

Knowledge About Hepatitis B Infection Among Undergraduate Medical And Health College Students, Baghdad.

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Abstract

Background: Hepatitis B virus is a powerful serious form of hepatic inflammation due to hepatitis B virus (HBV) infection, and one of the most common chronic infectious diseases worldwide.

Aim of study: to highlight the knowledge regarding hepatitis B infection (HBV) among a sample of Health and Medical Specialty students.

Methodology: A cross-sectional study including 107 students was conducted at Nursing College and Technical College of Health and Medicine / Baghdad during November and December 2015 who answered self-structured questionnaire covering socio-demographic characteristics and different aspects of disease knowledge of the students about Hepatitis B infection.

Results: Academic lectures were the main source of information of students (50.1%). The student's highest correct responses (46%, 42%) for vertical and sexual transmission, 69% for blood receivers as people at risk, 44% for physicians and dentists and drug addicts as people at risk. Children are exposed in developing countries 47, 6 % and mainly vaccination 72% as preventive measure.

Conclusion: In general students' knowledge were poor-fair for mode of transmission and people at risk while it was good for disease epidemiology and very good for prevention and treatment.

Key words: knowledge/Health /Medical Specialty students/college/hepatitis B Infection.

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INTRODUCTION

Hepatitis B infection is a serious blood borne disease, made by the hepatitis B virus (HBV) which attacks the hepatic organ.⁽¹⁾ It is one of the most common viruses in the modern world and ranked by the WHO as one of the "top ten killers".^(2, 3, 4)

Hepatitis B virus is a DNA virus,⁽⁵⁾ that is transmitted by unprotected sex, unsafe use of needles, unsafe blood transfusion, from the mother to child at birth, close household contact and between children in early childhood. The virus is responsible for about 1.5 million deaths worldwide each year, two thirds of

which are attributable to primary hepatic carcinoma following HBV infection. About "360 million people are chronically infected with HBV".^(3, 4)

The virus is found in high concentration level in the blood, saliva, vaginal fluid, serum exudates, and most other body fluids.⁽⁶⁾

People at high risk with health care workers (HCWs) that contact with human blood and fluid secretions which includes person workers in operating rooms and medical laboratories, respiratory therapists, doctors, surgeons, dentists beside medical dental and students studying nursing.⁽⁷⁾

All HBV infection do not give symptoms, ordinary some people may have acute symptoms like jaundice , nausea, loss of appetite, fatigue , and (or abdominal pain).⁽⁸⁾

There is a highly successful vaccine that protects against HBV infection, and it is recommended by "Department of Health (DOH)" in South Africa that all HCWS should be vaccinated against HBV before being contact to patients.⁽⁹⁾ It is vital that Health and Medical Specialty students should be evaluated for awareness, source of information and risk in sights in order to use right plan strategies for prevention and control of Hepatitis B virus.

Aim of study: to highlight knowledge regarding HBV among a sample of Healthy and Medical specialty students, Baghdad.

PATIENTS AND METHODS

A cross – sectional study including 107 Health and Medical Specialty college students (Nursing College, Technical college of Health and Medicine / Baghdad) during November and December 2015.They were obtain randomly by simple random technique and invited to participate after clarifying the purpose behind the study and they completed a comprehensive previously prepared self-structured, close ended questionnaire in designated areas under the supervision of the researcher. Thequestionnaire consisted of socio-demographic characteristics, source of information regarding HBV and different statements covering the knowledge regarding HBV. The data were analyzed by applying frequency and percentage for each question responses and a score of (3) was given for each yes answer ,(2) for each I don't know answer and (1) for answering no.

