

## SHORT COMMUNICATION

# Knowledge , Awareness and Practices regarding Hepatitis B vaccination among medical students in south India

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### ABSTRACT

The healthcare workers as well as medical students are at higher risk of developing Hepatitis B virus infection due to frequent encounters with infected patients and specimens. The present prospective questionnaire based study was conducted among second MBBS students to assess the awareness and knowledge about Hepatitis B virus infection and Vaccination. A total of 112 (83.5%) students out of 154 participated in the study and 84.8 % students opted that Hepatitis B is the most contagious blood borne pathogen through accidental exposure. One hundred and four students (92.8%) responded that Hepatitis B infection is preventable by vaccination. Out of the 112 students 96% correctly stated the complete hepatitis B vaccine series as three doses. Only 22(19.6%) students responded correctly that 10 IU /ml is the protective titre after vaccination and have checked their titres. All the participants agreed that an awareness session regarding Hepatitis B virus ,Vaccination ,Follow up checking of titres and Standard precautions must be conducted for all medical as well as allied health sciences students on induction into the course.

**Keywords:** Blood borne viruses, Sensitisation programmes, MBBS students

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### INTRODUCTION

Hepatitis B virus (HBV) is one of the major infection occurring after occupational exposure and is almost double among health care personnel [1,2]. Only 16% to 60% of health care workers are completely vaccinated for Hepatitis B in India. The National Viral hepatitis Control program of Government of India has made Hepatitis B vaccination mandatory for all Health care workers along with antibody titre assessment to check the immunity and requirement for further booster doses [3,4]. As per World Health organization, Every year around 66000 Hepatitis B virus infections are caused by needle stick injury [5]. Medical students who are also part of the health care system are also at the increased risk of acquiring Hepatitis B infection via occupational exposure [6]. A recombinant HBsAg is used for vaccination against HBV, and a positive immune response indicated by development of antibodies to HBsAg (anti-HBs) titer of > 10 mIU/mL is considered as protective. The effectiveness of vaccination is assessed one to three months after the third dose of vaccination [7]. Hence the present questionnaire study is undertaken to assess the awareness, knowledge and practices of second phase MBBS students towards Hepatitis B vaccination in a medical college hospital

### MATERIAL AND METHODS

The present prospective questionnaire-based study was conducted by the department of Microbiology. The aim of the study was explained to the students and were informed that they were free to participate in the study and the data would be kept confidential and consent was obtained. The questionnaire was shared with second phase MBBS students. Responses were collected from students willing to participate in the

study. The questionnaire comprised of sections assessing the knowledge, awareness and practices regarding Hepatitis B virus and Vaccination.

Table 1: Questionnaire about HBV from medical students

S.no	Questionnaire
1	What is the causative agent of hepatitis B?
2	HBV is the most contagious blood borne pathogen through accidental exposure to blood?
3	Do you think doctors and medical students are at risk of acquiring hepatitis B infection from the patients? Yes/NO
4	What are the manifestations of chronic hepatitis B infection?
5	Is Hepatitis B preventable? Yes/No
6	The number of doses for complete HBV vaccination is ?
7	Immunological response to vaccine should be checked after vaccination? Yes /No If immunological response is inadequate vaccine series should be restarted? Yes/No
8	What is the protective titre after vaccination?
9	Have you received hepatitis B vaccination previously? Yes /No
10	Have you received all doses of hepatitis B vaccination ? Yes /No
11	Are you aware that HBV vaccination can protect you against future exposure? Yes/No
12	Have you checked your anti HBsag titre values? Yes/No
13	Do you think medical students should have a awareness session included in first MBBS regarding the Hepatitis B vaccination? Yes/No
14	Should health care workers with Hepatitis B allowed to work in a hospital set up? Yes/No
15	Should health care worker with Hepatitis B avoid exposure prone procedures? Yes/No

All the responses were tabulated and analyzed in the form of percentage.

## RESULTS

Out of 134 students 112 (83.5%) students responded to the questionnaire. A total of 95(84.8 %) students opted that Hepatitis B is the most contagious blood borne pathogen through accidental exposure. Regarding the long-term consequences of hepatitis B infection, 104 (92.8%) students responded as Carcinoma liver and cirrhosis. 104(92.8%) of students responded that Hepatitis B infection is preventable. A total of 96% of the students selected the complete hepatitis B vaccine series as three doses and 15(13.35%) opted for only two doses. An overall 90(80.35%) students agreed that immunological response following vaccine should be checked and complete three doses provide protection against Hepatitis B infection. All 112(100%) students agreed that if immunological response to vaccine series is inadequate then vaccination should be restarted. Only 22(19.6%) students responded correctly that 10 IU /ml is the protective titre after vaccination. Out of the 112 students 89(79.4%) of students have completed three doses of vaccine. But only 22(19.6%) of the students have checked their antiHBsag titres. All the participants agreed that an awareness session regarding the importance of Hepatitis B vaccination should be included in first year and 52(46.4%) of the students responded correctly regarding the exposure prone procedures and agreed that healthcare workers with Hepatitis B should be allowed to work with proper standard precautions. In the current study 89(79.4%) responded that they will report any event of needle stick injury.

## DISCUSSION

The healthcare workers are at higher risk of developing Hepatitis B virus infection due to frequent encounters with infected patients and specimens like. Previous research have noted that the infection rates of HBV and other blood-borne viral infections among healthcare workers are almost double when compared with the national prevalence [8].

In a study conducted at Nepal and Saudi Arabia 75.5% and 81.3% of students opted that hepatitis B causes liver cancer respectively whereas in the present study 92.8% of students responded that liver cancer can be caused by Hepatitis B[9,10]. Majority of the students (>90%) agreed that Hepatitis B infection can be prevented by vaccination similar to other studies [9,10,11,12]. whereas in a study conducted at Iraq only 50.7% of the students agreed that Hepatitis B infection is vaccine preventable[13]. In a study conducted at Cyprus 89% of respondents were aware that vaccine can protect against Hepatitis B infection similar to the current study. More than 80% students agreed that all three doses of vaccine will give protection in contrast to other studies where only 20% of the respondents agreed to the same. [7]. In the present study 89(79.4%) of the students were completely vaccinated with all three doses in contrast to a Cameroon study

where only 16.8% were vaccinated[14]. This could be attributed to availability of vaccines and institutional vaccination policies. Majority of the second phase MBBS students were aware regarding the modes of transmission and vaccination protocols for Hepatitis B infection. In spite of good awareness and knowledge around 20 % of the students are yet to be fully vaccinated.

## CONCLUSION

Sensitisation and awareness programme to be conducted for all medical as well as allied health sciences students on induction into the course and protocols and policies should be in place for ensuring that all students are vaccinated completely and antiHBsAg titres checked. All the medical students also need to be sensitised about the exposure prone procedures and safety precautions to be followed and also reporting of needle prick injury.

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