

ORIGINAL RESEARCH ARTICLE

PERCEIVED RISK AND AWARENESS OF HEPATITIS B AMONG THE MEDICAL AND DENTAL STUDENTS IN KERALA

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ABSTRACT

Background: The endemic nature of Hepatitis B virus infection in India poses a greater occupational risk for the health care professionals. The study assess the perceived risk and awareness of Hepatitis B among undergraduate medical and dental students.

Methodology: A cross sectional study was conducted among 100 medical and dental students using a pretested questionnaire distributed during the class hours. Data was analyzed using SPSS version 16.0

Result: Adequate awareness regarding Hepatitis B was observed among both medical and dental students. Almost 63.8% of the medical students were aware that the infection can be asymptomatic ($p \leq 0.05$). The modes of transmission like mother to child, contaminated blood and blood products and unsterile syringes/ needles or surgical instruments were equally reported by the two groups. The chances of transmission of the disease through contaminated water is less as reported by more than half of the medical students(56.3%). An equal number of participants perceived occupational risk of getting the disease. Both the group expressed their willingness to treat a patient diagnosed with Hepatitis B.

Conclusion: The present study observed that adequate awareness, greater perceived risk about Hepatitis B and positive attitude towards the care of infected patients among the study population.

Keywords: awareness, Hepatitis B, perceived risk.

INTRODUCTION

Hepatitis B Virus (HBV) infection, a global public health issue has been reported endemically in all areas of the world with variable prevalence. The prevalence of HBV in South Asia is 2 to 7%¹. India has an intermediate endemicity of hepatitis B².

Health care professionals are at a greater risk of this common blood born infection through accidental sharp injuries and inadequate infection control methods³. Hepatitis B infections are common due to lapse in the sterilization technique of instruments or due to the improper hospital waste management as 10 to 20% health care waste is regarded hazardous and it may create variety of health risk⁴. Among the health care personnel, HBV is transmitted by skin prick with infected, contaminated needles and syringes or through accidental inoculation of minute quantities of blood during surgical and dental procedures. In health care settings, blood is an important vehicle of transmission as it contains the highest HBV titers of all the body fluids⁵. In India, the hospital staffs have higher HBsAg prevalence (10.87%) than in voluntary blood donors (6%) and in general population (5%)⁶.

Students of healthcare domain especially medical and dentistry, while acquiring new clinical and technical skills are more vulnerable to HBV as they are in direct contact with these patients requiring blood transfusions, invasive diagnostic and therapeutic

instrumentations⁷. The present study assess the perceived risk and awareness of hepatitis B among the medical and dental students.

METHODOLOGY

A cross sectional study was done at Amrita institute of medical sciences & Amrita school of dentistry, Ernakulam, Kerala. Ethical clearance was obtained from the institutional Ethics Review Board. The undergraduate medical and dental students from first year, second year, third year final year and interns were included. Data was collected using a pretested structured questionnaire and information regarding the perceived risk and awareness about the cause, symptoms, cure and mode of transmission of Hepatitis B was obtained. The questionnaire was distributed during the class hours with prior permission. For interns the questionnaire was distributed during the clinical hours. The purpose of the study was briefed and students were encouraged to participate. A total of 100 undergraduates; 50 medical and 50 dental students and were requested to fill in the questionnaire after signing an informed consent. The filled questionnaires were verified and taken back.

Data Analysis

The data was analysed using the Statistical Package

TABLES AND FIGURES

Table1. Hepatitis B awareness– Cause, symptoms and cure

| | Correct response n (%) | | P value |
|---|------------------------|-----------------|---------|
| | Medical Students | Dental Students | |
| 1. Cause of Hepatitis B - Viral | 49 (50.5%) | 48 (49.5%) | 0.558 |
| 2. Early symptoms similar to cold and flu | 24 (40.7%) | 35 (59.3%) | 0.250 |
| 3. Jaundice is one of the common symptom | 43 (50.6%) | 42 (49.9%) | 0.779 |
| 4. Can the disease be asymptomatic? | 37 (63.8%) | 21 (36.2%) | 0.001* |
| 5. Can the disease be self- cured? | 9 (69.2%) | 4 (30.8%) | 0.137 |
| 6. Can the disease be curable/treatable? | 42 (49.4%) | 43 (50.6%) | 0.778 |
| TOTAL | 50 (50%) | 50 (50%) | |

for the Social Sciences (SPSS) for windows (version 16; SPSS Inc; Chicago IL, USA). Descriptive statistics and Chi square test were done. Associations and differences were considered significant when $p \leq 0.05$. The percentage of correct responses were measured.

RESULT

Awareness of Hepatitis B regarding the causes, symptoms and cure was described in Table 1. A good knowledge was observed among both the medical and dental students about the etiology of Hepatitis B infection, as majority of them reported a viral etiology. There was no statistically difference in knowledge was observed among the medical and dental students regarding the early symptoms like of cold and flu and that jaundice as one of the common symptom. Almost 63.8% of the medical students were aware that the infection can be asymptomatic. The difference was statistically significant ($p \leq 0.05$). Only few of the undergraduate students both medical and dental were considered the disease self-limiting. An equal number of subjects reported that remedial measures are available for Hepatitis B.

Fig 1. Shows the possible mode of transmission of Hepatitis B as reported by the study participants. The chances of transmission of the disease through contaminated water is less as reported by more than

half of the medical students. Unsafe sex is considered to have more risk of HBV as reported by more than half of the medical students than the dental. The other modes of transmission like mother to child, contaminated blood and blood products and unsterile syringes/ needles or surgical instruments were equally reported by the two groups.

