

**ASSESSMENT OF KNOWLEDGE, ATTITUDE AND VACCINATION STATUS REGARDING HEPATITIS B INFECTION AMONG PRE AND PARA CLINICAL MBBS STUDENTS OF GOVERNMENT MEDICAL COLLEGE, SRINAGAR”**

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**ABSTRACT**

**Background:** As per WHO, 296 million people were living with chronic hepatitis B infection in 2019 with 1.5 million infections each year. There are certain groups in population who are at higher risk of acquiring hepatitis B infection. Health care workers represent one such group. Medical students are also at increased risk of occupational exposure to infected patients and instruments. Therefore, assessing the knowledge, attitude and vaccination status of medical students plays a key role in decreasing the exposure and transmission of infection. **Materials and Methods:** The conducted study was a cross sectional study, was carried out in the month of January among the first and second year MBBS students by using a pre designed questionnaire developed on the basis of literature review and was divided into 4 parts (sociodemographic characteristics, knowledge, attitude and vaccination status of the study participants). Data were collected and analyzed using descriptive statistics of frequency and percentage. **Results:** In our study we found that maximum number of the students had good knowledge about hepatitis B infection as a disease (100%) and its routes of transmission (93.75%). Most of them had good attitude towards the hepatitis B infected patients (71.88%, 65.62%). However most of them (69.53%) had no knowledge about precautionary measures to be taken against hepatitis B infection. It was also seen that many of them were unvaccinated or partially vaccinated against hepatitis B infection. Vaccination not offered to them was the reason given by most of the unvaccinated students for not being vaccinated. **Conclusion:** As evident from the findings, our study revealed that even though most of the students had an acceptable knowledge and attitude towards hepatitis B infection but there was lack of knowledge regarding the precautionary measures to be taken against hepatitis B infection. Also, the students who are not vaccinated makes them vulnerable to this infection. Imparting education regarding this infection and conducting vaccination programs among the medical students should be implemented.

**KEYWORDS:** hepatitis B, Knowledge, vaccination status, medical students.

**INTRODUCTION**

- Hepatitis B is a potentially life-threatening vaccine-preventable liver infection liver infection caused by the hepatitis B virus (HBV)<sup>[1,2]</sup> It spreads through blood, semen and vaginal fluids.<sup>[3]</sup> It most commonly transmits if people are infected with HIV, because hepatitis B and HIV spread in similar ways, have lived with or had sex with someone who has hepatitis B, have had more than one sex partner in the last 6 months or have a history of sexually transmitted disease, men who have sex with men, injection drug users, work in a profession such as health care in which they have contact with blood, needles, or body fluids at work, hepatitis C, have lived in or travel often to parts of the world where

hepatitis B is common, have been on kidney dialysis, live or work in a prison, had a blood transfusion or organ transplant.<sup>[4]</sup> It can lead to both acute and chronic disease.

AS per WHO, 296 million people were living with chronic Hepatitis B infection in 2019 with 1.5 million infection each year. It lead to 820 000 deaths in 2019. The most causes reported were cirrhosis and hepatocellular carcinoma.<sup>[1]</sup> By 2020, WHO aims to decrease the viral hepatitis mortality rate by 65% and the number of new cases by 90%.<sup>[5]</sup>

In order to prevent Hepatitis B virus transmission, standard precautions should be practiced including hand

hygiene, safe disposal of sharp instruments, and wearing personal protective equipment, in addition to awareness and vaccination.<sup>[6]</sup>

There are certain groups in population who are at higher risk of acquiring Hepatitis B Infection. Health care workers represent one such group including the newly joining medical students. The life time prevalence of needle prick injuries especially during blood sampling among medical students was shown to be 23%.<sup>[7]</sup> Therefore, assessing their knowledge, attitude and vaccination plays an important role decreasing the exposure and transmission rate of hepatitis B.

#### AIM AND OBJECTIVES

To assess the knowledge, attitude and vaccination status regarding hepatitis B infection among pre and para clinical MBBS students studying in GMC, Srinagar.

