

Original Article

Knowledge and awareness regarding viral hepatitis among paramedical and humanities studentsMohammad Darvishi¹, Mohammad Aminianfar¹, Bahar Heidarinia^{2*}, Maral Heidarinia³¹ Department of Infectious Diseases, School of Medicine, AJA University of Medical Sciences, Tehran, Iran² Department of General Medicine, School of Medicine, Islamic Azad University of Medical Sciences, Tehran, Iran³ Department of Psychology, School of Humanities, North Branch, Islamic Azad University of Tehran, Tehran, Iran

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ABSTRACT

Background & Aim: The term hepatitis applies to a wide group of clinical and pathological condition that is often caused by damage to the liver by various factors including viral infections. The present study aimed to assess the awareness of non-medical students about the viral hepatitis disease.

Methods & Materials: In this cross-sectional descriptive study, 298 students of the two universities in Tehran were selected. The data collecting tool was a two-part questionnaire. The first part examined the student demographic information, and the second part consisted of 10 questions about of viral hepatitis. Questionnaires were distributed among the students and then the data were analyzed by SPSS software.

Results: Among the 298 respondents, there were 224 women with a mean age of 26 years. 155 people (52%) were students of medicine and biosciences and 143 (48%) were students of the humanities. There was a significant difference between the awareness of the correct answer and the fields of study. Therefore, the awareness level of paramedical and biological sciences students was higher than other disciplines.

Conclusion: The mean level of awareness of respondents was 32.95%. The average level of awareness in students of paramedical and biological sciences (31.99%) was higher than the average level of awareness in students of humanities (16.06%). Albeit the entire study population was composed of the young and educated people, their awareness of viral hepatitis was low. It strongly reflects poor knowledge of society and especially our young people as a group at risk.

Introduction

The term hepatitis means inflammation of the liver and refers to a wide range of clinical disorders caused by liver damage induced by viruses, toxins, drugs, metabolic factors or safety factors arise (1). Regardless of the hepatitis cause, its clinical course may vary from a mild to very severe disease associated with severe

impairment of hepatic cell function (2). Almost all cases of acute viral hepatitis are created by one of the five viral agents (hepatitis A to E viruses). Chronic hepatitis includes liver inflammation lasting for more than 6 months which shows itself as a disorder of liver function tests (1). Thanks to rapid advances in science in the last two decades of the twentieth century, these viruses and their consequences are known more. Moreover, new drugs to treat as well as highly effective vaccines to prevent some of these viruses have been discovered (3).

Hepatitis A is one of the most common infectious diseases in developing countries (3).

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Hepatitis B is associated with the incidence of acute and chronic hepatitis and hepatocellular carcinoma (4). The incidence of hepatitis B is much more common in western countries and the most common cause of acute and chronic viral hepatitis in Iranian adult population (5). In Iran, on average, 2-3% of the population carries the virus (3). While in the United States and Western Europe, this population is about 0.1-0.5% and in the Far East and tropical countries, it is 5-20% (6). Hepatitis C virus is the most common viral cause of hepatitis around the world but it rarely causes acute symptomatic hepatitis (1). Furthermore, this virus is the cause of 40% of cases of chronic liver disease and the most common liver transplantation indication. Hepatitis D needs hepatitis B virus and other Hepadnaviruses for replication and incidence. It can cause infection associated with hepatitis B or secondary infection. Hepatitis E has the same release method with hepatitis A, which is mainly intestinal (4).

Recent studies have shown that global incidence of hepatitis is increasing, happening faster in the population of developing countries (7). It is necessary to increase community awareness about the disease due to the prevalence and incidence of illness in the community as well as the dangers of this disease and preventability by vaccination. So this study aimed to investigate the non-medical students' awareness about the viral hepatitis disease and ways to increase their awareness of hepatitis.

