INTRODUCTION

Viral Hepatitis is a cause of great concern the world over and more so in the developing countries especially in Pakistan.1 Its incidence has already increased to alarming proportions and is likely to increase further in the near future. Among the hepato-celluler viruses, B and C tend to be more severe and lead to chronic conditions, co-morbidity and high case fatality rates.

In Pakistan, factors responsible for the spread of these viruses are environmental, invasive surgical practices, infected syringes and unsafe blood transfusion, unhygienic instruments used by barbers and vertical transmission from mother to child during pregnancy.2 Local studies shows that carrier rate of Hepatitis B Virus (HBV) is 4-10%. It is estimated that 7% of all blood donors, 3.5% of all children and 13% of all cases requiring hemodialysis are Hepatitis B surface Antigen (HBsAg) positive. HBV infection has been reported to cause 31% of acute viral hepatitis cases, 60% of patients with chronic liver disease and 51% of cases of hepatocellular carcinoma. Whereas, the sero-prevalence of Hepatitis C Virus (HCV) is 6.7% in women and 1.3% in children in Pakistan.3

In Italy about 4,00,000 new cases occur each year.4 About 200,000-300,000 new cases of Hepatitis B occur annually in the USA.5 Hepatitis C accounts for approximately 20% of cases of acute hepatitis, 70% of chronic hepatitis and 30% of end stage liver disease in the USA.6

This study was undertaken to assess the knowledge of rural communities in regard to HBV and HCV in 10 villages of District Nowshera, North West Frontier Province, Pakistan.

MATERIAL AND METHODS

This cross-sectional study was conducted to estimate the awareness of viral hepatitis in district Nowshera during November 2007 to October 2008. Nowshera is known for its various types of industries located on the bank of river Kabul. It has borders with Peshawar on the west and Punjab province on the east. Most of the population is Pushto speaking. The district has about 200 villages. Ten villages were randomly selected from the list of all these villages. The provincial Health
manager Peshawar and district health manager Nowshera gave approval for this study. Subsequently 20 Lady Health Workers (LHWs) were recruited for data collection. One week training course on data collection was imparted to these LHWs.

A questionnaire was developed; data on demographic characteristics was recorded. Variables of interest were agents of infection, physical signs and symptoms of the disease, transmission, and the most frequent medium used as a source of information on HBV and HCV.

The questionnaire was developed in English and translated into the local language Pushto. The questionnaire was pre-tested on 10% of the study population to check sequence of questions and to see the respondent’s understanding of the questions.

After selection of each village, it was divided into several blocks of about 100 households in each block. Four blocks were randomly selected and the entire house holds in these blocks were included in the study. The purpose of the study was explained to the head of the house and informed verbal consent was obtained for the study.

The data were entered in EP1 INFO version 6.4. A trained data operator used to enter the data. Dual data entries were done for validation and necessary corrections were made. Analysis was performed on SPSS 10.

RESULTS

A total of 3654; males 2105 (58%) and females 1548 (42%) that were fit physically and mentally and agreed to participate, were included in the study.

The age range of the subject population was 14-58 years with a mean of 38. Forty-five percent of the respondents were illiterate, 25% below secondary level, 20% below graduate level and 10% were either graduate or postgraduate.

Only 642 (17.6%) were aware that Hepatitis B and C was a disease of the liver, transmitted through parentral route and is caused by the entry of specific viruses, 71.3% population was unaware of the source of these diseases and 11% mentioned the wrong source for the diseases. (Table-1).

One fifth (20%) of the respondents were unable to identify even a single symptom of the diseases, the remaining respondents recorded multiple physical signs and symptoms of the disease. (Table-2).