**ETHICAL CONSIDERATION:** The study was approved by the Institutional Review Board.

#### MATERIAL AND METHODS

**STUDY DESIGN:** Cross sectional observational study

**STUDY SETTING:** Government Medical College Srinagar.

**STUDY TOOL:** A pre designed questionnaire developed on the basis of literature review was divided

into 4 parts (sociodemographic characteristics, knowledge, attitude and vaccination status of the study participants) was distributed among the students.

**STUDY TIME PERIOD:** January 2023.

#### INCLUSION CRITERIA

MBBS students willing to take part in study.

MBBS students studying in first and second professional year at GMC Srinagar.

#### EXCLUSION CRITERIA

Students of first and second professional year enrolled in GMC Srinagar who are not willing to take part in the study.

The data collected was entered in SPSS version 10 and analyzed. The result was obtained in terms of frequency and percentage.

#### RESULTS

A total of 256 students participated in the present study. Table 1 shows their demographic characteristics. Maximum number of participants were in the age group of 18-20 years. Assessment of knowledge, attitude and vaccination status is shown in table 2, table 3 and table 4 respectively.

		NUMBER	PERCENTAGE
AGE(in years)	18-20	152	59.37
	21-23	104	40.63
	Total	256	100
GENDER	Male	96	37.5
	Female	160	62.5
	Total	256	100
RESIDENCE	Rural	160	62.5
	Urban	96	37.5
	Total	256	100

		NUMBER	PERCENTAGE
5. Have you heard of hepatitis B infection?	Yes	256	100
	No	0	0
	Total	256	100
6. Is hepatitis B infection caused by a virus?	Yes	255	99.60
	No	0	0
	May be	1	0.39
Total	256	100	
7. Is it transmitted by contaminated blood and body fluids?	Yes	240	93.75%
	No	0	0
	May be	16	6.25
Total	256	100	
8. Is it transmitted through unprotected sex?	Yes	232	90.63
	No	0	0
	May be	24	9.37
Total	256	100	
9. Is it transmitted from	Yes	208	81.25

infected mother to fetus?	No	3	1.17
	May be	45	17.58
	Total	256	100
10. Is it transmitted by causal contact (shaking hands)?	Yes	0	0
	No	240	93.75
	May be	16	6.25
	Total	256	100
11. Is it transmitted by unsterilized syringes /needles?	Yes	248	96.87
	No	0	0
	May be	8	3.13
	Total	256	100
12. Is it transmitted by coughing /sneezing?	Yes	32	12.5
	No	184	71.87
	May be	40	15.63
	Total	256	100
13. Is it transmitted by tattoo or acupuncture?	Yes	168	65.63
	No	24	9.37
	May be	64	25
	Total	256	100
14. Does hepatitis B Infection manifest as jaundice?	Yes	136	53.12
	No	40	15.63
	May be	80	31.25
	Total	256	100
15. Does hepatitis B cause liver cirrhosis?	Yes	96	37.5
	No	48	18.75
	May be	112	43.75
	Total	256	100
16. Can hepatitis B infection be prevented by vaccine?	Yes	232	90.62
	No	8	3.13
	May be	16	6.25
	Total	256	100
17. Are you aware about the risk of transmission of hepatitis B among your profession?	Yes	201	78.51
	No	55	21.49
	May be	0	0
	Total	256	100

**Table 3: Attitude regarding Hepatitis B infection among study participants.**

18. Do you feel uncomfortable while sitting with a hepatitis B infected patient?	Yes	72	28.12
	No	184	71.88
	Total	256	100
19. Do you mind shaking hands /hugging with a hepatitis B infected person?	Yes	88	34.38
	No	168	65.62
	Total	256	100
20. Do you believe hepatitis B vaccine is safe and effective?	Yes	251	98.05
	No	6	1.95
	Total	256	100
21. Do you believe healthcare workers should receive hepatitis B vaccine?	Yes	256	100
	No	0	0
	Total	256	100
22. Do you know the precautionary measures to be taken against hepatitis B transmission?	Yes	178	69.53
	No	78	30.47
	Total	256	100

