

Effect of transfusion of fresh-frozen plasma on recipients' antibodies to hepatitis B surface antigen and hepatitis B surface antigen status in countries where hepatitis B virus is endemic

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Effect of transfusion of fresh-frozen plasma on recipients' antibodies to hepatitis B surface antigen and hepatitis B surface antigen status in countries where hepatitis B virus is endemic

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Abstract

Background and Objectives Antibodies to hepatitis B virus (HBV) that are passively acquired through transfusions may lead to confusion and inappropriate clinical decisions. We evaluated the effects of transfusing fresh-frozen plasma (FFP) on serological tests for HBV antibodies in patients without such antibodies.

Materials and Methods Tests for HBV surface antigen (HBsAg), and for antibodies to HBV surface antigen (anti-HBs) and HBV core antigen (anti-HBc), were carried out using enzyme immunoassay on the FFP and sera of 50 patients transfused with FFP containing anti-HBs.

Results After FFP transfusion, the incidences of 'false' positivity for anti-HBs and anti-HBc were 64% (32/50) and 100% (seven of seven), respectively, and of 'false' negativity for HBsAg was 18.8% (three of 16) in previously positive patients. The post-transfusion seropositivity for antibodies results from passive transmission, whereas the inability to detect HBsAg is the result of decreased detectable levels.

Conclusions Laboratory staff and clinicians alike should be cautious in interpreting the results of the HBV marker tests in patients who have recently been transfused, and in obtaining specimens for such studies.

Reference

Kumar, A., Acharya, S.K., Joshi, Y.K., Gandhi, B.M., Irshad, M. and Tandon, B.N.: Role of immune serum globulin in post transfusion virus B infection. *Indian Journal of Medical Research* 89: 12-15, 1989