<table>
<thead>
<tr>
<th>Source</th>
<th>Number of respondents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Virus</td>
<td>642</td>
<td>17.6</td>
</tr>
<tr>
<td>Bacteria</td>
<td>354</td>
<td>9.7</td>
</tr>
<tr>
<td>Parasite</td>
<td>20</td>
<td>0.6</td>
</tr>
<tr>
<td>Fungi</td>
<td>13</td>
<td>0.4</td>
</tr>
<tr>
<td>Any other</td>
<td>18</td>
<td>0.5</td>
</tr>
<tr>
<td>Do not know</td>
<td>2607</td>
<td>71.3</td>
</tr>
<tr>
<td>Total</td>
<td>3654</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Number of respondents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yellow skin</td>
<td>1047</td>
<td>28.7</td>
</tr>
<tr>
<td>Body pain</td>
<td>1629</td>
<td>44.6</td>
</tr>
<tr>
<td>Loss of appetite</td>
<td>1439</td>
<td>39.4</td>
</tr>
<tr>
<td>Low grade fever</td>
<td>1298</td>
<td>35.5</td>
</tr>
<tr>
<td>Vomiting</td>
<td>975</td>
<td>26.7</td>
</tr>
<tr>
<td>Don’t know</td>
<td>742</td>
<td>20.3</td>
</tr>
</tbody>
</table>

* Respondents marked multiple options in this category thus number of responses is greater than 3654 and total may exceed 100%.

Used syringes, dental apparatus, nail cutters and sexual contact were perceived to be the most common causes of spread of these viruses. Most respondents perceived that multiple causes were responsible for spread of disease and they marked multiple options, as a result the total number of responses exceeded the number of respondents that were interviewed. (Table-3).

Information about these diseases was obtained from multiple sources. (Table-4) However television, doctors, relatives and radio appeared to be the most frequent sources used for information. Written media like newspaper as a source of information appeared to be used by only 11% of the respondents. However respondents marked multiple options in this category as well.
In our study, 17.6% of the subjects in the ten villages of district Nowshera were aware that Hepatitis B and C were diseases of the liver and the causative agent was a virus. This showed more awareness in our population as compared to a study conducted in 2004 in Islamabad and Rawalpindi that reported that 13% of barbers knew that hepatitis was a disease of the liver, and causative agent was a specific virus. However, an earlier study conducted in Islamabad in 2001 showed that 95% boys and 100% girls were aware that HIV/AIDS was caused by a specific virus. It may be argued that aggressive national media campaigns for HIV/AIDS may be one of the factors that contribute to awareness. Since our results clearly suggest that the respondents watched TV, listened to radio consulted doctors and relatives for information, it could be suggested that media could play a highly valuable role in promoting information, education regarding the prevention of transmission of HBV and HCV.

More than one cause was reported to be a risk factor for transmission of the disease by our study group. However, the most common causes reported were repeated use of disposable syringes, dental apparatus, nail cutting, and sexual contact amongst many others. This was similar to the findings of another study conducted in 2000 that reported that the most common cause of spread of these viral diseases were used syringes (64%) followed by dental apparatus (33%) and sexual contact (33%). Barbers in Islamabad perceived that sharing razors was a key factor responsible for transmission of these diseases. The culture of scavenging waste dumps containing used syringes, razors and other sharp matter was also reported to cause spread of acquiring viral hepatitis in some studies. Some researchers have reported that viral hepatitis is commonly transmitted through parental route, needle stick injuries, sexual contact and vertically from mother to child. Rare factors responsible for causing HBV and HCV include ear piercing, acupuncture, tattoos and cultural procedures involving blood contact. The use of inadequately sterilized needle and scalpels has also been shown to transmit the disease.

The level of awareness about physical signs and symptoms of HBV and HCV in our study was found to be similar to other studies. Crawford observed that HBV positive patients had high temperature, 60–70% patients have no discernable symptoms. 20–30% may have jaundice and 10–20% may have non-specific symptoms. Authors of the same study demonstrated that 10-20% of infected individuals are likely to develop cirrhosis over a period of 20-30 years while 1-5% go on to develop a hepato-cellular carcinoma.

It may be suggested from this study and other studies that well informed doctors, television and radio could play a critical role in prevention, early diagnosis and treatment of these diseases.
CONCLUSION

Knowledge and awareness regarding the causative agents, mode of transmission and the consequences of Hepatitis B and C are poor in rural communities.

From this study it appears that health messages regarding the transmission and prevention of Hepatitis B and C are inadequate. These should be given special attention on all public and private channels, and doctors should continuously be updated with the latest information.

REFERENCES

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Address for Correspondence:

Dr Sabina Aziz
Associate Professor
Khyber Girls Medical College, Hayatabad, Peshawar, Pakistan
Email: sab_asif22@hotmail.com