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Knowledge, Attitude and Practice of MBBS Students Regarding Hepatitis B and C: A Cross Sectional Survey at Faisalabad Medical University, Faisalabad

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ABSTRACT

Background: Hepatitis is a public health problem throughout the world. The chances of job-related exposure to hepatitis among healthcare workers is a key concern, particularly among students in healthcare profession. **Methods:** This six months (Jan to Jun 2017) cross-sectional study was carried out at Faisalabad Medical University, Faisalabad. Total 300 MBBS students (1st to 4th year) took part in this study. Data was collected using validated self-administered questionnaire. Descriptive statistics and Chi-square tests were used to find out the association between variables in the study. **Results:** Of 300 medical students, 40.6% were males and 59.4% were females. Female and older students demonstrated higher knowledge regarding hepatitis B and C, route of transmission, and availability of treatment for hepatitis B and C. Among them, 58.7% of males and 61.4% females had sufficient basic knowledge about hepatitis B and C. Moreover, 54% males and 57% females had good knowledge about sources for spreading of hepatitis while 54% males and 62% females had good knowledge regarding prevention against hepatitis. From total 300 students, 156 (52%) were vaccinated against hepatitis B. Lack of time was the most common reason reported for not being vaccinated against hepatitis B. **Conclusion:** The majority of participants in this study showed sufficient knowledge concerning HBV and HCV, route of transmission and prevention.

Keywords: Knowledge, Attitude, Hepatitis, Liver cirrhosis, Cellular carcinoma.

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INTRODUCTION

Viral hepatitis (both B and C) is a major public health menace responsible for liver related morbidity and mortality throughout the world.[1] Recent estimates suggest that approximately 257 million are living with chronic HBV infection while 71 million people are suffering from chronic HCV infection. The number of deaths caused by hepatitis was 1.34 million in 2015. The number is almost equal to deaths caused by tuberculosis but greater than those caused by HIV.[2]

Hepatitis B and C are endemic in Pakistan with high morbidity and mortality rates.[3] The province wise prevalence of Hepatitis B in Pakistan is 9.3% in Baluchistan, 2.4% in Punjab, 2.3% in Sindh, and the lowest (2%) in KPK. While the prevalence of hepatitis C is 4.3% in Punjab, 2.2% in KPK, 1.9% in Baluchistan and 1.8% in Sindh.[4]

With a population 170 million, Pakistan is a developing country with low health and educational standards. Human Development Index of the United Nations ranked Pakistan at 147th position out of 188 countries.[5] Pakistan has one of the world's highest burden due to chronic hepatitis viruses (both Hepatitis B and Hepatitis C) and mortality due to liver cirrhosis and cellular carcinoma.[6]

Several studies conducted in Pakistan during past decades to develop guidelines and prevention strategies to control hepatitis but the rate of hepatitis B and C is still increasing. Even though the illness is huge burden in endemic areas, it is avertible. The only safe strategy against high frequency of viral hepatitis is prevention. Adequate knowledge and proper attitude toward these infections are bases to prevent the spread of disease.[7, 8] As medical students consist prospect health staff and are exposed to cutaneous injuries. They are at high risk of contracting blood-borne infections such as HBV and HCV. Their knowledge and attitude about viral hepatitis, its transmission and its prevention can stop the spread of this disease in healthcare settings and in general public as well. Therefore, the current survey was conducted to assess the knowledge; attitudes and practices of medical students (MBBS) about hepatitis B and C in a public sector university in Faisalabad.

METHODOLOGY

Study Design: Cross-sectional survey.
Place of Study: Faisalabad Medical University, Faisalabad.
Duration of Study: Six months January to June 2017.
Methods: MBBS students from 1st to 4th year were included in this study. Final year students or those not willing to participate in the study were excluded. Convenient sampling technique was used to recruit the participants.

A validated closed ended questionnaire was used for data collection. The questionnaire was divided into sections like demographic features, history of hepatitis, knowledge, attitude and practice sections.

For concision, the answers about spread of hepatitis, diagnosis, treatment, precautionary measures and the procedures which can transmit the viruses were grouped. Total 13 options were cited for the basic knowledge of hepatitis B and C. Responses were categorized as 0-5 correct answers as "poor"; 6-10 as 'fair' and 11-13 as 'good'. Total 5 options were mentioned for transmission of hepatitis B and C and they were categorized as; 0-2 correct answers as 'poor', 3-4 as 'fair' and 5 as 'good'. Similarly, 5 options were stated for different treatment procedures for hepatitis B patients and they were merged as; 0-3 correct answers as 'poor' and 4-5 as 'good'. Five options were stated for precautionary measures against hepatitis B and C and they were grouped as; 0.2 correct answers as 'poor', 3-4 as 'fair', and 5 as 'good'. Descriptive statistics and Chi-square tests were used to find out the associations between variables in the study.

