ORIGINAL ARTICLE

Prevalence of Hepatitis B and C in Healthy Blood Donors in a Peripheral Hospital - Ghurki Trust Hospital, Lahore

RAHILA IJAZ[1], SARWAR BHATTI[2], SAMIULLAH[3]

ABSTACT

Objective: To determine the seropositivity for viral hepatitis B and C in healthy blood donors in a peripheral hospital (Ghurki Trust Hospital, Lahore).
Materials and methods: The blood donors attending Ghurki Trust hospital were screened for hepatitis B (HBV) and hepatitis C (HCV) by rapid device method.
Results: The results showed that 3.94 % of the blood donors were positive for HBV and 12.10 % were positive for HCV.
Conclusion: Hepatitis C is more common than hepatitis B in the donors visiting Ghurki Trust hospital.
Kay words: Hepatitis B&C, prevalence, seropositivity

INTRODUCTION

One of the major and important causes of liver damage worldwide is viral hepatitis by HBV and HCV[1,2]. The most dreaded complications of acute viral hepatitis (B,C)are the progression to chronicity (chronic liver disease), development of cirrhosis[3],and hepatocellular carcinoma[4].These consume a large amount of health budget[5]. Various parenteral routes of transmission of HBV and HCV have been implicated including sharing of needles, razors, tooth brushes, injections, unscreened blood transfusions, and accidental needle prick injuries in health care providers[6,7].

Hamid S et al[8] have cited a carrier rate of HBV as 3-4% with a total of 4.5 million cases and seroprevalence of HCV as 6% with a total of 10 million cases. The domestic figures for hepatitis B and C carriers are reported to be around 23 million[9,10]. Present study was planned to evaluate and compare the frequency of hepatitis B and C in healthy blood donors screened at Ghurki Trust hospital.

MATERIALS AND METHODS

Apparently healthy donors with no previous history of jaundice or any clinical symptoms attending the Ghurki Trust hospital from September 2011 to August 2012were included in the study. 3 ml of venous blood sample was collected from each patient and serum was separated. The serum was tested for hepatitis B surface antigen (HBsAg) and antibodies against hepatitis C virus (anti HCV) by rapid Immunochromatic test devices (ICT devices, Accurate, USA) and the results were recorded. The data was analyzed. Frequencies of seropositivity of hepatitis B and hepatitis C were calculated and the comparison of frequencies was made between the percentage of positivity of the two.

[1]*Assistant Professor Chemical Pathology,*
[2]*Professor Chemical Pathology,*[3] *Associate Professor Histopathology Lahore Medical and Dental College Lahore. Correspondence Prof. Sarwar Bhatti, Email: rahilaijaz58@yahoo.com*

RESULTS

Over a period of 12 months, a total of 3652 blood donors were screened for hepatitis B and C. Out of these 144 were found to be positive for HBs Ag and 442 for HCV and 9 for both HBV and HCV. The percentage was calculated for both HBV and HCV positive donors and was found out to be 3.94 % for HBV and 12.10 % for HCV and 0.246% for cases positive with both B and C donors.(table 1).

Table1: Total number of blood donors and the comparison between number and percentages of seropositive HBV and HCV blood donors (n=3652)

Serological markers	+ve by rapid method	%of +ve cases
HBV	144	3.94
HCV	442	12.10
HBV & HCV(both)	09	0.246

DISCUSSION

The prevalence of hepatitis B and C in general population of Pakistan is well established as reported in the national survey conducted by PMRC[11]. Pakistan falls in an intermediate zone of infection for both hepatitis B and C[12,13]. The results of present study show a high rate of seroprevalence of HCV than of HBV. Similar results were found in a national survey[14] carried out in Pakistan in year 2007-8. The

