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Case Report

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Acute Exacerbation of Chronic Hepatitis B and Concurrent Acute Autoimmune Hepatitis: A Case Report

Kronik Hepatit B Akut Alevlenme ve Akut Otoimmün Hepatit Birlikteliği

Hayrettin Sever, Kader İrak

ABSTRACT

Autoimmune hepatitis (AIH) is a chronic immunological liver disease in which the host's immune system targets liver parenchymal cells. Acute autoimmune hepatitis can occur as a result of triggering by hepatitis B virus infection. In our case, autoantibodies were analyzed, and a liver biopsy was performed on a patient hospitalized with acute hepatitis B exacerbation on a chronic background, who showed no clinical or laboratory response despite antiviral and supportive treatment. The patient was diagnosed with AIH, and methylprednisolone was added to the treatment. In such cases, careful follow-up is crucial.

Keywords: Acute autoimmune hepatitis; chronic hepatitis B; liver disease.

ÖZET

Otoimmün hepatit (OH), konakçının bağışıklık sisteminin karaciğer parankim hücrelerini hedef aldığı kronik immünolojik bir karaciğer hastalığıdır. Hepatit B virüs (HBV) enfeksiyonunun tetiklemesi ile akut otoimmün hepatit görülebilmektedir. Olgumuzda, kronik zeminde akut hepatit B alevlenmesi ile yatırılıp takiplerinde antiviral ve destek tedaviye rağmen klinik ve laboratuvar yanıt alınamayan bir hastadan otoantikorlar gönderilmiş ve karaciğer biyopsisi yapılmıştır. Hastaya OH tanısı konulmuş ve tedavisine metilprednizolon eklenmiştir. Bu gibi durumlarda takip sürecinde dikkatli olunmalıdır.

Anahtar sözcükler: Akut otoimmün hepatit; kronik hepatit B; karaciğer hastalığı.

Department of Gastroenterology, Basaksehir Cam and Sakura City Hospital, Istanbul, Türkiye

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Correspondence:
Dr. Hayrettin Sever.
Department of Gastroenterology, Basaksehir Cam and Sakura City Hospital, Istanbul, Türkiye

Phone:
+90 538 483 53 85

e-mail:
severhayrettin@yahoo.com

Autoimmune hepatitis (AIH) is a chronic immunological liver disease where the host's immune system targets hepatic parenchymal cells. Immunological triggers such as chemical substances, drugs, bacteria, fungi, and viral infections have been identified.[1] Cases of AIH activated by Hepatitis B virus (HBV) infection have been reported in the literature.[2] Here, we present a rare case of acute exacerbation of chronic hepatitis B triggering acute autoimmune hepatitis.

Case Report

A 48-year-old male patient was diagnosed with chronic hepatitis B approximately 2 years ago but discontinued treatment after receiving tenofovir disoproxil 245 mg/day for 9 months. He presented to our hospital complaining of nausea, itching, jaundice in the eyes, and darkening of urine for the past 10 days. Laboratory investigations in the emergency department revealed total bilirubin: 14 mg/dl, AST/ALT: 917/1283

Table 1. Post-treatment course of biochemical tests

Test	1st day	Methylprednisolone start	48th hour	1st week	4th week	12th week
Bilirubin	13.9	20.5	12	8.8	1.66	0.8
AST	917	829	249	82	25	22
ALT	1283	1051	583	246	40	29
GGT	132	86	90	103	90	37
ALP	179	135	144	156	120	97
INR	1.4	1.3	1.3	1.2	1.2	1
IgG	35.6	-	-	-	-	15

AST: Aspartate aminotransferase; ALT: Alanine aminotransferase; GGT: Gamma-glutamyl transpeptidase; ALP: Alkaline phosphatase; INR: International normalized ratio; IgG: Immunoglobulin G.

IU/L, GGT/ALP: 132/179 U/L, INR: 1.2, HBsAg: positive, and Anti-HBc IgM: negative. There was no history of alcohol, drug, or toxic substance exposure. The patient was hospitalized with a provisional diagnosis of acute exacerbation of chronic hepatitis.

Dynamic contrast-enhanced MRI showed periportal edema and hepatomegaly. Entecavir 0.5 mg/day was initiated based on a liver biopsy result consistent with chronic HBV from two years ago. Further tests during hospitalization revealed HBV DNA: 119,000,000 IU/ML, Anti-HBc Total: positive, Anti-HBe: positive, and HBeAg: negative. The patient's bilirubin levels rose to 20 mg/dl during hospitalization. Autoantibodies and IgG, IgA, and IgM levels were sent for further evaluation. IgG was found to be 35.6 (2.2 times the cutoff value). Anti-smooth muscle antibody (ASMA) was positive, and anti-nuclear antibody (ANA) showed a 1/100 titer with a fibrillar pattern of positive staining.

The autoimmune hepatitis scoring was calculated as 6 points, and the patient was started on 60 mg/day methylprednisolone and underwent liver biopsy. Approximately 50% reduction in enzyme levels was observed within 48 hours of methylprednisolone treatment (Table 1). Liver biopsy revealed a mixed infiltration containing eosinophils, neutrophils, and dense lymphoplasmacytic cells in the portal region, with severe interface activity. Significant interlobular bile duct damage was not observed.

The patient was discharged on entecavir 0.5 mg/day and methylprednisolone 60 mg/day. Subsequent outpatient follow-ups showed normalization of enzyme and IgG levels (Table 1). The methylprednisolone dose was gradually tapered down to 8 mg/day.

Discussion

Autoantibody positivity can be observed in patients with chronic HBV without autoimmune disease.[3] Therefore, diagnosing acute autoimmune hepatitis concurrently with chronic HBV is challenging. The patient's history, clinical presentation, elevated immunoglobulin levels, ANA and ASMA positivity, intensity of lymphoplasmacytic infiltration, and presence of interface hepatitis in liver biopsy are key factors in diagnosis.[4]

In cases of concurrent chronic HBV and acute autoimmune hepatitis, patients should be closely monitored using both viral and autoimmune markers. Treatment should be tailored based on the patient's clinical condition.[5]

Disclosures

Informed consent: Written informed consent was obtained from the patient for the publication of the case report and the accompanying images.

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