Journal of Microbiology and Infectious Diseases / JMID
2014; 4 (2): 75-77
doi: 10.5799/ahinjs.02.2014.02.0132

CASE REPORT

A rare case of lymphoma diagnosed with performing liver biopsy due to chronic Hepatitis B

Zeynep Türe[1], Hülya Akgün[2], Hayati Demiraslan[1]

[1] *Department of Infectious Diseases and Clinical Microbiology, Faculty of Medicine, Erciyes University Kayseri, Turkey*

[2] *Department of Pathology, Faculty of Medicine, Erciyes University Kayseri, Turkey*

ABSTRACT

Hepatitis B virus (HBV) infection is a huge problem in the worldwide as well as in Turkey. It has hepatotrophic and lymphotropic capacity, and can cause hepatocellular carcinoma (HCC) and lymphoma. HCC is the most prevalent primary malignity of liver. Some studies have been reported that HBV is more common in patient with lymphoma. We present a case with lymphoma diagnosed with liver biopsy which was performed for chronic HBV infection. *J Microbiol Infect Dis 2014;4(2): 75-77*

Key words: Lymphoma, hepatitis B, biopsy

Kronik Hepatit B için karaciğer biyopsisi yapılarak tanı konan nadir bir lenfoma olgusu

ÖZET

Hepatit B virüsü (HBV) Türkiye de dahil olmak üzere dünya çapında, ciddi bir problemdir. Virüsün hepatotropik ve lenfotropik özelliğinin olması, en yaygın görülen primer malignitesi olan hepatosellüler kanser (HCC) ve lenfoma riskini artırmaktadır. Lenfoma hastalarında HBV taşıyıcılığı sıklığının fazla olduğunu gösteren çeşitli çalışmalar mevcuttur. Bu vakada kronik hepatit B ile takip edilen karaciğer biyopsisi sonunda lenfoma tanısı alan olgu sunulmuştur.

Anahtar kelimeler: Lenfoma, hepatit B, biyopsi

INTRODUCTION

Hepatitis B virus (HBV) infection is a common infectious disease worldwide and also in Turkey.[1,2] It is estimated that approximately 30% of the world's population has had contact with HBV, and 350 million of them are HBV carriers.[2] The prevalence of HBV infection is 4% in Turkey.[1] The possibility of cirrhosis and hepatocellular carcinoma (HCC) increases among the carriers of HBV because of its hepatotropic characteristic. Also HBV replication has been shown in the lymphoid cells, so HBV infection may have a potential risk of lymphomas.[3] A cohort study was reported that HBs Ag positivity is associated with increased risk of diffuse large B-cell lymphoma.[4] Similar studies have been published in the literature scanned hepatitis markers in patient follow-up with lymphoma.[5,6] We present a patient with chronic HBV infection is diagnosed as incidentally diffuse large B-cell lymphoma in liver.

CASE

A 57 year-old female who had HBs Ag positivity for 6 years admitted to our department. She had not any symptoms and findings for hepatitis or cirrhosis, and she denied any symptoms related to malignity including loss of weight, fever, night sweating. She took non-steroid anti-inflammatory drug for arthralgia, and has not got any disease in her medical history. Also, two of her sisters have been infected with HBV.

On the first physical examination, she looked overweight and no hepatomegaly, splenomegaly, ascites were examined, and any cervical and inguinal lymphadenopathies were not found. Other physical examination was normal. On her laboratory findings; alanine aminotransferase was 27U/ L, platelet level was 182,000 per μL, and alpha fetoprotein (AFP) level was 5.1ng/ mL. HBsAg and anti-Hbe were positive; anti-HCV, anti-HDV and anti-HIV

Correspondence: Zeynep Türe, Dept. of Infectious Diseases and Clinical Microbiology Faculty of Medicine, Erciyes, Kayseri, Turkey Email: dr.zeynepture@gmail.com
Received: 20.09.2013, Accepted: 27.11.2014
Copyright © Journal of Microbiology and Infectious Diseases 2014, All rights reserved

were negative. HBV DNA level was 47500 IU/ mL, and coagulation parameters were in normal limits. Ultrasound revealed no hepatomegaly, but magnetic resonance imaging demonstrated that multiple nodular lesions with the largest one of them being as 2 cm in size were seen in the liver. Immediately, ultrasound-guided liver biopsy was performed to the patient, and revealed that histological activity index was 6/18, fibrosis was 3/6 according to Ishak score.[7] Also, liver parenchyma contained large number of neoplastic lymphocytes (Figure 1A), which were positively stained with CD20 (Figure 1B). The patient diagnosed as diffuse large B-cell lymphoma which was primary non-Hodgkin lymphoma (NHL) of liver. Positron emission tomography performed after five months, reached two cm in size axillary lymphadenopathy, which remained undetected in physical examination. It was removed surgically; no neoplastic involvement was examined by pathologically.

