Research Article

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Knowledge Level and Risk Perceptions about Hepatitis of Relatives of Patients with Hepatitis B and C Admitted to Erciyes University Hospitals

Erciyes Üniversitesi Hastanelerine Başvuran Hepatit B ve Hepatit C'li Hasta Yakınlarının Hepatitler Hakkında Bilgi Düzeyleri ve Risk Algıları

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ABSTRACT

Objectives: This study was conducted to determine the knowledge, attitudes, behaviours and risk perceptions about the disease of relatives of patients with chronic hepatitis B and C.

Materials and Methods: In this cross-sectional study, 121 relatives of patients with chronic hepatitis B and C admitted to Erciyes University Hospital, Infectious Diseases Outpatient Clinic between December 2016 and June 2017 were included.

Results: The mean age of the participants was 44.0±14.5 years. Sixty-four participants were male (52.9%) and 83.5% were married. 61.2% of the patients had hepatitis B virus (HBV) infection and 38.8% had HCV infection and 67.8% of the relatives stated that they lived in the same house with the patients. When the relatives of the patients were asked what type of hepatitis they knew, 92.6% stated that they knew HBV, 86.8% said they knew HCV and 79.4% said they knew both HBV-HCV. 26.4% of the participants did not know hepatitis. Approximately one-quarter of the relatives did not know what hepatitis B carrier is. 52.1% of the patient's relatives stated that they felt at risk for hepatitis infection and 69.4% stated that they had hepatitis tests and 48.8% had HBV vaccine. 38.7% of

ÖZ

Amaç: Bu çalışma Erciyes Üniversitesi Hastanesi, Enfeksiyon Hastalıkları Polikliniği'ne başvuran kronik hepatit B ve C'li hasta yakınlarının hastalıkla ilgili bilgi, tutum, davranış ve risk algılarını belirlemek amacıyla yapılmıştır.

Gereç ve Yöntemler: Kesitsel ve tanımlayıcı nitelikteki bu araştırmaya, Erciyes Üniversitesi Hastanesi, Enfeksiyon Hastalıkları Polikliniği'ne 2016 Aralık-2017 Haziran aylarında başvuran kronik hepatit B ve C'li hastaların 121 yakını dahil edilmiştir.

Bulgular: Katılımcıların yaş ortalaması 44,0±14,5 yıl olup, 64'ü erkek (%52,9) ve %83,5'i evlidir. Hastaların %61,2'sinde hepatit B virüs (HBV), %38,8'inde ise HCV enfeksiyonu mevcut olup yakınlarının %67,8'i hastalarla aynı evde yaşadığını belirtmiştir. Hasta yakınlarına hangi hepatit türünü bildikleri sorulduğunda %92,6'sı HBV'yi, %86,8'i HCV'yi ve %79,4'ü HBV-HCV'nin her ikisini de bildiklerini belirtmiştir. Katılımcıların %26,4'nün hepatitleri bilmediği görülmüştür. Hasta yakınlarının yaklaşık dörtte biri hepatit B taşıyıcılığının ne olduğunu bilmemektedir. Hasta yakınlarının %52,1'i kendini hepatit bulaşması yönünden risk altında hissettiğini ifade etmiş ve %69,4'ü hepatit testlerini ve %48,8'i HBV aşısını yaptırdığını belirtmiştir. Aşı

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ABSTRACT

those who did not have vaccination stated that they did not intend to have the vaccination.

Conclusion: Although the majority of the patient's relatives knew the basic ways of transmission of hepatitis B and C, their level of knowledge about other risks of transmission in their daily lives was insufficient.

Keywords: Hepatitis, patient's relatives, knowledge level, risk perceptions

ÖZ

yaptırmayanların %38,7'si ise aşı yaptırmayı düşünmediğini ifade etmiştir.

