

High Prevalence of HBV Infectivity in Blood Donors Detected by the Dot Blot Hybridisation Assay

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High Prevalence of HBV Infectivity in Blood Donors Detected by the Dot Blot Hybridisation Assay

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Abstract

Hepatitis B virus (HBV) continues to be a significant cause for post-transfusion hepatitis in India, in spite of the introduction of compulsory hepatitis B surface antigen (HBsAg) screening. To understand the true HBV-infective pool in the blood donor population, HBV DNA was detected by a ³²P-labelled dot blot hybridisation assay in 605 donor units that were negative for HBsAg by a third-generation Elisa. Serum alanine aminotransferase (ALT) was estimated in all these samples and correlated with DNA positivity. The frequency of HBV DNA positivity in HBsAg-negative units was very high (9.91%) and correlated well with the elevation in ALT ($p < 0.00005$). However, the frequency of elevated ALT was high (11.9%), using the locally determined upper limit of normal, and half of the DNA-positive samples had a normal ALT. Thus, ALT is a poor surrogate marker for HBV infectivity and efforts should be made to apply DNA detection systems in blood banks.

Reference

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