KNOWLEDGE OF HOUSEHOLD CONTACTS ABOUT VIRAL HEPATITIS B AND C IN A SAMPLE OF PATIENTS AT BAGHDAD MEDICAL CITY HOSPITALS [+]

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Abstract:

The aim of this study is to determine the level of knowledge of household contacts about hepatitis B and hepatitis C infection and the association between knowledge of household contacts and their demographic characteristics.

A cross-sectional study was conducted in Baghdad medical city; Gastroenterology and hepatology teaching hospital, gastroenterology and hepatology clinics in Baghdad hospital, from 1st of November 2012-to 30th of April 2013. This study includes 349 of all household contacts above age of 15 years who agreed to participate in the study. Data collection was done by a specially designed questionnaire.

The highest rate of contacts 31.2% occurred in the age group of (15-24) years, (52.7%) were females, the highest proportion (51.3%) of contacts had low level of knowledge. There is a significant association between age groups of contacts and their knowledge, (P= 0.034), Gender and their knowledge (P=0.007). There was no association between socioeconomic status and their knowledge (P=2.668).

There is great need to raise the level of knowledge of general population and at-risk groups. Focusing on different aspect of hepatitis B and C infections.

Key words: **Hepatitis B, Hepatitis C, household contacts, Knowledge.**

معرفة الملامسين نحو إلتهاب الكبد الفيروسي البائي والسيني في عينة من مرضى مستشفيات مدينة الطب في بغداد

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المستخلص :

الهدف من الدراسة هو تحديد المستوى المعرفي للملامسين في الاسرة حول التهاب الكبد الفيروسي نوع البائي و التهاب الكبد الفيروسي نوع السيني وايجاد العلاقة بين معارف الملامسين وبعض صفاتهم الديموغرافية.

المنهجية: دراسة مقطعية اجريت في مدينة بغداد الطبية ; مستشفى امراض الجهاز الهضمي والكبد التعليمي ومستشفى بغداد التعليمي وللفترة من الاول من نوفمبر2012 ولغاية 30 من ابريل2013، حيث تم جمع البياتات باستخدام استمارة استبيان خاصة و الذي صمم مسبقا للحصول المعلومات.

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لوحظ في النتائج بان اعلى معدل 31.2% كانوا ضمن الفئة العمرية من (15-24) سنة , 52.7% هم من الاناث و55.6%كانوا من الغير المتعلمين او في مستوى تعليمي متدني. وكانت اعلى معدلات الملامسين (51.3%) هم الذين اقل مستوى معرفي. واثبتت الدراسة جود فروقات ذات دلالة معنوية ما بين الفئة العمرية والمستوى المعرفي لدى الملامسين (القيمة المعنوية =0.034)، بين نوع الجنس والمستوى المعرفي (القيمة المعنوية =0.007) وبين صلة القرابة من المريض ونوع الجنس . مع عدم جود فروقات ذات دلالة معنوية بين الحالة الاجتماعية والمستوى المعرفي (القيمة المعنوية =2.668).

التوصيات: هناك حاجة كبيرة لرفع المستوى المعرفي لعامة الناس ومجاميع الاختطار بالتركيز على السمات المختلفة من التهاب الكبد الفيروسي البائي والسيني والتوجيه لفحص مجاميع الاختطار، التثقيف الصحي حول برامج التلقيح والسيطرة والمنع للعدوى, من خلال الهيئات الحكومية وغير الحكومية.

Introduction :

Hepatitis has become one of the major health care problem of the world with about 170 million patients are chronically infected with hepatitis C (HCV) with 3-4 million new infections each year[1]. Worldwide, an estimated two billion people have been infected with the hepatitis B virus (HBV), and more than 350 million have chronic liver infections [2]. While hepatitis B is vaccine-preventable, HCV infection has no effective vaccine [3]. WHO has categorized countries based upon the prevalence of hepatitis B surface antigen (HBsAg) into: High endemicity (≥8%): sub-Saharan Africa, most of Asia and the Pacific Islands, intermediate endemicity (2-7%): Southern parts of Eastern and Central Europe, Middle East and Indian sub-continent, Central and South America and low endemicity (<2%): Most of Western Europe and North America, Australia [4]. Iraq has intermediate endemicity [5].
Broadly speaking, the level of endemicity depends on the socioeconomic development, and access to health care facilities, barring few special population subgroups as exceptions [6].
HBV and HCV have common routes of transmission, hepatitis B virus is sexual and blood borne, with the additional risk for perinatal infection. Hepatitis C virus is mainly blood borne, with lower rates of sexual and perinatal transmission [7]. Household members of people with hepatitis B and C are at increased risk of hepatitis B and C infection [8]. The prevalence of HBV and HCV infection among inmates in correctional facilities was high in many places [9]. There is a lack of knowledge and awareness about chronic viral hepatitis on the part of health-care, social-service providers among at-risk populations, members of the public and policy-makers [10]. The obstacle to change may be a lack of knowledge of the benefits of health, or lack of knowledge of the problem and its severity [11]. Lack of education and awareness regarding its spread are the main factors contributing to this disease [12]. The prevention of new viral hepatitis infections will continue to be an important public health priority in the current century [13]. The objective of this study is setting for new approach of preventive issues by exploring the knowledge level of household contacts towards HBV and HCV infection.