Sonuç: Hasta yakınlarının büyük bir çoğunluğu hepatit B ve C'nin temel bulaşma yollarını bilse de günlük yaşamlarında karşılaşabilecekleri diğer bulaşma riskinin olduğu durumlar hakkındaki bilgi düzeyleri yetersizdir.

Anahtar Kelimeler: Hepatit, hasta yakınları, bilgi düzeyi, risk algıları

Introduction

If the necessary precautions are taken for viral hepatitis, which is an important group of infectious diseases that are related to public health, the infectiousness can be prevented and the disease burden of the disease is prevented. Hepatitis B and C become chronic in addition to acute infection and cause serious morbidity and mortality with the development of liver failure, cirrhosis and liver cancer (1,2,3).

In hepatitis B infection, the transmission of the disease is known as blood pathway, sexual intercourse and perinatal pathway from mother to baby. The disease can be transmitted from contaminated blood and blood products, the use of non-sterilized instruments, dental treatment, joint injectors, razor blades and toothbrushes, and tattooing. The disease may be acute or chronic at an early age and the rate of chronicity in the early period is very high but remains below 5% in adulthood (1,4). According to the World Health Organization (WHO) Global Hepatitis Report published in 2017, 257 million people live with chronic hepatitis B (CHB) (5). Hepatitis B prevalence of a comprehensive study conducted in Turkey was determined to be 4% and it was reported that at least one-third of the country population was faced with hepatitis B (6). Hepatitis C infection like B can be a chronic or acute infection. Similarly, the main ways of transmission are blood and blood products, sexual and perinatal. Again, the use of common injectors and surgical procedures performed with non-sterilized instruments, contaminated manicure and pedicure instruments in hairdressers, shaving blades in barbers, and dental treatments are risky conditions for transmission (7). In the WHO Global Hepatitis Report, 71 million people are reported to have chronic hepatitis (5). It has been shown that the prevalence of hepatitis C in our country is between 0.5 and 1% in various studies (6,8,9).

WHO stated that viral hepatitis caused 1.34 million deaths in 2015 (10). Most of the deaths due to hepatitis (96%) are caused by hepatitis B and C. These two viruses can be chronic cause lifelong infection and cause progressive liver damage such as cirrhosis and hepatocellular carcinoma (1,11). Because of life-long-lasting, becoming chronic, causing serious liver damage, serious health expenses occur. This brings a huge burden for patients, their relatives and the national economy. The cost of new generation drugs developed for hepatitis B and C is also very high (12,13). According to Turkey Viral Hepatitis Diagnosis and Treatment Guide 2017, people live in the same house with Hepatitis infected patients and first degree relative with patients infected with hepatitis B even they don't live in the same house are located primarily in the group that should be examined in terms of hepatitis B infection. Among the risk groups that should be examined for hepatitis C, those with risky contact within the family are also among the priority groups (14).

The relatives of patients with hepatitis, which constitute an important risk group, should be informed adequately and accurately, and their current knowledge and attitudes should be determined. By raising awareness on the subject, disease burden and unnecessary health expenditures will be prevented and this will bring an increase in life quality. The aim of this study is; determine the knowledge, attitude, behavior and risk perceptions of patients with CHB and C.

Materials and Methods

This cross-sectional and descriptive study was conducted in Erciyes University Hospital between December 2016 and June 2017. 157 relatives (with more than one relative of some patients) of patients with CHB and hepatitis C aged 18 and above admitted to the clinic of infectious diseases outpatient, were informed about the study. The face-to-face interview method was used by a single researcher with a single patient relative.

