

## **Frequency and awareness of hepatitis B and C in visitors of Hepatitis Awareness Mela**

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### **Abstract**

**Objective:** To observe the frequency of Hepatitis B and C in a section of society that is presumably healthy and educated and to evaluate the awareness about the modes of transmission of hepatitis B and C, in this segment.

**Methods:** A total of 504 individuals visiting the Awareness Mela arranged to observe World Hepatitis Day were screened for Hepatitis B and C. In addition, 106 conveniently selected individuals of age 16 years or more were asked to fill out a questionnaire which enquired on the modes of transmission of the diseases.

**Results:** A total of 504 individuals were screened; 351 males (69.6%) and 153 females (30.4%). Mean age 34.2±11.7 years; range 11-66 years. Twenty nine (5.75%) were found positive for either hepatitis B or C, mean age being 28.43 years and 92 % of the affected being males. Out of the 106 questionnaire takers, 25 were females (23.6%) and 81 males (76.4%). The mean age was 33.2±11.1 years. Majority (94.7%) believed that used syringes were amongst the main causes of spread of hepatitis B and C while 40.6% did not know about the risks of sharing toothbrushes and towels. Seventy three respondents did not have prior vaccination of Hepatitis B. In addition 2 males and 1 female of study subjects were anti-HCV positive and 1 male HBsAg positive.

**Conclusion:** In the educated class, prevalence of hepatitis B and C appears lower than the general population. They have the knowledge of the mode of spread of these viruses though there is room for further improvement. Many still confuse it with orofaecal transmission. Knowledge on vaccination is also unsatisfactory (JPMA 60:1069; 2010).

### **Introduction**

A recent campaign initiated against hepatitis states that every twelfth person in the world is living with either hepatitis B or hepatitis C.<sup>1</sup> It is estimated that there are more than 350 million people in the world carrying hepatitis B

virus (HBV)<sup>2</sup> and up to 200 million people are infected with hepatitis C virus (HCV).<sup>3</sup> In some countries, the prevalence of hepatitis C is 10-15% while of hepatitis B is in the range of 7-10%. Pakistan is an endemic area for hepatitis B and C. According to a recent study, prevalence of hepatitis B in

Pakistan is 2.5 % and of hepatitis C about 5%.<sup>4</sup> In Pakistan, the victims of Hepatitis B and C exceed 12 million. A surge in Hepatitis C has been recorded in the country while there is a decline in hepatitis B. However the awareness level about these diseases remains low. The objective of this study was to observe the frequency of Hepatitis B and C in a section of society that is presumably healthy and educated and to evaluate the awareness about the modes of transmission of hepatitis B and C in this segment.

## Methods

A total of 504 individuals visiting the Awareness Mela arranged at The Arts Council Karachi, to observe World Hepatitis Day were screened for Hepatitis B and C. Screening was done using indirect chromatography (ICT) kits for HBsAg and HCV antibody. In addition, 106 individuals of age 16 years or more, selected by convenient sampling filled out a questionnaire which asked them about the modes of transmission of the diseases. Ten generalized statements were given, interspaced amongst the true statements were some false statements related to the transmission of Hepatitis A and E rather than B and C. Statistical analysis was done using SPSS package version 10. Two sided Fisher's Exact Test was used to compare dichotomous variables where needed.

## Results

A total of the 504 individuals were screened. There were 351 (69.6%) males and 153 (30.4%) females. Mean age was 34.2±11.7 years; range 11-66 years. In all, 29 (5.75%) were found positive for either hepatitis B or C. Thirteen (2.6%) were found positive for HBV; the mean age being 28.4, with 12 of the affected being males. Sixteen individuals were found positive for HCV; the mean age of the affected was 39.6, with eight (50%) males. Out of the 106 questionnaire takers, 25 (23.6%) were females and 81 (76.4%) males. The mean age was 33.2±11.1 years; range 16-62 years. In addition, 55.7% were married.

It was seen that 100 (94.7%) believed that used syringes were amongst the main causes of Hepatitis B and C, 3 (3.85%) males and 3 (13.64%) females believed otherwise. Similarly, 84 (79.2%) believed that treatment by drips and injections were also to blame. It is interesting to note that 10 (66.7%) females believed this was not so, while only 12 (17.39%) males were in agreement with them ( $p=0.011$ ). Majority (87.7%) also felt that unsterilized instruments of surgery were the cause, whilst 96 (90.6%) also blamed blood and body secretions. It may be noted that 5 (20%) females were misguided in the matter of surgical instruments compared to 8 (9.89%) males ( $p=0.697$ ).

