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Gratis

Case Report

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A typical Presentation of Acute Infectious Mononucleosis (AIM) with Isolated Hyperbilirubinemia

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Abstract

Epstein - Barr virus (EBV) induced hepatitis and subsequent hyperbilirubinemia is a strikingly rare cause of jaundice. Lack of other common infectious mononucleosis symptoms makes the diagnosis difficult with history and physical exam alone. With differential diagnoses more commonly including HAV, HCV, and HBV hepatitis infections; alcoholic hepatitis; autoimmune hepatitis; and hepatocellular carcinoma, suspicion for EBV induced hepatitis is often low. We present a noteworthy case of isolated hyperbilirubinemia due to EBV virus confirmed with biopsy, without other infectious mononucleosis symptoms such as fever, sore throat, or splenomegaly. Furthermore, we review the pathophysiology, diagnosis, treatment, and prognosis of EBV-induced hepatitis.

Case Report

A 46-year-old Hispanic male arrived to the hospital with abdominal pain, dark colored urine, nausea, and vomiting for three days before admission. Upon review of systems, he endorsed no other symptoms. Notably, he denied fever, sore throat, head and body aches, diarrhea, rash, or any enlarged lymph nodes in the neck and axilla. Patient worked at a nursing home at the time of presentation. His past medical history and family history were negative. The patient was a febrile, normotensive, and without tachycardia.

Physical examination revealed scleral icterus (Figure 1) and mild diffuse tenderness in the right upper quadrant of the abdomen with no organomegaly. Bowel sounds were present upon auscultation.

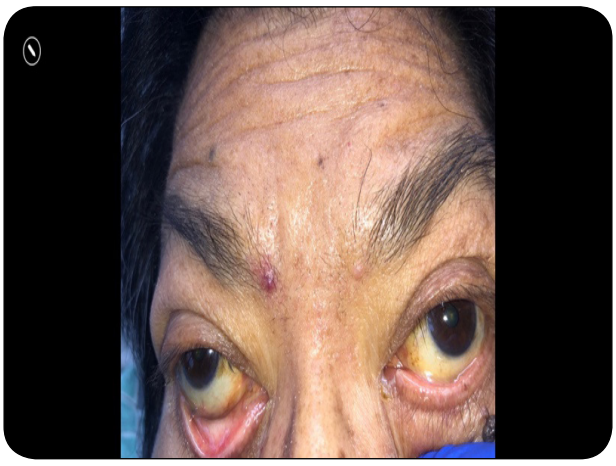


Figure 1: Scleral Icterus.

Laboratory tests revealed

- Hb: 9.6 g/dl
- Total Leukocyte Count: 16,200/microL
- Absolute Lymphocyte Count: 7800/microL

- Total Bilirubin: 6.08 mg/dl
- Bilirubin (Direct): 5.04 mg/dl
- Bilirubin (Indirect): 0.78 mg/dl
- AST: 49 IU/L
- ALT: 579 IU/L
- PT: 21.4 seconds
- INR: 2.20

On peripheral smear, atypical lymphocytes were present (48%). HBsAg, Anti-HAV IgM, Anti-HCV IgM, Anti-HEV IgM were all unremarkable. Ultrasound of the abdomen was negative for gallstones or CBD dilation, but CT-abdomen without contrast showed hepatic steatosis. MRCP and CT-chest/abdomen/pelvis with IV contrast were done, and were unremarkable. Anti LKM & Anti-smooth muscle antibodies as well as HIV tests were negative. Monospot test was positive. Serology for EBV was positive for EBV VCA IgM >1:20. PCR showed a viral load of >100,000. Finally, the patient underwent liver biopsy that revealed viral hepatitis secondary to EBV.

Discussion

Disease transmission and pathophysiology

EBV is transmitted primarily from person-to-person contact via saliva [1]. Once in the saliva, EBV replicates in B-cell rich lymphocytic tissue in the oropharynx and disseminates lymphatically throughout the body and to the liver [2]. Once in the lymphatic tissue, a Th1 immune response is elicited and the infection is controlled primarily via cytotoxic T-cells [3].

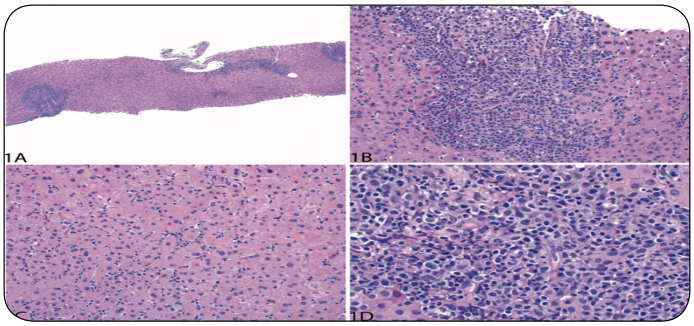
EBV hepatitis presentation

EBV hepatitis from a statistical standpoint is rare: in a retrospective review of 1995 patients performed by Vine et al. in 2012, only 0.85% of patients attending a jaundice clinic were diagnosed with EBV hepatitis over a 13-year period. Of the 0.85% of patients, 100% had serum lymphocytosis, 12% had classical features of infectious mononucleosis (fever, sore throat and lymphadenopathy), and 88% had splenomegaly [4].

Diagnosis, treatment and prognosis

The differential diagnosis of EBV hepatitis is widespread. Acute hepatitis, HIV, autoimmune hepatitis, hemochromatosis, and lymphoma all share at least one symptomatic commonality. However, liver biopsy revealing vacuolization of hepatocytes and portal and lobular lymphocytic inflammation is diagnostic (Figure 2). In addition, like the diagnosis of typical AIM, detection of IgM antibody to EBV viral capsid antigen is most reliable.

According to Vine et al., hepatitis due to EBV is self-limiting with the resolution of the viral infection. However, while symptoms may resolve in several weeks' time, patients can report lingering fatigue up to 6 months, as Buchwald et al. noted when 12% of 142 subjects with infectious mononucleosis still reported fatigue [5]. Despite persistent fatigue, the majority of diagnosed patients makes full recoveries and develops a protective immune response to the virus [6]. In accordance with the literature, the patient presented in this article received conservative management and was discharged home with a follow-up appointment with his primary care provider.



2a 2b

Figure 2: 2a) Histology showing EBV hepatitis with portal and lobular lymphocytic inflammation. 2b) Portal lymphocytic infiltrate present with Epstein-Barr virus hepatitis.

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