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Research Article

**PREVALENCE OF HEPATITIS B AND HEPATITIS C CARRIER
STATE AMONG HEALTHY BLOOD DONORS**¹Dr Muhammad Usman Zia, ²Dr Aqsa Aslam, ³Dr Saira Arshad¹Incharge Medical Officer, Basic Health Unit 291/E. B Burewala, ²Incharge Medical Officer, Basic Health Unit 257/E. B Burewala, ³DHQ Teaching Hospital Gujranwala.**Article Received:** February 2019**Accepted:** March 2019**Published:** April 2019**Abstract:**

In our population, hepatitis B and C has been increasing. Due to these viral infections, thousands of people have subjected to death.

Objectives: *Prevalence of hepatitis b and hepatitis c carrier state among healthy blood donors.*

Subject and Methods: *The current research study was organized at Rahim Yar Khan from the time period allocated to this study was from January 2013 to August 2018.*

Methods: *The people enrolled for this study were healthy and young blood donors. By employing ict screening kits, these participants were screened for HBSAG and anti-HIV. Monthly reports of Blood Donors were collected from Blood transfusion units and data was assembled from these reports.*

Results: *Total people selected for this study were 2,17,847. These people were healthy young donors. All participants were screened for HBV and HCV. Out of total, the number of people who were noticed positive for HBsAg and anti-HCV were 5143(2.4%) and 6407(2.2%) respectively. 2,03,522 people were screened at the District level. The number of subjects out of total that were found positive for HBsAg and anti-HCV were 4449(2.2%) respectively. Total 14,325 subjects were screened at Tehsil Units. From these, the subjects positive for HBsAG were 624(4.8%) and those who were positive for anti-HCV were 789(5.5%).*

Conclusion: *The study concluded that as compare to surrounding rural areas of district Rahim Yar Khan, the occurrence of HBV and HCV is low in urban areas. Moreover, among healthy blood donors, the incidence of HBV and HCV infection is high.*

Key Words: *Hepatitis B Virus, Hepatitis C Virus, HBsAG, Anti-HCV, Blood Donors.*

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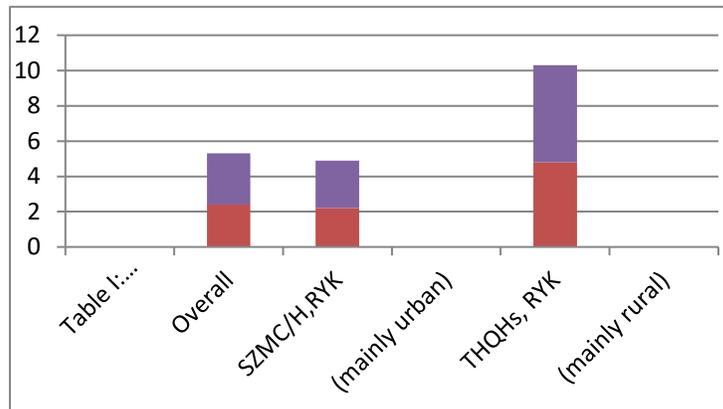


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INTRODUCTION:

In our population, the infections of hepatitis B and C are increasing day by day. The occurrence of these infections reached to an alarming condition. Due to viral infections including hepatocellular carcinoma and hepatic failure, a grate number of people have subjected to death. All around the world, the primary reason of hepatocellular carcinoma is HRV. Every year, 350,000 new cases of HBV are presented (1). In 40% of the cases having chronic HBV infection, the presence of cirrhosis is observed (2). Many studies have been conducted in different areas of country in order to check the incidence of HBV and HCV rates in Pakistan. In various types of population, HBV was 1.1-11.9 % (3). In Pakistan, the incidence of HCV

was 4-4.9% as indicated by the other studies (4,5). The objective of the study was to determine the frequency of hepatitis B and C occurrence among healthy blood donors. In this research study, current situation of HBV and HCV carriers is discussed and precautionary measures for the management of these viral infections are also mentioned.