The percent score for student's responses in each specific item was calculated according to the following equation:

Total score for all participates in the item X 100/maximum possible score for all participates in the item = No of no × 1 + no of don't know x2 + no of yes ×3 and maximum possible scores for all participants in the same item = no. of total participants x3 based on triple likert scale,⁽¹⁰⁾ and after approximation, the cutoff point of percent score categorized as students who had score less than 60% considered as poor, 60-70% as fair, while those with 70-79% were considered an good as 80%-89%as very good and 90%-100% as excellent.⁽¹⁰⁾

RESULTS

Results: The sample included 107 Health Specialty students with age range 21-28 years distributed as 86% urban and 14% rural residency , only 5.6% were with family history of HBV infection , 11.2% only were screened previously for HBV and 73% were previously vaccinated with HBV, and only 14.1%had completed 3 doses of vaccination as shown in table (1):

Table 1: Socio demographic and disease related characteristics

Socio demography disease related characteristics	No.	%
Residency		
Rural	15	14
Urban	92	86
Family history of HBV		
Yes	7	5.6
No	100	94.4
Previous screening for HIV		
Yes	12	11.2
No	95	88.8
Vaccination of HBV		
Yes	78	73
No	29	27
Number of doses(n=78)		
One	34	43.6
Two	33	42.3
Three	11	14.1

The main source of students information regarding HBV was academic lectures 55, 1%, followed by mass media 39.2% as shown in table 2:

Table (2): Source of information regarding HBV

Source information	No.	%
Academic lectures	59	55.1
Health personnel	28	26.1
Family and relatives	14	13
Printed mater	28	26.1
Mass media	42	39.2

Mode of transmission of the disease showed the highest correct responses 43% from mother to fetus, 39.2% for sexual transmission, contaminated needles and contact with contaminated wounds while the lowest correct responses proportions 21.4% for blood transfusion, while 23.3% wrongly answered that due to shaking hand with an infected person and intake of food prepared by infected person as shown in table (3):

Table (3) Responses of students regarding mode of transmission.

Mode of transmission	No.	%
Sexual transmission	42	39.2
Contaminated needles	42	39.2
Blood transfusion	23	21.4
Use of tooth brush of contaminated person	29	27.1
Tattooing	26	24.2
Shake hand with an infected person	25	23.3
From mother to fetus	46	43
Contact with contaminated wounds	42	39.2
Use of plates and spoons of infected person	27	25.2
Intake of food prepared by infected person	25	23.3
By air droplet	33	30.8

Participants responses regarding people at risk to have HBV were with highest proportions 64.5%, 41.1% for blood receivers, physicians and dentists and drug addicts respectively: while the lowest correct responses proportions 6.5% for patients and health workers in the mentally handicapped institutions as shown in table(4):

Table4: Students responses regarding people at risk to haveHBV.

People at risk	No.	%
Physicians and dentists	44	41.1
Drug addicts	44	41.1
Pregnant women	30	28
Patients of renal dialysis	25	23.3
Patients and health workers in mentally handicapped institutions	7	6.5
Blood receivers	69	64.5
Homosexual and sexually deviate people	30	28

Knowledge regarding HBV epidemiology was with highest correct responses 47.6% , 35.5% with good percent score 77% and 71% regarding children are more infected in developing countries , and it affects people at risk at developed countries while the lowest correct responses proportions 15.9% with fair percent score 68% for HBV present in all body fluids as shown in table(5) :-

Table (5): knowledge responses regarding HBV epidemiology.

Knowledge regarding HBV epidemiology	Yes		NO		Don't know	Percent score
	N	%	N	%		
HBV in present all body fluids	17	15.9	36	33.6	45	50.5
Incubation period range 28-160 day	27	25.3	10	9.39	70	65.4
Children are more infected in developing countries	51	47.6	19	17.8	37	34.6
People at risk are more infected at developed countries	38	35.5	24	22.5	45	42.0
Children below 6 years are at risk to be chronic cases	32	29.9	22	20.2	53	49.6

Prevention and control of HBV infection responses of the participants was with highest correct responses 72%, 71% with very good percent score 89% and 88% for by vaccination and detection of the virus before doing any surgery while the lowest correct responses 53.5% with good percent score 78% for possible treatment of the infection by medication as shown in table (6).