Method :

A cross-sectional study was conducted in Baghdad medical city; Gastroenterology and hepatology teaching hospital and gastroenterology and hepatology specialist clinics in Baghdad hospital for the period from1st of November 2012-to 30th of April 2013.This study includes a convenient sample of (349) of all household contacts above age 15 years who were agreed to participate in the study. Data collection was done by previously designed questionnaire and through face to face direct interview; the questionnaire consisted of 3 parts with 29 questions concerning basic knowledge of HBV and HCV. Measuring of knowledge was scored as (3) for correct answer, (2) for don't know, and (1) for incorrect answer. The potential range of total scores was 29-87**;** Poor knowledge was defined as scores (29-58), fair knowledge as (59-72), and good knowledge as (73-87**).** Socioeconomic status was classified into 3 groups high, middle and low according to special score take in accordance with education level, occupation and properties [14]. All data were statistically analyzed using chi-square test for association between descriptive variables with results being considered as statistically significant when the P value was < (0.05).

Results :

Table 1 shows that the higher percentage 31.2% (109/349) of household contacts was in the age group (15-24) years. The mean age was 33.69 ± 13.65years. The males constitute 47.3%, while 52.7% were females.

Table (1): Distribution of contacts according to age and gender.

Age (year)	Gender				Total	
	Males		Females			
	N	%	N	%	N	%
15-24	46	42.2	63	57.8	109	100
25-34	39	50	39	50	78	100
35-44	41	48.8	43	51.2	84	100
45 and over	39	50	39	50	78	100
Total	**165**	**47.3**	**184**	**52.7**	**349**	**100**

Table 2 shows that house wives constitute 44.6% of household contacts. The higher percentage 23.5% was read/write.

Table (2): Demographic characteristics of household contacts.

Characteristics	Group	Frequency	Percent
Occupation	Employee	71	20.4
	Unemployed	13	3.7
	Manual workers	70	20.1
	House wives	156	44.6
	Students	29	8.3
	Retired	10	2.9
Education level	Illiterate	55	15.8
	Read/write	82	23.5
	Primary school	57	16.3
	Intermediate school	49	14
	Secondary school	37	10.6
	Institute, college & above	69	19.8
Total		**349**	**100**

Table 3 shows the distribution of knowledge answer which included in six parameters and twenty nine questions comprised the knowledge index. The results indicate that 6 items were answered correctly by more than half of household contacts. The majority 68.2 % knew that hepatitis B and C are a major health problem in Iraq and the world, liver is the organ involved coincided by 91.4% , regarding the etiology of the disease infection 66.2% of household contacts answered correctly that virus as a cause of the infection, blood transfusion and medical procedure was coincided by 62.8% and 63% respectively of household contacts as the mode of transmission, and 63% of household contacts correctly identified that avoidance of unsafe medical procedures will protect against hepatitis B and C.

Table (3): Results of the knowledge of household contacts regarding hepatitis B and C infection.