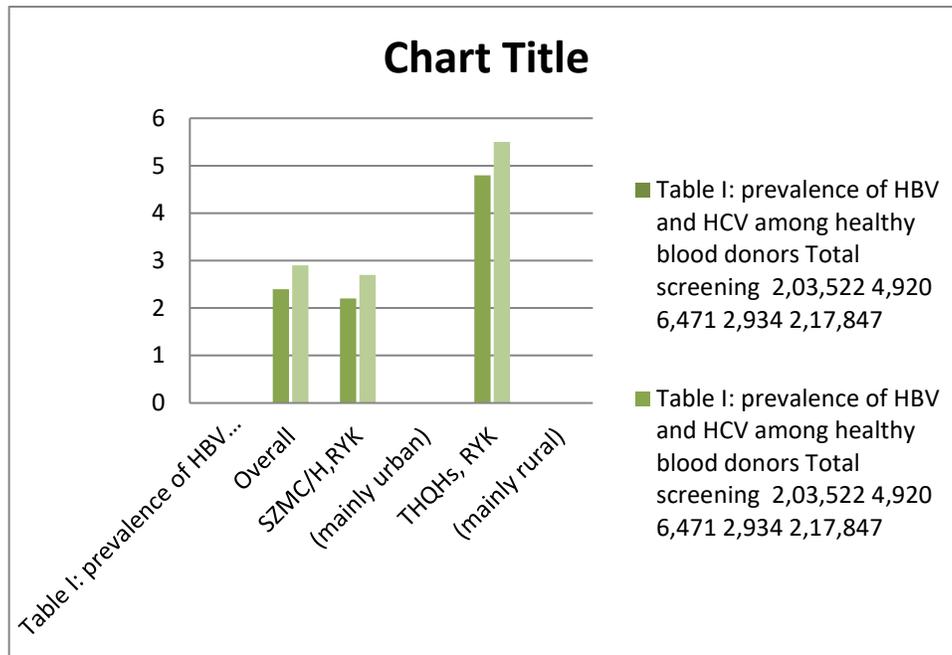
**PATIENTS AND METHODS:**

The current study was organized at Rahim Yar Khan from the time period allocated to this study was from January 2013 to August 2018. The people enrolled this study were health and young blood donors. By employing ICT screening kits, these people were screened for HCV, HIV and HBV. Monthly reports of Blood donors were collected from Blood

Transfusion Units as stated on “Blood screening forms”. For screening, plasma/serum was used. Abon Biopharm (Hangzhou) (co, Ltd, China, was used for taking the screening tests for HBsAGand anti-HCV. The incidence of HCV and HBV infection was measured and illustrated in the form of percentage. With this percentage, incidence for each tehsil of district was also mentioned.

Table I: Prevalence of HBV and HCV among healthy blood donors

Centres	Total screening	HBV	HCV
SZMC/H,RVK	2,03,522	4449(2.2%)	5611(2.7%)
THQH Sadiqabad	4,920	255305(5.18%)	305(6.1%)
THQH Khanpur	6,471	245(3.7%)	328(5%)
THQH Liaquatpur	2,934	194(6.6%)	155(5.2%)
Total	2,17,847	5,1436(2.4%)	6400(2.9%)



RESULTS:

The time period allocated to this study was 6 years. Total people enrolled for this study were 217,847. These people were healthy and young donors. All participants were screened for HBV and HCV. Out of total, the number of people who were noticed positive for HBV and HCV were 5143(2.4%) and 640(2.9%) respectively (Table I). 2,03,522 people were screened at SZMCIH, Rahim Yar Khan. Of these the number of people that were found positive for HBV and Anti-HCV were 4449(2.2%) and 5611(2.7%) respectively. Total 14,325 subjects were screened at Tehsil Units. From these, the subjects positive for HBV and HCV were 694(4.8%) and 789(5.5%) respectively.

DISCUSSION:

The objective of this study was to determine the frequency of hepatitis B and C occurrence among health blood donors. The incidence of these viral infections was compared between urban and rural areas. It was concluded that as compare to urban areas SZMCH, Rahim Yar Khan, the incidence of HBV and HCV is higher in rural areas (THQ Hospital). From January 2013 to August 2018, a meta-analysis of studies was carried out. All over the country, 47043 people were screened for HCV and HBV. In Rahim Yar Khan, the incidence of HBV was 3.7%. In Punjab the incidence rate of HCV was 6.7% and HBV was 2.4%. The results of HBV (4.8%) and HCV (5.5%) were similar to our THQHS (rural areas). In urban areas (SZMC/H), the incidence of these viral infections is low. It is due to the media

that make the people aware of precautionary measures and due to vaccination programs (6). Ilyas (7) et al, organized a study in 2011. The study was conducted in Gujranwala and 2502 college students were screened. The incidence in these students was 2.32% for HCV and 1.76% for HBV. Our study showed higher rates i.e 2.2% for HCV and 2.4% for HBV. Syed Asad Ali(8) et al, organized a study, the meta-analysis. The time period for this study was from August 1994 to September 2007. The incidence for blood donors was 2.4% for HBV and 3.0% for HCV. The overall occurrence of HCV was 2.1% and HBV was 2.4%. These outcomes are comparable to our study. T. Butt (9) et al. organized a study in which 5707 young people were included. The age bracket of these adults was 17 to 22 years. These were screened for HCV and HBV. The incidence of HBV was 1.7% and that of HCV was 2.9%. The results of our study were similar to this study. In southern Punjab Irfan Ali Mirza (10) et al. conducted a study. Total subjects screened for HBV and HCV were 1821. The incidence of HBV and HCV was found to be 5.9% and 2.5% respectively. Results of this study were comparable to our study. However, as compare to our study, the percentage of HBV is higher. In NWFP, Javed Iqbal Farooqi(11) et al organized a study in 2007. In healthy donors, the occurrence of HBV and HCV was reported as 1.83% and 2.34% respectively. On the other hand in general population, the occurrence of HBV and HCV was reported as 2.28% and 3.19% respectively. As compare to general population, the occurrence of HCV infections in all

centers (2.9%) is lower. But in donor group, this rate is lower. But in donor group, this rate is high. As illustrated in a study by Altaf Bosan (2) et al, it is considered that there is a variation in the prevalence of these viral infections in different people and different parts. The range of occurrence of HCV in this study was 2-13.5% and that of HBV was 1.1-11.9% .

CONCLUSION:

The study concluded that as compare to surrounding rural areas of district Rahim Yar Khan, the occurrence of HBV and HCV is low in urban areas. Moreover, among healthy blood donors, the incidence of HBV and HCV infection is high.

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