Methods

In this cross-sectional descriptive study, senior students of the two universities in Tehran, Iran, in a subgroup of Humanities at Allameh Tabatabai University and subgroups of in Paramedical and Biology at the Islamic Azad University, Tehran Medical Branch who were studying in the academic year 2014-15 were examined. 298 students were evaluated by simple random sampling. The method of collecting data was a 2-part questionnaire. In the first part, demographic data (age, sex, field of study, degree, student residence and place of residence of the family, the individual and the

family history of hepatitis) was assessed, and the second part contained 10 questions about the ways of transmission, prevention, treatment and complications of viral hepatitis and a question as the best way to raise awareness about viral hepatitis was raised. Questions were multiple choices which "I do not know" option was set as one of the options in all the questions. Each question has only one correct answer. After providing a suitable description for how to fill questionnaires and purpose of the plan and after obtaining verbal informed consent, questionnaires were distributed among the students and then the data were analyzed by SPSS software (version 21, IBM Corporation, Armonk, NY, USA).

Results

Out of 298 respondents, 224 cases (75.2%) were women and 74 cases (24.8%) were men. The average age of respondents was 26 years and the age range was between 20 and 32 years old. 155 cases (52%) were the students of laboratory sciences, anesthesiology, biology (with the trend of cellular and molecular biology, genetics, microbiology and biochemistry) of Islamic Azad University, Tehran Medical Branch, and 143 cases (48%) was students of psychology (public, clinical and exceptional children orientation), economics, management, accounting, educational science, counseling and laws of Allameh Tabatabai University. Unfortunately, the answer to the seven questions was "I do not know". Out of 298 respondents, one person mentioned a history of hepatitis in him and his family and seven other students had a history of hepatitis in the family. The person who had hepatitis history for him and his family selected "I do not know" option to 10 questions indicating a lack of awareness of the disease. Average total awareness of respondents was 32.95%. The average students' awareness of paramedical sciences and biosciences was 48.05% and the average awareness level of humanities students was 16.06%.

In response to the question "more than two million people living with viral hepatitis in Iran" only 19 cases (6.4%) chose the option "false". 11 correct answers were related to paramedical

and biosciences students, and 8 correct answers were related to students of humanities subgroups. The main place of body involvement in hepatitis is liver according to 179 cases (60.1%) of the respondents including 146 paramedical and biosciences students and 33 humanities students.

In response to the question "In the wake of hepatitis A patient may have hepatitis B and later hepatitis C", 54 cases (18.2%) including 41 paramedical and biosciences students, and 13 students of the humanities selected "True".

Regarding the hepatitis A, E transmission, only 44 cases (15.1%), including 33 paramedical and biosciences students and 11 students in the subgroup of humanities, selected the correct option (i.e. contaminated food or water). In terms of transmission of hepatitis B and C, "receiving blood, use of intravenous drugs and exposure to sex" was chosen by 138 students (48.1%) including 115 paramedical and biosciences students, and 23 students of humanities subgroup. It represents the awareness level of students (who are part of society) in relation to hepatitis B and C.

81 cases (27.9%), including 63 paramedical and biosciences students and 18 students of humanities considered hepatitis C curable.

144 cases (49.5%) were not aware of hepatitis vaccination and 73 cases (25.1%), including 55 students from the department of paramedical sciences and biosciences and 18 students in the subgroup of humanities referred to vaccines for hepatitis A and B.

104 cases (35.6%) referred to hepatitis B and C as the highest risk of liver cancer. 81 students of paramedical sciences and biosciences and 23 students of humanities subgroup answered correctly.

111 cases (38.1%), including 74 students of paramedical sciences and biosciences and 37 students in a subgroup of humanities considered the amount of hepatitis B virus contagious "more" than human immunodeficiency virus (HIV).

163 cases (54.9%), including 124 students of medicine and biosciences and 39 students in a subgroup of humanities, correctly selected liver cancer as a complication of chronic hepatitis.

160 students (53.9%) offered the best way to raise awareness about viral hepatitis through mass, audio, visual and textual media, and then 33 students (11.1%) presented this matter as part of a family planning.

Discussion

In this study, the average total awareness of the groups was 32.95%, in which the average awareness of paramedical sciences and biosciences students was 31.99% higher than the average awareness of students in a subgroup of humanities. However, considering that students of medicine and biosciences have acquired more information about viral hepatitis through degree courses and that the work environment of the students in the future is linked to hepatitis transmitted virus, this awareness level is not acceptable.

The results obtained by Alijani Lashkariani, regarding awareness of hepatitis B, showed that the highest score has been associated with the clinical symptoms of hepatitis B and the lowest score has been associated with awareness of hepatitis B prophylaxis which is consistent with the study (8).

