Syphilis Hepatitis With Cholestatic Liver Injury

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Introduction

The incidence of syphilis in the United States has increased, predominantly among men who have sex with men. Very few patients with early syphilis meet the criteria for syphilitic hepatitis, but many are HIV⁺ and engage in high-risk sexual behavior.

Case Presentation

- A 30-year-old man who identified as a MSM presented with yellowing of his eyes and hyperbilirubinemia, preceded by one month with a rash and photosensitivity and redness of his right eye. He denied any penile lesions, history of liver disease or alcohol use.
- His medical history included depression on escitalopram. He denied any recent medication changes.
- A physical examination revealed multiple hyperpigmented macular lesions over his torso, arms, palms, and the soles of his feet and scleral icterus. A slit lamp examination indicated anterior uveitis in both eyes and chorioretinitis/placoid retinitis in the right eye.

Laboratory and Radiological Work-up

- CBC and iron studies showed mild anemia of chronic disease (Hb 11.7 g/dL).
- BMP was within normal limits.
- Blood tests showed positive *T. pallidum* antibody with RPR 1:128 and smooth muscle antibody ≥1:160.
- Serum markers for viral hepatitis and HIV were negative.
- CSF from a lumbar puncture had an elevated WBC count (9/mm³).
- No biliary obstruction or masses were noted during on US and MRCP.

Liver Panel	
AST	41 IU/L ↑ (ULN <38 IU/L)
ALT	53 IU/L ↑ (ULN <42 IU/L)
ALP	210 IU/L ↑↑ (ULN <129 IU/L)
Total bilirubin	11.6 mg/dL ↑↑ (ULN <1.3 mg/dL)
Direct bilirubin	8.8 mg/dL ↑↑ (ULN <0.4 mg/dL)
GGT	53 (ULN <61 IU/L)
Albumin	3.8 g/dL
INR	1.0

Histopathology

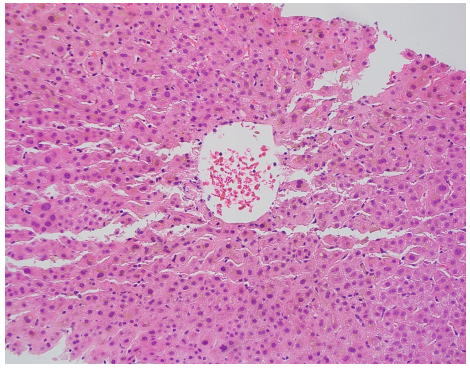

Figure 1: 40X magnification of liver specimen showing bland perivenular cholestasis (zone 3), canalicular and hepatocytic with rare apoptotic hepatocytes. No necro-inflammatory activity is present.

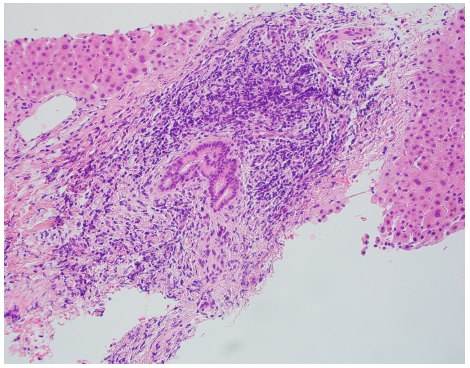

Figure 2: 40X magnification of liver specimen showing periportal inflammation and bile duct damage with mild bile ductular reaction.

Case Conclusion

The patient was treated with penicillin G for neurosyphilis, prednisolone and cyclopentolate for ocular syphilis, and ursodiol for cholestasis. Total bilirubin levels decreased to 1.7 mg/dL after 8 weeks of follow-up, and liver enzymes normalized.

Discussion

This patient met the criteria for syphilitic hepatitis (elevated liver enzymes, serologic evidence of syphilis, exclusion of other etiology, and improvement following appropriate therapy). He also had bilateral anterior uveitis and placoid retinitis of the right eye, suggesting ocular syphilis. Serum chemistries, testing for *T. pallidum* and other serologies (including positive anti-smooth muscle antibody) supported hepatic involvement, and CSF studies were consistent with neurosyphilis. Liver biopsy showed a bland cholestatic pattern without evidence of other causes of liver disease. The biopsy results are compatible with syphilitic hepatitis, though histologic features can vary and direct staining for spirochetes has limited sensitivity. These findings, together with his rapid improvement with penicillin therapy, confirmed a diagnosis of syphilitic hepatitis.

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