

Post-transfusion hepatitis type B following multiple transfusions of HBsAg-negative blood

<https://www.journal-of-hepatology.eu/>

DOI: [https://doi.org/10.1016/S0168-8278\(96\)80232-7](https://doi.org/10.1016/S0168-8278(96)80232-7)

Cited in:

Journal of Hepatology November 1996, 25 (5), 639–643

Post-transfusion hepatitis type B following multiple transfusions of HBsAg-negative blood

Shubhangi Saraswat, Kakoli Banerjee, Navjyoti Chaudhury, Navjyoti Chaudhury, Tekchand Mahant, Pramod Khandekar, Rakesh Kumar Gupta, Sita Naik
Department of Transfusion Medicine, SGPGIMS, Lucknow, India.

Abstract

Background/Aims: Post-transfusion hepatitis continues to occur, though with decreasing frequency, even after screening donor blood for HBsAg, anti-HBc, anti-HCV and alanine aminotransferase activity. Data from developing countries on the frequency and type of post-transfusion hepatitis are scarce. We undertook this prospective study to determine the incidence and type of post-transfusion hepatitis at our center after transfusion of blood negative for HBsAg by ELISA.

Methods: Forty-one patients undergoing open-heart surgery, who had received 3 or more units of HBsAg-negative blood, were followed up. Serum samples of donor units transfused to recipients who developed post-transfusion hepatitis-B were subjected to HBV DNA amplification by the polymerase chain reaction, using two sets of X-gene specific primers which amplified a 250-bp fragment of the HBV DNA.

Results: We found that six of the 41 patients (14.6%) developed post-transfusion hepatitis; four of them (66.6%) developed icteric post-transfusion hepatitis B, whereas two (33.3%) developed anicteric post-transfusion hepatitis C. These six recipients received a total of 48 units of blood and 30 of these 48 units could be subjected to HBV DNA amplification by polymerase chain reaction. Eleven donor samples were polymerase chain reaction positive and had been transfused to three of the four patients who had developed post-transfusion hepatitis B.

Conclusions: We conclude that post-transfusion hepatitis B continues to be the most common cause of post-transfusion hepatitis in India. Screening of donor units for HBsAg by ELISA does not exclude all blood units infectious for hepatitis B virus. Additional measures to ensure safety of blood supply should be sought.

Keywords: Blood donor, Blood transfusion, HBsAg ELISA, HBV DNA, Polymerase chain reaction

References

Patwari, SI, Irshad, M, Gandhi, BM, Joshi, YK, Nundy, S, Tandon, BN. Post-transfusion hepatitis: a prospective study. *Ind J Med Res.* 1986;84:508–510.