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

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ABSTRACT

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. The most dreaded complications of acute viral hepatitis (B,C) are the progression to chronicity (chronic liver disease), development of cirrhosis, and hepatocellular carcinoma. These consume a large amount of health budget. 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.

Hamid S et al 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. 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 2012 were 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.

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)

<table>
<thead>
<tr>
<th>Serological markers</th>
<th>+ve by rapid method</th>
<th>%of cases</th>
<th>+ve cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>HBV</td>
<td>144</td>
<td>3.94</td>
<td></td>
</tr>
<tr>
<td>HCV</td>
<td>442</td>
<td>12.10</td>
<td></td>
</tr>
<tr>
<td>HBV &amp; HCV(both)</td>
<td>09</td>
<td>0.246</td>
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</tbody>
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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. Pakistan falls in an intermediate zone of infection for both hepatitis B and C. The results of present study show a high rate of seroprevalence of HCV than of HBV. Similar results were found in a national survey 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 and Hafizuddin 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 in 3094 individuals is 16.45% which is quite high. Similarly Frank et al have reported a 22% mean HCV prevalence in Egypt. The prevalence of co-infection of (HBV/HCV) in the national survey 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

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