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only detect an acute stage of infection; however, previously infected people cannot be detected by this method and we need to do serological studies.

With the unprecedented increased population mobility in the form of tourism and business, political borders are no longer barriers against the spread of infections. For this, we need to have more studies among our blood donors, which include serology and molecular screening for this virus.

At the local level, the data should give primary picture for the blood bankers in the area. The absence of the WNV infection among the studied population does not mean it is absent in the UAE. Further studies in different geographical areas of the UAE and with different methodologies are recommended.

References


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Dear editor,

Hepatitis B infection is a universal health problem. Around 300-400 million carriers are estimated worldwide. Fortunately, there are effective vaccines against the virus, which are about 95% effective.[1] Although the protective efficacy of the primary course of vaccine is well established, there has been no unified opinion for booster doses to sustain protection. The seroconversion rate is influenced by a number of factors, the most important of which are the age and sex of the vaccinee. Because the virus challenge, the dosage and the infectivity of sources can vary considerably, it is difficult to define a minimum protective level of anti-HBs, but the level should be greater than 100 IU/L.[2] Although 10 mIU/mL is generally taken to be protective, some countries, like the UK, adopt a higher reference level of ≥100 mIU/mL.[3]

The present study was undertaken at Jubilee Mission Medical College and Research Institute, Thrissur, Kerala. The purpose of the study was to estimate antibody titers to HBsAg in health care workers who were vaccinated (with the protocol of three doses, (0-1-6) schedule and defaulted after one or two doses). The duration of the response to vaccine is variable, and dependant on the titer of anti-HBs after completion of the course. If vaccine is given for occupational protection and anti-HBs level is low (<100 IU/L), a booster dose should be recommended. Low or non-responders need to be identified and informed that they are not protected and advised to seek prophylaxis on accidental exposure.[2]

A total of 65 health care workers of both sexes (23 males and 42 females) in age group from 20-60 years were tested. Among them, 57 (88%) have completed three dose schedules of primary vaccination. Two (3%) had only one dose, and six (9%) had two doses. All the serum samples were tested for estimation of anti-HBs titers by Roche Elecsys with protocols of electrochemiluminescence. Antibodies to HBs (IgG) were estimated in ranges of 2-1000 mIU/mL of the master curve. Estimated Levels of Anti-HBs in health care workers is given in the Table.

The test results indicate that six (10.5%) of all successfully vaccinated persons have not attained minimal protective levels of antibody, 10 mIU/mL, and six (10.5%) have antibody levels in the range of >11-100 mIU/mL and the rest 45 (79%) have antibody levels >101 mIU/mL. Among the six defaulters who received only two doses, five persons (85%) have attained >101 mIU/mL. This limited study proves that the first two doses usually suffice to initiate anti-HBs production and prepare the immune system for a secondary response to antigen. The third dose stimulates the secondary response and biologically acts as a booster.[1]

The other participants who received two doses have attained
In spite of only one dose, one participant attained >100 mIU/mL. In spite of only one dose, one participant attained >100 mIU/mL. In spite of only one dose, one participant attained >100 mIU/mL.

As there are no data to support the need for booster doses of HB vaccine in immunocompetent individuals who responded well to primary doses, some authorities recommend regular booster doses to maintain seropositive anti-HBs titers. Health care workers are at a special risk of infection due to their nature of work and should be immunized and responses checked. In the present study, 12% of health care workers have not complied with completion of three doses of vaccine. Six (10.5%) of the successfully vaccinated health care workers who were low or non-responders (<10 mIU/mL) were advised to receive additional dose of vaccine since some may mount an anti-HBs response when given a dose of vaccine years later. All the defaulters were advised to have their anti-HBs levels checked at least once in two years for the sustainability of minimal protective levels of antibody.

It is essential that long-term follow-up studies should continue to monitor groups of immunized individuals to determine if clinically significant breakthrough episodes of hepatitis B occur or whether the carrier state develops. The outcome will help in future decisions on booster policies.

## References


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Received: 09-06-07
Accepted: 10-07-07

### Table: Estimated levels of anti-HBs in health care workers

<table>
<thead>
<tr>
<th>No. of vaccine recipients (n = 65)</th>
<th>Quantization of anti-HBs titers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;10 mIU/mL</td>
</tr>
<tr>
<td>Three doses (n = 57)</td>
<td></td>
</tr>
<tr>
<td>6 (10.5%)</td>
<td>6 (10.5%)</td>
</tr>
<tr>
<td>Two doses (n = 6)</td>
<td>0</td>
</tr>
<tr>
<td>One dose (n = 2)</td>
<td>0</td>
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</tbody>
</table>

Seroprevalence of Rubella Among Urban and Rural Bangladeshi Women Emphasises the Need for Rubella Vaccination of Pre-pubertal Girls

Dear editor,

Rubella virus infection poses a serious threat to the developing foetus if contracted during early pregnancy. In post-rubella vaccination era, endemic rubella and congenital rubella syndrome (CRS) continue to occur in much of the developing world, and Bangladesh is not an exception. The present study was designed to report the prevalence of rubella antibody in the female population of different age groups in both rural and urban areas and to find out the susceptible age group and the eligible group for rubella immunization. The study was carried out by the Department of Virology, Bangabandhu Sheikh Mujib Medical University (BSMMU), Dhaka, from April 2004 to June 2005 with subjects in the age group of 1-45 years. The estimation for rubella-specific IgG was done in the study population consisting of a total of 582 children and women in the child-bearing age.

The average prevalence of rubella antibody was 71.99%, and the prevalence of rubella IgG increased gradually with age. The 1-5-year age group, the prevalence was found to be 21.31%, which gradually increased with age to reach