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Evaluation of seroprevalence of HbsAg infection among blood donors in a tertiary-care hospital

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Abstract

Background: Hepatitis B infection is a serious global and public health problem. Hepatitis B is one among the transfusion-transmissible infections. Hepatitis B virus (HBV) is a DNA virus that causes acute and chronic liver diseases. Transmission of infection occurs through blood transfusion, needles, body fluids, and sexual intercourse. The clinical diagnosis of carrier state of HBV is commonly done by the detection of hepatitis B surface antigen (HBsAg) in the serum. The prevalence of this infection differs across the globe. The preventive strategies can be accomplished by analyzing the trends in seroprevalence.

Objective: To assess the seroprevalence of HBsAg among blood donors attending the blood bank of a tertiary-care hospital.

Materials and Methods: The study was conducted at the blood bank of Hassan Institute of Medical Sciences (a tertiary-care hospital), Hassan, Karnataka, India. In this retrospective study, healthy blood donors, over a period of 3 years from 2011 to 2013, were assessed. The blood donors were categorized as voluntary and replacement donors. Blood samples from donors were subjected to serological tests for the detection of HBsAg through ELISA-based assay.

Result: A total of 11,894 blood donors were studied. Seventy-four (0.62%) cases were positive, which comes under the “low prevalence (<2%) zone” as per World Health Organization (WHO) guidelines. Male blood donors showed significantly higher seropositivity when compared with female donors. The *c*2-test was used to calculate the significance of difference between the sex groups.

Conclusion: This study endorses the fact that extensive screening through routine and specialized tests is mandatory, and definite criteria are to be given for the selection of donor to minimize the spread of HbsAg infection through transmission.

Key Words: HBsAg, seroprevalence, blood donors, hepatitis B virus

Reference

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