In a study conducted on 900 students in three medical colleges about knowledge evaluation and attitudes of medical students toward hepatitis B and C, 84.33% and 78.3% of respondents have mentioned sexual intercourse, blood transfusion and blood products as the most important ways of transmission of hepatitis B and C, respectively. These results are consistent with present study where most of the students have mentioned that hepatitis B and C are preventable for various reasons (9).

In the assessment of midwives and midwifery students' awareness regarding hepatitis B, conducted by Pak Gohar et al., the awareness levels of the majority of samples were at the intermediate level; and therefore, there was no difference between the awareness of midwives and midwifery students (10).

In the study of Rahmaniyan, the similar results about the awareness and performance of Zahedan's nurses in relation to viral hepatitis were found. According to this study, 68.5% of nurses had moderate awareness, and the highest

level of knowledge and practice was related to hepatitis B (11).

Barati et al. evaluated awareness of students in Meshkindasht of Karaj, Iran, about the ways of infection and prevention of hepatitis B. They found that the mean total awareness score was 30.67, out of 48 points, and average girls' awareness was 24.5 points which was more than boys. The higher educational level of respondents also means increased awareness. Awareness of hepatitis in the field of mathematical sciences to other disciplines was higher after experimental sciences and then humanities (6).

In a similar study conducted in 2014 in women's college in Bangalore, India, a similar questionnaire was distributed among woman students in the fields of science, art and commerce of undergraduate and graduate courses. Overall awareness of the respondents was 6.7 on the scale of 0 (less awareness) to 10 (full knowledge). The majority of students had sufficient awareness about the transmission of hepatitis, high-risk behaviors and prevention of diseases. However, students did not have sufficient knowledge about some key points of viral hepatitis that according to the present study, Iranian non-medical study students' awareness was much lower than Indian students (7).

In a survey of awareness, attitude and practice of hairdressers (men- woman) of Sabzevar, Iran, toward hepatitis B in 2009, the awareness and attitude of subjects were moderate to good. There was a difference of 30% between the awareness and their performance (12).

In a similar study conducted in Kumasi, Ghana, where awareness of hairdressers about the transmission ways of hepatitis B and C were investigated, it was found that more than 36% and 5% of hairdressers heard some information about hepatitis B and C, but 7% heard no information about the transmission ways of hepatitis B and C (13).

Mohammadinia et al. estimated that the average level of awareness about hepatitis B in Iranshahr hospital service personnel was good (14).

In a similar study conducted among 169 workers in Nigeria Teaching Hospital, more

than 94% of workers were aware of hepatitis B and C and viral infections, while 77% and 72% knew that hepatitis B and C can be transmitted through blood transfusions and needle damage, respectively. Moreover, 48% knew unprotected sex as one of HIV transmission ways (15).

In a study conducted by Iravani et al. about the effect of education on awareness and attitude of the garrison 02 soldiers of transmission ways of hepatitis, it was shown that education has a major impact in raising awareness and attitude. The mean awareness score (out of 20) before education was 11.31 ± 4.41 . However, after the intervention, the average score of awareness was increased to 13.96 ± 2.98 (2).

Ghasemi et al. in a study about the effect of education on the promotion of awareness and attitude of students in Arak Islamic Azad University conducted on the prevention of emerging diseases indicated that there was a significant difference between awareness, attitude and sense of danger about the prevention of hepatitis B and C before and after training (16).

According to the results obtained in this study, the research community awareness about transmission, prevention and symptoms of hepatitis disease is low. Therefore, there is a serious need for proper training practices about possible risks and ways to prevent the disease in people, community, and especially those who are most at risk of an outbreak. Considering the research results showing that proper education can play a role in raising awareness, attitude and performance of the individuals, it is better to start training from the schools, through the production and distribution of leaflets and posters for health education in schools and by adding the curriculum for students (even as part of a family planning), holding question and answer sessions with the attending physician health officers and must also increase informing these contents through audio-visual media.

Conclusion

The mean level of awareness of respondents is 32.95%, in which the average level of awareness in students of medicine and biological sciences (31.99%) is higher than the average

level of awareness in students of humanities (16.06%). Although the entire study population is composed of the young and educated people, their awareness of viral hepatitis is low. It, in fact, reflects poor knowledge of society and especially our young people as a group at risk.

Conflict of Interests

Authors have no conflict of interests.

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