

Occult Hepatitis B Infection Among Blood Donors in Al Azhar University Hospital, Upper Egypt: The Current Status After 25 years of Vaccine Introduction

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Occult hepatitis B virus infection (OBI) is a challenging topic with much debate regarding its clinical and virological relevance. The reliance on anti HBc seropositivity for diagnosis of OBI is still controversial. We aimed to determine the frequency of OBI among Egyptian blood donors, the role of anti HBc and HBe Ag as predictors of OBI and the possible risk factors. A total of 300 randomly selected hepatitis B surface antigen (HBsAg) negative blood donors at the Blood Bank of Al Azhar University Hospital in Assiut were included. Measurement of liver enzymes and screening for HBV core antibodies (anti HBc) and Hepatitis e antigen (HBeAg) were done. Quantitative HBV DNA measurement was achieved by real time polymerase chain reaction with a detection limit of 20 IU/mL after DNA extraction from the peripheral blood mononuclear cells (PBMC). The prevalence of OBI was 3.7% (11/300) among the donors and the majority had low level viremia (63.6%). Anti HBc was detected in 20.7% (62/300) (group I). OBI was detected in 14.5% (9/62) in group I compared to 0.84% (2/238) in the anti-HBc Ab negative donors (group II). Anti HBc had a sensitivity and specificity of nearly 82% for detection of OBI with a high negative predictive value (99.16%). HBe Ag was detected in only 1.6% (1/62) of group I. There were no statistical significant differences regarding the liver enzymes, demographic data or risk factors between group I and II and even between cases of OBI and those without. We conclude that OBI exists in an alarming percentage among Egyptian blood donors. Anti HBc should be introduced in the routine blood screening. Negative anti HBc results ensures safe blood, while positive results need nucleic acid confirmation especially if given to high risk recipients. More in-depth evaluation of the immunization program is needed.