The questionnaire consisted of a total of 23 questions. The participants were asked about the socio-demographic characteristics such as age, gender, marital status, educational status, social security, and the type of hepatitis in their relatives, the degree of intimacy with the patient and living status in the same home. Patient's relatives were asked what type of hepatitis they knew with an open-ended question, and hearing states of hepatitis A, B, C, D, E, and G were evaluated in later parts of the questionnaire. Those who respond positively to the sentence "Hepatitis is an infectious disease with cell inflammation and jaundice in the liver by various viruses" were considered to be aware of hepatitis. Those who respond positively to the sentence "Patients who carry the germ after HBV disease may be sick again in any time of life-long period and infectiousness of them continues" were also considered to be what is a carriage. Participants' general knowledge about hepatitis, vaccination status and risk perceptions about the disease were also questioned. In addition, their thoughts on the ways of transmission specifically for HBV and HCV and their attitudes and behaviors towards protection were questioned. Behavioural questions were questioned as "always, rarely and never". In order to prevent sexual transmission, condom use was only asked, spouses and sexual partners.

The study was found and approved ethically appropriate by the Erciyes University Clinical Research Ethics Committee (approval

number: 2016/537, date: 07.10.2016). Permission was obtained from the Erciyes University Faculty of Medicine Hospital Head Department. All participants were informed about the study before the study and their verbal consent was obtained.

Statistical Analysis

Frequency and percentage, mean value, standard deviation, highest and lowest values were used for descriptive statistics. Pearson chi-square test was used for statistical analysis of category data. Statistical significance was considered as $p<0.05$.

Results

The mean age of the participants was 44.0±14.5 (minimum: 20, maximum: 76) years. 52.9% were male and 83.5% were married. When education levels were evaluated, 40.5% had a primary school and below, 15.7% had secondary, 31.4% had high school and 12.4% had university graduation levels. Most of the participants (80.2%) lived in the city centre. Hepatitis B virus (HBV) infection was present in 61.2% and HCV infection was present in 38.8% of the patient's relatives. Relatives of the patient relatives are 47.1% spouse, 39.7% children or parents and 13.2% distant relatives-friends-neighbours. 67.8% of the patient's relatives lived in the same house, 6.6% of the relatives lived for less than one year, 11.6% for 1-5 years and 81.8% for more than five years. 92.6% of the participants said that they knew hepatitis B, 86.8% hepatitis C, 79.4% knew both hepatitis B and C. In addition, 23.1% of the patient's relatives reported that they knew hepatitis A, 7.4% of them knew hepatitis D and only 4.1% of them knew hepatitis E. When each type of hepatitis was asked separately, the distribution of hearing status of these hepatitis types was given in Table 1.

The majority of the patient's relatives stated that hepatitis can be caused by various viruses that cause cell inflammation in the liver. The rate of those who do not know the hepatitis was 26.4% and 33.1% of the patients' relatives did not know hepatitis carriage. The answers of patient's relatives to some questions about hepatitis were shown in Table 2.

The relationship between the knowledge of hepatitis and its carriage and some socio-demographic characteristics were given in Table 3. The relationship between the knowledge of hepatitis carriage and education level was found to be statistically significant ($p<0.05$). The rate of knowing the carriage of hepatitis was low in the people with primary and lower education level and it was high in the university graduates.

Table 4 shows the responses of the participants to the suggestions about hepatitis B and C transmission ways. When the patient's relatives were asked about the transmission of hepatitis B and C by body secretions, they responded with the highest rated blood, sperm and vaginal fluid (82.6%; 79.3%, 78.5% respectively) and the lowest rate stool, urine and sweat (25.6%, 23.1%, 21.5% respectively). Patient's relatives stated as low rate that breast milk and sputum from body fluids could be infectious (38.8% and 32.2%, respectively).

