Original Article

PREVALENCE OF HEPATITIS B, C AND HIV IN BLOOD DONORS OF SOUTH PUNJAB

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Background: Hepatitis B, C and AIDS are dreadful diseases transmitted through the blood transfusion. This study was carried out to find out the prevalence of these in blood donors of South Punjab and to compare it with national and international data.
Material and Methods: The blood from 25631 donors were screened for hepatitis B,C and HIV.
Results: Out of 25631 blood donors, 24447 (95.38%) were male and 1184 (4.62%) were female. Blood was positive in 4.93% for HBs Ag, 4.06% for HCV and negative for HIV.
Conclusion: The present study has shown a high prevalence of hepatitis B and C in blood donors of South Punjab. HIV was not detected in any blood donor.
Key words. Hepatitis B and C, HIV

Introduction

Hepatitis B.C. and AIDS (Human Immune Deficiency Syndrome) viruses can be transferred to the recipients of blood transfusion. The demand for blood transfusion is increasing due to endemicity of infections causing anemia, malnutrition, surgical and obstetrical emergencies associated blood loss [1,5]. Hepatitis B, C and AIDS are important public health problems world wide. Transmission of these dreadful diseases warrants careful screening of blood donors Acute and chronic viral hepatitis are common public problem in Pakistan and are associated with serious complications. Cases of AIDS have also been reported. Screening for hepatitis B, C and HIV is carried out routinely in the blood banks. The purpose of this study was to determine the prevalence of Hepatitis B,C and AIDS in blood donors of South Punjab.

Materials and Methods

This data was collected by the members of the Blood Donor Society, Nishtar Medical College, Multan from the Blood Transfusion Center, Nishtar Hospital / Nishtar Medical College, Multan for the period, January 2005 to December 2005. During this period, 25631 blood donors attended the Blood Transfusion Center.

For HBs Ag, HCV and HIV detection, 5 ml blood was taken from each subject. It was centrifuged for 5 minutes to obtain the serum. It was tested for HBs Ag, HCV and HIV. HBs Ag and HCV were assayed by enzyme linked immunoabsorbant assay kit (Murex Diagnostic Ltd, UK). HIV was tested by using HIV-1/ HIV-2 Latex reagent- Trinity Biotech.

Results

The blood from 25631 donors were screened for hepatitis B and C and HIV. Out of these blood donors 24447 (95.38%) were male and 1184 (4.62%) were female. **(Table 1)**

HBs Ag was positive in 1254 (4.93%) of the blood donors (4.82% of the male and 7.18% of the female donors). HCV was positive in 1042 (4.06%) of the blood donors (3.94% of the male and 6.59% of the female donors). No blood donor was positive for HIV **(Table 2).**

Table-1: Sex distribution in blood donors.

	Male blood donor	Female Blood donor	Total
Numbers	24447	1184	25631
Percentage	95.38%	4.62%	100%

Table-2: Number and Percentage of Blood Donors Positive for HB_s Ag, HCV and HIV.

	Male blood donor		Female Blood donor		Total	
	Number	Percentage	Number	Percentage	Number	Percentage
HBsAg	1179	48.2%	85	7.18%	1254	4.93%
HCV	964	3.94%	78	6.59 %	1042	4.07%
HIV	0	0	0	0	0	0

Discussion

Protection of the blood supply from virus infected blood donation has reached a very high level due to effective donor selection and testing with latest techniques[8]. In the present study, blood donors were predominantly males (95.38%). Of the blood donors screened, 4.93% were positive for HBs Ag while 4.07% were positive for HCV. No blood donor was positive for HIV. In Nigeria, the reported values are 14.3% for HBs Ag and 25.9% for HIV. In Tanzania, the prevalence is 3.8, 8.8% and 1.5% for HBs Ag, HCV and HIV respectively[9]. From Greece, the values reported are 0.41%, 0.37% for HBs Ag and HCV[2]. In a study conducted in Qaseem, Saudi Arabia, Saudis had a higher prevalence of hepatitis B as compared to hepatitis C[3]. In blood donors screened in Punjab Institute of Cardiology, Lahore, HBs Ag was positive in 2.1% of the donors[11]. The prevalence reported from NWFP is 1.9%, 2.2% for HBs Ag and HCV respectively[5]. The prevalence reported from Karachi is 2.2%, 0.5% and 0% for HBs Ag, HCV and HIV respectively[10]. Results of a study in Abbottabad are HBs Ag positive in 1.55% and HIV negative[7]. The screening of blood donors in Peshawar showed 1.40%, 1.34% and 0% prevalence for hepatitis B,C and HIV respectively[6]. In an other study in Peshawar, the results were 1.9% and 2.2% positive for hepatitis B and C[5]. Asif et al reported a prevalence of 2.51% , 5.14% and 0.25% respectively for HBs Ag, HCV and HIV in replacement donors from Islamabad. The present study carried out in 25631 blood donors showed a higher prevalence rate (4.93% for HBs Ag and 4.07% for HCV) which is alarming. HIV was not detected in any blood donor. The higher prevalence rate may be due to larger number of blood donors screened in the present study as compared to number of subjects included in other studies in Pakistan.

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