Parameters	Correct answer		Wrong answer		Don't know		Total	
General question:	No	%	No	%	No	%	No	%
Hepatitis B and C are a major health problem in Iraq and the world	238	68.2	26	7.4	85	24.4	349	100
Hepatitis B and C are infectious diseases	124	35.5	129	37	96	27.5		
Hepatitis B vaccine is available	29	8.3	184	52.7	136	39		
Hepatitis C vaccine is available*	71	20.3	138	39.5	140	40.2		
Hepatitis B and C can causes liver cancer	39	11.2	187	53.6	123	35.2		
Organs affected:								
Liver	319	91.4	23	6.6	7	2	349	100
Stomach*	70	20.1	235	67.3	44	12.6		
Etiology of HBV and HCV infection:								
Contaminated food or water*	119	34.1	191	54.7	39	11.2	349	100
Viruses	231	66.2	83	23.8	35	10		
Alcohol consumption*	96	27.5	186	53.3	67	19.2		
Bacteria*	129	37	145	41.5	75	21.5		
Sign and symptoms:								
Hepatitis B and C show icteric disease	135	38.7	121	34.7	93	26.6	349	100
Hepatitis B and C asymptomatic disease	140	40.1	102	29.2	107	30.7		
Mode of transmission:								
Blood transfusion	219	62.8	72	20.6	58	16.6	349	100
Mother to child	74	21.2	158	45.3	117	33.5		
Breast feeding*	94	26.9	111	31.8	144	41.3		
Sexual contact	156	44.7	106	30.4	87	24.9		
Nonsexual contacts; hugging and hand shaking*	132	37.8	100	28.7	117	33.5		
Medical procedures	220	63	77	22.1	52	14.9		
Traditional therapy (cupping), tattoo and body piercing	86	24.6	179	51.3	84	24.1		
Sharing or use personal tools	72	20.6	170	48.7	107	30.7		
Protection:								
Immunization against HBV	76	21.8	192	55	81	23.2	349	100
Sex abstinence & restricted to legal sex	154	44.1	104	29.8	91	26.1		
Use of condom	88	25.2	183	52.4	78	22.4		
Avoidance of unsafe blood transfusion	65	18.6	218	62.5	66	18.9		
Avoidance of unsafe medical procedures	220	63	71	20.3	58	16.7		
Avoidance of unsafe traditional therapy, tattoo and body piercing	82	23.5	177	50.7	90	25.8		
Avoidance of contact with infected person*	112	32.1	89	25.5	148	42.4		
Avoidance of sharing or use personal tools	120	34.4	95	27.2	134	38.4		

*** = indicates a wrong statement**

Table 4 shows that the majority 95.1% of household contacts had poor and fair knowledge regarding all questions parameters. As regard question related to general practice 61.9%, organ affected 7.7%, etiology of infection 53.3%,of contacts had poor knowledge, sign and symptoms 28.4%, mode of transmission 52.1%, and protection of infection 74.2% of contacts had poor knowledge respectively.

Table (4): Association of the knowledge level with knowledge questions.

Parameters Total N= 349	Knowledge level						Mean ± SD Score of question
	Poor		Fair		Good		
	No	%	No	%	No	%	
General question	216	61.9	108	30.9	25	7.2	9.92 ± 1.74
Organs affected	27	7.7	258	73.9	64	18.4	4.36 ± 0.98
Etiology of infection	186	53.3	92	26.4	71	20.3	8.60 ± 2.12
Sign and symptoms	99	28.4	180	51.6	70	20.1	4.15 ± 1.31
Mode of transmission	182	52.1	143	41	24	6.9	16.27 ± 2.81
Protection of infection	259	74.2	76	21.8	14	4	15.40 ± 2.56
Over all total knowledge	179	51.3	153	43.8	17	4.9	58.66 ± 6.64

Table 5 shows that the highest percentages 62.6% of household contacts in the age group 15-24 years had poor knowledge; household contacts with good knowledge constitute 7.7% in the age group 25-34 years. There is statistical significant association between age groups and their knowledge level about HBV and HCV infection (P-value = 0.034).

Table (5): Distribution of household contacts knowledge level according to age groups.

Age (year)	Knowledge level						Total	
	Poor		Fair		Good			
	N	%	N	%	N	%	N	%
15-24	68	62.6	38	34.6	3	2.8	109	100
25-34	29	37.2	43	55.1	6	7.7	78	100
35-44	39	46.4	41	48.9	4	4.7	84	100
45 and over	43	55.2	31	39.7	4	5.1	78	100
Total	179	51.3	153	43.8	17	4.9	349	100
P-value = 0.034								

Table 6 shows that 60.9% of females had poor knowledge compared with 39.1% of males. The association is significant between gender and their knowledge level about hepatitis B and C infection (P-value = 0.007).

Table (6): Distribution of household contacts knowledge level according to gender.