52.1% of the patient's relatives felt that they were at risk for hepatitis and 19.8% said that they shared this situation with another person. 69.4% of the patient's relatives stated that they

Table 1. Hepatitis types hearing status of the patient's relatives in the study group

Hepatitis types (n=121)	Number	%*
Hepatitis A	46	38.0
Hepatitis B	116	96.0
Hepatitis C	113	93.0
Hepatitis D	12	10.0
Hepatitis E	8	7.0
Hepatitis G	2	2.0

Table 2. The distribution of the answers to the questions about hepatitis of the patient's relatives in the research group

Questions about hepatitis	Yes (n, %)	No (n, %)	I don't know (n, %)
Hepatitis causes inflammation in liver cells	100 (82.6)	3 (2.5)	18 (14.9)
Hepatitis can be caused by various viruses	102 (84.3)	1 (0.8)	18 (14.9)
Hepatitis can cause jaundice	104 (86.0)	0 (0.0)	17 (14.0)
People with hepatitis can infect others	100 (82.6)	3 (2.5)	18 (14.9)
People who continue to carry germs after having hepatitis B are called hepatitis B carriers (vector)	91 (75.2)	2 (1.7)	28 (23.1)
People with hepatitis B may be ill again for any lifelong period	94 (77.7)	1 (0.8)	26 (21.5)
Hepatitis B carriers can infect others	87 (71.9)	7 (5.8)	27 (22.3)
Some types of hepatitis may last a lifetime	100 (82.6)	0 (0.0)	21 (17.4)
It is possible that can be protected from some types of hepatitis diseases by vaccination	99 (81.8)	1 (0.8)	21 (17.4)
Relatives of patients with hepatitis are at risk for disease	106 (87.6)	2 (1.7)	13 (10.7)
Family members of patients with hepatitis should be screened	106 (87.6)	1 (0.8)	14 (11.6)
Hepatitis can cause liver cirrhosis	105 (86.8)	0 (0.0)	16 (13.2)
Hepatitis can cause liver cancer	101 (83.5)	0 (0.0)	20 (16.5)
Hepatitis can cause liver failure	104 (86.0)	0 (0.0)	17 (14.0)
Hepatitis can cause death	103 (85.1)	0 (0.0)	18 (14.9)
Hepatitis B vaccine is given free of charge in groups at risk	99 (81.8)	2 (1.7)	20 (16.5)

had a hepatitis test and 48.8% stated that they had an HBV vaccine. 38.7% of those who did not have vaccination stated that they did not intend to have a vaccination. In 74 relatives of patients with HBV infection, the rate of vaccination of spouses was 58.8%, while the rate of vaccination of other relatives was 45%. When it was questioned about the ways of obtaining information about hepatitis, it was the highest rate of health personnel with 81.8%. Obtaining information from TV-radio, internet, acquaintance and books were reported at low rates (18.2%; 14.0%; 8.3%; 2.5%, respectively).

Considering their participation in some suggestions about hepatitis, the patient's relatives; 79.3% of those agreed that HBV and 66.9% of those agreed that HCV was curable, 37.2% agreed that HBV and 28.9% agreed that HCV was a self-healing disease. 28.9% of them agreed that herbal remedies may be the solution to the disease, 83.5% of them agreed avoidance of smoking and alcohol, 82.6% of them agreed that balanced and regular nutrition should be.

Discussion

It is known that there is a serious lack of information about hepatitis which has an important place in infectious diseases. This lack of information is present in patients and their relatives as well

Table 3. Hepatitis and carriage knowledge of patient's relatives according to various characteristics- in the research group

Characteristics		n	Hepatitis knowledge			Hepatitis carriage knowledge		
			Number	%	X^2, p	Number	%	X^2, p
Whole group		121	89	73.6	-	81	66.9	-
Gender	Male	64	43	67.2	X^2=2.831 p=0.092	43	67.2	X^2=0.004 p=0.952
	Female	57	46	80.7		38	66.7	
Education status	Primary school and below	49	32	65.3	X^2=4.338 p=0.227	25	51.0	**X^2=12.932 p=0.005**
	Secondary school	19	17	89.5		16	84.2	
	High school	38	29	76.3		26	68.4	
	University	15	11	73.3		14	93.3	
Residence	Provincial center	97	71	73.2	X^2=0.032 p=0.858	66	68.0	X^2=0.267 p=0.605
	Town/village	24	18	75.0		15	62.5	
Living in same house	Yes	82	58	70.7	X^2=1.042 p=0.307	51	62.2	X^2=2.591 p=0.107
	No	39	31	73.6		30	76.9	

