

# AWARENESS OF VIRAL HEPATITIS IN TEN VILLAGES OF DISTRICT NOWSHERA

Sabina Aziz Asif, Rashid Iqbal, Hamid Hussain, Mohammad Hussain Khan

Department of Community Medicine, Khyber Girls Medical College,  
Khyber Medical College Peshawar,  
Gomal Medical College, D.I.Khan, Pakistan

## ABSTRACT

**Background:** Viral hepatitis is a cause of great concerns the world over and more so in the developing countries like Pakistan. Its incidence has increased to alarming proportions and is likely to increase further in near future. This study was conducted to assess awareness of a rural community to Hepatitis B and C.

**Material & Methods:** A cross-sectional study was conducted from November 2007 to October 2008, in ten villages of District Nowshera. Questionnaire was designed to assess their knowledge about viral Hepatitis. Data was computed using SPSS version 10.

**Results:** A total of 3654 respondents were interviewed, 642 (17.6%) were aware that Hepatitis B and C were diseases of liver and transmitted by a virus. Respondents reported that there were multiple routes of transmission of this disease. Used syringes were the most common factor reported to be responsible for spread of this disease, followed by dental apparatus, injuries caused by nail cutters and sexual contact. One fifth (20%) of the respondents were unable to identify any physical sign or symptom of the disease. Television, Doctors and Radio appeared to be the most popular sources of information used for obtaining health information on these diseases this was reported by 43%.42% and 40% of the population respectively.

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

**Key words:** Hepatitis B, Hepatitis C, Rural population, knowledge, Transmission.

## INTRODUCTION

Viral Hepatitis is a cause of great concern the world over and more so in the developing countries especially in Pakistan.<sup>1</sup> Its incidence has already increased to alarming proportions and is likely to increase further in the near future. Among the hepato-cellular viruses, B and C tend to be more severe and lead to chronic conditions, comorbidity 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.<sup>2</sup> 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.<sup>3</sup>

In Italy about 4,00,000 new cases occur each year.<sup>4</sup> About 200,000-300,000 new cases of Hepatitis B occur annually in the USA<sup>5</sup> 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.<sup>6</sup>

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 parental 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-1: Knowledge about the causative agent of HBV and HCV.**

Source	Number of respondents	Percentage
Virus	642	17.6
Bacteria	354	9.7
Parasite	20	0.6
Fungi	13	0.4
Any other	18	0.5
Do not know	2607	71.3
Total	3654	100

**Table-2: Knowledge about physical signs and symptoms of HBV and HCV.\***

Symptom	Number of respondents	Percentage
Yellow skin	1047	28.7
Body pain	1629	44.6
Loss of appetite	1439	39.4
Low grade fever	1298	35.5
Vomiting	975	26.7
Don't know	742	20.3

\* 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.

**Table-3: Knowledge about route of infection of HBV and HCV.\***

Cause	Number of respondents	Percentage
Sneezing	784	21.5
Needle stick injury	498	13.6
Mosquito Bite	325	8.9
Acupuncture	365	10
Sexual Contact	1191	32.6
Designing	243	6.7
Surgery	713	19.5
Dental apparatus	1212	33.2
Used Syringes	2332	63.8
Sharing Brush	91	2.5
Barbers	436	11.9
Breast Feeding	162	4.4
Polluted Water	301	8.3
Nail cutter	1050	28.7

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

**Table-4: Media used for information Source of Knowledge of HBV and HCV.\***

Source	Number	Percentage
T.V	1584	43.4
Radio	1470	40.2
News Paper	265	7.25
Doctor/Health Workers	1540	42.2
Friends/Relatives	1131	31

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

## DISCUSSION

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<sup>7</sup>. 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.<sup>8</sup> 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 highly valuable role in promoting information, education regarding the prevention of transmission of HBV and HCV.<sup>9,16-18</sup>

More than one cause was reported to be 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%).<sup>10</sup> Barbers in Islamabad perceived that sharing razors was a key factor responsible for transmission of these diseases.<sup>7</sup> 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.<sup>9</sup> Some researchers have reported that viral hepatitis is commonly transmitted through parental route, needle stick injuries, sexual contact and vertically from mother to child.<sup>11</sup> Rare factors responsible for causing HBV and HCV include ear piercing, acupuncture, tattoos and cultural procedures involving blood contact.<sup>12</sup> The use of inadequately sterilized needle and scalpels has also been shown to transmit the disease.<sup>13</sup>

The level of awareness about physical signs and symptoms of HBV and HCV in our study was found to be similar to other studies.<sup>14</sup> 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.<sup>15</sup> 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.<sup>16-18</sup>

**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.

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**Address for Correspondence:**

Dr Sabina Aziz  
Associate Professor  
Khyber Girls Medical College, Hayatabad,  
Peshawar, Pakistan  
Email: sab\_asif22@hotmail.com