

Epstein-Barr Virus-Associated Acute Hepatitis Mimicking Lymphoma : A Diagnostic Challenge

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Introduction: Epstein-Barr virus infection does not cause any symptoms or only results in mild symptoms similar to the common cold in most cases. EBV-associated acute hepatitis is generally considered a relatively rare cause of acute viral hepatitis compared to other viruses such as hepatitis A, B, C, and E. We report a rare case of lymphoma-like features among patients with EBV-associated acute hepatitis.

Results: This case study presents an 18-year-old male patient with symptoms of dyspepsia, abdominal discomfort, night fever (up to 38.5), and myalgia. A blood test revealed lymphocytosis, and AST of 295 U/L, ALT of 422 U/L, total bilirubin of 1.87 mg/dL, ALP of 451 U/L, and GGT of 266 U/L. Abdominal CT was performed to rule out biliary disease, and the results showed enlarged lymph nodes in the upper abdomen, retroperitoneum, and borderline-sized lymph nodes in both inguinal areas, raising suspicion of lymphoma. Following admission, the levels of ALT and AST continued to increase, reaching ALT: 359 U/L, AST 222 U/L, and total bilirubin 3.19 mg/dL on the third day. Serologic tests for hepatitis A, B, and C viruses yielded negative results, and tests for autoimmune hepatitis markers, including ANA and IgG levels, were within normal ranges. The bone marrow biopsy revealed hypercellular marrow with increased megakaryocytes, while the liver biopsy showed that moderate lobular inflammation with sinusoidal T-cell infiltration. In situ hybridization demonstrated positive finding for EBV infection in hepatocytes. EBV PCR showed 414000 copies/mL and EBV VCA IgM was also positive. Three days later patient complained sore throat. Subsequently, a neck CT was performed due to the patient's sore throat, revealing tonsillitis and multiple lymphadenopathy. The patient received best supportive treatment and was discharged.

Conclusion: In this case, the patient presented with symptoms of acute hepatitis that resembled lymphoma, leading to a clinical suspicion of lymphoma.

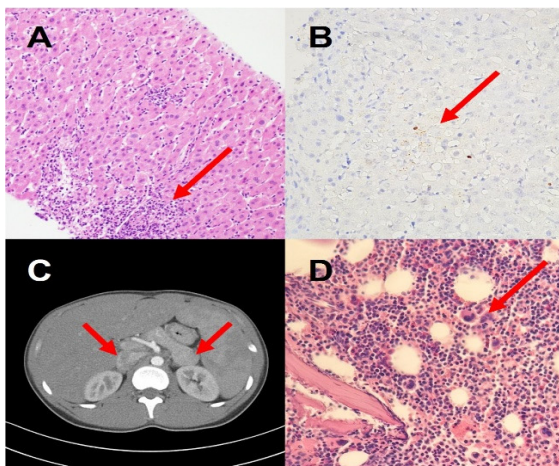


Figure1.
**Liver biopsy(A&B), Abdominal CT(C),
Bone marrow biopsy(D)**

Liver biopsy and bone marrow biopsy were performed to determine the cause of hepatitis and differentiate lymphoma, among other possibilities. Abdominal CT showed enlarged lymph nodes in the abdomen, raising suspicion of lymphoma.

A : Moderate lobular inflammation with sinusoidal T-cell infiltration (H&E stain, x200)
B : EBV in hepatocytes (In situ hybridization)
C : Enlarged lymph nodes in the upper abdomen, retroperitoneum, and borderline-sized lymph nodes in both inguinal areas, suspicion of lymphoma
D : Hypercellular marrow with increased megakaryocytes

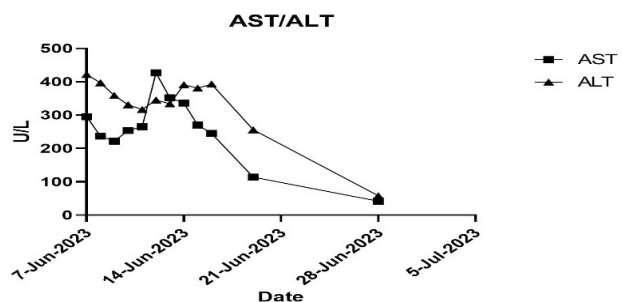
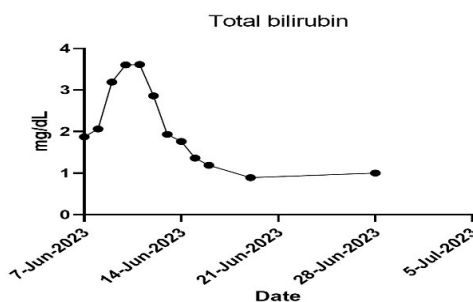


Table1. Total bilirubin & AST/ALT

The patient received appropriate supportive treatment, experienced improvement, and was discharged.

Hospitalization period : 2023/06/07 – 2023/06/19
Outpatient f/u after discharge : 2023/06/28