Table 4. The distribution of the responses of the patient's relatives to the suggestion of transmission ways of hepatitis B and C

Transmission ways (n=121)	HBV			HCV		
	Yes (%)	No (%)	I don't know (%)	Yes (%)	No (%)	I don't know (%)
Blood transfusion	87.6	0.8	11.6	87.6	-	12.4
Injector stick	87.6	-	12.4	86.8	0.8	12.4
Common injector usage	87.6	0.8	11.6	86.8	0.8	12.4
Dental treatment	86.0	0.8	13.2	83.5	1.7	14.9
Sexual intercourse	85.1	1.7	13.2	86.0	0.8	13.2
Sharing the same toothbrush with the patient	81.8	2.5	15.7	81.8	2.5	15.7
Instruments used during acupuncture, tattoo, piercing	79.3	5.0	15.7	76.9	6.6	16.5
Barber shears	77.7	3.3	19.0	76.9	4.1	19.0
Common instrument use like pedicure manicure	76.0	5.8	18.2	73.6	5.8	20.7
From mother to baby during childbirth	72.7	4.1	23.1	69.4	5.8	24.8
Using goods like cups, forks and spoons with sick person	52.1	28.9	19.0	52.1	28.9	19.0
Living in the same house with the patient	32.2	40.5	27.3	31.4	41.3	27.3
Contaminated water and food	28.1	40.5	31.4	30.6	38.0	31.4
Coughing-sneezing	21.5	57.9	20.7	21.5	59.5	19.0
Eating from the same plate with the patient	19.8	50.4	29.8	23.1	46.3	30.6
Mosquito bite	18.2	31.4	50.4	19.0	32.2	48.8
Handshake	14.0	61.2	24.8	16.5	57.9	25.6
Eating the patient's cooking	11.6	63.6	24.8	10.7	65.3	24.0

HBV: Hepatitis B virus, HCV: Hepatitis C virus

Table 5. Knowledge and application of patient's relatives who participated in the research related to some issues to consider about hepatitis (%)

Some issues to consider	Knowledge status (n=121)	Application status (n=121)		
		Always	Rarely	Never
Condoms should be used for sexual intercourse* (n=57)	86.0	61.4	22.8	17.6
The toothbrush of patients with hepatitis does not be used	88.4	90.9	1.7	7.4
The nail clippers of the patient with hepatitis do not be used	76.9	65.3	10.7	24.0
In case of any injury, the wound is not treated with bare hands	82.6	70.2	10.7	19.0
It should be protected from sick people's blood and body fluids	85.1	73.6	8.3	18.3
It should be careful about visiting a dentist that disease can be transmitted from	86.0	66.9	9.9	23.1
It should be careful about visiting barber-hairdresser that disease can be transmitted from	77.7	58.7	10.7	30.6
Foods should be washed with plenty of water	84.3	76.9	8.3	14.9

as in many segments of society (15,16,17,18,19,20). In our study, awareness rates of hepatitis types B, C, A, D and E were 92.6%, 86.8%, 23.1%, 7.4%, 4.1% respectively (Table 1). In a similar study conducted by Poyrazoğlu et al. (21) In 2009, they found hepatitis B to be 99.1%, hepatitis C to 98.2%, and hepatitis A to be 86.6% with higher rates than our study. In another study conducted by Güner et al. (15) related to the level of knowledge in patients with hepatitis B, they found hepatitis D and E low similar to our study. Although the participants were asked by saying the name of each type of hepatitis in our study, the rate of awareness of hepatitis A, D and E was very low. This can be explained by the fact that the people in the research group had a higher awareness of hepatitis types B and C because they were relatives of patients with hepatitis B and hepatitis C.

