatigue or poor appetite, hepatomegaly and icterus [2]. In addition, the pattern of liver enzyme abnormalities is often cholestatic, with altered alkaline phosphatase (ALP) levels and mildly elevated transaminases and bilirubin [5]. The pathophysiology of SH is unknown, but the cholestatic pattern of injury is thought to have been caused by pericholangiolar inflammation [6,7].

There are no clear diagnostic criteria exist; however, Mullick et al. established 4 main criteria, such as the abnormal liver enzymes in a cholestatic pattern, serological evidence of Syphilis, exclusion of alternative causes of liver diseases, and improvement in liver enzymes with proper antibiotic therapy [6].

A previous review of performed liver biopsies showed non-specific histopathologic features, with the prevalence of the inflammatory cell infiltration of portal areas or hepatic lobules (87.2%), cholestasis and hepatocellular necrosis, in 49.0% 45.5% cases, respectively, and less common were granuloma with multinucleated giant cells and fibrosis, 20% and 18.2%, respectively [2]. In addition, immunohistochemical staining or silver stain can identify T. palladium [8].

Miyakawa et al. demonstrated that false-positive reactions to the PBC-specific anti-M2 AMA reactions could occur with hepatitis A, Syphilis, and rheumatoid arthritis [9]. In addition, Kern et al. showed a return to a negative anti-M2 AMA titer after recovery from Syphilis that was previously not reported [10].

In our case, we have typical cholestatic hepatitis with severe hyperbilirubinemia, positive serological tests for Syphilis, the presence of autoimmune antibodies, in particular, highly specific anti-M2 AMA, complete resolution of clinical manifestations and laboratory tests, and the disappearance of autoantibodies against the background of antimicrobial therapy. Skin rashes with positive antibodies to Syphilis appeared later than the liver reaction, and Baveja et al. described a similar case [7].

Conclusion

In conclusion, Syphilis remains a highly prevalent pathology, and any hospital admission requires testing. However, at the outpatient stage, there is no such alertness, and clinicians often overlook syphilis screening, in particular in the differential search algorithm for jaundice and cholestasis syndrome. One of the reasons for the omission in primary appointments is the mental aspect, which does not allow patients to reveal their sexual life, compared with Western countries thoroughly.

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References

1. Mezzano G, Rondón F, Cid A, Parra F, Soto A, Gómez F, Jara D, et al. Hepatitis sifilítica: reporte de una serie de casos [Syphilitic hepatitis. Report of three cases]. *Rev Med Chil.* 2019;147(2):251-255. https://doi.org/10.4067/s0034-98872019000200251
2. Huang J, Lin S, Wan B, Zhu Y. A Systematic Literature Review of Syphilitic Hepatitis in Adults. *J Clin Transl Hepatol.* 2018;6(3):306-309. https://doi.org/10.14218/JCTH.2018.00003
3. Loseva OK, Dergacheva IA, Zalevskaya OV, Chernysheva NV, Zhukovsky RO. Three cases of late syphilitic hepatitis. Ter Arkh. 2018;90(4):96-99. https://doi.org/10.26442/terarkh201890496-99
4. Rubio-Tapia A, Hujoel IA, Smyrk TC, Poterucha JJ. Emerging secondary Syphilis presenting as syphilitic hepatitis. *Hepatology*. 2017;65(6):2113-2115. https://doi.org/10.1002/hep.28974
5. Al Dallal HA, Narayanan S, Alley HF, Eiswerth MJ, Arnold FW, Martin BA, Shandiz AE. Case Report: Syphilitic Hepatitis-A Rare and Underrecognized Etiology of Liver Disease With Potential for Misdiagnosis. *Front Med (Lausanne)*. 2021;8:789250. https://doi.org/10.3389/fmed.2021.789250
6. Mullick CJ, Liappis AP, Benator DA, Roberts AD, Parenti DM, Simon GL. Syphilitic hepatitis in HIV-infected patients: a report of 7 cases and review of the literature. *Clin Infect Dis*. 2004;39(10):e100-e105. https://doi.org/10.1086/425501
7. Baveja S, Garg S, Rajdeo A. Syphilitic hepatitis: an uncommon manifestation of a common disease. *Indian J Dermatol.* 2014;59(2):209. https://doi.org/10.4103/0019-5154.127711
8. Kim GH, Kim BU, Lee JH, Choi YH, Chae HB, Park SM, Youn SJ, et al. Cholestatic hepatitis and thrombocytosis in a secondary syphilis patient. *J Korean Med Sci.* 2010;25(11):1661-1664. https://doi.org/10.3346/jkms.2010.25.11.1661
9. Miyakawa H, Kawaguchi N, Kikuchi K, Kitazawa E, Kawashima Y, Yajima R, Itoh Y. False positive reaction in ELISA for IgM class anti-M2 antibody and its prevention. *Hepatol Res*. 2001;20(3):279-287. https://doi.org/10.1016/s1386-6346(00)00144-3
10. Kern C, Elmoursi A, Blake C, Hoellein A. Syphilis Hepatitis Presenting as a Mimic of Primary Biliary Cholangitis. *ACG Case Rep J*. 2020;7(12):e00497. https://doi.org/10.14309/crj.0000000000000497