Overview of Hepatitis B Surface Antigen Examination Results in Health Analyst Study Program Students of STIKes Muhammadiyah Ciamis

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ABSTRACT

Background & Objective: Hepatitis B can also be called a liver infection caused by the Hepatitis B Virus (VHB). Health workers are at high risk of being infected with the Hepatitis B Virus, this is due to a lack of knowledge and skills such as the use of Personal Protective Equipment and not implementing health protocols which can cause exposure to the Hepatitis B Virus. This study aims to determine the description of the results of the Hepatitis B surface Antigen examination in Health Analyst Study Program Students of STIKes Muhammadiyah Ciamis.

Method: This study is a descriptive study with a purposive sampling technique conducted in May 2023. Respondents in this study were students of STIKes Muhammadiyah Ciamis as many as 38 respondents with measurements using the Sandwich method ELISA which then the results were processed manually and displayed in tabular format for narration.

Result: The results of the Hepatitis B Surface Antigen examination showed that all respondents were 100% negative for Hepatitis B.

Conclusion: The research that has been carried out, shows that all respondents, namely students of the Health Analyst Study Program at STIKes Muhammadiyah Ciamis, are not exposed to the Hepatitis B virus.

Keywords: Hepatitis B; HBsAg; HBV; Health Students; Hepatitis B Vaccine.

Introduction
Hepatitis is known as liver disease, or jaundice due to an inflammatory process in the liver (Papuangan, 2018). Pain in the lower abdomen and yellowing of the limbs, such as the whites of the eyes and yellow skin are the clinical symptoms of this infection. However, these clinical symptoms do not appear
In a study conducted by Amalia & Sari (2020) on the Overview of HbsAg Results in 24 Cleaning Service officers at BCM Pelaihari Hospital, it was found that 7 people tested positive for Hepatitis B. Based on this background, the research team is interested in conducting HBsAg examinations on Health Analyst Students of STIKes Muhammadiyah Ciamis who have done Field Work Practices.

Objective
Based on the above background, this study aims to determine the description of the results of the Hepatitis B surface Antigen examination in Health Analyst Study Program Students of STIKes Muhammadiyah Ciamis who have carried out Field Work Practices.

Method
This research is a descriptive study with a purposive sampling technique. The research was conducted at the Immunoserology Laboratory of STIKes Muhammadiyah Ciamis in May 2023. Respondents in this study were STIKes Muhammadiyah Ciamis students who had carried out Field Work Practices (PKL) as many as 38 respondents. Measurements were made by the Sandwich ELISA method.

Results
The data used in this study were primary data from the HBsAg test results of 43 people. Five respondents did not participate in the examination because they were not willing. Data on the characteristics of the research subjects are presented in the following table 1.

Table 1 shows that there were fewer male subjects than female subjects. The age of 22 years is more than the age of 20 and 21 years.
TABLE 1 Characteristics of Research Subjects of STIKes Muhammadiyah Ciamis Students Who Have Performed Field Work Practices in 2023

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Total</th>
<th>Frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>9</td>
<td>23,6</td>
</tr>
<tr>
<td>Female</td>
<td>29</td>
<td>76,4</td>
</tr>
<tr>
<td>Age (Years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>7</td>
<td>18,4</td>
</tr>
<tr>
<td>21</td>
<td>15</td>
<td>39,5</td>
</tr>
<tr>
<td>22</td>
<td>16</td>
<td>42,1</td>
</tr>
<tr>
<td>Total</td>
<td>38</td>
<td>100</td>
</tr>
</tbody>
</table>

TABLE 2 Quality Control Results of HbsAg Testing for Health Analyst Students of STIKes Muhammadiyah Ciamis

<table>
<thead>
<tr>
<th>Quality Control</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>OD Blanko</td>
<td>0,00</td>
</tr>
<tr>
<td>Positive Control</td>
<td>0,09</td>
</tr>
<tr>
<td>Negative Control</td>
<td>0,015</td>
</tr>
</tbody>
</table>

Based on table 2 that has been done, it shows that the Quality Control results are in. The results of this study OD Blanko 0.00 for Positive Control the result is 0.09 and for Negative Control the result is 0.015. The results of the Quality Control value in the Insert Kit for OD Blanko \( \leq 0.08 \) for positive control \( \geq 0.8 \) and negative control \( \leq 0.1 \).

TABLE 3 Percentage of HBsAg Testing Results in Health Analyst Students of STIKes Muhammadiyah Ciamis

<table>
<thead>
<tr>
<th>Hepatitis B surface Antigen</th>
<th>Sample Quantity</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Negative</td>
<td>38</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>38</td>
<td>100%</td>
</tr>
</tbody>
</table>

Based on Table 3 The results of the HBsAg examination with the ELISA method on 38 STIKes Muhammadiyah Ciamis students who have done Field Work Practices obtained 100% Negative results.

Discussion
A Hepatitis B surface Antigen (HBsAg) examination was conducted on 38 Health Analyst students of STIKes Muhammadiyah Ciamis and the results were 100% negative. These results are in line with research conducted by Wijayanti (2016) with the title Effectiveness of HbsAg Rapid Screening Test for Early Detection of Hepatitis B. This study has examined 20 samples of female students of the Kusuma Husada Surakarta Midwifery D-III Study Program and obtained 100% negative results.

Hepatitis B infection can survive outside the body for seven days, during this time the infection can still cause disease if it enters the body of someone who is not protected by antibodies (vaccines). Meanwhile, if the immune system is weak, it will be easier to contract the Hepatitis B Virus. The infection will survive because the immune system cannot fight it. (Sari & Rahmawati, 2022).

Hepatitis B virus is very easy to transmit, especially for students who do Field Work Practices. This is because the risk of contracting the Hepatitis B Virus in the work environment during Field Work Practices is higher. Hepatitis B examination methods can be done qualitatively using rapid tests and quantitatively using ELISA (Enzyme-linked immunosorbent assay) (Fristiani, 2017). ELISA has the advantage of being able to examine several samples at once, making it very suitable for examining a large number of samples. This method has been recognized and documented both in medicine and science.

Conclusion
Based on the results of the above research, it can be concluded that Health Analyst Students of STIKes Muhammadiyah Ciamis...
who have conducted Field Work Practices activities show 100% of respondents are HBsAg negative. For further research, it is expected to conduct HBsAg examination on health workers who are very at risk of exposure to the Hepatitis B Virus.

Acknowledgment
We would like to thank the entire team and parties who have collaborated in the implementation of this research.

Conflict of Interest
There is no conflict of interest in this study.

References