

Background

- Syphilis commonly known as the great imitator, is caused by a systemic bacterial infection by *Treponema pallidum*.¹
- In 2020 alone, the CDC reported 133,945 cases of syphilis in the USA.
- 41,655 cases were in the most infectious stages of the disease: primary and secondary.²
- Cutaneous involvement is found in 90% of cases.
- Abnormal liver enzymes are found in 10% of cases, commonly alkaline phosphatase (ALP), and alanine aminotransferase (ALT).^{3,4}
- unrecognized.
- Liver disease, namely syphilitic hepatitis (SH), in the setting of active syphilis infection has rarely been reported due to its elusive diagnosis.
- We present a unique case of SH.

References

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3. Baveja, S., Garg, S. & Rajdeo, A. Syphilitic Hepatitis: An Uncommon Manifestation of a Common Disease. *Indian J Dermatol* 59, 209 (2014).
4. Huang, J., Lin, S., Wan, B. & Zhu, Y. A Systematic Literature Review of Syphilitic Hepatitis in Adults. *J Clin Transl Hepatol* 6, 306–309 (2018).
5. Al Dallal, H. A. et al. Case Report: Syphilitic Hepatitis—A Rare and Underrecognized Etiology of Liver Disease With Potential for Misdiagnosis. *Frontiers in Medicine* 8, (2021).

Case Report

A 46-year-old male with a chronic macular rash presented with elevated ALT, ALP, and GGT. Physical exam was remarkable for an improving macular rash for which prior biopsy was nonspecific. Repeat liver profile revealed continually elevated ALT and ALP (Figure 1) with normal total/direct bilirubin. Moreover, AMA, ESR, and CRP were found to be elevated. In this clinical context the patient was started on a steroid course for presumed primary biliary cirrhosis (PBC). Continually elevated ALP prompted ultrasound elastography of the liver which revealed hepatomegaly without evidence of steatosis or cirrhosis. Several months later, the patient developed uveitis with a positive RPR titer; therapeutic Penicillin G was initiated. On follow up, the patient was found to have complete resolution of his elevated transaminases (Figure 1). Given cholestatic liver enzyme abnormalities, positive treponemal serology, and resolution with antimicrobial therapy, diagnosis of SH was made.⁵

Results

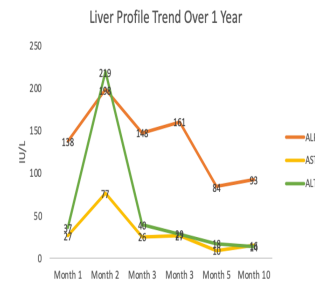


Figure 1: Patient's liver profile trend over 1 year. Notably total and direct bilirubin were normal through the patient's clinical course. Month 5 indicates post Penicillin G administration at time of positive RPR (1:256). Patient's GGT was 279 and AMA 88. [Alkaline Phosphatase (ALP), Aspartate Aminotransferase (AST), Alanine Aminotransferase (ALT)]



Figure 2: Mild extrahepatic biliary ductal dilation, common bile duct (CBD) measures 0.8cm. Notably, gallbladder found to be contracted without gallstones, as well as negative sonographic Murphy's sign.

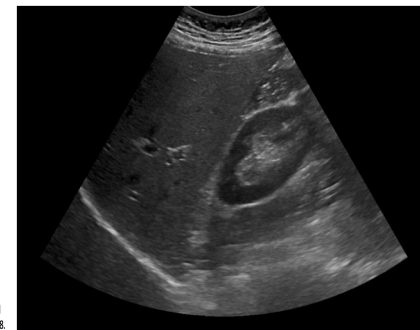


Figure 3: Notable hepatomegaly, liver measuring 19.0cm.

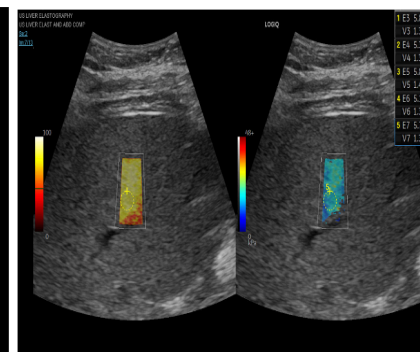


Figure 4: Median liver stiffness scores were 1.4 m/s and 5.6 kPa.

Future Direction

- This patient met diagnostic criteria for PBC, however AMA likely elevated due to active syphilis infection.
- Importance of maintaining a broad differential diagnosis in hepatic enzyme abnormalities
- Thorough review of patient risk factors for both common and uncommon causes of hepatitis such as polysubstance abuse, IVDU, and unprotected sexual activity which may expedite identification and management of a less common presentation of syphilis.

Acknowledgements

- Thank you to our patient for this learning opportunity.