

Prevalence of HBsAg Among Directed Donors of Eastern Medical College & Hospital

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Abstract:

In this prospective study, 263 (Two hundred & sixty three) normal healthy directed donors were entered who attended at the department of Transfusion Medicine, Eastern Medical College Hospital (EMCH), Comilla between the period from July 2015 to December 2015. With predonation consent, blood samples were collected in a sterile dry plain test tube. Serum of each donor was collected by proper centrifugation within 6 hours of collection. All the samples were tested within 24 hours of collection. The method used were latex Agglutination method and reconfirmed by ELISA techniques. On analyzing the results of the hepatitis B surface antigen screening test, only 5 (five) were found positive for HBsAg and others were negative for HBsAg. Although the study population was small in number, these findings are alarming from a public health standpoint.

Introduction:

Bangladesh is a densely populated country in the world with a total population of 140.5 million. Concurrent natural, socioeconomic conditions and existing primary healthcare system expose them to health hazards. Hepatitis B Virus (HBV) infection results in broad-spectrum of disease from subclinical infection to fulminate hepatitis. It can progress to Chronic active hepatitis, Cirrhosis of Liver and Hepatocellular Carcinoma¹. More than one million deaths occur from complication of HBV infection every year. Approximately 5-10 percent of infected patients become long term carriers of the virus and it is estimated that there are 400 to 500 million carriers. Patients with blood loss require blood transfusion to compensate the bleeding. Use of unscreened blood transfusion keep the patients at risk of acquiring many transfusion transmissible diseases (TTDs) like HBV, HCV, HIV, syphilis etc. Unsafe sexual act is a well-known route for HBV, HCV, syphilis and HIV/AIDS transmission². And, since most of the routes for transmission prevail in the

country, the spread of HBV has become a great threat.

Materials and Methods:

Blood samples from 263 donors were collected who were directed to donate blood in the need of the admitted patients of Eastern Medical College Hospital. The blood samples were collected in the department of Transfusion Medicine of EMCH from 1st July' 2015 to 31st Dec'15 of which 245 were male and 18 were female. The person who had more than 45kg body weight, age within 18-60 years not suffering from any illness, pulse, blood pressure, temperature within normal range and who were apparently healthy were accepted as blood donors³. History of Jaundice, recent HBsAg vaccination, HBsAg carriers, history of recent major operation were rejected. Voluntary donors were mainly students of different institutions. Some are service holders, doctors, teachers and businessman. A direct binding monoclonal based immunochromatographic assay were done for the visual detection of Hepatitis-B surface antigen in serum.

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Results:

Out of 263 directed donors 18 were female Blood donors and 245 were male blood donors. Age distribution of majority donors was within 20-30 years. As because mainly they were students of different institutions.

Overall prevalence of HBsAg positive cases among directed donors were 05 (1.90%). Prevalence was more in male blood donors 05 of 245 (2.04%) than Female blood donors 00 of 18 (00%).

Table I: HBsAg Positive donors

Group	Total Number of donors	Number of HBsAg Positive donors	Percentage (%)
Male & Female	263	05	1.90
Male	245	05	2.04
Female	18	00	00

Discussion:

Bangladesh is an endemic area for Hepatitis-B virus. In our study it is found that 1.90% directed donors show HBsAg positive. One study of northern region (Rajshahi) 3.64% voluntary blood donors were positive⁴. 7% HBsAg positive was found among apparently healthy population of Mymensingh City⁵. It is reported that prevalence of HBsAg positive carrier was 11%, 8% and 7.8% among prostitutes, drug addicts and apparently healthy population of Dhaka city^{6,7,8} respectively. Prevalence of HBsAg varies from one country to another country and also varies from one part of the country to another part. HBsAg positivity is much less in female voluntary blood donors than male voluntary blood donors⁸. To reduce the prevalence of HBsAg positivity there should be more awareness about the disease and its transmission among all people, to avoid professional blood donors, to ensure vaccine to all people. HBsAg screening test must be done compulsorily before blood donation.

Conclusion & Recommendation:

Widespread transmission of this disease to most unprivileged population might be a great health hazard unless it is prevented by vaccination, mass campaigning and mandatory predonation screening.

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