The perceived risk of Hepatitis B among medical and dental students is depicted in Table 2. An equal number of participants perceived occupational risk of getting the disease. 51% of the medical students were of the opinion that the disease is preventable by vaccination. Both the group expressed their willingness to treat a patient diagnosed with Hepatitis B.

DISCUSSION

The Professional training period entails higher occupational risk for Hepatitis B infection. Adequate knowledge is essential to minimize acquired infections in health care setting. The present study showed that both the medical and dental students had adequate knowledge regarding Hepatitis B. Similar finding was noted in a study done in Nepal⁸. However a study done in Chennai observed better awareness among medical students than dental students⁹. A poor knowledge among the medical students about Hepatitis B was noted in a study done in Ahmedabad².

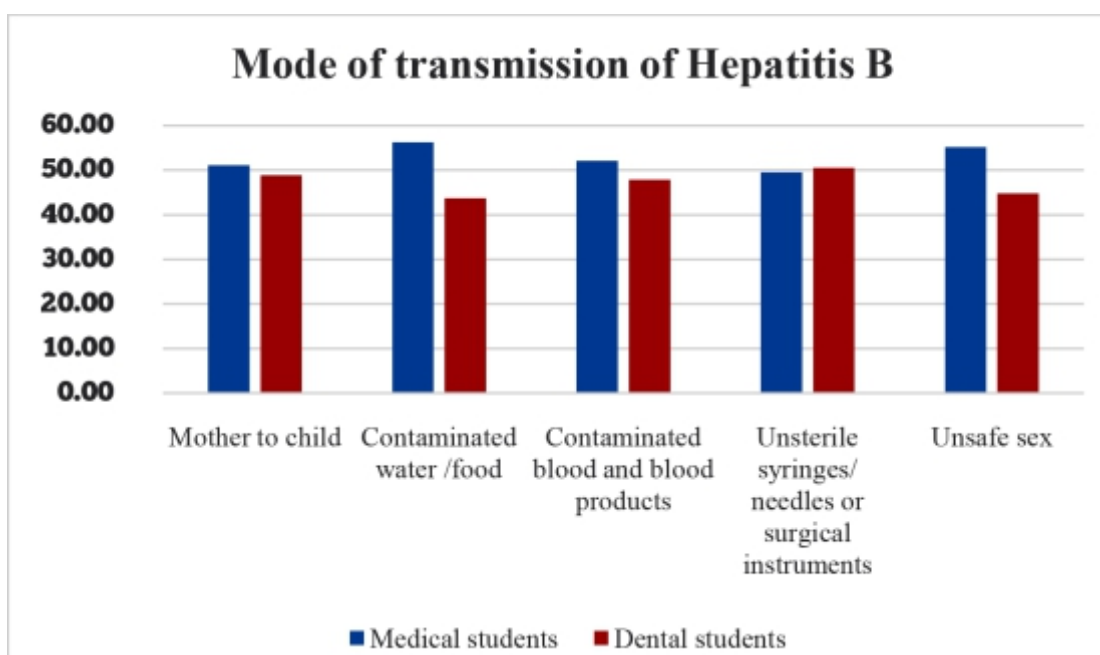


Fig 1. Awareness of mode of transmission of Hepatitis B among medical and dental students

Majority of the study participants reported that contaminated blood and blood products and unsterile syringes/ needles or surgical instruments as possible mode of transmission of the disease. Study done in Tamil Nadu reports a similar finding¹⁰. However some of the study participants wrongly identified the disease get transmitted through contaminated water. Such wrong perception might be due to confusion with Hepatitis A which get transmitted is through feco-oral route. Unsafe sex is considered to have more risk of HBV as reported by more than half of the medical students than the dental.

The undergraduate medical and dental students are at higher risk of accidental exposure as well as transmission of Hepatitis B infection during their training period. They must be aware of the potential risk involved in performing the procedures and appropriate measures to prevent transmission of the disease. Similar to a study done in Hyderabad, the present study showed a greater perception of occupational risk of HBV among both the medical and dental students¹¹. Majority of the medical students hesitated to take care of the patients diagnosed with HBV according to a study done in Greece¹². In contrary both the groups expressed their willingness to treat a patient diagnosed with Hepatitis B in the present study.

CONCLUSION

The study concludes that there is no observed difference in the knowledge level of Hepatitis B among the medical and dental students. Adopting healthy practices, developing good attitudes and acquiring knowledge about occupational diseases and its prevention is a prerequisite for undergraduate training in medical and dental colleges. Information regarding the vaccination coverage, prevalence of Hepatitis B and awareness on post exposure prophylaxis were not measured; which is noted as the limitation of the current study.

The study recommend compulsorily screening, vaccination and education of students for HBV at the time of admission by the institute management to reduce the future occupational risk.

Acknowledgement

The authors acknowledge the support of the faculty members at Amrita Institute of Medical Sciences and Amrita School of dentistry.

There is no financial support or conflict of interest.

Table2. Perceived risk of Hepatitis B among medical and dental students

| | Correct response n (%) | | P value |
|---|------------------------|-----------------|---------|
| | Medical Students | Dental Students | |
| 1. Occupational Risk of getting the disease | 35 (50.7%) | 34 (49.3%) | 0.829 |
| 2. Can the infection be prevented by vaccination? | 50 (51.0%) | 48 (49.0%) | 0.153 |
| 3. Will you treat a patient diagnosed with Hepatitis B? | 48 (51.6%) | 45 (48.4%) | 0.240 |
| TOTAL | 50 (50%) | 50 (50%) | |

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