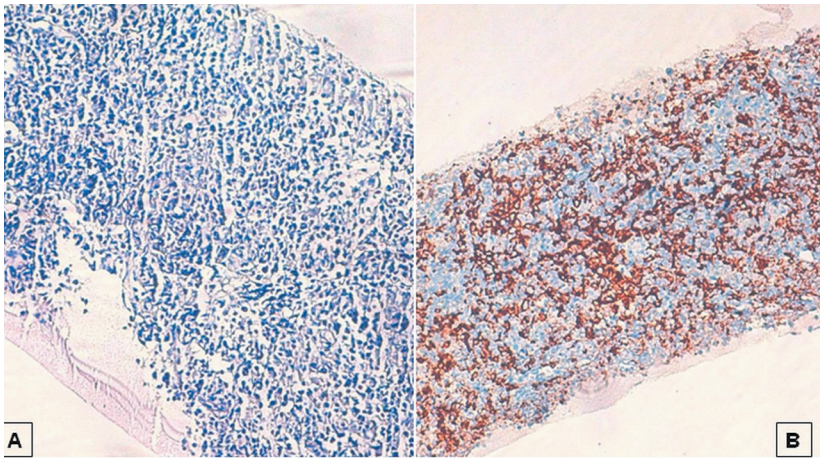


Figure 1. (**A**) View of diffuse proliferation of large lymphoid cells with prominent nucleoli in the liver parenchyma (Haematoxylin& Eosine, magnitude 400x), and (**B**) imaging of B lymphocyte (CD20+, brown color)

DISCUSSION

Hepatitis B and C viruses have hepatotrophic and lymphotropic characteristic. While viral replication in these cells is ongoing, frequency of some malignity increases such as lymphoma and HCC. HCC represents more than 90% of primary liver cancers. Incidence of HCC among people with chronic HBV infection ranges from 120 to 180 per 100000 each year in female. AFP has insufficient sensitivity and specificity for diagnosis of HCC.[2,5,8]

Primary NHL of liver is extremely rare lymphoma, which predominantly arises from B cell. Most common radiological presentation is a solitary lesion in liver, followed by multiple nodular lesions.[9] Nodules between 1 and 2 cm in size should be studied with CT and MR and, in case of non-diagnostic imaging, undergo nodule biopsy.[5]

Our patient had multiple nodules in the liver. Firstly HCC was considered due to HBV infection; however, AFP was in the normal range. Then, liver biopsy was performed. Diffuse lymphocytic infiltration was seen on liver parenchyma, and stained with CD20. CD 20 is a pan-B-cell antigenic marker which is associated with chemotherpy regimens.[10]

Although there is no significant association between NHL and HBsAg in EPIC study,[6] HBsAg prevalence in patients with NHL was detected 2-3 times higher than control group in other studies.[5] It should be planned a comprehensive study to clear up this problem about genetically predisposition and host factors.

The specificity of our case is that the patient was diagnosed as large cell lymphoma when her liver biopsy was performed for chronic HBV infection. When a mass in the liver was detected in patients with HBV, lymphoma should be also considered along with HCC.

REFERENCES

1. Tozun N, Ozdogan OC, Cakaloglu Y, et al. A Nationwide Prevalance Study and Risk Factors For Hepatitis A, B, C and D Infections in Turkey. Hepatology 2010;Suppl(52):697A.
2. Boesecke C, JC. W. Hepatitis B. In: Mauss S, Berg T, Rockstroh J, et al., eds. Hepatology a clinical textbook. 4th ed: Flying publisher;2013:34-45.
3. Yoffe B, Noonan CA, Melnick JL, Hollinger FB. Hepatitis B virus DNA in mononuclear cells and analysis of cell subsets for the presence of replicative intermediates of viral DNA. J Infect Dis 1986;153:471-477.

4. Engels EA, Cho ER, Jee SH. Hepatitis B virus infection and risk of non-Hodgkin lymphoma in South Korea: a cohort study. Lancet Oncol 2010;11:827-834.

5. Mancuso A. Management of hepatocellular carcinoma: Enlightening the gray zones. World J Hepatol 27 2013;5:302-310.

6. Franceschi S, Lise M, Trepo C, et al. Infection with hepatitis B and C viruses and risk of lymphoid malignancies in the European Prospective Investigation into Cancer and Nutrition (EPIC). Cancer Epidemiol Biomarkers Prev 2011;20:208-214.

7. Ishak K, Baptista A, Bianchi L, et al. Histological grading and staging of chronic hepatitis. J Hepatol 1995;22:696-699.

8. Kew M. Hepatic tumors and cysts. In: Feldman M, Scharschmidt BF, Sleisenger MH, eds. Gastrointestinal and liver disease. 6th ed. Philadelphia: W.B. Saunders 1998:1364-1387.

9. Noronha V, Shafi NQ, Obando JA, Kummar S. Primary non-Hodgkin's lymphoma of the liver. Crit Rev Oncol Hematol 2005;53:199-207.

10. Coiffier B, Lepage E, Briere J, et al. chop chemotherapy plus rituximab compared with chop alone in elderly patients with diffuse large-B-cell lymphoma. N Engl J Med 2002;346:235–242.