RESULTS

A total of 300 MBBS students from 1st to 4th year participated in this study. Among them 40.6% were males and 59.4% were females. Age of the students ranged from 20 to 30 years. Personal history of jaundice was quite low while the family history of hepatitis was 19.7%. Majority of the student reported class lectures and course books as their primary source of knowledge about hepatitis B and C (Table 1). About basic knowledge, 58% male and 61% female students showed fair knowledge. Total 85% respondents showed that they were aware of vaccine for hepatitis B while 19% also claimed that a vaccine exists for hepatitis C. Regarding routes for transmission of hepatitis B and C, 54% male and 57.1% female students presented good knowledge. For the knowledge of route of transmission, students of age more than 20 years displayed better knowledge than younger ones. But regarding treatment procedures for hepatitis B and C, only 47% male and 49% students presented 'good' knowledge. Regarding curability of hepatitis, 47% males and 57% female said that it is curable up to certain level, with females displaying higher percentage than male students. Knowledge about prevention of hepatitis was good among 32% males and 34% females. Table 2 is showing basic knowledge of student, knowledge about routes of transmission, vaccines availability, treatment methods for hepatitis B and C, extent of cure and preventive measures.

About 87% students were agreed that hepatitis is a major public health problem. Regarding risk of hepatitis, more than 80% student agreed that health care workers are at elevated risk for acquiring hepatitis. Majority of the students believe that vaccine against hepatitis B is necessary for healthcare workers and majority of them also think that training programs play important role in changing the public behavior. Table 3 shows attitude of MBBS students towards Hepatitis.

Table 1: Demographic characteristics of MBBS students

Characteristics		Frequency (%)
Gender	Male	121 (40.6)
	Female	179 (59.4)
Age	≤20	71 (23.5)
	21-25	118 (39.4)
	26–30	111 (37.1)
Study year	1st	91 (30.4)
	2nd	61 (20.6)
	3rd	82 (27.3)
	4th	66 (21.7)
History of jaundice	Yes	8 (2.6)
	No	292 (97.4)
Family history of hepatitis	Yes	59 (19.7)
	No	241 (80.3)
Sources of knowledge	Classroom lectures and course books	128 (42.7)
	Family/friends/neighbors	67 (22.3)
	Media (social and other)	42 (14)
	Information campaigns broachers etc.	63 (21)

From total 300 students, 52% students were aware of their Hepatitis B and C status and 52% students were also vaccinated against Hepatitis B. Among vaccinated students, more than 55% completed all three doses of Hepatitis B vaccine. Majority of the unvaccinated students reported lack of time as their major reason for not being vaccinated followed by the students who reported no reason for not getting vaccinated. Table 4 shows practice of students towards hepatitis B vaccine.

Table 2: Knowledge of medical students about hepatitis B and C

Questions	Gender		Age group		
	Male (N=121)	Female (N=179)	<20 (N=71)	20-25 (N=118)	26-30 (N=111)
Basic knowledge about hepatitis					
Good	36(29.7)	56(31.3)	17(23.9)	38(32.2)	38(34.2)
Fair	71(58.7)	110(61.5)	42(59.2)	69(58.5)	68(61.3)
Poor	14(11.6)	13(7.2)	12(16.9)	11(9.3)	5(4.5)
Knowledge about routes of transmission of hepatitis B and C					
Good	66(54.6)	103(57.6)	30(41.1)	70(59.3)	80(72.1)
Fair	49(40.5)	69(38.5)	37(53.1)	43 (36.4)	27(24.3)
Poor	6(4.9)	7(3.9)	4(5.7)	5(4.3)	4(3.6)
Knowledge about vaccine availability					
Hepatitis B	103(85.1)	158(88.4)	56(78.8)	101(85.6)	99(89.2)
Hepatitis C	24(19.8)	31(17.0)	17(23.9)	21(17.8	12(10.8)
Knowledge of treatment HBV and HCV					
Good	57(47.1)	87(49)	15(21.1)	63(53.3)	89(80.7)
Poor	64(52.9)	92(51)	56(78.9)	55(46.7)	22(19.3)
Knowledge about treatment of hepatitis					
Completely curable	36(29.8)	56(31.2)	18(26.7)	34(28.4)	37(33.3)
Curable up to certain level	57(47.1)	103(57.5)	37(52.1)	62(52.5)	9(53.2)
Not curable	9(7.4)	8(4.6)	3(4.2)	10(8.4)	6(5.4)
Don't Know	19(15.7)	12(6.7)	13(17)	12(10.7)	9(8.0)
Knowledge about prevention of Hepatitis					
Good	39(32.3)	61(34.1)	20(28.2)	36(30.5)	49(44.1)
Fair	66(54.5)	112(62.5)	42(59.2)	71(60.3)	57(51.4)
Poor	16(13.2)	6(3.3)	9(12.7)	11(9.2)	5(4.5)

