VACCINATION STATUS AGAINST HEPATITIS “B” IN DOCTORS WORKING IN HAYAT SHAHEED TEACHING HOSPITAL PESHAWAR

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SUMMARY

Vaccination status against hepatitis “B” was assessed in doctors working in Hayat Shaheed Teaching Hospital Peshawar. One hundred and ninety doctors from different departments were interviewed including 77 house officers, 80 medical officers and 33 consultants. Eighty two (43%) had vaccinated themselves, which included 22 (28%) house officers, 36 (45%) medical officers and 24 (72%) consultants. Of those vaccinated 66 (80%) had booster dose. Seven had checked their antibody levels and six found it adequate. Of 108 doctors who did not vaccinate the commonest reasons for not vaccination was lack of motivation 41% and financial 37%. Ten doctors (including two surgeons) thought it was not necessary to vaccinate while 15 had other reasons.

INTRODUCTION

Hepatitis is a preventable disease and higher rates of prevalence and carrier state have been reported from all over the world including Pakistan. Health worker dealing with hepatitis “B” patients are considered at higher risk of getting the infection. Health care staff who are particularly at high risk are those involved in exposure prone procedures. Thus doctors working in the hospital and dealing with HBsAg positive patients are at higher risk. Various risk factors including needle prick are considered important in transmission of hepatitis “B”. Higher prevalence of Hepatitis “B” has been reported from various parts of Pakistan. Higher incidence of hepatitis B has been reported in health workers and vaccination has been recommended for them. Vaccination status of doctors working in Hayat Shaheed Teaching Hospital was checked and is presented in this study.

MATERIAL AND METHODS

Doctors working in various department (medicine, pediatrics, surgical, gynecology, eye, ENT, and orthopedics) of Hayat Shaheed Teaching Hospital were interviewed and information recorded on a proforma. They were asked about status of vaccination and if not vaccinated then reasons for it, were enquired. 190 doctors were interviewed including 77 House Officer, 80 Medical Officer and 33 consultants. Eighty two were from the department of medicine (including pediatrics) and 108 were from Surgical and allied (including gynecology). Those who were vaccinated were further asked about the booster dose and checking of hepatitis B surface antibody levels.

RESULTS

Eighty two (43%) of the doctors were vaccinated and 108 (57%) were not vaccinated. The frequency of vaccination varied in different groups. (table-1). The
TABLE – I
VACCINATION STATUS OF DIFFERENT GROUPS

<table>
<thead>
<tr>
<th></th>
<th>TOTAL</th>
<th>VACCINATED</th>
<th>NOT VACCINATED</th>
<th>BOOSTER CHECKED</th>
<th>ANTIBODIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>HOUSE OFFICERS</td>
<td>77</td>
<td>22(29%)</td>
<td>55(71%)</td>
<td>15</td>
<td>0</td>
</tr>
<tr>
<td>MEDICAL OFFICERS</td>
<td>80</td>
<td>36(44%)</td>
<td>44(55%)</td>
<td>32</td>
<td>3</td>
</tr>
<tr>
<td>CONSULTANTS</td>
<td>33</td>
<td>24(72%)</td>
<td>9(28%)</td>
<td>19</td>
<td>4</td>
</tr>
<tr>
<td>TOTAL</td>
<td>190</td>
<td>82(43%)</td>
<td>108(57%)</td>
<td>66(80%)</td>
<td>7(9%)</td>
</tr>
</tbody>
</table>

Reasons for not vaccinating were also recorded (Table–II). Out of the 82 doctors from the department of medicine, 49(60%) were vaccinated while of 108 working in surgical and allied only 33(30%) were vaccinated.

Ten doctors did not consider it necessary to get vaccinated. Five doctors did not give any reason for not vaccinating themselves. Four thought it was the responsibility of the government to provide them the vaccine. Three were "too busy" to get time for vaccination and one did not get it because he was not sure of the quality of vaccine available in Pakistan (Table–II).

