

PREVALENCE OF HEPATITIS B AND HEPATITIS C IN BLOOD DONORS OF KARACHI

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ABSTRACT

Hepatitis B virus (HBV) and Hepatitis C virus (HCV) are two major public health problems in the country. The purpose of this study was to compare the prevalence of hepatitis B and hepatitis C in voluntary non-remunerated and replacement donors in Baqai Medical University Hospital and PNS Shifa Karachi from April, 2005 to June, 2007. A total of 11459 donors were bled. Anti-HCV was found positive in 237 (2.068%) HBs Ag was positive in 196 (1.71%) and both were positive in 11 (0.095%) individuals. This study shows a higher prevalence of HCV than HBV infection in blood donors. The prevalence of HCV and HBV can be minimized by the screening of all donors for anti-HCV and HBs Ag and discouraging the use of unsterilized syringes.

INTRODUCTION

Hepatitis B and C are major public health problems in developing countries¹. HBV and HCV are the commonest causes of chronic liver disease in several regions of the world. The worldwide carrier rate of HBV is more than 350 million.¹⁴ These carriers provide a huge reservoir for HBV. It is estimated that HBV has infected over 2 billion individuals alive today at some point in their lives.² It is estimated that about one million people die each year from HBV related chronic liver disease.³

Hepatitis B and C are transmitted parenterally mainly as a result of blood to blood contact including injury with contaminated instruments and sharing of needles or by sexual contact and also through perinatal transmission from mother to child.^{2,4} HBV and HCV are the two established causes of posttransfusion hepatitis. Prevalence of transfusion-transmitted diseases is much lower in healthy voluntary blood donors as compared to professional blood donors.⁵ Both infections can lead to an acute or silent course of liver disease progressing from liver impairment to liver failure, cirrhosis of liver and to hepatocellular carcinoma.

PATIENTS AND METHODS

The study was conducted at Baqai Medical University Hospital and PNS Shifa Karachi from April 2005 to June 2007. A total of 11459 blood donors who were declared physically fit for transfusion were screened for Hepatitis B and C alongwith other routine screening tests for blood transfusion. The screening tests was the routine kit used in all the blood banks.

RESULTS

Among the total donors studied (n = 11459), 196 (1.71%) were positive for HBs Ag, 237 (2.068%)

were positive for anti-HCV antibodies and 11 (0.095%) individuals were both anti-HCV and Hbs Ag positive (Table 1).

Table 1: HBs Ag and anti-HCV prevalence in blood donors (n – 11459).

Serological Marker	Seropositive	Percentage
HBs Ag	196	1.710%
Anti-HCV	237	2.068%
HBs Ag + Anti-HCV	11	0.095%

DISCUSSION

Our study shows 1.71% prevalence for Hepatitis B which is lower as compared to other studies.⁵⁻¹² Ijaz et al from Lahore reported relatively low seroprevalence (1.52%) for HBsAg in blood donors.

Seroprevalence of HBV in blood donors is different in various countries. It is reported as 0.1-0.5 in normal population in the United States and Western Europe, whereas the prevalence rate of 5 to 20% has been reported in Far East and in some tropical countries.¹⁴ Seroprevalence of HCV in blood donors is different in different countries. Forty thousand new infections of HCV are estimated to occur annually in the United States and approximately 1.8% of the Americans have antibodies against HCV.² Most European countries have reported a prevalence of 0.5% to 2% in general population.¹⁸ It is reported as 0.016% to 0.322% in Saudi Arabia.¹⁹

The seroprevalence of anti-HCV antibodies is 2.068% in our study, which is lower as compared to other studies from other areas of Pakistan. Seroprevalence of HCV is reported 2.2% from Pesh-

war,¹⁵ 5.14% from Islamabad,¹⁶ 2.52% from Rawalpindi,¹² 5.34% from Lahore¹³ and 3.69% from Mardan²⁰ Dual infection of Hepatitis B and C is very low. It is 0.095% in our study. This trend shows that prevalence rate of HBs Ag appears to be declining. It probably reflects greater awareness and wider acceptance of health care measures and use of disposable syringes.

It is **concluded** from the study that seroprevalence of Hepatitis C is higher in donors than in Hepatitis B infection. This is in contrast to many other studies which show higher prevalence of Hepatitis B in our country. Prevention is the most important aspect on which we all need to work hard. Blood is one of the main sources of transmission of Hepatitis B and C, hence donor selection is of paramount importance. With vigilant donor's selection and use of sterilized syringes and medical instruments, spread of Hepatitis B and C could be minimised.

It is suggested that more attention should be given paid providing health education concerning risk factors and prevention of Hepatitis B and C infections to the general public.

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