Knowledge level	Gender				Total	
	Males		Females			
	N	%	N	%	N	%
Poor	70	39.1	109	60.9	179	100
Fair	85	55.6	68	44.4	153	100
Good	10	58.8	7	41.2	17	100
Total	165	47.3	184	52.7	349	100
P-value = 0.007						

Table 7 shows that 97.1% of household contacts with low socioeconomic status had poor and fair knowledge, while 2.9% of low socioeconomic status had good knowledge. There was no statistical significant association between SES and their knowledge level about hepatitis B and C infection (P-value > 0.05).

Table (7): Association of household contacts knowledge level according to SES*.

Socioeconomic status	Knowledge level						Total	
	Poor		Fair		Good			
	N	%	N	%	N	%	N	%
High	7	36.8	7	36.8	5	26.3	19	100
Middle	19	37.3	28	54.9	4	7.8	51	100
Low	153	54.8	118	42.3	8	2.9	279	100
Total	179	51.3	153	43.8	17	4.9	349	100
P-value > 0.05								

***Socioeconomic status**

Table 8 shows that family and friends were the main source of information for 50.4% of household contacts, followed by the health-care providers 31.5%, while 6% of household contacts have not any source of information.

Table (8): Sources of information of household contacts about hepatitis B and C.

Source of information	Frequency	Percent
Family and Friends	176	50.4
Health care workers	47	13.5
Media	11	3.2
All above	46	13.2
Family and friends + health care workers	21	6
Health care workers + media	7	2
Family and Friends + media	20	5.7
No information	21	6
Total	349	100

Discussion :

This study presented to us the awareness of household contacts about hepatitis B and C. The findings of the present study showed that 61.9% of the household contacts had poor knowledge about basic questions toward B and C infection. This result is in agreement with other studies in different populations [12, 15, 16]. In this study, the responses to the 6 parameters and twenty nine questions comprised the knowledge index, unfortunately gave misconceptions in most of answers of household contacts about the hepatitis B and C, it is clear that the organs affected question, was not satisfactory answered 18.4% of contacts had good knowledge these results differ from that conducted in Pakistan had higher rate of knowledge about this issue amounting to (93%) [17]. The etiology of infection were known to 20.3% of contacts which is similar to result of a study in Syria 21.5% of students know that HBV infection is caused by a virus [18]. In the present study knowledge on signs and symptoms of infections were generally poor 20.1% than those found in other study [19]. Also in the present study only 6.9% of contacts had good knowledge on specific B and C transmission, this is lowest than what is found in other study [15]. This study had clearly demonstrated the level of ignorance, 74.2% of contacts had poor knowledge regarding B and C protection. This is lower than the results of a study in Pakistan [20]. in the current study only 4.9% of household contacts had good knowledge over all, these result are in agreement with other study in different population [21]. Regarding to analysis of knowledge level in relation to age groups there is significant difference between the age groups and their knowledge ($p= 0.034$), in comparison with another study conducted in USA, there were fair correlations between knowledge and age groups [22]. In this study the knowledge level was higher among males contact than females and there is a significant difference between the gender and their knowledge ($p=0.007$), comparison with other study conducted in USA [22]. The findings of the present study reflected that the knowledge about B and C infection is influenced by age and gender. In the present study there was no significant difference between the level of knowledge and socioeconomic status towards B and C infection. These results differ from those found by Wei Lu et al, 2007 in Singapore [23]. where a significant difference was found between the level of knowledge and Socioeconomic status. In the current study, it is clear that family and friends were the source of information for 50.4 % of household contacts. This result is not differ from what is demonstrated by Amir et al, 2010 in Pakistan [24], who found that the TV was a major source of information in 55.7% of the student's. This indicates that family members and friends did not play a great role as sources of information about HBV infection.

Conclusions :

The score of knowledge of household contacts about different aspects of hepatitis B and C infections was low. There was a significant relationship between age, gender and their knowledge level about hepatitis B and C infection. There was no significant difference between the level of knowledge and Socioeconomic status towards hepatitis B and C infection. These findings reflected that the knowledge about hepatitis B and C infection is influenced by age and gender.

These finding emphasize the great need to improve the quality of knowledge regarding hepatitis B and C infection through health education programs and materials for primary health-care providers, social-service providers, and to increase the awareness of patients about their infectivity and to improve the public heath efforts to educate general population and at-

risk groups, and health care providers, regarding the important of the hazard of possessing the infection.

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