

Study On Awareness and Knowledge about Hepatitis B Virus and Vaccination Among MBBS Students

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Abstract: *Introduction: Hepatitis B is a major health problem in India. To prevent transmission and progression of the disease in the community, proper community awareness about the disease, including prevention, is necessary. Our objective was to study the awareness amongst the health care workers (undergraduates) about hepatitis B virus, including knowledge regarding vaccine. Aim: To assess the level of awareness, and knowledge of the health care providers (undergraduates) toward Hepatitis B virus and vaccination. Methods: After obtaining approval from the IEC and valid informed consent, the participants were recruited into the study. A cross-sectional descriptive questionnaire-based study was conducted amongst health care providers, i.e., MBBS students of total 150 participants were enrolled for this study. Participants completed the questionnaire. Results: Most of the students had good knowledge about disease and modes of transmission & prevention. Surprisingly half of them were unaware of high risk of transmission to health professional. Mainly very less of the students were unimmunized mainly due to lack of awareness and motivation Conclusion: High awareness level about the disease, most students had sufficiently high knowledge about vaccine and underwent vaccination*

Keywords: Awareness, education, hepatitis B, hepatitis B virus, hepatitis B vaccine, knowledge, medical students.

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I. Introduction

Hepatitis B virus (HBV) is one of the major diseases of mankind.[1] Globally, over 2 billion people have been infected with HBV, and there are over 350 million carriers.[1,2] HBV is one of the most common infectious diseases without seasonal distribution.[2] The virus is transmitted in the blood and fluids, which can be diagnosed during acute and chronic phases.[2,3] Acute infection may cause nonspecific symptoms or fulminant hepatitis that may die or requires urgent liver transplantation.[1-3].

Chronic infection causes death associated with cirrhosis, liver failure, or hepatocellular carcinoma.[3] HBV ranks second, after tobacco, on the list of known carcinogenic agents affecting humans.[4] Furthermore, infection with HBV constitutes the first etiology of hepatocellular carcinoma and the tenth leading cause of death globally.[4]

Medical students are a group of health care workers (HCWs) that are at high risk to get and spread HBV because their activities involve contact with patients or blood or other body fluids in healthcare, laboratories or public-safety settings.[5-7] The risk varies during their career, but it is often the highest during their professional training.[5,6] It was assumed that medical students studying in college of medicine are lacking the important knowledge about and the appropriate practice toward infectious, occupational risks of HBV. Although many studies in different countries have been conducted, there have been very few attempts to evaluate the knowledge, attitudes and practice of undergraduates studying regarding occupational risks of HBV.[5,6,8] Therefore, this study had the objective of evaluating knowledge base, attitudes and practice of undergraduates regarding occupational risks of HBV

II. Aims And Objectives

The aim of this study was to explore awareness and knowledge about Hepatitis B virus and vaccination among MBBS students

III. Materials And Methods

Study design and study population: After obtaining approval from the IEC and valid informed consent, the participants were recruited into the study. A cross-sectional descriptive questionnaire-based study was conducted amongst health care providers (undergraduate MBBS students) of a Tertiary Health Care and Teaching Institute, AMC, KGH, Visakhapatnam in December 2019.

Sample size: 150 participants

Statistical analysis: Statistical analysis was done using descriptive statistics.

A total of 150 participants were enrolled in the study and they were given the questionnaire which includes.

1. Have you ever heard about hepatitis B virus infection?

- Yes
 No

2. How serious do you think being infected with hepatitis B virus is compared to HIV?

- Less serious than HIV
 As serious as HIV
 More serious than HIV
 I don't know

3. How can someone be infected with hepatitis B virus? (please check (✓) all the correct boxes if your answer is more than one)

- Through contact with blood of an infected person
 Through contact with saliva of an infected person
 Through contact with sweat of an infected person
 Through contact with body fluid contaminated by blood of an infected person
 I don't know

Section D: Hepatitis B vaccination Knowledge and Status

4. Have you ever heard about hepatitis B vaccination?

- Yes
 No

5. How effective do you think hepatitis B vaccination is in protecting someone against hepatitis B virus infection?

- Not effective
 Slightly
 effective Very
 effective
I don't know

6. Have you ever received hepatitis B vaccination?

- Yes
 No

If your answer to question 12 is 'No', answer question 13; if it is 'Yes', go to question 14

7. Why have you not received hepatitis B vaccination? (Please check (✓) all the correct boxes if your answer is more than one)

- I am not aware of hepatitis B vaccination
- I do not know where to go and receive it
- I don't have time
- It is expensive
- I don't see the need
- I am afraid of contracting the virus from the vaccine
- Others (please state).....