23. Are you vaccinated against hepatitis B infection?	Yes	158	61.72
	No	63	24.61
	Don't know	35	13.67
	Total	256	100
24. How many doses of hepatitis B vaccine have you received?	1	9	3.51
	2	12	4.69
	3	137	53.51
	Total	256	100
25. Reason for not being vaccinated?	Not offered	47	74.60
	Lack of knowledge	12	19.05
	Other reason	4	6.35
	Total	63	100

## DISCUSSION

In present study the assessment of knowledge regarding hepatitis B infection showed that all the participants knew hepatitis B infection as a disease that is caused by a virus (n=256, 100%). Maximum number of (n=255, 99.68%) had knowledge about its causative agent, 93.75% (n=240) knew that blood and other body fluids as its routes of transmission, 90.6% (n=232) knew sexual route and 96.87% (n=240) knew unsterilized syringes/needles as routes of transmission of hepatitis B. The findings were similar to the studies conducted by Vasantha Mallika MC et al<sup>[8]</sup>, Askarian M et al<sup>[9]</sup>, Shreshtha DB et al<sup>[7]</sup> and Setia S et al.<sup>[10]</sup> One study conducted in our region among dental students and interns has shown relatively lower level of knowledge and attitude towards hepatitis B infection.<sup>[11]</sup>

Jaundice as a manifestation of this disease was known to 53.12% (n=136), 15.63% did not know that it manifests as jaundice. Hepatitis B infection can cause liver cirrhosis, was known to 37.5% (n=96) of the study participants. Studies by Chhabra et al<sup>[12]</sup> and Daud S et al<sup>[13]</sup> have shown inadequate knowledge regarding these aspects of hepatitis B infection.

Maximum number of students showed good attitude towards the hepatitis B infected patients. Most of them (71.88%, n=184) had no issue while setting with hepatitis B infected patients and 65.62% (n=168) did not mind while shaking hands with hepatitis B infected persons which was higher than in studies conducted by Shreshtha et al<sup>[7]</sup> and Al Hamzi et al.<sup>[14]</sup>

Most of the study participants (69.53%, n=178) had no knowledge about the precautionary measures to be taken against hepatitis B transmission which was similar to the study conducted by Kumar et al<sup>[12]</sup> among the dental students and interns of Jammu region.

Regarding the vaccination status of the medical students who participated in the study, it was found that 53.51% (n=137) were fully vaccinated against hepatitis B infection and 24.61% (n=63) of the students were not vaccinated against the hepatitis B infection This finding was lower than the studies conducted by Khurram M et al<sup>[15]</sup>, Vasantha Mallika et al<sup>[8]</sup> and Noor N et al<sup>[16]</sup> which

showed the full vaccination status of medical students as 80.6%, 79.5% and 70% respectively. Other studies that have shown the vaccination status as lower than our study are conducted by Dr.Jayakiruthiga<sup>[17]</sup> and Askarian et al.<sup>[9]</sup>

The reason for not being vaccinated given by maximum number (n=47) was that vaccine was not offered to them. Similar reason was given in studies conducted by Shreshtha et al<sup>[7]</sup> in Nepal and Okeke EN et al<sup>[18]</sup> in Nigeria among medical students.

## CONCLUSION

Medical students are at higher risk of accidental exposure to potentially infectious body fluids and instruments due to lack of knowledge and incomplete vaccination status. Complete vaccination confers 90-100% protection rate against hepatitis B infection. As evident from the findings, our study revealed that even though most of the students had an acceptable knowledge and attitude towards hepatitis B infection but there was lack of knowledge regarding the precautionary measures to be taken against hepatitis B infection. Also, the students who are not vaccinated makes them vulnerable to this infection. Imparting education regarding this infection and conducting vaccination programs among the medical students should be implemented. World Health Organization recommends special consideration of medical students for hepatitis B virus screening and vaccination.

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