survey showed that the overall prevalence of HBV is 2.5% and that of HCV is 4.9%. The results reported by Raja Amjad[15]and Hafizuddin[16] also showed a similar trend of prevalence of HCV more than HBV with 5.4% HCV positivity versus 3.24% HBV positivity in young healthy adults. The overall prevalence of HCV as reported by a hospital based study by Nafees et al[17] in 3094 individuals is 16.45% which is quite high. Similarly Frank et al[18] have reported a 22% mean HCV prevalence in Egypt. The prevalence of co-infection of (HBV/HCV) in the national survey[14] was 0.1%. Our results showed 0.246%. The finding should be alarming especially for health care providers as co-infection indicates a more severe disease which is more difficult to treat. The very high prevalence of HCV found in the present study needs to be confirmed by large scale population based studies in Pakistan. Considering the results of present study showing a high prevalence of hepatitis, it is suggested that strict preventive measures should be taken in social and medical practices. The most effective way is to educate the masses through print and electronic media.

REFERENCES

1. Pyrsapoulas N and Rajender K. Hepatitis B .eMed J 2005;3. Available from URL:htp/www.e medicine.com/gastroentrology/hepatitis.
2. Mukherjee S and Dhavan V. HepatitsC. eMed J 2004. Available from URL:htp/www.e medicine.com/ gastroentrology/hepatitisC.
3. Viral Hepatitis. Patient UK [electronic] 2006[cited 2006april 21]. Available from http:www.patient co UK / show doc/ 4000038/.
4. Sangivanni A, Del NE, Fasani P, Fazio C, Ronchi G, Romeo R et al. Increased survival of cirrhotic patients with hepatocellular carcinoma detected during surveillance. Gstroentrology 2004;126: 1005-14.
5. Abrar S, Khan ZU, Usman J, Hussain AB. Hepatitis screening in the Armed Forces. A cost effective approach. Pak J Pathol 2002;13: 24-6.
6. Mujaeeb SA. Unsafe injection: a potential source of HCV spread in Pakistan. J Pak Med Assoc 2001;51: 1-3.
7. Kcully CK. Electric razor as a potential vector for viral hepatitis. N Eng J Med 2000;342;744-5.
8. Hamid S,Umar M,Alam A, Saddique A, Qureshi H, Butt J et al, PSG consensus statement in the management of hepatitis C virus infection 2003. J Pak Med Assoc, 2004;54: 146-50.
9. Haq I. Pakistan Task Force established in NWFP to combat Hepatitis. Integerated information network (IRIN) WHO 2003.
10. Akhtar J. Surgeons and Hepatitis B and C (Editorial) J Coll Physician Surg Pak 2004;14:327-8.
11. 11 PMRC. Prevalence of hepatitis B and C in Pakistan, Islamabad. Pakistan Medical and Research Council 2008.
12. Lok AS, Mc Mohan BJ. Chronic hepatitis B. Hepatology 2007;45:507-39.
13. WHO. Wkly Epidemiology Rec 2002;77: 41.
14. Qureshi H,Bile KM, Jooma R, Alam SE, Afridi HUR. Prevalence of hepatitis B and C viral infections in Pakistan: findings of a nation wide survey appealing for effective preventive and control measures. Eastern Mediterr Health J 2010; 16(SUPP): S 15-23.
15. Raja Amjad Waheed Khan, Waqaruddin Ahmad, Syed Ejaz Alam, Ambreen Arif. Screening of HBsAg and Anti HCV from tertiary care , Private and Public Sector Hospital. PJMR 2011; 50(I):20-3.
16. Hafeezuddin, Javaid Usman Rao. Prevalence of HBV and HCV in Young Healthy Adult males seeking recruitment in Pakistan Rangers (Punjab). Pakistan Journal of Pathology 2009; 20(3): 74-7.
17. Nafees M, Bhatti MS, Haq IU. Seroprevalence of HCV antibodies in population attending Madina Teaching Hospital. Annals 2007; 13: 260-3.
18. Frank C, Mohammad MK, Strickland GT, Lavanchy D, Arthur RK, Madger LS et al. The role of parenteral antischistosomal therapy in the spread of hepatitis C in Egypt. Lancet 2000; 11(355): 887-91.