8. If your answer to question 12 is 'Yes', how many doses of hepatitis B vaccine have you received?

- 1 dose
- 2 doses
- 3 doses
- More than 3 doses

9. When did you receive the last dose of hepatitis B vaccine?

- Less than 1 month ago
- 1 month to 3 months ago
- 4 months to 6 months ago
- More than 6 months ago

10. What do you think is the recommended full dose of hepatitis B

- vaccine? 1 dose
- 2 doses
- 3 or more doses
- I don't know

11. How long does a full dose of hepatitis B vaccine protect

- someone? Less than 1 year
- 1 year to 5 years
- 6 years to 10 years
- 11 years to 19 years

- 20 years
or more
- I don't know

IV. Results

Out of the 150 participants we received only 145 participants questionnaire and we calculated the results for 145 participants. For the first question have you ever heard about hepatitis B virus infection, for this all the participants have answered 100% yes. For the second question how serious do you think being infected with hepatitis B virus is compared to HIV for this only 13.7% participants answered correctly. For the third question how can someone be infected with hepatitis B virus , 87% participants opted for through contact with blood of an infected person, 37.93% participants opted through contact with saliva of an infected person, 19% participants opted through contact with swaet of an infected person and 73% participants opted for through contact with body fluid contaminated by blood of an infected person. For the fourth question have you heard about hepatitis B vaccination 100% of the participants said yes. For the fifth question how effective do you think hepatitis B vaccination is in protecting someone against Hetatitis B virus infection for this 77% participants had said very effective. For the sixth question have you ever received hepatitis B vaccination for this 97.3% participants said yes. For the seventh question why have you not received hepatitis B vaccination, for this 2.75% opted for I don't have time and 0.6% opted for I do not know where to go and receive it. For the eighth question how many doses of hepatitis B vaccine have you received for this 5.51% answered as 1 dose, 14.48% answered as 2 doses, 77.24% answered as 3 doses and 2.75% answered as more than 3 doses. For the ninth question when did you receive the last dose of hepatitis B vaccine 2.06% answered as less than 1 month ago, 11.7% answered as 1 month to 3 months ago, 56.55% answered as 4 months to 6 months ago and 25.51% answered as more than 6 months ago. For the tenth question what do you think is the recommended full dose of hepatitis B vaccine for this 95.17% of the participants correctly said it is 3 or more doses. For the eleventh question how long does a full dose of hepatitis B vaccine protect someone for this 15.86% correctly said that is 20 years or more.

**Table no 1:
Scoring Table: HBV (A) and HBVc (B) Knowledge Questions and Scoring Pattern.**

A. Question	Options checked	Score
Have you heard about hepatitis B virus infection? (one option)	Yes (✓)	1
	No (✓)	0
How serious do you think being infected with hepatitis B virus is compared to HIV? (one option)	Less serious than HIV (✓)	0
	As serious as HIV (✓)	0
	More serious than HIV (✓)	1
	I don't know (✓)	0
How can someone be infected with hepatitis B virus? (please check (✓) all the correct boxes if your answer is more than one)	Through contact with blood of an infected person (✓)	1
	Through contact with saliva of an infected person (blank)*	1
	Through contact with sweat of an infected person (blank)*	1
	Through contact with body fluid contaminated by blood of an infected person (✓)	1
	I don't know (✓)	0 for all options
Maximum HBV knowledge Score		6 of 6
Minimum HBV knowledge Score		0 of 6
B. Question	Options	Score

Have you ever heard about hepatitis B vaccination? (one option)	Yes (✓)	1
	No (✓)	0
How effective do you think hepatitis B vaccination is in protecting someone against hepatitis B virus infection? (one option)	Not effective (✓)	0
	Slightly effective (✓)	0
	Very effective (✓)	1
	I don't know (✓)	0
What do you think is the recommended full dose of hepatitis B vaccine? (one option)	1 dose (✓)	0
	2 doses (✓)	0
	3 or more doses (✓)	1
	I don't know (✓)	0
How long does a full dose of hepatitis B vaccine protect someone? (one option)	Less than 1 year (✓)	0
A. Question	Options checked	Score
someone? (one option)	1 year to 5 years (✓)	0
	6 years to 10 years (✓)	0
	11 years to 19 years (✓)	0
	20 years or more (✓)	1
	I don't know (✓)	0
Maximum HBVc knowledge score		4 of 4
Minimum HBVc knowledge score		0 of 4

V. Discussion

Form the results all the participants heard about hepatitis infection and about less participants know how serious they think being infected with hepatitis B virus is compared to HIV. All the participants well know how can someone be infected with hepatitis B virus but less participants know that hepatitis B infection can be spread through contact with sweat of an infected person. All the participants heard about hepatitis B vaccination, and most of the participants think that hepatitis B vaccination is very effective against hepatitis B virus infection. Most of the participants received hepatitis B vaccination and very less participants do not know where to go and receive it. Most of the participants knew about the how many doses and recommended full dose of the hepatitis B vaccine and very less participants knew how long does a full dose of hepatitis B vaccine can protect someone.

VI. Conclusion

The results of the present study demonstrate most of the students had good knowledge about disease and modes of transmission & prevention. Surprisingly half of them were unaware of high risk of transmission to them for being a health care professional. Very less students are unimmunized and face risk of contracting the disease in future. Hence it is recommended for Hepatitis B vaccination for all unimmunized students who enter medical profession. The orientation and sensitization programme should be held to create awareness regarding HBV infection

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