Instead of our study, it was observed that 26.4% of the participants did not know hepatitis and 33.1% did not know the carriage (Table 2). According to Poyrazoğlu et al.'s (21) study, the rate of incomplete or incorrect knowledges of hepatitis and hepatitis carriage were 58.9%, 96.4% respectively and the rates were higher than our study. Over a decade of time between the two studies, increased knowledge of patient's relatives about hepatitis can be attributed to the higher educational level of our study group and to the change in socio-demographic characteristics, such as residence in the provincial centre. In our study, the majority of the patient's relatives stated that hepatitis can cause liver failure, cirrhosis and liver cancer (86.0% 86.8%, 83.5%, respectively) (Table 2). Güner et al. (15) respectively, 61.9%, 85.7% and 65.7% were found to be low compared to our study. In a society-based study aiming at the level of knowledge about hepatitis in Brazil, it was reported that hepatitis may cause cirrhosis and liver cancer as 80.8% and 84.6% respectively (22). Having such high rates indicates that societies including in our country are aware of the serious diseases that hepatitis can cause.

The main ways of transmission of hepatitis B and C are the perinatal, sexual, and parenteral/percutaneous ways, which are the route of transmission from mother to infant; It is known that the same cutlery and plate can be transmitted in barbers and beauty centres, and there is no transmission by water and food, vectors and air (23,24). Hepatitis viruses can be found in all fluids in the human body, especially in the blood, semen and vaginal fluid, in the vagina, semen and saliva are found relatively low concentrations (25). It has been shown in several studies that infected blood and blood products and genital secretions, pericardium, peritoneum, pleura, cerebrospinal, synovial and amniotic fluid, such as body fluids can also be passed through the mucosa contact. However, in the case of stool, urine, saliva, sweat, sputum, and vomiting, there is no risk of transmission unless it contains a significant amount of blood (24). There are publications showing that hepatitis B and C are not infected with vectors such as handshaking with the patient, eating from the same container, coughing, and mosquitoes. At the same time, in a review published in 2015, it was stated that transmission by vectors was suspicious (21,26).

In our study, although the majority of the participants knew the three basic transmissions ways correctly, they did not have enough information about the transmission ways of hepatitis. The participants stated that the most common transmission ways of hepatitis B were blood transfusions, stinging, the use of a common syringe, dental treatment, and sexual intercourse (87.6% 87.6%, 86.0% 85.1%, respectively). They stated that the transmission ways of hepatitis C were blood transfusions, stinging-joint injectors, sexual intercourse and dental treatment (87.6% 86.8%, 86.0% 83.5%, respectively) (Table 4). In addition, the rate of those who know that hepatitis B and C will not be transmitted by contaminated water and food is around 40%. These rates indicate that patients' relatives should be informed about the ways of transmission. In the study, more than three-quarters of the participants knew that the using the same toothbrush with the patient, barber scissors, manicure pedicure instruments, and the use of acupuncture, tattoos, and piercings could make the transmission of the disease. The reason why there is not enough information about the seriously contamination in the use of social areas can be because of lack of information, low awareness, and the fact that our study group is quite older than the age range that will perform procedures such as tattoos and piercings. About one-fifth of the participants thought that hepatitis can be transmitted by mosquito bites, coughing and sneezing, and eating from the same dish with the patient. This suggests that the transmission routes of hepatitis may be confused with other respiratory diseases.

There are many publications in the literature about the transmission of hepatitis in the family and during sexual intercourse between spouses is well known (27,28,29). Intra-family transmission is likely to occur during sexual intercourse between

spouses (30). However, the use of common living space and the use of personal belongings may be involved in the transmission of children. In addition to taking preventive measures, family members who carry a serious risk for hepatitis infection should also have some examinations in terms of disease. In the study, 87.6% of the participants stated that their relatives are at risk and that they should have a screening test. 71.9% of the participants stated that HBV carriers can infect the disease. Approximately 30% of the participants think that the disease can be transmitted by living in the same house. The instead of our study, 52.1% of the patient's relatives felt that they were at risk for disease transmission and 69.4% stated that they had a test. These rates were similar to the results of previous studies conducted at the same university (21). Despite a decade of time between these two studies, living at home with the patient was a risk factor, but at low rates, almost no difference was observed between the rate of those testing for the disease. The lack of information about the transmission ways of the disease is thought to continue.