Table 3: Attitude of medical students in towards hepatitis infection

Questions	Strongly agree N (%)	Agree N (%)	Neutral N (%)
Do you think hepatitis is big public health problem?	101(33.7)	160 (53.3)	39 (13)
Do you think healthcare personals are at higher risk acquiring of hepatitis infection?	89 (29.7)	155 (51.7)	56 (18.7)
Do you think it is necessary for healthcare personals to receive HBV vaccine?	93 (31.0)	164 (54.7)	43 (14.3)
Do you think HBV vaccine is safe?	87 (29.0)	140 (46.7)	73 (24.3)
After repeated exposure to contagious fluid/ material, the vaccine reduces likelihood of being HBV positive?	79 (26.3)	128 (42.7)	93 (31)
The vaccine is not important if the exposure is not with patient blood of known HBV positive?	55 (18.3)	157 (41.5)	88 (29.3)
There should be the vaccine guidelines in work areas?	165 (55.0)	91 (30.3)	44 (14.7)
Do you think training/awareness programs on hepatitis are important for a behavioral change?	163 (54.3)	89 (29.7)	48 (16)

Table 4: Practice of medical students towards hepatitis B vaccination

Practices	Frequency (%)
Awareness about HBV status	157 (52.3)
Awareness about HCV status	161 (53.7)
Vaccination status	
Vaccinated	156 (52)
Not-vaccinated	144 (48)
Doses of vaccine received (N=156)	
1 (at 0 months)	42 (26.9)
2 (at 0 and 1 month)	27 (17.3)
3 (at 0, 1 and 6 months)	87 (55.8)
Reason for not being vaccinated (N=144)	
No reason	29 (20.1)
Consider unimportant	3 (2.1)
Fear of needle	24 (16.7)
Lack of time	68 (47.2)
Carelessness/laziness	20 (13.9)

DISCUSSION

Exposure to pathogens such as Hepatitis B and C viral infections is a significant professional hazard to the healthcare workers. The risk is especially high in countries where infection is highly prevalent. Pakistan has one of the world's highest burdens because of chronic hepatitis (both B & C), mortality due to liver cirrhosis and hepato-cellular carcinoma. It is essential for medical students to have a sound scientific knowledge about hepatitis. They can adopt protective measure during their medical practice because they are at four time's greater risk of acquiring these infections[9]. KAP studies have are an important sources of obtaining data to design health intervention and public health policies.

Current study revealed that more than 50% participants had sufficient knowledge about hepatitis B and C. Participants of higher ages (61.3%), females (61.4%) had higher knowledge as compared to participants with lower knowledge and males. The results were consistent with studies conducted by Atlam SA et al[10], Tazeem et al.[11]

Average age of students and male to female ratio in this study was nearly same as reported by other studies carried among medical students in different cities of Pakistan as well as other parts of the world.[11]

Regarding the availability of a successful treatment of HBV or HCV, 47% males and 49% females had good knowledge. Our study shows that about 30% participants consider that hepatitis B and C are completely curable. The results are different from the study conducted among house officers in Quetta.[12]

The knowledge about vaccine for hepatitis B in this study was 85% which is same compared to studies conducted in Karachi. The reason for higher knowledge might be that hepatitis B vaccine is available in Pakistan from 1985. It is merged in Expanded Programme on immunization (EPI) from 2000. The knowledge about existence of a vaccine for hepatitis C in our study was also same as a study conducted in Pakistan and other countries. [13,14]

Present study showed vaccination status of participants was 52%. The participants who completed all three doses of Hepatitis B vaccination were 55.8%. The results on vaccination status of students in our study are low as compared to other studies published from Pakistan.[13] A study conducted in Lahore shows that about 82.9% students were vaccinated against Hepatitis B with 71.4% with those who completed all three doses.[11] The While the results are in line with the study conducted on dental students in Bulgaria[16] while rate of vaccination was higher as compared to studies conducted in Ethiopia.[17]

CONCLUSION

The majority of participants in our study showed high or average rate of knowledge concerning HBV and HCV route of transmission and prevention. Pre-tests, lectures, demo of standard precautions and policies to control infection followed by a post-test cab be effective in changing the attitude and improving the knowledge for viral diseases among medical students.

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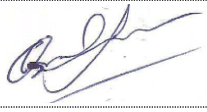
Obaid Anwar Pharmacology Department, Faisalabad Medical University, Faisalabad	Literature Review, References Writing	
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