

FIELD MEDICINE

PREVALENCE OF ANTI HEPATITIS C ANTIBODIES AND HEPATITIS B SURFACE ANTIGEN IN HEALTHY BLOOD DONORS IN BALTISTAN

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ABSTRACT

Objective: To determine the prevalence Hepatitis C and Hepatitis B in healthy blood donors in Baltistan.

Design: A descriptive study.

Patients and Methods: All the healthy donors between 20-45 years of age visiting DHQ hospital Skardu were screened for Anti HCV and HBs Antigen.

Results: Eight Hundred and fifty donors were including in the study. The overall percentage of Anti HCV was 1.1% and HBs Ag was 8.4%.

Conclusion: The percentage rate of Hepatitis B quite high in Baltistan, whereas HCV positivity in rather low in this areas.

Keywords: HCV antibodies, hepatitis B surface antigen.

INTRODUCTION

All types of Hepatitis viruses are endemic in Pakistan. The prevalence and pattern of various types of viral hepatitis in Pakistan is quite different from that of developed countries in the west. There is no dearth of studies done on viral hepatitis in Pakistan, but no study has been carried out in this remote part of Baltistan situated in Northern Areas of Pakistan and comprising of districts of Skardu and Ganche.

Studies done previously have shown a prevalence rate of 4-10% for Hepatitis B surface antigen [1] and 4.8-15% for Hepatitis C virus anti bodies [2] The purpose of this study was to determine the frequency of HBsAg and anti HCV in population of this remote area of Pakistan.

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PATIENTS AND METHOD

A descriptive study was carried out at DHQ hospital Skardu. A total of 850 healthy blood donors were screened for HBs Ag and anti HCV. All were males with the age range of 20 to 45 years. They were drawn from all areas of Baltistan. Blood was collected in disposable syringes and was tested for anti HCV and HBsAg. The test for HBsAg was performed by using the IMx® HBsAg (V2) assay which is a qualitative third generation micro particle Enzyme immunoassay for the detection of HBsAg in human serum or plasma (Abbot laboratories diagnostic division, USA) Anti HCV was performed by IMx® HCV version 3.0 which is micro particle Enzyme immunoassay for the qualitative detection of anti HCV in human serum or plasma (Abbot laboratories Diagnostic Division, USA). None of the donors had been vaccinated in the past for hepatitis B.

STATISTICAL ANALYSIS

Data were analyzed using SPSS version 11.0. Percentages were calculated for HBs Ag in different age groups. Chi-square test was applied to check the relationship of HBs Ag and HCV with age.

RESULTS

Eight hundred and Fifty donors were included in study. The results are shown age wise in (table-1). The overall percentage of HBsAg was 8.4%. The over all percentage of anti HCV was 1.1%. None of the donors were positive for both HBsAg and Anti HCV. There was no significant statistical difference in percentages of anti HCV in different age groups ($p>0.05$). Similarly the difference in percentages of HBs Ag in different age groups was statistically in significant ($p>0.05$).

DISCUSSION

World wide prevalence of HBs Ag is quite variable. It is infrequent (0.1 to 0.5%) in normal population in the United States and western Europe. However a higher prevalence rate of (5-20%) has been found in the far east and in some tropical countries. Previous studies done in Pakistan have shown variable results. However none of these studies was done in Northern Areas of Pakistan. Khatak et al [3] reported HBs Ag prevalence of 3.3% in a study done in healthy blood donors. Another study done by Shamim et al [4] showed prevalence rate of 5.86% for HBs Ag in healthy blood donors. Similarly a study done by Nasir et al [5] showed prevalence rate of 2.56% for HBs Ag in a community based study. Zuberi et al [6] Hashim et al [7] Yousaf et al [8] and Rehman et al [1] reported HBs Ag prevalence of 3.1%,0.99%,1.11% and 5% respectively in healthy volunteer blood donors. The percentage of HBs Ag appears to be quite high in Baltistan. This is probably due to lack of awareness, absence of health care measures and poor socioeconomic status of population in this area.

Table-1: Percentages of HBs Ag and Anti HCV age wise in healthy blood donors from Baltistan.

Age Group	No.	HBs Ag Positive	%	Anti HCV Positive	%
20 -30 yrs	490	42	8.57	6	1.22
30 - 40 yrs	275	24	8.72	3	1.09
> 40 yrs	85	6	7.05	1	1.17

In the United States 0.5% of volunteer blood donors and 1.8% of the general population has serological evidence of hepatitis C infection. However extra ordinarily high prevalence occurs in certain countries such as Egypt, where prevalence rate as high as 20% has been reported. Khattak et al [3] reported 4% prevalence of anti HCV in healthy blood donors in a study done in Rawalpindi. Shamim et al [4] reported prevalence of 6.21% for anti HCV in a study also done in healthy blood donors. Nasir et al [5] reported prevalence rate of 5.31% in a community based study. Bhatti et al [9] reported that 4.8% of blood donors in age range of 18 to 45 were positive for anti HCV. Another study by Akhter et al [10] reported over all sero prevalence rate of 1.8% in asymptomatic male volunteer blood donors in Karachi. Nadir et al [11] reported prevalence of 1.87% in blood donors in a study done in Quetta.

The percentage of 1.1% of HCV in my study is relatively low when compared with some of the above mentioned studies. It shows that whereas hepatitis B virus infection is on the rise in this area, percentage of hepatitis C is comparatively low.

CONCLUSION

This is a population based study. It shows that percentage rate of hepatitis B is alarmingly high in Baltistan. However percentage of HCV is rather low in this area.

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