

Original Article**Prevalence of Hepatitis B Virus in Blood Donors****1. Saadat Parveen 2. Muhammad Ashraf 3. Muhammad Zafarullah**

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ABSTRACT**BACKGROUND:** There is no treatment available once get infected with hepatitis B virus. Transfusion of blood contaminated with HBV is one of the major risk factors for increasing its Seroprevalence.**Objective:** To determine the prevalence of Hepatitis B virus in healthy blood donors .**Study Design:** A prospective descriptive study**Place and duration of study:** This study was conducted in department of pathology Combined Military Hospital Multan during a period of three years from 01.07.2007 to 30.06.2010.**Patients and Methods:** A total number of 18042 blood donors in between 18-55 years of age were screened for transfusion related carriers of infectious diseases including hepatitis B virus by ELIZA technique.**Results:** Hepatitis B virus surface antigen was detected in 561 (3.1%)**Conclusion:** Seroprevalence of hepatitis B is high even in healthy and young blood donors. Therefore every donor should be screened for it.**Key words:** Hepatitis B, Serological screening, Transfusion related infectious diseases.**INTRODUCTION**

Hepatitis is one of the leading causes of morbidity and mortality world wide especially in developing countries like Pakistan ⁽¹⁾. Hepatitis B viral infection is going to increase since its discovery in 1963 ⁽²⁾. It has infected over two billions individuals all over the world and more than half million die each year ⁽³⁾. Hepatitis B surface antigen was first time demonstrated by Blumberz as serological markers for HBV in 1963 ⁽⁴⁾. Contaminated blood transfusion of as little as 0.01ml is main culprit of spread of this infection ⁽⁵⁾. As there is no treatment available after getting infected with HBV. Special precautions should be taken to check its' transmission.

PATIENTS AND METHODS

This study was carried out in Hematology section of department of Pathology Combined Military Hospital, Multan during a period of three years from 1st July, 2007 to 30th June 2010. All healthy blood donors coming for blood donation between 18-55 years of age were included in study. Screening of all donors for transfusion transmissible infections including Hepatitis B was carried out by ELIZA. Positive individuals were informed and advised not to donate their blood. Results were recorded on predesigned proforma. At the end of study, record of hepatitis B positive cases was analyzed separately.

RESULTS

During three years, 18042 persons came for blood donation. 16138 (90%) were male and 1804 (10%)

female. Age was between 18-55 years. Hepatitis B surface antigen was positive in 561 (3.1%).

Table No. 1: Male to Female Ratio in Screened Persons

Male	Female
90%	10%

Table No. 2: Hepatitis B Prevalence in various age groups.

Age in Year	Percentage
18-25	1.8%
25-35	3.8%
35-45	3.8%
45-55	2.9%

Table No. 3: Prevalence in Gender

Male	Female
3.9%	2.8%

DISCUSSION

Viral hepatitis is widely seen all over the world and is one of the most challenging health problem with very high end stage morbidity and mortality ^(6,7). In this study 3.1 % of otherwise healthy blood donors were serologically positive for Hepatitis B surface antigen. In an international study by Andrgachen and colleagues published in Biomed central, HBV seroprevalence rate in healthy blood donors is 4.7% ⁽⁸⁾. Taguchi etal in Pubmed Journal reported 1.8% in surgical patients ⁽⁹⁾. According to Erden and colleague it is 6.6% in patients coming in out patient clinic at Istumbol University Hospital, Turkey. In local studies between 2% to as

high as 14% in blood donors and 3.6%-18.6% in general population ⁽¹⁰⁾. HBV seropositivity in blood donors reported by Chaudhary⁽¹¹⁾ Hashmi⁽¹²⁾, Tanweri⁽¹³⁾, Bulkhari⁽¹⁴⁾, Rehman⁽¹⁵⁾, Bhatti⁽¹⁶⁾ and Rehman K⁽¹⁷⁾ is 2%, 2.1%, 2.6%, 3.4%, 3.5%, 6.5% and 14% respectively. In general population it is reported by Abbas⁽¹⁸⁾ and Gondal⁽¹⁹⁾ as 3.6% and 18.6% respectively.

RECOMMENDATIONS

On the basis of findings in this study following recommendation are laid down.

- 1) Awareness in public and health professionals about hepatitis B, its risk factors and prevention.
- 2) Screening for HBV surface antigen and vaccination at mass level.
- 3) Vaccination and regular check of antibody status in all health care providers.
- 4) Complete screening before blood donation.
- 5) Use of disposable items and their destruction by incinerator after use on positive patients.
- 6) Separate non disposable equipment for positive patient and proper sterilization after use.

CONCLUSIONS

Seroprevalence of hepatitis B virus is high and more in developing world. No treatment is available after getting infected. Main protective measure is vaccination. Screening before blood donation and transfusion may help in reducing its spread.

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