Eighty three (78%) subjects noted that handshakes and hugs were not the cause, however, approximately 18 males and 5 females (22%) felt otherwise. Furthermore, just

51 (48.1%) believed that food and drinks did not cause hepatitis B and C. Fifty five (51.9%) individuals 39 males and 16 females, confused it with the cause of Hepatitis A and E. Ninety seven 96% males and 76% females felt that used razor blades played a role. Meanwhile, 88 (83.2%) believe that sex also played an active role. Conflict arose once again on the matter of shared toothbrushes and towels. Sixty three (59.4%) of the questionnaire takers opined that it was amongst the causes while 31 (38.27%) men and 12 (48%) women disagreed. Seventy four (69.8%) also thought that neglecting hand washing was a cause whereas only 26 (25.93%) males and 6 (24%) females were closer to the truth.

It was also to be noted that 73 (68.87%) did not have prior vaccination of Hepatitis B, this included 21 (84%) females and 52 (64.2%) males. In addition, 2.83% of the Questionnaire takers had HCV positive (2 males and 1 female) and 0.94% of them had HBV positive (1 male).

## Discussion

Hepatitis B and C are global health problems affecting every 12th individual on our planet.<sup>5</sup> In Pakistan contaminated needle use in medical care, treatment of common ailments by injections and drips, unsterile dental and surgical equipment, drug abuse, unsafe blood and blood product transfusion and reuse of razors by barbers are the major causal factors.<sup>6,7</sup> In a study from Lahore, seroprevalence in females and males for HbsAg was 2.2% and 3.2% and of Anti HCV 15.6% and 10.9% respectively.<sup>8</sup> In a recent systematic review of prevalence, genotypes and risk factors of Hepatitis C in Pakistan, it was found that the prevalence of HCV was 4.95% in the general adult population and while the HCV prevalence was moderate in the general population, it was very high in injecting drug users and multi-transfused populations.<sup>9</sup> A recent nationwide survey conducted by the Pakistan Medical Research Council on 47043 individuals suggests a carrier rate of 2.5% for hepatitis B and about 5% for hepatitis C.<sup>4</sup> Our survey was conducted on an educated apparently healthy segment of the community hailing from Karachi. So it is expected the prevalence of these infection would be lower. In spite of this 29 individuals were detected from 504 (5.7%) screened persons.

This screening was carried out in a public awareness Mela to observe World Hepatitis Day. It is important to communicate with the people to impart education about the preventive aspects of communicable diseases. Reminders have to be continually given to the community about modes of transmission of hepatitis as this has helped in the past to decrease the prevalence of these infections in the past.<sup>10</sup> It is imperative that such public health interventions be initiated. In Pakistan treatment by drips and injections is very common. Patients demand such treatment due to the belief that the

administration of drugs<sup>11</sup> leads to faster action and cure. This has encouraged the reuse of syringes and needles and the use of unsterilized equipment.

In our study many participants knew about the mode of spread of hepatitis B and C. They were well educated to fill the proforma themselves. As such a segment of our community has access to different media including print media, TV and internet, it is expected their knowledge would be better than patients visiting hospitals.<sup>12</sup> However, there were certain lacunae in the knowledge. Some still believed that hand shaking and hugs may spread the infection. Moreover, some confusion still prevails in the community about the orofaecal route as the cause and it is not unusual to find people blaming contaminated water for the high prevalence of hepatitis B and C. This may be because hepatitis A and E are also prevalent and people mix their mode of spread with hepatitis B and C. In our study, men were more knowledgeable than women. This statement can be concluded from the fact that wherever discrepancies in the significance of the results emerged, it was due to more inaccurate answers from, female questionnaire takers. Another study found that the knowledge about hepatitis B virus among women is inadequate and there are certain misconceptions regarding its mode of transmission.<sup>13</sup> This is in contrast to another study showing females knowing more about risk factors than males.<sup>14</sup>

In conclusion, the prevalence of hepatitis B and C appears lower than the general population in the educated segment of our society. They have the knowledge of the mode of transmission of these viruses, although there is room for further improvement especially amongst females. Many still confuse mode of transmission of hepatitis B and C with orofaecal route; similar to the spread of hepatitis A and E.

Hepatitis B vaccination is also unsatisfactory even in this class. There is also a need to increase awareness among the public to emphasize on practicing universal precautions to prevent infections.

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