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Research Article

**EVALUATION OF HEPATITIS B & C PREVALENCE AMONG
HEALTHY BLOOD DONORS WITH HEPATITIS C CARRIER
STATUS**¹Dr Ayesha Shafeeq, ²Dr Hafiza Farah Deeba, ³Dr Sherwali Khan¹Nawaz Sharif Social Security Hospital Multan Road Lahore, ²DHQ Teaching Hospital Sahiwal, ³Hamdard College of Medicine and Dentistry Hamdard University Karachi.

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Abstract:

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

Objectives: The objective of this research was to assess the status of Hepatitis B & C occurrence among healthy blood donors.

Subject and Methods: The current research study was organized at Sir Ganga Ram Hospital, Lahore (October 2017 to August 2018). The people enrolled in this study were healthy and young blood donors. By employing its 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 the total, the number of people who were noticed positive for HBsAg and anti-HCV was 5143 (2.4%) and 6407 (2.2%) respectively. 2,03,522 people were screened at the District level. The number of subjects out of the total that was found positive for HBsAg and anti-HCV was 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 compared to surrounding rural areas, 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.

Keywords: Hepatitis B Virus, Hepatitis C Virus, HBsAg, Anti-HCV, Blood Donors.

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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 great number of people have subjected to death. All around the world, the primary reason for 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 the 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 research study was organized at Sir Ganga Ram Hospital, Lahore (October 2017 to

August 2018). The people enrolled in this study were healthy 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 HBsAg and anti-HCV. The incidence of HCV and HBV infection was measured and illustrated in the form of a percentage. With this percentage, the incidence for each tehsil of the district was also mentioned.

RESULTS:

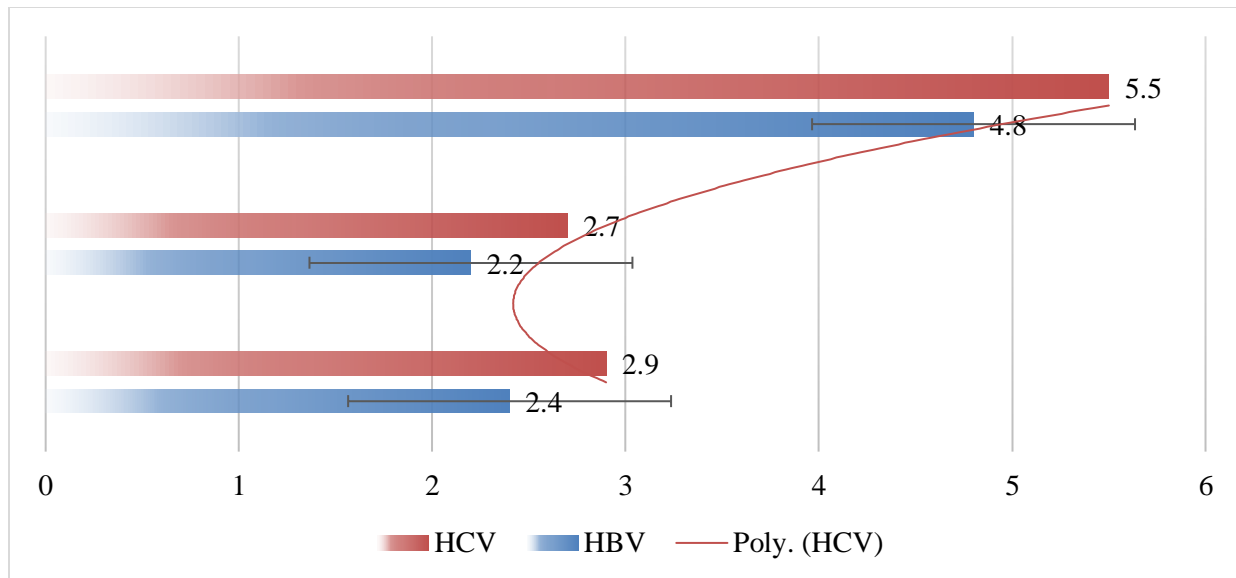
Total people enrolled in this study were 217,847. These people were healthy and young donors. All participants were screened for HBV and HCV. Out of the total, the number of people who were noticed positive for HBV and HCV was 5143 (2.4%) and 640 (2.9%) respectively. 2,03,522 people were screened. Of these, the number of people that were found positive for HBV and Anti-HCV was 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.