Table (6) knowledge responses regarding prevention and treatment

Prevention and treatment	Yes		NO		Don't know		Percent score
Detection of HBV antigen before any surgery	76	71	6	5.6	25	23.4	88
Detection of HBV antigen before blood transfusion	73	68.2	10	9.4	24	22.4	86
Detection of HBV antigens in pregnant women	70	65.4	5	4.6	32	29.9	87
Sterilization of contaminated surface with infected blood	58	54.2	14	13	35	32.7	80
Possible to treat the disease by medications	57	53.3	21	19.6	29	27.1	78
Prevention of disease by vaccination	77	72	6	5.6	24	22.4	89

DISCUSSION

Hepatitis B virus is a major public health problem globally causing very large burden on the system of health care and big source of patients' misery.⁽¹¹⁾

In the current study, only 5.6% of students had family history of HBV, in comparison 27.6% of the students of in Sohag university / Egypt had family history of HBV,⁽¹²⁾ also 11.2% of the participants had previous screening for HBV which is higher than of in Sohag University,⁽¹²⁾ 6.5 % and lower than that of in Karachi,⁽¹³⁾ that is about half of respondents indicated that they were screened for hepatitis B .

In this study, 73% of the students were taken vaccine against HBV which is higher than that among Vietnamese university,⁽¹⁴⁾ 58.8%, 63% among the students of in Ahmedabad,⁽¹⁵⁾ 42% among medical students of Lahor,⁽¹⁶⁾ this is due to nursing students consider part of the health care delivery system are influenced to the same, if not high risk as other health care workers when they come in contact with contaminated device and patients.⁽¹⁵⁾

The main source of information regarding HBV was academic lectures 50.1% ,mass media 39.2% which is in agreement with Sohag University study,⁽¹²⁾ that class room lectures and doctors 32.5 % , mass media 20.5% .

Knowledge responses of the students were in general disappointing regarding mode of transmission. It was highly correct 43% , from mother to fetus , 39.2% for sexual transmission , contaminated needles and contact with contaminated surfaces which is nearly revealed in Dahlstorm and viberge study,⁽¹⁴⁾ 47.6% of students know correctly that HBV can be transmitted sexually and 39.5% know correctly that HBV can be perinatal , 62.8% know that HBV can be transmitted by using same a tooth brush , also the results of Maroofetal,⁽¹⁷⁾ study in India revealed unsafe sex as risk factor known by one fifth and one tenth of the respondents while better results as answered by the participants in Ahmedabad,⁽¹⁵⁾ regarding transmission of HBV , through sexual route 74%, by used infected needles

and syringes 83% , by blood transfusion 86% and regarding through vertical transmission 78% .

Hepatitis B infection in high risk for surgeons and physicians especially in "developing countries" ⁽¹⁸⁾ yet only 41.1% answered correctly regarding physicians and dentists and 64.5% regarding blood receivers.⁽¹⁴⁾ among university of Vietnamese in HO Chi Minh city.

The knowledge responses regarding disease epidemiology was satisfactory while the studies organized in Iran,⁽¹⁹⁾ and Turkey.⁽²⁰⁾ reported poor knowledge on HBV where other studies in Pakistan,^(13,21) and Oman,⁽²²⁾ recorded good knowledge of the disease.

Preventive medicine is concerned with reducing the incidence of disease by modifying environmental or behavioral factors that are related to illness,⁽¹³⁾ and in the current study prevention and control measures responses were more encouraging in all fields especially for vaccination 72% while in studies conducted in Oman,⁽³³⁾ regarding vaccination as prevention strategy for HBV was recorded 56% and 65% of the respondents.^(17,22)

Conclusion:

It is recommended that:

The knowledge of the included Health and Medical specialty students ranged from poor to moderate regarding the mode of transmission and people at risk to have the disease while it was good in all fields of disease epidemiology while it was very good for prevention and control measures.

Recommendations :

- 1- Seminars, programs and workshops should be conducted for Health and Medical specialty students to update their knowledge regarding Hepatitis B.
- 2- The study could serve as a stimulant for further researches to assess knowledge with various samples and different medical and health students.

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