World Journal of Gastroenterology

Online Submissions: http://www.wjgnet.com/1007-9327office World J Gastroenterol

TOPIC HIGHLIGHT

Juan-Ramón Larrubia, PhD, *Series Editor*

Management of occult hepatitis B virus infection: An update for the clinician

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Received: August 6, 2010 Revised: September 18, 2010
Accepted: September 25, 2010
Published online: March 28, 2011

Abstract

Occult hepatitis B virus (HBV) infection (OBI) is defined by the presence of HBV DNA in the liver tissue of individuals who test negative for hepatitis B surface antigen (HBsAg). Patients who have recovered from acute hepatitis B can carry HBV genomes for a long time and show histological patterns of mild necro-inflammation, even fibrosis, years after the resolution of acute hepatitis, without showing any clinical or biochemical evidence of liver disease. At least in conditions of immunocompetence, OBI is inoffensive itself, but when other relevant causes of liver damage are present it might make the course of the liver disease worse. The risk of HBV transmission through transfusion is related to blood donations negative for HBsAg that have been collected during the pre-seroconversion period or during chronic OBI. Use of HBV nucleic acid amplification testing and multivalent anti-HBs antibodies in the HBsAg assays is recommended for detection of true and false OBI, respectively. It is not known if prior hepatitis B immunization with an optimal anti-HBs response in cases of HBV transmission through organ transplantation can effectively modulate or abort the infection. Use of antiviral agents as prophylaxis in patients with serological evidence of past HBV infection prevents reactivation of OBI after transplantation in most cases. Reactivation of OBI has been observed in other conditions that cause immunosuppression, in which antiviral therapy could be delayed until the HBV DNA or HBsAg becomes detectable. OBI might contribute to the progression of liver fibrosis and hepatocellular carcinoma development in patients with chronic liver disease.

Occult hepatitis B; Management; Blood transfusion; Organ transplantation; Virus reactivation; Chronic liver disease; Hepatocellular carcinoma

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Lledó JL, Fernández C, Gutiérrez ML, Ocaña S. Management of occult hepatitis B virus infection: An update for the clinician. *World J Gastroenterol* 2011; 17(12): 1563-1568 Available from: URL: http://www.wjgnet.com/1007-9327/full/v17/i12/1563.htm DOI: http://dx.doi.org/10.3748/wjg.v17.i12.1563

INTRODUCTION

Occult hepatitis B virus (HBV) infection (OBI) is defined

Table 1 Scenarios in which occult hepatitis B virus infection is of clinical importance

. Mild necro-in f ammation, even f brosis, has been

OBI AND BLOOD DONATIONS

use a highly sensitive and speci f c test, like HBV nucleic

C virus or human immunode f ciency virus (HIV)

OBI AFTER ACUTE HEPATITIS

another pathogen. The risk of transmission is insigni f cant

caution is recommended when immunode f cient patients

fused blood in Western Europe is given to immunode f

able, NAT has higher potential benefit for reducing this

of highly sensitive and specific HBsAg and anti-HBc as says limits the benefit of NAT

OBI AND ORGAN TRANSPLANTATION

The clinical significance of HBV reactivation in HIV-

de novo

with a serological profile of past exposure to hepatitis B

sufficient to recommend routine prophylaxis and antiviral

≥

REACTIVATION OF OBI

(anti-CD52) or infliximab (anti-tumor necrosis factor)

OBI AND CHRONIC LIVER DISEASE

progression of liver fbrosis and cirrhosis development

OBI AND HCC DEVELOPMENT

CONCLUSION

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