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

Centres	Total screening	HBV	HCV
Center – I	2,03,522	4449(2.2%)	5611(2.7%)
Center – II	4,920	255305(5.18%)	305(6.1%)
Center – III	6,471	245(3.7%)	328(5%)
Center – IV	2,934	194(6.6%)	155(5.2%)
Total	2,17,847	5,1436(2.4%)	6400(2.9%)

Table – II: HBV & HCV Prevalence

Prevalence	HBV	HCV
Overall	2.4	2.9
Urban	2.2	2.7
Rural	4.8	5.5



DISCUSSION:

The objective of this study was to determine the frequency of hepatitis B and C occurrence among healthy blood donors. The incidence of these viral infections was compared between urban and rural areas. It was concluded that as compared to urban areas, the incidence of HBV and HCV is higher in rural areas (THQ Hospital). From 1980 to 2004, a meta-analysis of studies was carried out. All over the country, 47043 people were screened for HCV and HBV. 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]. Illyas [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 of 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 et al. organized a study in which 5707 young people were included. The age bracket of these adults was 17 to 22 years [9]. 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 compared 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 the general population, the occurrence of HBV and HCV was reported as 2.28% and 3.19% respectively. As compared to the general population, the occurrence of HCV infections in all centres (2.9%) is lower. But in the donor group, this rate is lower. But in the 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 compared to surrounding rural areas, 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.

REFERENCES:

1. T. Butt, M.S. Amin, "Seroprevalence of Hepatitis B and C Infections among Young Adult Males in Pakistan", Eastern Mediterranean Health Journal 2008, vol.14 no.4: 520-24.
2. Irfan Ali Mirza, Syed Mathar Hussain Kazmi, Asif Nawaz Janjua, et al, frequency of Hepatitis B surface Antigen and Anti-HCV in Young

- Adults Experience in Southern Punjab, Journal of College of Physicians and Surgeons of Pakistan, 2007; vol.17(2):114-115.
3. Liver and Biliary Tract”, chapter 18, Robbins and Cotran Pathologic Basis of Disease, 7th edition, p. 891-96
 4. Illyas, Mohammad Iftikhar, Usman Rasheed et al, Prevalence of Hepatitis B and Hepatitis C in Population of a college student in Gujranwala, Biologia Pakistan, 2011,57(1&2)89-95.
 5. Syed Asad Ali, Rafe MJ Donahue, Huma Quredhiet al, “Hepatitis B and Hepatitis C Prevalence and Risk Factors”, International Journal of Infectious Diseases, January 2009:13(1),9-19.
 6. Javed Iqbal Farooqi, Rukhsana Javed Farooqi, Nowshad Khan, et al. Frequency of Hepatitis B and C in Selected Groups of Population in NWFP, Pakistan. JPMI 2007; vol.21 no.03:165-168.
 7. Chronic Viral and Autoimmune Hepatitis, chapter 151, Goldman’s Cecil Medicine, 24th edition, p. 974-976.
 8. Liver, Biliary Tract and Pancreas Disorders, Current Medical Diagnosis and Treatment 2012:651-55.
 9. Altaf Bosan, Irtaza Ahmad, Rehan Hafiz et al., “A review of Hepatitis Viral Infection Pakistan”, JPMA, December 2010.
 10. Yasir Waheed, Telha Shafi, Sher Zaman, et al., “Hepatitis C Virus in Pakistan: A Systemic review of prevalence, genotype and risk factors”. World Journal of Gastroenterology. 2009;1007-9327,2009.
 11. Karamat, “Pakistan Medical Research Council (PMRC), Annual Report 1980-81, Islamabad, 1981.