DISCUSSION

Health workers coming in contact with hepatitis B patient or infected blood are at higher risk of getting the infection and vaccination has been generally recommended for them.3,4,5 The available vaccine are genetically engineered and give more than 90% protection when used appropriately.6,3,8 These are safe and effective and do not have the risk of transmitting AIDS or other diseases.3 Vaccination is considered mandatory for health care workers coming in contact with hepatitis “B” patients.3,9,10 It is unfortunate to note that 57% of our doctors are not vaccinated against hepatitis “B” and the two main reasons are lack of motivation and financial constraints. Senior doctors (consultants) were more frequently vaccinated comparing to House officer (p<.001) and medical officers (p<.01), but significant difference was also observed between house officer and medical officers (p<.04).

Doctors working in medical Department were significantly more frequently vaccinated than those working in surgical and allied (p<.001) disciplines.

Lack of motivation was the most important reason for not getting vaccinated. This was common in all groups and no significant difference was observed amongst senior and junior doctors.

Finances was not a problem for consultants while a significant number of the junior doctors (23 medical officer and 17 house officers) did not vaccinate because of financial constraints. Financial constraint was the most important factor for the medical officer compared to house officers and consultants (p<.001). Although high price of the vaccine is an important factor but lack of motivation seems to be more important as this was the commonest reason for not getting vaccinated.

Ten doctors did not consider it necessary to vaccinate and another 13 did not give any valid reason for not vaccinating themselves.
TABLE – II
REASONS OF NOT GETTING VACCINATED

<table>
<thead>
<tr>
<th></th>
<th>NUMBER</th>
<th>LACK OF MOTIVATION</th>
<th>FINANCIAL</th>
<th>DID NOT CONSIDER NECESSARY</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>HOUSE OFFICERS</td>
<td>55</td>
<td>24</td>
<td>17</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>MEDICAL OFFICERS</td>
<td>44</td>
<td>15</td>
<td>23</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>CONSULTANT</td>
<td>9</td>
<td>6</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>108</td>
<td>45</td>
<td>40</td>
<td>10</td>
<td>13</td>
</tr>
</tbody>
</table>

These findings suggest an over all poor recognition of the gravity of the problem and this needs to be addressed seriously.

Vaccination status of young doctors (who are probably at a higher risk because of their nature of duty and frequent exposure and handling of hepatitis “B” positive patients) is more discouraging as 71% of them are not vaccinated and thus have the potential risk of acquiring the infection.

Surgeons are considered to be at a higher risk of getting the infection but in our study doctors on the surgical disciplines were significantly less vaccinated compared to medical departments (p<.001). This possibly reflects different perceptions about hepatitis “B” in these groups.

Routine checking of surface antibody to hepatitis B virus is not mandatory. However various factor may alter it’s production and then it may be important to check it’s level. Factors which can lead to decreased production of antibody response include age above 50, HLA status, injecting vaccine in gluteal muscle, HIV positivity and frozen vaccine. Any of these should prompt a person to check the antibody level after vaccination. Surface antibody level of <10 iu/L are called non–responders. An adequate response (levels above 100 iu/L) will give long–term protection. Lower antibody levels may still give protection and if infection occurs it is usually subclinical.

Booster doses at 5 years are generally recommended. In our study booster dose was received by majority (%=60(80%)) of doctors. Antibody level was checked by a small number (%=7(8%)) and one of them found no surface antibodies despite a full course of vaccination. He attributed this to the quality of vaccine, because there was no obvious reason for a poor response in his case. He did not know about his HLA status. Although one out of seven having no antibodies after vaccination means that about 15% will not develop adequate antibody levels after vaccination, however this number is too small and larger number will be required for any statistically significant conclusion.

CONCLUSION

In conclusion we recommend that,

i. There is a need of better understanding and awareness about vaccination against hepatitis “B”, specially in the doctors of surgical and allied discipline.

ii. Free or at least subsidized rate vaccine should be available, specially to the young doctors who are less paid and can not afford to purchase it within their own resources.

iii. Those who are vaccinated should get the booster dose and check their antibody levels to make sure that they have adequate protection.
REFERENCES