In our study, 81.8% of the participants stated that some types of hepatitis can be prevented by vaccination and a free hepatitis B vaccine is given to individuals at risk (Table 2). In a previous study by Poyrazoğlu et al. (21), the rate of knowing free vaccination was reported as 26.8%. This makes us think that the awareness of vaccination programs has increased in our country. In our country, it is given free of charge to adults in hepatitis A and B risk groups who are in routine vaccines in the childhood vaccination program (31). In our study, 48.8% of the patient's relatives stated that they had an HBV vaccine, and 58.8% of the other patient's relatives had HBV vaccination. 38.7% of those who did not have vaccination stated that they did not intend to have the vaccination. The fact that spouses are vaccinated at a higher rate than other relatives can be attributed to the high level of knowledge about the sexual transmission of the disease and to the awareness of the spouses. However, vaccination rates are still well below expectations.

In our study, the participants stated that 81.8% of the patients were informed about the disease from health personnel. This was followed by TV-radio and the Internet. Güner et al. (15) in their study, physicians are the primary source of information in patients with hepatitis B. In another study evaluating the level of knowledge about hepatitis in Korean American parents, physicians were the reliable source of information with 40.2% (32). These rates show that healthcare professionals are a very important group for a reliable source of information.

In this study, various suggestions about the transmission of hepatitis were given to the patient's relatives and their knowledge and application status were questioned. The use of condoms during sexual intercourse, the toothbrush and nail scissors of the patient with hepatitis will not be used, no bare-handed intervention to open injuries, visiting the dentist and barber-hairdresser should be careful are the cases which are known by the participants at higher rates. Although participants' knowledge rates were high their application rates about the cases were relatively low (Table 5). In our study, it was found that the knowledge of these propositions was higher than that of Güner et al.'s (15) study. According to Poyrazoğlu et al. (21), their knowledge s was lower, but their application status was higher than our study. Although the ways of transmission of the disease are known, low rates in applications shows that the behavioral transformation of information is insufficient. A remarkable point in our study is that the food should be washed with plenty of water to respond to a high rate and some herbal remedies may have a place in the treatment of the disease that is close to 30%. In the study of Güner et al. (15), while the rate of those who think that herbal remedies can be a solution to the disease was 13%, higher rates in our study suggest that traditional and alternative medicine has become widespread in recent years in our country and may cause some misperceptions in the society.

Study Limitations

The fact that the study was conducted in a single center, that it could not be generalized to other patients, the number of patients attending a tertiary hospital and their relatives did not represent the population are among the limitations of the study.

Conclusion

In our study, it was found that the participants did not have enough knowledge about hepatitis and some wrong and incomplete applications. In particular, there was a serious deficiency in converting some knowledge into behaviour. For this reason, the training to be given to this group as well as to the whole society is of great importance. There can be achieved awareness about facilitating access to information, the importance of vaccination, and ways of protection from disease with the help of providing accurate and sufficient information. For this purpose, first of all, training should be provided for health workers and this information should be transferred to patients and their relatives by means of correct communication. It is recommended to establish counselling units for the patients and their relatives in the hospital. In addition, the importance of vaccination with public spots can be emphasized and the benefits of vaccination and negative attitudes towards vaccination can be prevented.

Ethics

Ethics Committee Approval: The study was found and approved ethically appropriate by the Erciyes University Clinical Research Ethics Committee (approval number: 2016/537, date: 07.10.2016).

Informed Consent: All participants were informed about the study before the study and their verbal consent was obtained.

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Authorship Contributions

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